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ORIGINAL

June 23, 2000

BY HAND DELIVERY

Ms. Blanca S. Bayo, Director
Division of Records and Reporting
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

000761-TP

Re: Petition by Sprint PCS for Arbitration of Certain terms and Conditions of a Proposed Agreement with BellSouth Pursuant to Section 252 of the Communications Act

Dear Ms. Bayo:

Enclosed for filing in the above docket are the original and fifteen (15) copies of Sprint PCS' Petition for Arbitration.

Please acknowledge receipt and filing of the above by stamping the duplicate copy of this letter and returning the same to this writer.

Thank you for your assistance in this matter.

Yours truly,

John P. Fons

Enclosures

cc: All parties of record

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ORIGINAL

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Petition by Sprint PCS for Arbitration of Certain Terms and Conditions of a Proposed Agreement with BellSouth Pursuant to Section 252 of the Communications Act	)	Docket No. 000761-TP Filed: June 23, 2000

SPRINT PCS' PETITION FOR ARBITRATION

Sprint Spectrum L.P., d/b/a Sprint PCS ("Sprint PCS"), pursuant to Section 252 of the Communications Act ("the Act") and all rules and regulations thereto, petitions the Florida Public Service Commission ("Commission" or "FPSC") for arbitration to establish a new interconnection agreement between it and BellSouth Telecommunications, Inc. ("BellSouth"). The primary issue raised in this petition is the rate that BellSouth must pay Sprint PCS for terminating traffic that originates on BellSouth's network. Although Section 252(d) of the Act expressly provides that "each carrier" is entitled to receive its "additional costs" of call termination, BellSouth has taken the position that it has no obligation to pay the additional costs Sprint PCS incurs in terminating BellSouth's traffic. According to BellSouth, Sprint PCS is not entitled to receive reciprocal compensation based on its own costs, but must instead use as a proxy BellSouth's reciprocal compensation rates that are based on BellSouth's call termination costs. A secondary issue is whether BellSouth should be required to exchange records in the standard industry format.

I. Introduction

1. Sprint PCS holds PCS radio licenses issued by the Federal Communications Commission ("FCC") that authorize it to provide Personal Communications Services ("PCS")

throughout the State of Florida.[1] Under federal law, Sprint PCS is both a telecommunications carrier and a provider of commercial mobile radio service ("CMRS").[2] Under state law, Sprint PCS is a CMRS provider but not a telecommunications company.[3]

2. BellSouth is a telecommunications carrier certificated by the FPSC to provide local telephone exchange services in the State of Florida. Under state law, BellSouth is both a telecommunications company and a local exchange telecommunications company.[4] Under federal law, BellSouth is an incumbent local exchange carrier ("ILEC").[5]

3. On January 18, 2000, pursuant to Section 252(a) of the Act, Sprint PCS asked BellSouth to negotiate a new interconnection agreement. This date was confirmed by letter dated April 20, 2000, which both parties executed, and a copy of this letter is attached at Tab 1. Using January 18, 2000 as the date that BellSouth received Sprint PCS' request for negotiations, this Petition for Arbitration is timely filed pursuant to Section 252(b)(1) of the Act.

4. Subsequent to this request, Sprint PCS and BellSouth representatives have held several negotiating sessions by teleconference, through correspondence, and in person. These negotiations have resulted in a proposed interconnection agreement ("Agreement") attached as Tab 2. The proposed Agreement resolves all but two issues between the parties. The parties

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[1] The State of Florida encompasses four Major Trading Area ("MTAs"). Sprint PCS holds PCS licenses to serve all four of these MTAs: the Miami-Fort Lauderdale MTA (southern Florida); the Tampa-St. Petersburg-Orlando MTA (middle Florida); the Jacksonville MTA (northern Florida); and the New Orleans-Baton Rouge MTA (western Panhandle). Sprint PCS also holds additional PCS licenses to provide PCS service in certain Basic Trading Areas ("BTAs"), including the Gainesville, Panama City, Sarasota, Tallahassee, and Tampa BTAs.

[2] *See* 47 U.S.C. §§ 153(44), 332(c)(d)(1). Although Sprint PCS provides telephone exchange services under the Act, it is not deemed to be a local exchange carrier ("LEC"). *See* 47 U.S.C. § 163(26); Local Competition Order, 11 FCC Rcd 15499, 15517 ¶ 34, 15995-96 ¶¶ 1004-06 (1996), aff'd in part, vacated in part on other grounds, Iowa Utilities Board v. FCC, 120 F.3d 753 (8th Cir. 1997), vacated in part on other grounds, AT&T Corp. v. Iowa Utilities Board, 525 U.S. 366, 119 S. Ct. 721 (1999)("Local Competition Order").

[3] *See* Florida Statutes, § 364.02(3), 364.02(12)(c).

[4] *See* Florida Statutes, § 364.02(6), 364.02(12).

[5] *See* 47 U.S.C. § 251(h)(1).

have reached an impasse on these issues, and they therefore need the Commission to resolve them in arbitration.

5. Although it does not change the issue presented to this Commission for arbitration, the FPSC should be apprised of a related matter now pending at the FCC. The FCC in its Local Competition Order provided the states with guidance over how to apply the Act's reciprocal compensation provisions and the FCC's implementing rules to ILEC networks.[6] The FCC did not provide similar guidance concerning wireless networks, which use very different network elements (e.g., base stations, radio spectrum).[7] On February 2, 2000, Sprint PCS asked the FCC to provide the states the same type of guidance for wireless networks that it has already provided for ILEC networks.[8] BellSouth has opposed this request, taking the position, inter alia, that "state commissions need no 'guidance' to properly apply the [FCC's] rules."[9] This matter is pending, and Sprint PCS does not know when the FCC might render its decision.

6. Sprint PCS believes that additional FCC guidance would be useful. Nonetheless, it agrees with BellSouth that this Commission can and should address in this arbitration petition the unresolved reciprocal compensation issue.[10]

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[6] *See* Local Competition Order, 11 FCC Rcd at 15908 ¶ 822, 16025 ¶ 1057, 16027 ¶ 1061, 16042 ¶ 1090, on recon., 11 FCC Rcd 13042, 13045 ¶ 6 (1996).

[7] *See, e.g.,* Wireless One/Sprint-Florida Arbitration Order, Docket No. 971194-TP, Order No. PSC-98-0140-FOF-TP (Jan. 26, 1998)("The record clearly demonstrates a number of differences between the landline and mobile network technologies.").

[8] *See Public Notice*, "Comment Sought on Reciprocal Compensation Obligations for CMRS Providers, Dockets 95-185, 96-98, 97-207, DA 00-1050 (May 11, 2000). Copies of the filings made in this proceeding can be retrieved from: www.fcc.gov/e-file/ecfs.html, under Docket 97-207.

[9] BellSouth Comments, Dockets 95-185, 96-98, 97-207, at 5 (June 1, 2000).

[10] There is some ambiguity over the authority of state commissions to establish the rates that CMRS charge for interconnection. *Compare* 47 C.F.R. § 51.711(b) *with* 47 U.S.C. § 332(c)(3)(A); CMRS Interconnection Obligations, 9 FCC Rcd 5408, 5463 ¶ 131 (1994)(This statute "clearly preempts state regulation of the rates of [CMRS] interconnection."); Second CMRS Report, 9 FCC Rcd 1411, 1500 ¶ 237 (1994)("We agree . . . that the statutory language is clear that . . . the statute preempts state regulation of interconnection rates of CMRS providers."). Nevertheless, Sprint PCS is willing to waive any possible objections to the FPSC's jurisdiction to arbitrate this petition — so long as BellSouth agrees to do the same.

II. Statement of Issues to be Resolved by Arbitration

7. The primary issue unresolved by negotiation is a question of fact: "what additional costs does Sprint PCS incur in terminating local traffic originated on BellSouth's network and terminated on Sprint PCS' network." Consistent with governing FCC Rule 51.711(b), Sprint PCS attaches at Tab 3 a "cost study using the forward-looking economic cost" so that the Commission can resolve this factual issue.[11]

8. It is Sprint PCS' understanding that BellSouth may also want to arbitrate a question of law: whether, notwithstanding Section 252(d) of the Act and FCC Rule 51.711(b), Sprint PCS is legally entitled to recover in reciprocal compensation its own additional call termination costs.[12]

9. A secondary issue is whether BellSouth should be required to exchange access records in the standard industry format.

III. Statement of Parties' Positions on the Issue of Reciprocal Compensation

A. Sprint PCS' Position Regarding Reciprocal Compensation

10. Sprint PCS is entitled to receive in reciprocal compensation a rate that recovers its additional costs of terminating BellSouth's traffic. Sprint PCS is not obligated to use BellSouth's rates as a proxy. The Act imposes a duty upon BellSouth to establish reciprocal compensation arrangements with Sprint PCS for the interconnection, transport and termination of calls

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[11] This cost study contains proprietary confidential business information as defined at Section 364.183, Florida Statutes. Accordingly, the cost study attached to this Petition (Tab 3) is a redacted version. A non-redacted version is simultaneously being filed with the Commission's Division of Records and Reporting under separate cover together with a request for confidential treatment pursuant to Rule 25-22.006, F.A.C. BellSouth, who has signed a non-disclosure agreement, is being served a copy of this Petition with a non-redacted version of the cost study.

[12] While the parties have conducted numerous negotiating sessions, BellSouth has not yet given Sprint PCS any specific criticisms of its cost study. BellSouth has indicated, however, that Sprint PCS could rely on the position it has taken in the pending FCC proceeding as its statement of position on the issue being submitted for arbitration. *See* BellSouth Comments, Dockets 95-185. 96-98, 97-207 (June 1, 2000)("BellSouth FCC Comments") and ¶ 5 supra.

(47 U.S.C. § 251(b)(5)). More specifically, the Act requires that such terms and conditions be considered just and reasonable only when they:

> i) . . . provide for the mutual and reciprocal recovery by **each carrier** of costs associated with the transport and termination **on each carrier's network facilities** of calls that originate on the network facilities of the other carrier; and
>
> ii) such terms and conditions determine such costs on the basis of a reasonable approximation of the additional costs of terminating such calls.

47 U.S.C. § 252(d)(2)(A)(i) (emphasis added). See also, 47 C.F.R. §51.701(e).

11. The FCC has found that the "additional cost" of terminating a call originating on another network "includes only the usage-sensitive costs . . . but not the non-traffic sensitive costs."[13] The FCC has also established a procedure so that a carrier "other than the incumbent LEC" can recover its own call termination costs rather than use the ILEC's costs as a proxy: "prove to the state commission on the basis of a cost study . . . that the forward-looking costs for a network efficiently configured and operated by the carrier . . . exceed the costs incurred by the incumbent LEC . . . and, consequently, that such a higher rate is justified."[14]

12. Consistent with these FCC rules, Sprint PCS has prepared a forward-looking Total Element Long Run Incremental Costs ("TELRIC") cost study, which, as noted previously, is attached hereto at Tab 3. This cost study demonstrates that Sprint PCS' additional cost to terminate BellSouth traffic is $0.066 per minute of use. Sprint PCS therefore proposes that the following language be included in the Agreement between it and BellSouth:

> For all land-to-mobile traffic that BellSouth terminates to Sprint PCS, BellSouth will pay Sprint PCS for transport and termination at the rate of $.066 per minute.

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[13] Local Competition Reconsideration Order, 11 FCC Rcd 13042, 13045 ¶ 6 (1996).

[14] 47 C.F.R. § 51.771(b).

B. BellSouth's Position Regarding Reciprocal Compensation

13. BellSouth opposes Sprint PCS' proposed rate on four grounds.[15] First, BellSouth maintains that the Commission should ignore the Act and FCC rules quoted above and preclude Sprint PCS from assessing cost-based rates for reciprocal compensation because, it asserts, cost-based rates are contrary to public policy.

14. BellSouth's second argument is related to the first. As Sprint PCS understands it, BellSouth contends that even if Sprint PCS is entitled to recover its additional call termination costs in theory, it is not entitled to recover these costs in practice. According to BellSouth, Sprint PCS may recover only those costs associated with "the" most efficiently configured network. BellSouth says that its landline network is more efficient than Sprint PCS' mobile network, and therefore Sprint PCS' cost study must be based on BellSouth's costs rather than on its own costs.

15. Third, BellSouth argues that even if Sprint PCS is permitted to recover its own additional costs, it is limited to recovering only the traffic sensitive portion of an end-office switch, or an "equivalent facility."[16] BellSouth maintains that a Sprint PCS mobile switch is the "equivalent facility" of a BellSouth end office and that other Sprint PCS network elements (*e.g.*, backhaul, cell sites and spectrum) are the equivalent of loop plant in the landline network. BellSouth contends that because it cannot recover its loop costs in reciprocal compensation, Sprint PCS should not be permitted to recover its "loop-equivalent" costs.

16. Finally, Sprint PCS suspects (but does not know) that BellSouth will also want to challenge Sprint PCS' cost study and its proposed reciprocal compensation rate. Although the

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[15] Sprint PCS sets forth BellSouth's arguments to the best of its knowledge. BellSouth has provided no specific criticism regarding the rate proposed by Sprint PCS, *See* note 12 supra.

[16] FCC rules define call termination as "the switching of local telecommunications traffic at the terminating carrier's end office switch, or equivalent facility, and delivery of such traffic to the called party's premises." 47 C.F.R. § 51.701(d).

parties have held numerous negotiation sessions during which Sprint PCS explained its TELRIC study to BellSouth, BellSouth has not shared with Sprint PCS its views concerning the cost study.

IV. Basis for Adopting Sprint PCS' Position on Reciprocal Compensation

17. This is a simple question of fact: what are Sprint PCS' additional costs of call termination. Sprint PCS has prepared a TELRIC cost study that it believes complies fully with the Act and governing FCC rules. As noted above, at this time Sprint PCS does not know which, if any, portions of this cost study BellSouth intends to challenge. It appears that the principal issue that BellSouth wants to arbitrate is not the adequacy of Sprint PCS' cost study, but rather Sprint PCS' legal right to receive in reciprocal compensation any rate that is higher than the rate BellSouth charges for its own reciprocal compensation.

A. BellSouth's Claim that Sprint PCS Cannot Recover Its Own Additional Call Termination Cost is Inconsistent With Governing Law

18. BellSouth acknowledges that FCC rules permit a carrier to recover its own additional costs in reciprocal compensation:

> Asymmetrical reciprocal compensation is justified only when the cost of the connecting carrier exceeds the cost of the incumbent LEC.[17]

Nevertheless, BellSouth contends that Sprint PCS should be precluded from recovering its additional call termination costs and must instead use BellSouth's rates as a proxy because asymmetric rates would be "anticompetitive and contrary to sound public policy."[18]

19. Any policy arguments BellSouth may make in this proceeding are legally irrelevant and should be ignored. Congress has already considered the policy issues related to reciprocal compensation in competitive markets and has determined that "each carrier" is entitled to re-

[17] *Id.* at 4.

[18] *Id.* at 1.

ceive its "additional costs" associated with the "transport and termination on each carrier's network facilities of calls that originate on the network facilities of the other carrier's network."[19] The FCC has codified this statutory mandate,[20] and it has further established a procedure so a carrier "other than an incumbent LEC" can recover its own additional costs.[21] These FCC rules have been affirmed on appeal.[22]

20. BellSouth apparently wants this Commission to disregard the requirements set forth in Section 252(d) and the FCC rules even though the FCC's rules incorporate the very position that BellSouth had advocated. Specifically, BellSouth told the FCC that it is "not free to rewrite the statutory requirements and require symmetry":

> The Act allows for these differences [in costs among interconnecting carriers] as well as the opportunity of the carriers to recover their respective costs.[23]

21. This Commission does not have the flexibility to disregard the statutory requirements as BellSouth suggests — even though it may disagree with the policy judgment that Con-

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[19] 47 U.S.C. § 252(d)(2)(A)(emphasis added).

[20] *See* 47 C.F.R. § 51.701(e)("For purposes of this subpart, a reciprocal compensation arrangement between two carriers is one in which each of the two carriers receives compensation from the other carrier for the transport and termination on each carrier's network facilities of local telecommunications traffic that originates on the network facilities of the other carrier.")(emphasis added).

[21] *See* 47 C.F.R. § 51.711(b)("A state commission may establish asymmetrical rates for transport and termination of local telecommunications traffic only if the carrier other than the incumbent LEC . . . proves to the state commission on the basis of a cost study . . . that the forward-looking costs for a network efficiently configured and operated by the carrier other than the incumbent LEC . . . exceed the costs incurred by the incumbent LEC . . . and, consequently, that such that a higher rate is justified.").

[22] The Eighth Circuit vacated FCC Rule 51.711(b) shortly after its adoption. However, one year ago, the Eighth Circuit reinstated the Rule following the Supreme Court's reversal of its decision. *See* Iowa Utilities Board v. FCC, No. 96-3321, Order (8th Cir., June 10, 1999). Thus, BellSouth would have the FPSC disregard a FCC rule that the U.S. Supreme Court has affirmed.

[23] BellSouth Comments, CC Docket No. 96-98, at 73 (May 16, 1996). It appears that BellSouth took a similar position before the FPSC: "BellSouth argued that the applicable pricing standard for judging the reasonableness of the terms and conditions for reciprocal compensation clearly contemplates the recovery by each carrier of the costs associated with the termination of calls on its network and that mutual traffic exchange does not do this." Resolution of Petitions to Establish Nondiscriminatory Rates, Terms and Conditions for Interconnection, Docket No. 950985-TP, Order No. PSC-96-1231-FOF-TP (Oct. 1, 1996)(emphasis added).

gress has made. The commands of Section 252(d)(2) are unequivocal: "[A] State commission shall not consider the terms and conditions for reciprocal compensation to be just and reasonable unless . . . such terms determine [each carrier's] costs on the basis of a reasonable approximation of the additional costs of terminating such calls."[24]

B. BellSouth's Related Argument That Mobile Networks Are Not Efficient Also Lacks Merit

22. BellSouth's second argument is a variation of its first argument. BellSouth contends that even if Sprint PCS is entitled to recover its additional call termination costs in theory, it is not entitled to recover these costs in practice. According to BellSouth, the FCC's TELRIC standard requires use of "the most efficient, least cost forward looking technology," and BellSouth contends that its network and not Sprint PCS' network utilizes the most efficient technology:

> Sprint PCS has chosen a technology that is not the least-cost, most efficient available. Obviously, for the same footprint, the least-cost, most efficient technology is the lower of the two cost estimates (in this case, BST's costs).[25]

23. BellSouth's position is flatly inconsistent with FCC rules. The FCC's asymmetrical rule provides that a carrier "other than an incumbent LEC" may demonstrate that "the forward-looking costs for a network efficiently configured and operated by the carrier other than the incumbent LEC."[26] In adopting this rule, the FCC recognized that different technologies will have different costs but that each technology is entitled to recover its costs through an appropriate cost study.[27] Indeed, the FCC specifically directed state commissions to set paging carrier

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[24] 47 U.S.C. § 252(d)(2)(A)(ii)(emphasis added).

[25] BellSouth FCC Comments at 10-11.

[26] 47 C.F.R. § 51.711(b)(emphasis added).

[27] *See* Local Competition Order, 11 FCC Rcd at 16057 ¶ 1117 ("[T]he cost of CMRS termination . . . is generally considered to be greater than the cost of LEC termination.").

call termination rates "based on the forward-looking economic costs of such termination to the paging provider."[28]

24. Congress had determined that "each carrier" should receive its "additional costs," and the FCC has defined additional costs as traffic sensitive costs, but not non-traffic sensitive costs:

> Such non-traffic-sensitive costs, by definition, do not vary in proportion to the number of calls terminating over the LEC's facilities and, thus, are not "additional costs."[29]

Sprint PCS seeks to recover only the traffic sensitive costs it incurs in call termination, and the attached cost study identifies the traffic sensitive forward looking costs of an efficiently configured PCS network using the FCC's TELRIC cost model.

25. The fact that a PCS network contains more traffic sensitive components than landline networks does not suggest a PCS carrier is not using the most efficient technology currently available or the lowest cost network configuration. Sprint PCS' cost study does not attempt to demonstrate the total cost of operating its network, only its "additional costs" of call termination. Because a PCS network is more traffic sensitive than an ILEC network, that portion of a PCS' carriers costs recoverable in reciprocal compensation may be higher, but that does not mean its network as a whole is less efficient.

26. Moreover, a comparison of the features associated with wireless networks and landline networks is simply inappropriate. Wireless networks provide advantages not found in landline networks. These advantages accrue not just to mobile endusers, but to the landline customers that originate traffic to them. Because of the mobile functionality of wireless systems,

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[28] First Local Competition Order, 11 FCC Rcd at 16043-44 ¶ 1093 (emphasis added). *See also* 47 C.F.R. § 51.711(c).

[29] Local Competition Reconsideration Order, 11 FCC Rcd at 13045 at ¶ 6.

landline customers can reach individuals that would otherwise be unavailable. Thus landline customers benefit from Sprint PCS's wireless technology when they originate calls to Sprint PCS. Sprint PCS merely seeks to recover its actual forward-looking costs incurred on behalf of the landline customer.

27. BellSouth's position is further contradicted by the existing practice of asymmetric compensation between existing ILECs. As the testimony of Michael Hunsucker, attached hereto at tab 6, demonstrates, BellSouth currently pays existing ILECs asymmetric rates. Sprint PCS seeks only to apply the same principles to its network.

28. In the end, BellSouth would have the Commission believe that the FCC established its asymmetrical compensation rule when no carrier can take advantage of the rule because, according to BellSouth, all interconnecting carriers must use the ILEC's rate because only ILECs use efficient technologies and build efficient networks.

C. BellSouth's "Functional Equivalency" Argument Is Both Wrong and Legally Irrelevant

29. BellSouth next contends that even if Sprint PCS may recover its own additional costs, it may recover only the additional costs of its mobile switch and not the costs of traffic sensitive components of other network elements used in call termination. BellSouth's argument runs as follows:

1) The FCC has ruled that ILECs may recover the traffic sensitive portion of their end office switches, but not their loop costs.

2) FCC rules define call termination as "the terminating carrier's end office switch, or equivalent facility;"

3) CMRS mobile switching centers are "equivalent" to ILEC end office switches; and

4) Because ILECs do not recover their non-traffic sensitive loop costs, CMRS providers should be precluded from recovering their "loop equivalent" costs, including their traffic sensitive costs.

BellSouth therefore states that the FCC "has drawn the line at the [ILEC] end office switch for reciprocal compensation purposes. The same line should be drawn at the mobile switching center in the CMRS provider's network."[30]

30. There are numerous flaws in this BellSouth position. In the first place, the FPSC has already rejected BellSouth's position in a previous wireless arbitration case. In Wireless One Network, d/b/a Cellular One/Sprint-Florida Arbitration Order, Docket No. 971194-TP, Order No. PSC-98-0140-FOF-TP, 1998 Fla. PUC LEXIS 144, at *16 (Jan. 26, 1998), a cellular carrier argued that it was entitled to assess the LEC's tandem rate as its own rate for terminating compensation. The wireless carrier asserted that its MSC was equivalent to a LEC tandem switch, while its cell sites were equivalent to LEC end office switches. The LEC responded that cell sites were not equivalent to end offices because the LEC could not connect directly to the cell sites; that cell sites were rather more functionally equivalent to landline subscriber line carrier systems; and that therefore the cellular carrier should use the LEC's end-office termination rate as a proxy for its termination rate.

31. This Commission recognized at the outset that there are "a number of differences between the landline and mobile network technologies," and it declined the parties' invitation to examine and compare each cellular network component with LEC network components for purposes of determining whether they are "equivalent facilities" within the ambit of FCC Rule 51.701(d). The Commission instead found it "appropriate to construe the term 'equivalent facilities' more broadly:"

> Sprint and Wireless One both transport, switch, and terminate telecommunications traffic; therefore, the two systems are functionally equivalent, although they use different technologies. We also agree that the cell sites do provide essential functions associated with transport and "delivery of a call to the called party's premises," as set forth in FCC Rule 47 C.F.R. § 51.701(d). Wireless One's network

[30] BellSouth FCC Comments at 7.

facilities are, therefore, equivalent facilities for purposes of reciprocal compensation.

Id. at 17. As this Commission later explained, Rule 51.701(d) should be interpreted "to mean that these [switching and delivery] functions may be provided by equivalent facilities and not necessarily in the identical manner as that provided by the ILEC." Wireless One Network Reconsideration Order, Docket No. 971194-TP, Order No. PSC-98-0594-FOF-TP, 1998 Fla. PUC LEXIS 917, at *18 (April 27, 1998).

32. Even if the FPSC had not already addressed this issue, BellSouth's position is untenable. The FCC has defined call termination as "the switching of local telecommunications traffic at the terminating carrier's end office switch, or equivalent facility, and delivery of such traffic to the called party's premises."[31] Thus, even if Sprint PCS' mobile switches were deemed to be functionally equivalent to ILEC end office switches, Sprint PCS would still be entitled to recover the traffic sensitive components of network elements used in delivering BellSouth traffic to the Sprint PCS customers being called.

33. Finally, BellSouth's argument suffers from an even more fatal flaw. Congress did not state that a CMRS provider's ability to recover its call termination costs is limited to those CMRS network elements deemed functionally equivalent to compensable ILEC network elements. Nor did it state that each carrier may recover only its "additional costs" of switching. Rather, Congress declared that "each carrier" may recover its "additional costs" associated with the "termination on each carrier's network facilities of calls that originate on the network facilities of the other carrier."[32] Clearly, the statutory phrase "network facilities" encompasses mobile switching centers and other CMRS network elements, such as backhaul and base station transceivers.

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[31] 47 C.F.R. § 51.701(d)(emphasis added).

[32] 47 U.S.C. § 252(d)(2)(A)(emphasis added).

34. As one court noted recently, there are "fundamental technical differences between wireless and landline telephone systems" and attempting to compare them is "like comparing the proverbial apples and oranges."[33] And as the Montana Commission has recognized, in establishing rates for reciprocal compensation it is "more consistent with the language in the Act" to examine each carrier's costs than to attempt to compare the functional equivalency of various ILEC and CMRS network components:

> Ideally, rather than comparing Western's MTSOs with U S WEST's tandem switches, the Commission should determine transport and termination based on the specific costs incurred by each carrier or a reasonable approximation of the costs to terminate calls that originate on the other carrier's network.[34]

35. FPSC should decline BellSouth's invitation to compare the network elements in mobile CMRS networks with fixed ILEC networks. In the end, the attempt to compare "equivalent facilities" between particular network components utilized in landline and CMRS networks is a futile exercise given that the technologies are so different. More fundamentally, such a comparison does not address the central question posed by Section 252(d): whether a given network element used in call termination constitutes an "additional cost" — whether or not the network element is equivalent to elements in other networks — and is, therefore, recoverable in reciprocal compensation.

36. Sprint PCS has furnished BellSouth with a forward-looking cost study demonstrating Sprint PCS' additional costs and has explained its entitlement to an asymmetrical compensation rate for transport and termination of land-to-mobile traffic. The Sprint PCS traffic-sensitive network components included in this cost calculation, using the Sprint PCS Cost Model, are: the Mobile Switching Center ("MSC") which consists of a Mobile Telephone Ex-

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[33] U S WEST v. Minnesota PSC, 55 F. Supp. 2d 968, 978 (D. Minn. 1999).

[34] Western Wireless/U S WEST Arbitration Order, Order No. 5949b, at 14 ¶ 24 (Dec. 27, 1996).

change ("MTX") and a Base Station Controller ("BSC"); Backhaul – leased facilities from the MSC to the cell site; Basestation Transceiver Systems ("BTS"); Antennae and Structures (*e.g.*, monopoles and towers supporting the BTS and antennae); and Spectrum Licenses. The Sprint PCS Cost Model calculates the TELRIC of providing transport and termination. To the costs produced by this Model, Sprint PCS has added its common costs. This results in a per minute charge of $0.066 applicable to the transport and termination of land-to-mobile calls.

37. Currently, Sprint PCS is incurring these costs on every land-to-mobile call. Yet the reciprocal compensation rate that BellSouth has been paying to Sprint PCS is only $0.003776 per minute. In effect, Sprint PCS's mobile customers are today paying the difference for each and every land-to-mobile call. In other words, the rates paid by mobile customers of Sprint PCS are inflated by the unrecovered costs of terminating land-to-mobile calls. Correcting this situation by fully compensating Sprint PCS for the costs incurred in terminating land-to-mobile calls will allow Sprint PCS to pass the benefits of this full reimbursement onto its mobile customers. Correcting the current situation will also promote competition by allowing Sprint PCS to price its services more competitively with the landline carriers like BellSouth.

V. Statement of the Parties' Position Regarding Records Exchange

A. Position of Sprint PCS Regarding Records Exchange

38. Section VII of the draft agreement (Tab 2) is entitled "Records Exchange." This language was proposed by BellSouth approximately two weeks before the window for arbitration closed. The language improperly attempts to impose certain requirements on Sprint PCS that are not consistent with industry standards. In the alternative, Sprint PCS proposes language that would require the parties to exchange records in standard industry format. As explained in the testimony of Derek Canfield (Tab 9), BellSouth is improperly

mixing the exchange of records associated with local traffic and the exchange of records for access traffic. For the reasons set forth in that testimony, Sprint PCS recommends that its proposed language in the attached draft agreement be adopted.

B. Position of BellSouth Regarding Exchange of Records

39. BellSouth maintains that its billing systems are incapable of providing records in the industry standard format. It seeks to require Sprint PCS to provide it additional information to allow it to overcome the shortcomings of its systems.

VI. Basis for Adopting Sprint PCS' Position on Records Exchange.

40. Sprint PCS has proposed language which is consistent with industry standards. BellSouth has demonstrated that it can exchange access records with Sprint PCS without intermingling local records. BellSouth cannot now attempt to cut off the exchange of these access records and impose new additional requirements on Sprint PCS. Sprint PCS requests that the Commission adopt the records exchange language proposed by Sprint PCS.

* * * *

41. In further compliance with the requirements of Sections 252(b)(2), Sprint PCS is also attaching to this Petition for Arbitration the following direct testimony and related exhibits:

Tab 4 - Randy G. Farrar (Sprint PCS)
- Explains the Sprint PCS Cost Model and how Sprint PCS calculated its proposed reciprocal compensation rate.

Tab 5 - Bridger Mitchell (Charles River Associates)
- Addresses the methodology for calculating the additional costs of terminating interconnected local calls on PCS networks.

Tab 6 - Michael Hunsucker (Sprint PCS)
- Addresses the requirements of the Act and FCC Orders applicable to CMRS recovery of additional costs of terminating land-to-mobile local calls, and the pro-consumer aspect of adopting Sprint PCS's position.

Tab 7 - Tony Sabatino (Sprint PCS)
- Addresses the architecture, operation, and traffic sensitive costs associated with the Sprint PCS network.

Tab 8 - John Quackenbush (Sprint PCS)
- Addresses the appropriate cost of capital as an input to the Sprint PCS Cost Model.

Tab 9 - Derek Canfield (Sprint PCS)
- Addresses the necessity for requiring BellSouth to exchange records in standard industry format.

WHEREFORE, having fully complied with the requirements of the Act and having fully demonstrated the legal and factual basis for receiving cost-based compensation for terminating BellSouth's land-to-mobile local calls and exchanging records in standard industry format, Sprint PCS respectfully requests that the Commission adopt its position with respect to the unresolved issue and order Sprint PCS's proposed language incorporated into the attached Agreement.

DATED this 23rd day of June, 2000.

Respectfully submitted,

JOHN P. FONS
Ausley & McMullen
P. O. Box 391
Tallahassee, FL 32302
(850) 224-9115

and

Charles W. McKee, Esq.
Senior Attorney
Sprint PCS
4900 Main, 11th Floor
Kansas City, MO 64112
(816) 559-2521

ATTORNEYS FOR SPRINT PCS

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true copy of the foregoing has been furnished by hand delivery (*) this 23rd day of June, 2000, to the following:

Leah G. Cooper, Esq. *
c/o Nancy Sims
BellSouth Telecommunications, Inc.
150 S. Monroe St., Suite 400
Tallahassee, FL 32301

Beth Keating, Esq. *
Division of Legal Services
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399-0850

Walter D'Haeseleer *
Division of Communications
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399-0850

Attorney

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Sprint

Charles W. McKee
Legal Department

Sprint PCS

April 20, 2000

VIA FEDERAL EXPRESS

Mr. Randy Ham
BellSouth Telecommunications, Inc.
Room E3D1
3535 Colonnade Parkway
Birmingham, AL 35243

Re: Interconnection negotiations

Dear Randy:

Section 251(c) (1) of the Telecommunications Act of 1934, as amended, (the Act) provides for a voluntary interconnection negotiation period to commence upon the receipt by an incumbent LEC of a request for interconnection. Section 252(b)(1) of the Act provides that during the period from the 135th to the 160th day (inclusive) after the date on which the negotiation request was received, either party to a voluntary negotiation may petition a State commission to arbitrate any open issues.

Pursuant to our telephone conversation this morning, this letter is to confirm that BellSouth Telecommunications, Inc. ("BellSouth") and Sprint Spectrum, L.P. d/b/a Sprint PCS ("Sprint PCS") agree that January 18, 2000, is the date on which Sprint PCS requested interconnection negotiations for purposes of Section 252(a) of the Act. Sprint PCS and BellSouth agree that: (1) January 18, 2000, will be the basis for calculating the arbitration period under Section 252(b)(1) of the Act, and (2) The period during which either party may petition a State commission under this section of the Act for arbitration of any open issues will commence on May 31, 2000, and lapse on June 25, 2000.

The parties further agree not to challenge any term of this letter agreement in any proceeding before a State commission, the Federal Communications Commission, or any state or Federal court. In addition, Sprint PCS and BellSouth agree that should any third party successfully challenge this letter agreement or should any state commission, the Federal Communications Commission or any state or federal court rule that any other date prior to January 18, 2000, is the date on which Sprint PCS' request for negotiation was received, then this letter shall serve as a formal request by Sprint PCS to commence a new set of interconnection negotiations commencing on today's date pursuant to Sections 251 and 252 of the 1996 Act.

If you have any questions or need additional information, please give me a call at (816) 559-2521. I would appreciate your confirming your agreement to the terms of this letter by placing your signature at the bottom of this page and faxing back your company's concurrence to my attention at (816) 559-2591.

Thank you for your assistance in this matter.

Sincerely,

Charles W. McKee

AGREED TO AND APPROVED BY:

4/26/00

Randy Ham
Manager – Wireless Interconnection
BellSouth Telecommunications, Inc.

AGREEMENT

THIS AGREEMENT is made by and between BellSouth Telecommunications, Inc., ("BellSouth"), a Georgia corporation, and Sprint Spectrum L.P., a Delaware limited partnership, as agent and General Partner for WirelessCo, L.P., a Delaware limited partnership, and SprintCom, Inc., a Kansas corporation, all foregoing entities jointly d/b/a Sprint PCS ("Carrier") with offices at 4900 Main, Kansas City, MO 64112 and shall be deemed effective as of July 1, 2000, (the "Effective Date"). This Agreement may refer to either BellSouth or Carrier or both as a "party" or "parties."

WITNESSETH

WHEREAS, BellSouth is a local exchange telecommunications company authorized to provide telecommunications services in the states of Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, and Tennessee; and

WHEREAS, Carrier is a Commercial Mobile Radio Service ("CMRS") provider licensed by the Federal Communications Commission ("FCC") to provide CMRS in the State of Florida; and

WHEREAS, the parties wish to interconnect their facilities and exchange traffic for the purposes of fulfilling their obligations pursuant to sections 251, 252 and 271 of the Telecommunications Act of 1934 as amended by the Telecommunications Act of 1996 and to replace any and all other prior agreements, both written and oral;

NOW THEREFORE, in consideration of the mutual agreements contained herein, BellSouth and Carrier agree as follows:

I. Definitions

A. Commission is defined as the appropriate regulatory agency in each of BellSouth's nine state region: Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, and Tennessee.

B. Intermediary function is defined as the delivery, pursuant to this agreement or Commission directive, of local or toll (using traditional landline definitions) traffic to or from a local exchange carrier other than BellSouth; an ALEC; or another telecommunications company such as a CMRS provider other than Carrier through the network of BellSouth or Carrier from or to an end user of BellSouth or Carrier.

C. Local Traffic is defined for purposes of reciprocal compensation under this Agreement as: (1) any telephone call that originates on the network of Carrier within a Major Trading Area ("MTA") and terminates on the network of BellSouth in the same MTA and within the Local Access and Transport Area ("LATA") in which the call is handed off from Carrier to BellSouth, and (2) any telephone call that originates on the network of BellSouth that is handed off to Carrier in the same LATA in which the call originates and terminates on the network of Carrier in the MTA in which the call is handed off from BellSouth to Carrier. For purposes of this Agreement, LATA shall have the same definition as that contained in the Act, and MTA shall have the same definition as that contained in the FCC's rules.

D. Local Interconnection is defined for purposes of this Agreement as 1) the delivery of Local Traffic to be terminated on each party's local network so that end users of either party have the ability to reach end users of the other party without the use of any access code or substantial delay in the processing of the call; and 2) the LEC unbundled network features, functions, and capabilities set forth in this Agreement.

E. Percent of Interstate Usage (PIU) is defined as a factor to be applied to that portion of Non-Local Traffic comprised of interstate interMTA minutes of use in order to designate those minutes that should be rated as interstate access services minutes of use. The numerator includes all interstate interMTA minutes of use. The denominator includes all interMTA minutes of use.

F. Percent Local Usage (PLU) is defined as a factor to be applied to terminating minutes of use. The numerator is all "nonintermediary" Local minutes of use. The denominator is the total minutes of use including Local and Non-Local.

G. Telecommunications Act ("Act') means the Communications Act of 1934 (47, U.S.C. Section 1 et. seq.) as amended by Public Law 104-104 of the United States Congress effective February 8, 1996.

H. Non-Local Traffic is defined as all traffic that is not Local Traffic or access services, as described in section VI of this Agreement.

II. Purpose

The parties desire to enter into this Agreement consistent with all applicable federal, state and local statutes, rules and regulations in effect as of the date of its execution including, without limitation, the Act at Sections 251, 252 and 271. The access and interconnection obligations contained herein enable Carrier to provide CMRS in those areas where it is authorized to provide such services within the nine state region of BellSouth.

III. Term of the Agreement

The term of this Agreement shall be one year, beginning on the Effective Date and shall automatically renew for additional six (6) month terms unless either party provides written notice of termination to the other party at least sixty (60) days prior to the end of the then-current term.

IV. Local Interconnection and Compensation

A. The exchange of the parties' traffic on BellSouth's interLATA EAS routes shall be considered Local Traffic and compensation for the termination of such traffic shall be pursuant to the terms of this section. EAS routes are those exchanges within an exchange's Basic Local Calling Area, as defined in Section A3 of BellSouth's General Subscriber Services Tariff.

B. Each party will pay the other for terminating its Local Traffic on the other's network the local interconnection rates as set forth in Attachment B-1. Charges for terminating traffic will be in accumulated conversation minutes, whole and partial, measured from receipt of answer supervision to receipt of disconnect supervision and rounded up to the next whole minute at the close of the billing period. The charges for local interconnection are to be billed and paid monthly. Late payment fees, not to exceed 1 1/2% per month (or a lower percent as specified by an appropriate state regulatory agency or state law) after the due date may be assessed, if undisputed interconnection charges are not paid, within thirty (30) days after the due date of the monthly bill. All charges under this agreement shall be billed within one year from the time the charge was incurred, previously unbilled charges more than one year old shall not be billed by either party.

V. Methods of Interconnection

A. There are three appropriate methods of interconnecting facilities: (1) interconnection via purchase of facilities from either party or a third party; (2) physical collocation; and (3) virtual collocation where physical collocation is not practical for technical reasons or because of space limitations. Type 1, Type 2A and Type 2B interconnection arrangements described in BellSouth's General Subscriber Services Tariff, Section A35, as amended, may be purchased pursuant to this Agreement provided, however, that such interconnection arrangements shall be provided at the rates, terms and conditions set forth in this Agreement. Rates and charges for both virtual and physical collocation may be provided in a separate collocation agreement. Rates for virtual collocation will be based on BellSouth's Interstate Access Services Tariff, FCC #1, Section 20 and/or BellSouth's Intrastate Access Services Tariff, Section E20. Rates for physical collocation will be negotiated on an individual case basis.

B. The parties will accept and provide any of the preceding methods of interconnection. Reciprocal connectivity shall be established to at least one BellSouth access tandem within every LATA Carrier desires to serve, or Carrier may elect to interconnect directly at an end office for interconnection to end users served by that end office. Such interconnecting facilities shall conform, at a minimum, to the telecommunications industry standard of DS-1 pursuant to Telcordia Standard No. TR-NWT-00499. Signal transfer point, Signaling System 7 ("SS7") connectivity is required at each interconnection point after Carrier implements SS7 capability within its own network. Carrier may use a third party provider for its SS7 requirements. BellSouth will provide out-of-band signaling using Common Channel Signaling Access Capability where technically and economically feasible, in accordance with the technical specifications set forth in the BellSouth Guidelines to Technical Publication, TR-TSV-000905. The parties facilities' shall provide the necessary on-hook, off-hook answer and disconnect supervision and shall hand off calling party number ID when technically feasible. In the event a party interconnects via the purchase of facilities and/or services from the other party, the appropriate intrastate tariff, as amended from time to time, or as otherwise agreed by the parties, will apply. In the event that such facilities are used for two-way interconnection, the appropriate recurring charges for such facilities will be shared by the parties based upon percentages equal to the estimated or actual percentage of traffic on such facilities.

C. Nothing herein shall prevent Carrier from utilizing existing collocation facilities, purchased from the interexchange tariffs, for local interconnection; provided, however, that if Carrier orders new facilities for interconnection or rearranges any facilities presently used for its alternate access business in order to use such facilities for local interconnection hereunder and a BellSouth charge is applicable thereto, BellSouth shall only charge Carrier the lower of the interstate or intrastate tariffed rate or promotional rate.

D. The parties will establish trunk groups from the interconnecting facilities of subsection (A) of this section such that each party provides a reciprocal of each trunk group established by the other party. Notwithstanding the foregoing, each party may construct its network, including the interconnecting facilities, to achieve optimum cost effectiveness and network efficiency. BellSouth's treatment of Carrier as to said charges shall be consistent with BellSouth treatment of other local exchange carriers for the same charges. Unless otherwise agreed, BellSouth will provide or bear the cost of all trunk groups for the delivery of traffic from BellSouth to Carrier's Mobile Telephone Switching Offices within BellSouth's service territory, and Carrier will provide or bear the cost of all trunk groups for the delivery of traffic from Carrier to each BellSouth access tandem and end office at which the parties interconnect.

E. The parties will use an auditable PLU factor as a method for determining whether traffic is Local or Non-Local. The PLU factor will be used for traffic delivered by either party for termination on the other party's network.

F. When the parties provide an access service connection between an interexchange carrier ("IXC") and each other, each party will provide its own access services to the IXC. If access charges are billed, each party will bill its own access service rates to the IXC.

G. The ordering and provision of all services purchased from BellSouth by Carrier shall be as set forth in the BellSouth Telecommunications Wireless Customer Guide as that guide is amended by BellSouth from time to time during the term of this Agreement.

H. Nothing in this Agreement shall prohibit Sprint PCS from enlarging its CMRS network through management contracts with third parties for the construction and operation of a CMRS system under the SPCS brand name and license. Traffic originating on such extended networks shall be treated as Sprint PCS traffic under the terms and conditions of this Agreement. All billing for such traffic will be in the name of Sprint PCS, and subject to the terms and conditions of this Agreement.

VI. Non-Local Traffic Interconnection

A. The delivery of Non-Local Traffic by a party to the other party shall be reciprocal and compensation will be mutual. For terminating its Non-Local Traffic on the other party's network, each party will pay either the access charges described in paragraph (B) hereunder or the Non-Local Intermediary Charges described in paragraph (D) hereunder, as appropriate.

B. For originating and terminating intrastate or interstate interMTA Non-Local Traffic, each party shall pay the other BellSouth's intrastate or interstate, as appropriate, switched network access service rate elements on a per minute of use basis, which are set out in BellSouth's Intrastate Access Services Tariff or BellSouth's Interstate Access Services Tariff as those tariffs may be amended from time to time during the term of this Agreement.

C. Actual traffic measurements in each of the appropriate categories is the preferred method of classifying and billing traffic. If, however, either party cannot measure traffic in each category, then the parties shall agree on a surrogate method of classifying and billing traffic, taking into consideration territory served (e.g. MTA boundaries, LATA boundaries and state boundaries) and traffic routing of the parties.

D. If Non-Local Traffic originated by Carrier is delivered by BellSouth for termination to the network of a nonparty telecommunications carrier ("Nonparty Carrier"), then BST will bill Carrier and Carrier shall pay a $.002 per minute intermediary charge in addition to any charges that BellSouth may be obligated to pay to the Nonparty Carrier (collectively called "Non-Local Intermediary Charges"). The charges that BST may be obligated to pay to the Nonparty Carrier may change during

the term of this Agreement and that the appropriate rate shall be the rate in effect when the traffic is terminated. The parties shall agree for purposes of this section, and subject to verification by audit what percentage of the Non-Local Traffic delivered to BellSouth by Carrier shall be subject to Non-Local Intermediary Charges. None of the Non-Local Traffic delivered to Carrier by BellSouth shall be subject to the Non-Local Intermediary Charges.

VII. Records Exchange

BELL SOUTH PROPOSED LANGUAGE:

A. For purposes of this Agreement, Records Exchange shall mean the exchange of billing data relating to calls transiting BellSouth's network from an originating telecommunications carrier other than BellSouth and terminating to a telecommunications carrier other than BellSouth or the originating telecommunications carrier. Subject to Carrier providing all necessary information, BellSouth agrees to participate in Records Exchange for traffic which transits its network when both the originating and terminating parties participate in Records Exchange with BellSouth. Traffic from a network which does not participate in Records Exchange will be delivered by BellSouth, however, call records for traffic originated and/or terminated by a non-Records Exchange network will not be delivered to the originating and/or terminating network. Parties participating in Records Exchange with BellSouth are required to provide information necessary for BellSouth to identify the parties to be billed. Information required for Records Exchange includes, but is not limited to; (1) a unique Access Carrier Name Abbreviation (ACNA), (2) Regional Accounting Office code (RAO), (3) Operating Company Number (OCN) per state, (4) Percent Interstate Usage, (5) Percent Local Usage, (6) 800 Service Percent Interstate Usage and (7) Billing Interconnection Percentage. A default Billing Interconnection Percentage of 95% BellSouth and 5% Carrier will be used if Carrier does not file with NECA to establish a Billing Interconnection Percentage other than default. Carrier must support exchange of records for all intermediary calls BellSouth delivers from network providers to Carriers' network. This will includes messages from IXCs, facility based CLECs, ICOs and CMRSs, etc. Failure to comply with exchange of records, in Mechanized Exchange Carrier Access Billing (MECAB) format, for all network messages transiting BellSouth's network will result in termination of the Records Exchange portion of this agreement.

B. When Carrier desires BellSouth to deliver call records associated with intermediary and access traffic which BellSouth terminates to Carriers network, the parties agree to adopt the MECAB guidelines as the terms and conditions for such Records Exchange. Participation in a Records Exchange process requires that both parities are technically capable to support, and in full compliance with, MECAB.

C. Records Exchange will be provided for traffic which transits BellSouth's network at the access tandem level only. Parties desiring Records Exchange will

subscribe to access tandem level interconnections with BellSouth and will deliver all transit traffic to BellSouth over such access tandem level interconnections. Additionally exchange of records will necessitate both the originating and terminating networks to subscribe to dedicated NXX codes, which can be identified as belonging to the originating and terminating network. When the access tandem, in which interconnection occurs, does not have the capability to record messages and either surrogate or self reporting of messages and minutes of use occur, Records Exchange will not be possible and will not occur.

D. In a Records Exchange environment, the parties desiring to participate in Records Exchange with BellSouth, will be billed for miscellaneous usage charges, as defined in BellSouth's FCC No.1 and appropriate state access tariffs, (i.e. Local Number Portability queries and 800 Data Base queries) necessary to deliver certain types of calls. Should Carrier desire to avoid such charges Carrier may perform the appropriate data base query prior to delivery of such traffic to BellSouth.

E. Participation in Records Exchange is outside the reciprocal compensation requirements of this agreement. Records Exchange under this Section will result in the originating carrier compensating BellSouth at the intermediary rate in Section VI. D of this Agreement for traffic delivered to BellSouth's network which terminates to a third party network.

F. Commencement of exchange of records will begin no earlier than sixty days from the later date of, the date the contact is signed or the date that all necessary information as defined in Section VII. A above is provided.

SPRINT PCS PROPOSED LANGUAGE:

A. When the parties jointly provide switched access services to an interexchange carrier ("IXC") the parties will establish industry standard Meet Point Billing (MPB) access arrangements to support the exchange of traffic with the IXC. Pursuant to the procedures described in the most current Multiple Exchange Carrier Access Billing ("MECAB") document, the parties shall provide to each other the Switched Access Detail Usage Data and the Switched Access Summary Usage Data to bill for jointly provided switched access service, such as switched access Feature Groups B and D. The parties agree to provide this data to each other at no charge. Such exchange of data shall commence on the effective date of this Agreement.

B. If the procedures in the MECAB document are amended or modified, the parties shall implement such amended or modified procedures within a reasonable period of time. Each party shall provide the other party the billing name, billing address, and carrier identification ("CIC") of the IXCs that may utilize any portion of either party's network in a MPB arrangement in order to comply with the MPB notification process as outlined in the MECAB document. Each party shall implement

"Multiple Bill Alternative Implementation Option One" wherein each party bills the IXC for its portion of the jointly provided switched access services.

VIII. Provision of Network Elements

A. BellSouth shall, upon request of Carrier, and to the extent technically feasible, provide to Carrier access to its Network Elements for the provision of a Carrier telecommunications service. Any request by Carrier for access to a BellSouth Network Element that is not already available shall be treated as a Network Element bona fide request. Carrier will pay BellSouth the cost associated with the bona fide request if Carrier cancels the request or fails to purchase the service once completed. Carrier shall provide BellSouth access to its Network Elements as mutually agreed by the parties or as required by the Commission or the FCC.

B. A Network Element obtained by one party from the other party under this section may be used in combination with the facilities of the requesting party only to provide a telecommunications service, including obtaining billing and collection, transmission, and routing of the telecommunications service.

C. A separate agreement or an amendment to this Agreement may be required for utilization of the above referenced Network Elements.

IX. Access To Poles, Ducts, Conduits, and Rights of Way

BellSouth will provide to Carrier, pursuant to 47 U.S.C. § 224, as amended by the Act, nondiscriminatory access to any pole, duct, conduit, or right-of-way owned or controlled by BellSouth.

X. Access to 911/E911 Emergency Network

A. BellSouth and Carrier recognize that 911 and E911 services were designed and implemented primarily as methods of providing emergency services to fixed location subscribers. While BellSouth and Carrier recognize the need to provide "911-like" service to mobile subscribers, both parties recognize that current technological restrictions prevent an exact duplication of the services provided to fixed location customers. BellSouth will route "911-like" calls received from Carrier to the emergency agency designated by Carrier for such calls. Carrier will provide the information necessary to BellSouth so that each call may be properly routed.

B. BellSouth and Carrier recognize that the technology and regulatory requirements for the provision of "911-like" service by CMRS carriers are evolving and agree to modify or supplement the foregoing in order to incorporate industry accepted technical improvements that Carrier desires to implement and to permit Carrier to comply with applicable regulatory requirements.

XI. Directory Listings

A. Subject to execution of an agreement between Carrier and BellSouth's affiliate, BellSouth Advertising & Publishing Corporation, ("BAPCO"), (1) listings shall be included in appropriate White Pages or alphabetical directories; (2) Carrier's business subscribers' listings shall also be included in appropriate Yellow Pages, or classified directories; and (3) copies of such directories shall be delivered to Carrier's subscribers.

B. BellSouth will include Carrier's subscriber listings in BellSouth's directory assistance databases and BellSouth will not charge Carrier to maintain the Directory Assistance database. The parties will cooperate with each other in formulating appropriate procedures regarding lead time, timeliness, format and content of listing information.

C. BellSouth will provide Carrier a magnetic tape or computer disk containing the proper format for submitting subscriber listings. Carrier will provide BellSouth with its directory listings and daily updates to those listings, including new, changed, and deleted listings, in an industry-accepted format.

D. BellSouth and BAPCO will accord Carrier's directory listing information the same level of confidentiality which BellSouth and BAPCO accords its own directory listing information, and BellSouth shall limit access to Carrier's customer proprietary confidential directory information to those BellSouth or BAPCO employees who are involved in the preparation of listings.

E. Additional listings and optional listings may be provided by BellSouth at the rates set forth in the General Subscriber Services Tariff as the tariff is amended from time to time during the term of this Agreement.

XII. Access to Telephone Numbers

Carrier is responsible for interfacing with the North American Numbering Plan administrator for all matters dealing with dedicated NXXs. BellSouth will cooperate with Carrier in the provision of shared NXXs where BellSouth is the service provider.

XIII. Local Number Portability

The Permanent Number Portability (PNP) database supplies routing numbers for calls involving numbers that have been ported from one local service provider to another. PNP is currently being worked in industry forums. The results of these forums will dictate the industry direction of PNP. BellSouth will provide access to the PNP

database at rates, terms and conditions as set forth by BellSouth and in accordance with an effective FCC or Commission directive.

XIV. Access to Signaling and Signaling Databases

A. BellSouth will offer to Carrier use of its signaling network and signaling databases on an unbundled basis at BellSouth's published tariffed rates or at unbundled rates that may be available through non-tariffed arrangements. Signaling functionality will be available with both A-link and B-link connectivity.

B. Where interconnection is via B-link connections, charges for the SS7 interconnection elements are as follows: 1) Port Charge - BellSouth shall not bill an STP port charge nor shall BellSouth pay a port charge; 2) SS7 Network Usage - BellSouth shall bill its tariffed usage charge and shall pay usage billed by the Carrier at rates not to exceed those charged by BellSouth; 3) SS7 Link - BellSouth will bill its tariffed charges for only two links of each quad ordered. Application of these charges in this manner is designed to reflect the reciprocal use of the parties' signaling networks. Where interconnection is via A-link connections, charges for the SS7 interconnection elements are as follows: 1) Port Charge - BellSouth shall bill its tariffed STP port charge but shall not pay a termination charge at the Carrier's end office; 2) SS7 Network Usage - BellSouth shall bill its tariffed usage charge but shall not pay for any usage; 3) SS7 Link - BellSouth shall bill its tariffed charges for each link in the A-link pair but shall not pay the Carrier for any portion of those links.

XV. Network Design and Management

A. The parties will work cooperatively to install and maintain reliable interconnected telecommunications networks, including but not limited to, maintenance contact numbers and escalation procedures. BellSouth will provide public notice of changes in the information necessary for the transmission and routing of services using its local exchange facilities or networks, as well as of any other changes that would affect the interoperability of those facilities and networks.

B. The interconnection of all networks will be based upon accepted industry/national guidelines for transmission standards and traffic blocking criteria.

C. The parties will work cooperatively to apply sound network management principles by invoking appropriate network management controls.

D. Neither party intends to charge rearrangement, reconfiguration, disconnection, termination or other non-recurring fees that may be associated with the initial reconfiguration of either party's network interconnection arrangement contained in this Agreement. However, the interconnection reconfigurations will have to be considered individually as to the application of a charge. Notwithstanding the

foregoing, the parties do intend to charge non-recurring fees for any additions to, or added capacity to, any facility or trunk purchased. Parties who initiate SS7 STP changes may be charged authorized non-recurring fees from the appropriate tariffs.

E. The parties will provide Common Channel Signaling (CCS) information to one another, where available and technically feasible, in conjunction with all traffic in order to enable full interoperability of CLASS features and functions except for call return. All CCS signaling parameters will be provided, including automatic number identification (ANI), originating line information (OLI) calling party category, charge number, etc. All privacy indicators will be honored, and the parties agree to cooperate on the exchange of Transactional Capabilities Application Part (TCAP) messages to facilitate full interoperability of CCS-based features between the respective networks.

F. For network expansion, the parties will review engineering requirements on a quarterly basis and establish forecasts for trunk utilization as required by Section V of this Agreement. New trunk groups will be implemented as stated by engineering requirements for both parties.

G. The parties will provide each other with the proper call information, including all proper translations for routing between networks and any information necessary for billing where BellSouth provides recording capabilities. This exchange of information is required to enable each party to bill properly.

XVI. Auditing Procedures

A. Upon thirty (30) days written notice, each party must provide the other the ability and opportunity to conduct an annual audit to ensure the proper billing of traffic between the parties. The parties will retain records of call detail for a minimum of nine months from which the PLU, the percent intermediary traffic, the percent interMTA traffic, and the PIU can be ascertained. The audit shall be accomplished during normal business hours at an office designated by the party being audited. Audit request shall not be submitted more frequently than one (1) time per calendar year. Audits shall be performed by a mutually acceptable independent auditor paid for by the party requesting the audit. The PLU shall be adjusted based upon the audit results and shall apply to the usage for the quarter the audit was completed, the usage for the quarter prior to the completion of the audit, and to the usage for the two quarters following the completion of the audit.

B. Should Carrier in the future provide toll services through the use of network switched access services, then all jurisdictional report requirements, rules and regulations specified in E2.3.14 of BellSouth's Intrastate Access Services Tariff will apply to Carrier. After the Local Traffic percentage has been determined by use of the PLU factor for application and billing of Local Interconnection, the PIU factor will be used for application and billing of interstate and intrastate access charges, as appropriate.

XVII. Liability and Indemnification

A. EXCEPT AS OTHERWISE PROVIDED FOR IN THIS AGREEMENT OR IN THIS SECTION XVII, NEITHER PARTY SHALL BE LIABLE TO THE OTHER PARTY FOR ANY INDIRECT, INCIDENTAL, CONSEQUENTIAL, RELIANCE, PUNITIVE, OR SPECIAL DAMAGES SUFFERED BY THE OTHER PARTY (INCLUDING WITHOUT LIMITATION DAMAGES FOR HARM TO BUSINESS, LOST REVENUES, LOST SAVINGS, OR LOST PROFITS SUFFERED BY THE OTHER PARTY), REGARDLESS OF THE FORM OF ACTION, WHETHER IN CONTRACT, WARRANTY, STRICT LIABILITY, OR TORT, INCLUDING WITHOUT LIMITATION NEGLIGENCE OF ANY KIND WHETHER ACTIVE OR PASSIVE, AND REGARDLESS OF WHETHER THE PARTIES KNEW OF THE POSSIBILITY THAT SUCH DAMAGES COULD RESULT.

B. Neither party shall be liable to the other for any act or omission of any other telecommunications company providing a portion of a service under this Agreement, nor shall either party hold liable any other telecommunications company providing a portion of a service under this Agreement for any act or omission of BellSouth or Carrier.

C. Neither party is liable for damages to the other party's terminal location, POI, nor customer's premises resulting from the furnishing of a service, including but not limited to the installation and removal of equipment and associated wiring, unless the damage is caused by a party's gross or willful negligence or intentional misconduct.

D. Each party shall be indemnified, defended and held harmless by the other party against any claim, loss or damage arising from the other party's acts or omissions under this Agreement, including without limitation: 1) Claims for libel, slander, invasion of privacy, or infringement of copyright arising from the other party's own communications; 2) Claims for patent infringement arising from combining or using the service furnished by either party in connection with facilities or equipment furnished by either party or either party's customer; 3) any claim, loss, or damage claimed by a customer of either party arising from services provided by the other party under this Agreement; or 4) all other claims arising out of an act or omission of the other party in the course of using services provided pursuant to this Agreement. Each party's liability to the other for any loss, cost, claim, injury or liability or expense, including reasonable attorney's fees relating to or arising out of any negligent act or omission in its performance of this Agreement whether in contract or in tort, shall be limited to a credit for the actual cost of the services or functions not performed or improperly performed.

E. A party may, in its sole discretion, provide in its tariffs and contracts with its Customer and third parties that relate to any service, product or function provided or contemplated under this Agreement, that to the maximum extent permitted by Applicable Law, such party shall not be liable to Customer or third party for (i) any Loss relating to or arising out of this Agreement, whether in contract, tort or otherwise, that exceeds the amount such party would have charged that applicable person for the service, product or function that gave rise to such Loss and (ii) Consequential Damages. To the extent that a party elects not to place in its tariffs or contracts such limitations of liability, and the other party incurs a Loss as a result thereof, such party shall indemnify and reimburse the other party for that portion of the Loss that would have been limited had the first party included in its tariffs and contracts the limitations of liability that such other party included in its own tariffs at the time of such Loss.

F. Neither BellSouth nor Carrier shall be liable for damages to the other's terminal location, POI, or other company's customers' premises resulting from the furnishing of a service, including, but not limited to, the installation and removal of equipment or associated wiring, except to the extent caused by a company's negligence or willful misconduct or by a company's failure to properly ground a local loop after disconnection.

G. Under no circumstance shall a party be responsible or liable for indirect, incidental, or consequential damages, including, but not limited to, economic loss or lost business or profits, damages arising from the use or performance of equipment or software, or the loss of use of software or equipment, or accessories attached thereto, delay, error, or loss of data. In connection with this limitation of liability, each party recognizes that the other party may, from time to time, provide advice, make recommendations, or supply other analyses related to the Services, or facilities described in this Agreement, and, while each party shall use diligent efforts in this regard, the Parties acknowledge and agree that this limitation of liability shall apply to provision of such advice, recommendations, and analyses.

H. The party providing services hereunder, its affiliates and its parent company, shall be indemnified, defended and held harmless by the party receiving services hereunder against any claim, loss or damage arising from the receiving company's use of the services provided under this Agreement pertaining to (1) claims for libel, slander or invasion of privacy arising from the content of the receiving company's own communications, or (2) any claim, loss or damage claimed by the customer of the party receiving services arising from such company's use or reliance on the providing company's services, actions, duties, or obligations arising out of this Agreement.

I. Notwithstanding any other provision of this Agreement, claims for damages by Carrier or Carrier's clients or any other person or entity resulting from the gross negligence or willful misconduct of BellSouth shall not be subject to such limitation of liability.

J. Notwithstanding any other provision of this Agreement, claims for damages by BellSouth or any other person or entity resulting from the gross negligence or willful misconduct of Carrier shall not be subject to such limitation of liability.

K. Neither party assumes liability for the accuracy of the data provided to it by the other party.

L. No license under patents (other than the limited license to use) is granted by either party or shall be implied or arise by estoppel, with respect to any service offered pursuant to this Agreement.

M. Each party's failure to provide or maintain services offered pursuant to this Agreement shall be excused by labor difficulties, governmental orders, civil commotion, criminal actions taken against them, acts of God and other circumstances beyond their reasonable control.

N. EXCEPT AS SPECIFICALLY PROVIDED TO THE CONTRARY IN THIS AGREEMENT, NEITHER PARTY MAKES ANY REPRESENTATIONS OR WARRANTIES TO THE OTHER PARTY CONCERNING THE SPECIFIC QUALITY OF ANY SERVICES, OR FACILITIES PROVIDED UNDER THIS AGREEMENT. THE PARTIES DISCLAIM, WITHOUT LIMITATION, ANY WARRANTY OR GUARANTEE OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARISING FROM COURSE OF PERFORMANCE, COURSE OF DEALING, OR FROM USAGES OF TRADE.

O. The obligations of the parties contained within this section shall survive the expiration of this Agreement.

XVIII. More Favorable Provisions

A. BellSouth shall make available, pursuant to 47 USC § 252 and the FCC rules and regulations regarding such availability, to Carrier any interconnection, service, or network element provided under any other agreement filed and approved pursuant to 47 USC § 252. The Parties shall adopt all rates, terms and conditions concerning such other interconnection, service or network element and any other rates, terms and conditions that are interrelated or were negotiated in exchange for or in conjunction with the interconnection, service or network element being adopted. The adopted interconnection, service, or network element and agreement shall apply to the same states as such other agreement and for the identical term of such other agreement.

B. If Carrier changes its name or makes changes to its company structure or identity due to a merger, acquisition, transfer or any other reason, it is the responsibility of

Carrier to notify BellSouth of said change and request that an amendment to this Agreement, if necessary, be executed to reflect said change.

C. No modification, amendment, supplement to, or waiver of the Agreement or any of its provisions shall be effective and binding upon the Parties unless it is made in writing and duly signed by the Parties.

D. Execution of this Agreement by either Party does not confirm or infer that the executing Party agrees with any decision(s) issued pursuant to the Telecommunications Act of 1996 and the consequences of those decisions on specific language in this Agreement. Neither Party waives its rights to appeal or otherwise challenge any such decision(s) and each Party reserves all of its rights to pursue any and all legal and/or equitable remedies, including appeals of any such decision(s).

E. In the event that any effective legislative, regulatory, judicial or other legal action materially affects any material terms of this Agreement, or the ability of Carrier or BellSouth to perform any material terms of this Agreement, Carrier or BellSouth may, on thirty (30) days' written notice require that such terms be renegotiated, and the Parties shall renegotiate in good faith such mutually acceptable new terms as may be required. In the event that such new terms are not renegotiated within ninety (90) days after such notice, the Dispute shall be referred to the Dispute Resolution procedure set forth in Section XX.

F. If any provision of this Agreement, or the application of such provision to either Party or circumstance, shall be held invalid, the remainder of the Agreement, or the application of any such provision to the Parties or circumstances other than those to which it is held invalid, shall not be effective thereby, provided that the Parties shall attempt to reformulate such invalid provision to give effect to such portions thereof as may be valid without defeating the intent of such provision.

XIX. Taxes and Fees

A. Definition. For purposes of this section, the terms "taxes" and "fees" shall include but not be limited to federal, state or local sales, use, excise, gross receipts or other taxes or tax-like fees of whatever nature and however designated (including tariff surcharges and any fees, charges or other payments, contractual or otherwise, for the use of public streets or rights of way, whether designated as franchise fees or otherwise) which are imposed, or sought to be imposed, on or with respect to the services furnished hereunder or measured by the charges or payments therefor.

B. Taxes And Fees Imposed Directly On Either Providing Party Or Purchasing Party.

1. Taxes and fees imposed on the providing party, which are neither permitted nor required to be passed on by the providing party to its customer, shall be borne and paid by the providing party.

2. Taxes and fees imposed on the purchasing party, which are not required to be collected and/or remitted by the providing party, shall be borne and paid by the purchasing party.

C. Taxes And Fees Imposed On Purchasing Party But Collected And Remitted By Providing Party.

1. Taxes and fees imposed on the purchasing party shall be borne by the purchasing party, even if the obligation to collect and/or remit such taxes or fees is placed on the providing party.

2. To the extent permitted by applicable law, any such taxes and fees shall be shown as separate items on applicable billing documents between the Parties. Notwithstanding the foregoing, the purchasing party shall remain liable for any such taxes and fees regardless of whether they are actually billed by the providing party at the time that the respective service is billed.

3. If the purchasing party determines that in its opinion any such taxes or fees are not payable, the providing party shall not bill such taxes or fees to the purchasing party if the purchasing party provides written certification, reasonably satisfactory to the providing party, stating that it is exempt or otherwise not subject to the tax or fee, setting forth the basis therefor, and satisfying any other requirements under applicable law. If any authority seeks to collect any such tax or fee that the purchasing party has determined and certified not to be payable, or any such tax or fee that was not billed by the providing party, the purchasing party shall have the right, at its own expense, to contest the same in good faith, in its own name or on the providing party's behalf. In any such contest, the purchasing party shall promptly furnish the providing party with copies of all filings in any proceeding, protest, or legal challenge, all rulings issued in connection therewith, and all correspondence between the purchasing party and the governmental authority.

4. In the event that all or any portion of an amount sought to be collected must be paid in order to contest the imposition of any such tax or fee, or to avoid the existence of a lien on the assets of the providing party during the pendency of such contest, the purchasing party shall be responsible for such payment and shall be entitled to the benefit of any refund or recovery.

5. If it is ultimately determined that any additional amount of such a tax or fee is due to the imposing authority, the purchasing party shall pay such additional amount, including any interest and penalties thereon.

6. Notwithstanding any provision to the contrary, the purchasing party shall protect, indemnify and hold harmless (and defend at the purchasing party's expense) the providing party from and against any such tax or fee, interest or penalties thereon, or other charges or payable expenses (including reasonable attorney fees) with respect thereto, which are incurred by the providing party in connection with any claim for or contest of any such tax or fee.

7. Each party shall notify the other party in writing of any assessment, proposed assessment or other claim for any additional amount of such a tax or fee by a governmental authority; such notice to be provided at least ten (10) days prior to the date by which a response, protest or other appeal must be filed, but in no event later than thirty (30) days after receipt of such assessment, proposed assessment or claim.

8. The Purchasing Party shall have the right, at its own expense, to claim a refund or credit, in its own name or on the Providing Party's behalf, of any such tax or fee that it determines to have paid in error, and the Purchasing Party shall be entitled to any recovery thereof.

D. Taxes And Fees Imposed On Providing Party But Passed On To Purchasing Party.

1. Taxes and fees imposed on the providing party, which are permitted or required to be passed on by the providing party to its customer, shall be borne by the purchasing party.

2. To the extent permitted by applicable law, any such taxes and fees shall be shown as separate items on applicable billing documents between the Parties. Notwithstanding the foregoing, the purchasing party shall remain liable for any such taxes and fees regardless of whether they are actually billed by the providing party at the time that the respective service is billed.

3. If the purchasing party disagrees with the providing party's determination as to the application or basis of any such tax or fee, the Parties shall consult with respect to the imposition and billing of such tax or fee and with respect to whether to contest the imposition of such tax or fee. Notwithstanding the foregoing, the providing party shall retain ultimate responsibility for determining whether and to what extent any such taxes or fees are applicable, and the purchasing party shall abide by such determination and pay such taxes or fees to the providing party. The providing party shall further retain ultimate responsibility for determining whether and how to contest the imposition of such taxes or fees; provided, however, that any such contest undertaken at the request of the purchasing party shall be at the purchasing party's expense.

4. In the event that all or any portion of an amount sought to be collected must be paid in order to contest the imposition of any such tax or fee, or to avoid the

existence of a lien on the assets of the providing party during the pendency of such contest, the purchasing party shall be responsible for such payment and shall be entitled to the benefit of any refund or recovery.

5. If it is ultimately determined that any additional amount of such a tax or fee is due to the imposing authority, the purchasing party shall pay such additional amount, including any interest and penalties thereon.

6. Notwithstanding any provision to the contrary, the purchasing party shall protect, indemnify and hold harmless (and defend at the purchasing party's expense) the providing party from and against any such tax or fee, interest or penalties thereon, or other charges or payable expenses (including reasonable attorney fees) with respect thereto, which are incurred by the providing party in connection with any claim for or contest of any such tax or fee.

7. Each party shall notify the other party in writing of any assessment, proposed assessment or other claim for any additional amount of such a tax or fee by a governmental authority; such notice to be provided, if possible, at least ten (10) days prior to the date by which a response, protest or other appeal must be filed, but in no event later than thirty (30) days after receipt of such assessment, proposed assessment or claim.

E. Mutual Cooperation. In any contest of a tax or fee by one Party, the other Party shall cooperate fully by providing records, testimony and such additional information or assistance as may reasonably be necessary to pursue the contest. Further, the other Party shall be reimbursed for any reasonable and necessary out-of-pocket copying and travel expenses incurred in assisting in such contest.

XX. Treatment of Proprietary and Confidential Information

A. The parties acknowledge that it may be necessary to provide each other, during the term of this Agreement, with certain confidential information, including trade secret information, including but not limited to, technical and business plans, technical information, proposals, specifications, drawings, procedures, customer account data, call detail records and like information (hereinafter collectively referred to as "Information"). All Information shall be in writing or other tangible form and clearly marked with a confidential, private or proprietary legend and that the Information will be returned to the owner within a reasonable time. The Information shall not be copied or reproduced in any form. The parties shall not disclose any Information received. Both parties will protect the Information received from distribution, disclosure or dissemination to anyone except employees of the parties with a need to know such Information and which employees agree to be bound by the terms of this Section. Both parties will use the same standard of care to protect Information received as they would use to protect their own confidential and proprietary Information.

B. Visually disclosed information shall be deemed Confidential Information only if contemporaneously identified as such and reduced to writing and delivered to the other Party with a statement or marking of confidentiality within thirty (30) calendar days after oral or visual disclosure. To the extent negotiations between Parties are communicated orally, the substance of such negotiations such as proposals and counter proposals, shall be considered Confidential Information, whether or not marked as such: orders for services, usage information in any form, and Customer Proprietary Network Information ("CPNI") as that term is defined by the Act and the rules and regulations of the FCC ("Confidential and/or Proprietary Information").

C. Notwithstanding the foregoing, both parties agree that there will be no obligation to protect any portion of the Information that is either: 1) made publicly available by the owner of the Information or lawfully disclosed by a nonparty to this Agreement; 2) lawfully obtained from any source other than the owner of the Information; 3) previously known to the receiving party without an obligation to keep it confidential; or 4) requested by a governmental agency, provided that the party upon whom the request is made shall notify the party who originally provided the confidential Information at least seven (7) days prior to its release to the agency.

D. The obligations of this Section XX shall survive the expiration of this Agreement for a period of two (2) years.

XXI. Resolution of Disputes

Except as otherwise stated in this Agreement, if any dispute arises as to the interpretation of any provision of this Agreement or as to the proper implementation of this Agreement, the parties will initially refer the issue to the appropriate company representatives . If the issue is not resolved within 30 days, either party may petition the Commission for a resolution of the dispute. However, each party reserves the right to seek judicial review of any ruling made by the Commission concerning this Agreement.

XXII. Limitation of Use

This Agreement shall not be proffered by either party in another jurisdiction as evidence of any concession or as a waiver of any position taken by the other party in that jurisdiction or for any other purpose.

XXIII. Waivers

Any failure by either party to insist upon the strict performance by the other party of any of the provisions of this Agreement shall not be deemed a waiver of any of the provisions of this Agreement, and each party, notwithstanding such failure, shall have the right thereafter to insist upon the specific performance of any and all of the provisions of this Agreement.

XXIV. Assignment

No party may assign any of its rights or delegate any of its obligations under this Agreement without the prior written consent of the other party, which will not be unreasonably withheld.

XXV. Amendment

This Agreement may not be amended in any way except upon written consent of the parties.

XXVI. Severability

In the event that any provision of this Agreement shall be held invalid, illegal, or unenforceable, it shall be severed from the Agreement and the remainder of this Agreement shall remain valid and enforceable and shall continue in full force and effect; provided however, that if any severed provisions of this Agreement are essential to any party's ability to continue to perform its material obligations hereunder, the parties shall immediately begin negotiations of new provisions to replace the severed provisions.

XXVII. Survival

Any liabilities or obligations of a party for acts or omissions prior to the cancellation or termination of this Agreement, any obligation of a party under the provisions regarding indemnification, confidential information, limitations of liability and any other provisions of this Agreement which, by their terms, are contemplated to survive (or be performed after) termination of this Agreement, shall survive cancellation or termination thereof.

XXVIII. Governing Law

This Agreement shall be governed by, and construed and enforced in accordance with, the laws of the State of Georgia, without regard to its conflict of laws principles, and the Communications Act of 1934 as amended by the Act.

XXIX. Arm's Length Negotiations

This Agreement was executed after arm's length negotiations between the undersigned parties and reflects the conclusion of the undersigned that this Agreement is in the best interests of all parties.

XXX. Filing of Agreement

Upon execution of this Agreement it shall be filed with the appropriate state regulatory agency pursuant to the requirements of Section 252 of the Act. If the regulatory agency imposes any filing or public interest notice fees regarding the filing or approval of the Agreement, Carrier shall be responsible for publishing the required notice and the publication and/or notice costs shall be borne by Carrier.

XXXI. Notices

A. Every notice, consent, approval, or other communications required or contemplated by this Agreement shall be in writing and shall be delivered in person, via overnight mail, or given by postage prepaid mail, address to:

BellSouth Telecommunications, Inc.
675 W. Peachtree St. N.E.
Suite 4300
Atlanta, Georgia 30375
Attn: Legal Dept. "Wireless" Attorney

Sprint PCS
Mailstop: MOKCMM1101
4900 Main
Kansas City, MO 64112
Attn: Legal Regulatory Dept.

Copy to:
Sprint PCS
Mailstop: KSOPAM0101
11880 College Blvd.
Overland Park, KS 66210
Attn: Director-National Network Eng.

or at such other address as the intended recipient previously shall have designated by written notice to the other party.

B. Where specifically required, notices shall be by certified or registered mail. Unless otherwise provided in this Agreement, notice by mail shall be effective on the date it is officially recorded as delivered by return receipt or equivalent, and in the absence of such record of delivery, it shall be presumed to have been delivered the fifth day, or next business day after the fifth day, after it was deposited in the mails; and by overnight mail, the day after being sent.

XXXII. Entire Agreement

This Agreement and its Attachments, incorporated herein by this reference, sets forth the entire understanding and supersedes prior agreements between the parties relating to the subject matter contained herein and merges all prior discussions between them, and neither party shall be bound by any definition, condition, provision, representation, warranty, covenant or promise other than as expressly stated in this Agreement or as is contemporaneously or subsequently set forth in writing and executed by a duly authorized officer or representative of the party to be bound thereby. In the event of any conflict between the term(s) of this Agreement and those of an applicable tariff, the terms of this Agreement shall control.

BellSouth Telecommunications, Inc.	**Sprint Spectrum, L.P.**
By: _____	By: _____
Jerry D. Hendrix	
_____	_____
Name	Name
Senior Director	
_____	_____
Title	Title
_____	_____
Date	Date

Attachment B-1

CMRS Local Interconnection Rates
(All rates are Per Minute of Use)

Florida

Mobile-to-Land

Type 1 (End Office Switched):	$.003776
Type 2A (Tandem Switched):	$.003776
Type 2B (Dedicated End Office):	$.002

Land-to-Mobile $.066

SPRINT PCS COST MODEL

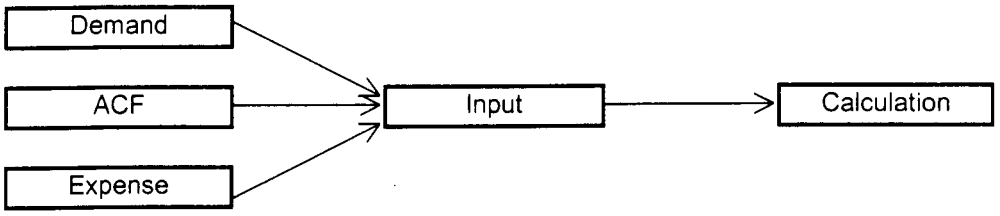
DESCRIPTION OF SPRINT PCS COST MODEL

The Sprint PCS Cost Model (SPCSCM) is written in Microsoft Excel. It consists of five individual modules. They are:

1. Demand Module
2. Annual Charge Factor Module
3. Expense Module
4. Input Module
5. Calculation Module

Each module is an individual Excel workbook. There are no macros in the model; rather, all calculations are performed within the Excel workbooks. (Note: in Excel terminology, a workbook refers to an actual file, while a worksheet is one of many tabs within a workbook.)

The Demand Module, Annual Charge Factor Module, and Expense Module provide back-up information for the inputs contained in the Input Module, and are directly linked to the Input Module. The Calculation Module obtains all inputs from the Input Module. The following diagram illustrates the relationship between the various modules.



SPRINT PCS COST MODEL

DESCRIPTION OF DEMAND MODULE
(SPCS_Demand_XX.xls)

The Demand Module determines the average number of MOU per subscriber at both the MTX (Mobile Telephone Exchange) and the Cell Site. The forecasted number of subscribers is then used to forecast total MOU.

1. INTRODUCTION WORKSHEET

The Introduction Worksheet lists all of the worksheets within the workbook.

2. CALCULATIONS WORKSHEET

The Calculations Worksheet contains all of the necessary MOU and subscriber demand inputs.

Rows 7 - 10: Number of Days in Study - The number of days in each month's MOU demand data.

Rows 13 - 19: Average Subscribers - The average number of subscribers in each month's study. The average is equal to the sum of the beginning month total and ending month total, divided by two.

Rows 21 - 35: MTX MOU - The total MOU processed by each MTX in each month studied. This data is collected on a per trunk group basis.

Rows 38 - 44: MTX MOU Per Subscriber Per Month - For each major market, the Net MTX MOU divided by the Average Subscribers.

Rows 47 - 61: Cell Site MOU - The total MOU processed by each cell site, in aggregate for each MSC, in each month studied.

Rows 64 - 70: Cell Site MOU Per Subscriber Per Month - For each major market, the Cell Site MOU divided by the Average Subscribers.

Rows 73 - 79: MTX / Cell Site MOU Per Year Per Subscriber - The total MTX or Cell Site MOU, divided by the Number of Days (Row 10), multiplied times 365 days.

Rows 82 - 96: Multiple MTX MOU - The number of MOU on inter-MSC trunk groups. Since these MOU are counted at both the originating

and terminating MSCs, the number is divided by two to avoid double-counting.

Rows 99 - 102: Ratio Multiple MTX to Total MTX MOU - The total Multiple MTX MOU (Row 96) divided by the Total MTX MOU (Row 35). This ratio represents the percent of traffic which must be routed through multiple MTXs to complete or continue the call.

3. SUMMARY WORKSHEET

The Summary Worksheet summarizes the results of the Calculations Worksheet. The following discussion applies to the first market area only. The process is repeated for each market area. Grand totals for the entire study area are found at the bottom of the worksheet.

Row 8: Name of market area.

Row 9: Subscribers - Year End - The number of year-end subscribers according to the most recent subscriber forecast.

Row 10: Subscribers - Mid-year - The average number of subscribers in each forecasted year. The average is equal to the sum of the beginning year total and ending year total, divided by two.

Row 12: MOU / Subscriber - MTX - The average MTX MOU per subscriber per year, as calculated on the "Calculations" worksheet, rows 73 - 79.

Row 13: MOU / Subscriber - Cell Site - The average cell site MOU per subscriber per year, as calculated on the "Calculations" worksheet, rows 73 - 79.

Row 15: Total MOU - MTX - The total annual MTX MOU, equal to the number of Subscribers - Mid-year (Row 10) times the MOU / Subscriber - MTX (Row 12).

Row 16: Total MOU - Cell Site - The total annual cell site MOU, equal to the number of Subscribers - Mid-year (Row 10) times the MOU / Subscriber - Cell Site (Row 13).

Row 40: Grand Total MOU - MTX - The total number of MTX MOU for the entire study area.

Row 41: Grand Total MOU - Cell Site - The total number of cell site MOU for the entire study area.

Row 43: Grand Total - Multiple MTX - % MTX MOU - The percent of traffic that is routed through multiple MTXs.

Sprint PCS Cost Model (SPCS_CM)

Version 2, April 2000

Welcome to the Sprint-PCS Cost Model, Version 1, Demand module. This module develops the MOU demand for each component of the Sprint PCS network. It is written in Microsoft Excel 97. A brief description of each worksheet follows.

Demand Module Worksheet Descriptions:

(All inputs are in BLUE font)
(All inputs linked to other workbooks or worksheets are in GREEN font)

Introduction	Introduction
Calculations	Calculates MOU forecast for each network component.
Summary	Summary page for demand.

Sprint PCS - Florida
Demand Module
Calculations Worksheet

A	B	C	D	E	F	G	H	I	J
		Number of Days in Study							
		1999							
Row #	Description	October	November	December	January	February	March	April	May
10	Number of days								
11									
12									
13		Average Subscribers							
14		1999							
15	Market	October	November	December	January	February	March	April	May
16	Jacksonville								
17	Miami								
18	Tampa								
19	Total								
20									
21		MTX MOU							
22		1999							
23	Market	October	November	December	January	February	March	April	May
24	Jacksonville								
25									
26	Miami - Miami								
27	Miami - Deerfield								
28	Miami - Miami 3								
29	Total Miami								
30									
31	Orlando								
32	Tampa								
33	Total Tampa								
34									
35	Grand Total								
36									
37									
38		MTX MOU Per Subscriber Per Month							
39		1999							
40	Market	October	November	December	January	February	March	April	May
41	Jacksonville								
42	Miami								
43	Tampa								
44	Total								
45									
46									

Sprint PCS - Florida
Demand Module
Calculations Worksheet

	A	B	C	D	E	F	G	H	I	J
47			Cell Site MOU							
48				1999						
49		Market	October	November	December	January	February	March	April	May
50		Jacksonville								
51										
52		Miami - Miami								
53		Miami - Deerfield								
54		Miami - Miami 3								
55		Total Miami								
56										
57		Orlando								
58		Tampa								
59		Total Tampa								
60										
61		Grand Total								
62										
63										
64			Cell Site MOU Per Subscriber Per Month							
65				1999						
66		Market	October	November	December	January	February	March	April	May
67		Jacksonville								
68		Miami								
69		Tampa								
70		Total								
71										
72										

	A	B	C	D
73			MTX MOU Per Year Per Subscriber	Cell Site MOU Per Year Per Subscriber
74		Market		
75		Jacksonville		
76		Miami		
77		Tampa		
78		Total		
79				
80				
81				

Note:
MSC = Total Monthly MOU (Cell R41 - R44) / Total Days (Cell R10) * 365
Cell = Total Monthly MOU (Cell R67 - R70) / Total Days (Cell R10) * 365

Sprint PCS - Florida
Demand Module
Calculations Worksheet

A	B	C	D	E	F	G	H	I	J
82		**Multiple MTX MOU**							
83			**1999**						
84	**Market**	**October**	**November**	**December**	**January**	**February**	**March**	**April**	**May**
85	Jacksonville								
86									
87	Miami - Miami								
88	Miami - Deerfield								
89	Miami - Miami 3								
90	Total Miami								
91									
92	Orlando								
93	Tampa								
94	Total Tampa								
95									
96	Grand Total								
97									
98									
99		**Ratio Multiple MTX to Total MTX MOU**							
100			**1999**						
101	**Market**	**October**	**November**	**December**	**January**	**February**	**March**	**April**	**May**
102	Total								

Sprint PCS - Florida
Demand Module
Calculations Worksheet

A	B	K	L	M	N	O	P	Q	R
		2000							
Row #	Description	June	July	August	September	October	November	December	Total
10	Number of days								
11									
12									
13									
14		2000							
15	Market	June	July	August	September	October	November	December	Total
16	Jacksonville								
17	Miami								
18	Tampa								
19	Total								
20									
21									
22		2000							
23	Market	June	July	August	September	October	November	December	Total
24	Jacksonville								
25									
26	Miami - Miami								
27	Miami - Deerfield								
28	Miami - Miami 3								
29	Total Miami								
30									
31	Orlando								
32	Tampa								
33	Total Tampa								
34									
35	Grand Total								
36									
37									
38									
39		2000							
40	Market	June	July	August	September	October	November	December	Total
41	Jacksonville								
42	Miami								
43	Tampa								
44	Total								
45									
46									

Sprint PCS - Florida
Demand Module
Calculations Worksheet

A	B	K	L	M	N	O	P	Q	R
47									
48		2000							
49	**Market**	**June**	**July**	**August**	**September**	**October**	**November**	**December**	**Total**
50	Jacksonville								
51									
52	Miami - Miami								
53	Miami - Deerfield								
54	Miami - Miami 3								
55	Total Miami								
56									
57	Orlando								
58	Tampa								
59	Total Tampa								
60									
61	Grand Total								
62									
63									
64									
65		2000							
66	**Market**	**June**	**July**	**August**	**September**	**October**	**November**	**December**	**Total**
67	Jacksonville								
68	Miami								
69	Tampa								
70	Total								
71									
72									
73									
74									
75	**Market**								
76	Jacksonville								
77	Miami								
78	Tampa								
79	Total								
80									
81									

Sprint PCS - Florida
Demand Module
Calculations Worksheet

A	B	K	L	M	N	O	P	Q	R
82									
83		2000							
84	**Market**	**June**	**July**	**August**	**September**	**October**	**November**	**December**	**Total**
85	Jacksonville								
86									
87	Miami - Miami								
88	Miami - Deerfield								
89	Miami - Miami 3								
90	Total Miami								
91									
92	Orlando								
93	Tampa								
94	Total Tampa								
95									
96	Grand Total								
97									
98									
99									
100		2000							
101	**Market**	**June**	**July**	**August**	**September**	**October**	**November**	**December**	**Total**
102	Total								

Sprint PCS - Florida
Demand Module
Summary Worksheet

A	B C D	E	F	G	H
Row #	**Description**	**Base**	**2000**	**2001**	**2002**
8	Jacksonville				
9	Subscribers - Year End				
10	Subscribers - Mid-year				
11	MOU / Subscriber				
12	MSC				
13	Cell Site				
14	Total MOU				
15	MSC				
16	Cell Site				
17					
18	Miami				
19	Subscribers - Year End				
20	Subscribers - Mid-year				
21	MOU / Subscriber				
22	MSC				
23	Cell Site				
24	Total MOU				
25	MSC				
26	Cell Site				
27					
28	Tampa				
29	Subscribers - Year End				
30	Subscribers - Mid-year				
31	MOU / Subscriber				
32	MSC				
33	Cell Site				
34	Total MOU				
35	MSC				
36	Cell Site				
37					
38	Grand Total				
39	Total MOU				
40	MSC				
41	Cell Site				
42	Multiple MSCsSwitching				
43	% MSC MOU				

SPRINT PCS COST MODEL

DESCRIPTION OF ANNUAL CHARGE FACTOR MODULE (SPCS_ACF_XX.xls)

The Annual Charge factor Workbook calculates the annual charge factor for each of six network elements.

1. MTX / BSC
2. BTS
3. Antennae
4. Structure
5. Spectrum License
6. Spectrum Clearing

1. INTRODUCTION WORKSHEET

The Introduction Worksheet lists all of the worksheets within the workbook.

2. INPUTS WORKSHEET

The Inputs Worksheet contains all necessary inputs.

Column A - Row #

Column B - Description

Column C -

Item A - Rate of Return - Input value equal to the overall weighted cost of capital.

Item B - Debt Ratio - Input value.

Item C - Equity Ratio - Input value.

Item D - Debt Cost - Input value.

Item E - Federal Income Tax Rate - Input value

Item F - State Income Tax Rate - Input value, state specific.

Item G - Composite Income Tax Rate - For description, see Income Tax Worksheet, Item M.

Item H - Income Tax Factor - For description, see Income Tax Worksheet, Item L.

Item I - Ad Valorem Tax Rate - Input value, state specific.

Column C - Maintenance Expenses - Maintenance expenses as a percent of investment, as determined by the Expense Module.

Column D - Book Life (Years) - The economic life of each plant category.

Column E - Salvage Value - Value of the asset at the end of its book life, stated as a percent of original value. A negative salvage value is the cost of removal.

Column F - Tax Life (Years) - The tax depreciation life of each plant category.

3. SUMMARY WORKSHEET

The Summary Worksheet summarizes the results of the Annual Charge Factor Workbook.

Column A - Row #

Column B - Description - Category of plant.

Column C - Total Book Rate Depreciation - Equal to Rate of Return Worksheet, Column E.

Column D - Rate of Return - Equal to Rate of Return Worksheet, Column I.

Column E - Income Tax - Equal to Income Tax Worksheet, Column K.

Column F - Maintenance Expenses - Equal to Input Worksheet, Column C.

Column G - Ad Valorem Taxes - Equal to Input Worksheet, Item (I).

Column H - Annual Charge Factor - Equal to the sum of Columns C - G.

4. RATE OF RETURN WORKSHEET

The Rate of Return Worksheet calculates the total book depreciation rate and the rate of return less capital recovery.

Column A - Row #

Column B - Description - Category of plant.

Column C - Book Life (Years) - Equal to Input Worksheet, Column D.

Column D - Salvage Value - Equal to Input Worksheet, Column E.

Column E - Book Depreciation First Cost - Equal to Column G minus Column F.

Column F - Book Depreciation Net Salvage - The annual salvage rate, equal to Column D divided by the book life in Column C.

Column G - Total Book Depreciation Rate - Annual depreciation rate, including salvage. Equal to one minus Column D, divided by the book life in Column C.

Column H - Investment Annual Cost - The annuity needed to recover $1 of investment, less future amount of salvage. Calculated using the Excel PMT Function. See Engineering Economics, AT&T, 1977, 3rd Edition, p. 172, formula (8.4).

Column I - Rate of Return Annual Cost - Equal to Column H minus Column G. Represents the return on gross plant over it useful life, excluding capital recovery.

5. INCOME TAXES WORKSHEET

The Income Taxes Worksheet calculates the total income tax factor, combining both book (economic) and tax depreciation lives.

Column A - Row #

Column B - Description - Category of plant.

Column C - Book Life (Years) - Equal to Input Worksheet, Column D.

Column D - Total Book Depreciation Rate - Equal to Rate of Return Worksheet, Column G.

Column E - Salvage Value - Equal to Input Worksheet, Column E.

Column F - Tax Life (Years) - Equal to Input Worksheet, Column F.

Column G - PV Tax Depreciation - Equal to the present value of the annual tax depreciation in Column F. Since tax depreciation is not straight

line, a table is used to calculate the present value. The tax table is in the Tax Depreciation Worksheet.

Column H - Annual Cost Tax Depreciation - The annuity needed to recover the tax depreciation in Column G over the book life in Column C. Calculated using the Excel PMT Function.

Column I - Investment Annual Cost - The annuity needed to recover the salvage in Column E over the book life in Column C. Calculated using the Excel PMT Function.

Column J - Annual Investment Cost - Equal to Rate of Return Worksheet, Column H.

Column K - PV Income Tax - Equal to the annuity needed to recover income taxes reflecting both book and tax depreciation. This calculation is described in "Engineering Economy, A Manager's Guide to Economic Decision Making," by American Telephone and Telegraph Company, Third Edition, 1977, page 200, formula (9.1). Formula has been adapted to Annual Cost from Present Worth as shown in (9.1). Annual Cost of tax depreciation, AC(Dt), is equal to Column G plus Column H.

The formula is: $[L * (J - D)] - [M * (1 + L) * (H + I - D)]$
Where:
L = Income Tax Factor (see below)
J = Investment Annual Cost (Column J)
D = Total Book Depreciation rate (Column D)
M = Composite Tax Rate (see below)
H = Annual Cost Tax Depreciation (Column H)
I = Annual Cost Salvage (Column I)

Item L - Income Tax Factor - This factor determines the amount of income taxes necessary for each dollar of return. This calculation is described in "Engineering Economy, A Manager's Guide to Economic Decision making," by American Telephone and Telegraph Company, Third Edition, 1977, pages 178 - 180. The actual formula can be found on page 179.

The formula is : $(L) = [t / (1-t)] * [1 - ((r * d)/i)]$
Where :
t = Composite Tax Rate
r = ration to debt to total capital
d = cost of debt
i = overall rate of return

Item M - Composite Tax Rate - This factor combines the federal and state income tax rates into a single composite rate. This calculation is described in "Engineering Economy, A Manager's Guide to Economic Decision making," by American Telephone and Telegraph Company, Third Edition, 1977, page 174. The actual formula is on that page (equation 8.7).

The formula is: $(M) = s + f(1 - s)$

Where s = state income tax rate
f = federal income tax rate

Item N - Rate Of Return - Copied from the Input Worksheet, Item A.

6. TAX DEPRECIATION WORKSHEET

Column A - Year

Column B - Discount - The annual discount factor given the rate of return, Item Q, which is equal to Income Tax Worksheet, Item N.

Columns C - I - Tax Depreciation Rates - Annual tax depreciation rates from tax tables.

Columns J - P - Present Value of Tax Depreciation - Equal to Columns C - I multiplied times Column B.

Sprint PCS Cost Model (SPCS_CM)

Version 2, April 2000

Welcome to the Sprint-PCS Cost Model, Version 1, Annual Charge Factor module. This module develops the Annual Charge Factor for each component of the Sprint PCS network. It is written in Microsoft Excel 97.

A brief description of each worksheet follows.

Annual Charge Factor (ACF) Module Worksheet Descriptions:

(All inputs are in BLUE font)
(All inputs linked to other workbooks or worksheets are in GREEN font)

Introduction	Introduction
Inputs	Financial data.
Summary	Summary page for the ACF results
ROR	Calculates the equated Rate of Return.
Income Tax	Calculates Income Taxes.
Tax Depreciation	Provides tax depreciation tables for Income Tax worksheet.

Sprint PCS - Florida
Annual Charge Factor Module
Input Worksheet

A	B	C	D	E	F
Row #	Description	Input	Calc/Source		
8	**Capital**				
9	Rate of Return		**(A)**		
10	Debt Ratio		**(B)**		
11	Equity Ratio		**(C)** = (1 - B)		
12	Debt Cost		**(D)**		
13					
14	**Income taxes**				
15	Federal Rate		**(E)**		
16	State Rate		**(F)**		
17	Composite Rate		**(G)** = (F + (E * (1 - F))		
18	Income Tax Factor		**(H)** = (G / (1 - G))* (1 - ((D * B) / A))		
19					
20	**Ad Valorem Taxes**		**(I)**		
21					
22					
Row #	Description	Maintenance Expenses	Book Life (Years)	Salvage Value	Tax Life (Years)
25					
26	MTX / BSC				
27	BTS				
28	Antennae				
29	Structure				
30	Spectrum License				
31	Spectrum Clearing				
32	Other				

Sprint PCS - Florida
Annual Charge Factor Module
Summary Worksheet

A	B	C	D	E	F	G	H
Row #	Description	Total Book Rate Depreciation	Rate of Return	Income Tax	Maintenance Expenses	Ad Valorem Taxes	Annual Charge Factor
10							
11	MTX / BSC						
12	BTS						
13	Antennae						
14	Structure						
15	Spectrum License						
16	Spectrum Clearing						
17	Other						

Sprint PCS - Florida
Annual Charge Factor Module
Rate Of Return Worksheet

Rate of Return 0.00% (J)

A	B	C	D	E G - F	F D / C	G (1 - D) / C	H PMT (J, C, -1) - ((J*D)/(((1+J)^C)-1))	I (H - G)
Row #	Description	Book Life (Years)	Salvage Value	Book Depreciation First Cost	Book Depreciation Net Salvage	Total Book Depreciation Rate	Investment Annual Cost	Rate of Return Annual Cost
14								
15	MTX / BSC							
16	BTS							
17	Antennae							
18	Structure							
19	Spectrum License							
20	Spectrum Clearing							
21	Other							

Sprint PCS - Florida
Annual Charge Factor Module
Income Tax Worksheet

Income Tax Factor	0.00% **(L)**
Composite Tax Rate	0.00% **(M)**
Rate of Return	0.00% **(N)**

A	B	C	D	E	F	G	H	I	J	K
						(Table)	PMT (N, C, -G)	PMT(N,C,E*(1/((1+N)^C)))		L*(J-D)-(M*(1+L)*(H+I-D))

Row #	Description	Book Life (Years)	Total Book Depreciation Rate	Salvage Value	Tax Life (Years)	PV Tax Depreciation	Annual Cost Tax Depreciation	Annual Cost Salvage	Investment Annual Cost	Income Tax Annual Cost
16										
17	MTX / BSC									
18	BTS									
19	Antennae									
20	Structure									
21	Spectrum License									
22	Spectrum Clearing									
23	Other									

Sprint PCS - Florida
Annual Charge Factor Module
Tax Depreciation Worksheet

Rate of Return 0.00% (Q)

A	B	C	D	E	F	G	H	I
	1 / ((1 + Q) ^ A)							
		Tax Depreciation Rates						
Year	Discount	3	5	7	10	15	20	39
1	1.0000	0.3333	0.2000	0.1429	0.1000	0.0500	0.03750	0.01177
2	1.0000	0.4445	0.3200	0.2449	0.1800	0.0950	0.07219	0.02564
3	1.0000	0.1481	0.1920	0.1749	0.1440	0.0855	0.06677	0.02564
4	1.0000	0.0741	0.1152	0.1249	0.1152	0.0770	0.06177	0.02564
5	1.0000		0.1152	0.0893	0.0922	0.0693	0.05713	0.02564
6	1.0000		0.0576	0.0892	0.0737	0.0623	0.05285	0.02564
7	1.0000			0.0893	0.0655	0.0590	0.04888	0.02564
8	1.0000			0.0446	0.0655	0.0590	0.04522	0.02564
9	1.0000				0.0656	0.0591	0.04462	0.02564
10	1.0000				0.0655	0.0590	0.04461	0.02564
11	1.0000				0.0328	0.0591	0.04462	0.02564
12	1.0000					0.0590	0.04461	0.02564
13	1.0000					0.0591	0.04462	0.02564
14	1.0000					0.0590	0.04461	0.02564
15	1.0000					0.0591	0.04462	0.02564
16	1.0000					0.0295	0.04461	0.02564
17	1.0000						0.04462	0.02564
18	1.0000						0.04461	0.02564
19	1.0000						0.04462	0.02564
20	1.0000						0.04461	0.02564
21	1.0000						0.02231	0.02564
22	1.0000							0.02564
23	1.0000							0.02564
24	1.0000							0.02564
25	1.0000							0.02564
26	1.0000							0.02564
27	1.0000							0.02564
28	1.0000							0.02564
29	1.0000							0.02564
30	1.0000							0.02564
31	1.0000							0.02564
32	1.0000							0.02564
33	1.0000							0.02564
34	1.0000							0.02564
35	1.0000							0.02564
36	1.0000							0.02564
37	1.0000							0.02564
38	1.0000							0.02564
39	1.0000							0.02564
40	1.0000							0.01391
		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Sprint PCS - Florida
Annual Charge Facto
Tax Depreciation Wo

Rate of Return

A	B 1 / ((1 + Q) ^ A)	J	K	L	M	N	O	P
		Present Value of Tax Depreciation						
Year	Discount	3	5	7	10	15	20	39
1	1.0000	0.3333	0.2000	0.1429	0.1000	0.0500	0.0375	0.0118
2	1.0000	0.4445	0.3200	0.2449	0.1800	0.0950	0.0722	0.0256
3	1.0000	0.1481	0.1920	0.1749	0.1440	0.0855	0.0668	0.0256
4	1.0000	0.0741	0.1152	0.1249	0.1152	0.0770	0.0618	0.0256
5	1.0000		0.1152	0.0893	0.0922	0.0693	0.0571	0.0256
6	1.0000		0.0576	0.0892	0.0737	0.0623	0.0529	0.0256
7	1.0000			0.0893	0.0655	0.0590	0.0489	0.0256
8	1.0000			0.0446	0.0655	0.0590	0.0452	0.0256
9	1.0000				0.0656	0.0591	0.0446	0.0256
10	1.0000				0.0655	0.0590	0.0446	0.0256
11	1.0000				0.0328	0.0591	0.0446	0.0256
12	1.0000					0.0590	0.0446	0.0256
13	1.0000					0.0591	0.0446	0.0256
14	1.0000					0.0590	0.0446	0.0256
15	1.0000					0.0591	0.0446	0.0256
16	1.0000					0.0295	0.0446	0.0256
17	1.0000						0.0446	0.0256
18	1.0000						0.0446	0.0256
19	1.0000						0.0446	0.0256
20	1.0000						0.0446	0.0256
21	1.0000						0.0223	0.0256
22	1.0000							0.0256
23	1.0000							0.0256
24	1.0000							0.0256
25	1.0000							0.0256
26	1.0000							0.0256
27	1.0000							0.0256
28	1.0000							0.0256
29	1.0000							0.0256
30	1.0000							0.0256
31	1.0000							0.0256
32	1.0000							0.0256
33	1.0000							0.0256
34	1.0000							0.0256
35	1.0000							0.0256
36	1.0000							0.0256
37	1.0000							0.0256
38	1.0000							0.0256
39	1.0000							0.0256
40	1.0000							0.0139
		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

SPRINT PCS COST MODEL

DESCRIPTION OF EXPENSE MODULE
(SPCS_Expense_XX.xls)

The Expense Module contains all accounting data for every National, Region, Area, and District account applicable to the study area. Data not applicable to the study area is not included. The Expense Module assigns each account to a specific network element. Since cost studies are usually conducted for a specific geographic area, accounting data for a specific geographic area is extracted.

Sprint PSC accounting information is arranged in four geographic tiers. The four tiers are:

1. National - Accounting information which applies at a national level, and not to any specific geographic market.

2. Region - Accounting information which applies specifically to one of four geographic regions, and not to any smaller geographic market. The four Regions are:
   - NOCT - North Central
   - NOET - Northeast
   - SOET - Southeast
   - WEST - West

3. Area - Each Region is divided into of several smaller geographic Areas. For example, the NOCT Region (North-Central) consists of six geographic Areas:
   - CHIG (Chicago)
   - DETR (Detroit)
   - MINN (Minneapolis)
   - OHIO (Ohio)
   - PITB (Pittsburgh)
   - SLKC (St. Louis / Kansas City)

4. District - Each Area is divided into several smaller geographic Districts. For example, the CHIC Area (Chicago) consists of two geographic Districts:
   - CHIG (Chicago)
   - MLWK (Milwaukee)

The expense assignment process consists of four steps.

First, Input Worksheets are populated with depreciation, investment, network, expense, subscriber, and study area information. Only data applicable to the study area is included. There are six Input Worksheets which contain information for all geographic areas applicable to the study area. Expense and investment accounts are categorized as Direct, Other Direct, Common, Retail (Marketing), or Excluded. Retail-related accounts are excluded from the TELRIC study.

1. Depreciation Input
2. Investment Input
3. Network Input
4. Expense Input
5. Subscriber Input
6. Study Area Input

Second, Summary Worksheets assign TELRIC expenses to one of five network elements (MSC, BTS, Structure, Spectrum License, or Excluded); and to a specific geographic tier (National, Region, Area, or District). There are four Summary Worksheets.

1. Direct Expense Summary
2. Other Direct and Common Expense Summary
3. Backhaul Expense Summary
4. Collocation Expense Summary

Third, Assignment Worksheets assign TELRIC expenses to individual geographic districts. Only those geographic districts applicable to the study area are included. Generally, Direct and Other Direct expenses are assigned based upon investment amounts, and Common expenses are assigned based upon subscriber counts. There are six Assignment Worksheets.

1. Direct Expense Assignments
2. Other Direct Expense Assignments
3. Common Expense Assignments
4. Backhaul Expense Assignments
5. Collocation Expense Assignments
6. Excluded Expense Assignments

Fourth, Factor Development Worksheets calculate cost factors which are inputs to the Annual Charge Factor Module, Input Module, and Calculation Module. There are four Factor Development Worksheets.

1. Direct Expense Factor Development
2. Other Direct and Common Expense Factor Development
3. Backhaul Expense
4. Collocation Expense

Note that the worksheets appear in the workbook in reverse order, beginning with the Factor Development Worksheets, and ending with the Input Worksheets.

1. INTRODUCTION WORKSHEET

The Introduction Worksheet lists all of the worksheets within the workbook.

2. DIRECT EXPENSE FACTOR DEVELOPMENT WORKSHEET

The Direct Expense Factor Development Worksheet summarizes the direct (maintenance) expenses for the specific geographic areas selected for the TELRIC study. The actual factors are found on Row 43, are used by the Annual Charge Factor Module to calculate the direct annual charge factor.

Column A - Row #

Column B - Description -

Column C - Source / Input - The individual districts selected for the TELRIC study.

Column D - MSC - The total amount of direct expenses assigned to the MSC network element.

Column E - BTS - The total amount of direct expenses assigned to the BTS network element.

Column F - Structure - The total amount of direct expenses assigned to the Structure network element.

Column G - Total - The sum of Columns D - F.

Row 25 - Total Direct Expenses - Total for the TELRIC study by network element.

Row 41 - Total Book Investment - Total for the TELRIC study by network element.

Row 43 - Direct Expense Factor - Equal to Row 25 divided by Row 41. These factors are used by the Annual Charge Factor Module to calculate the direct annual charge factor.

3. OTHER DIRECT AND COMMON EXPENSE FACTOR DEVELOPMENT WORKSHEET

The Other Direct and Common Expense Factor Development Worksheet summarizes the other direct (network and general support) and common (corporate overhead) expenses for the specific geographic areas selected for the TELRIC study. The Other Direct factor is found on Row 29; the Common Expense factor is found on Row 59.

These factors are used by the Input Module, Annual Charge Factor Worksheet, to calculate the TELRIC (Total Element Long Run Incremental Cost) annual charge factor.

Column A - Row #

Column B - Description

Column C - Source / Input - The individual districts selected for the TELRIC study.

Column D - MSC - The total amount of other direct expenses and common costs assigned to the MSC network element.

Column E - BTS - The total amount of other direct expenses and common costs assigned to the BTS network element.

Column F - Structure - The total amount of other direct expenses and common costs assigned to the Structure network element.

Column G - Total - The sum of Columns D - F.

Row 25 - Total Other Direct Expenses - Total for the TELRIC study by network element.

Row 27 - TELRIC Investment - Total for the TELRIC study by network element.

Row 29 - Other Direct Expense Factor - Equal to Row 25 divided by Row 27. These factors are used by the Input Module, Annual Charge Factor Worksheet to calculate the TELRIC annual charge factor.

Row 47 - Total Common Cost - Total for the TELRIC study by network element.

Row 49 - Less Common Cost Excluded (Retail Related) - Common costs related to retail activities are excluded from the TELRIC study.

Row 51 - Total Recoverable Common Cost - Equal to Row 47 minus Row 49.

Row 53 - TELRIC Investment - Total for the TELRIC study by network element.

Row 55 - TELRIC ACF - Equal to Input Module, Annual Charge Factor Worksheet, Column E.

Row 57 - Total TELRIC Cost - The annual TELRIC-derived revenue requirement, equal to Column 53 times Column 55.

Row 59 - Common Expense Factor - Common expenses as a percent of TELRIC, equal to Row 47 divided by Row 57. These factors are used by the Calculation Module, Summary Worksheet to calculate the TELRIC per MOU.

4. COLLOCATION WORKSHEET

The Collocation Worksheet records revenues received by Sprint PCS for leasing space on its structures (towers and mono-poles). The model treats these revenues as contra-expenses applicable to the Structure network element.

Column A - Row #

Column B - Description

Column C - Source / Input - The individual districts selected for the TELRIC study.

Column D - Collocation - The total amount of collocation revenues. The model treats these revenues as contra-expenses applicable to the Structure network element.

5. DIRECT EXPENSE ASSIGNMENTS WORKSHEET

The Direct Expense Assignments Worksheet assigns direct expenses (maintenance) to individual geographic tiers.

Column A - Row #

Column B - Description - Geographic tier, National, Region, Area, or District.

Columns C - I - Direct Expenses - MSC - Direct expenses assigned to the MSC network element.

Column C - National Assignment - The portion of National tier expenses assigned to individual Regions. (The total National expense is found on the Direct Expense Summary Worksheet.)

Column D - Regional - Total expenses in the Regional tier.

Column E - Regional Assignment - Total Regional expenses plus the portion of National expenses assigned each Area. National expenses are assigned to individual Areas based upon the actual network element investment in each Area.

Column F - Area - Total expenses in the Area tier.

Column G - Area Assignment - Total Area expenses plus the portion of Regional expenses assigned each District. Area expenses are assigned to individual District based upon the actual network element investment in each District.

Column H - District - Total expenses in the District tier.

Column I - Total District - Total District expenses plus the portion of Area expenses assigned each District. Equal to Column G plus Column H.

Columns K - Q - Direct Expenses - BTS - Direct expenses assigned to the BTS network element. Individual descriptions of these columns are the same as Columns C - I.

Columns S - Y - Direct Expense - Structure - Direct expenses assigned to the Structure network element. Individual descriptions of these columns are the same as Columns C - I.

6. OTHER DIRECT EXPENSE ASSIGNMENTS WORKSHEET

The Other Direct Expense Assignments Worksheet assigns other direct expenses (network and general support) to individual geographic tiers.

Column A - Row #

Column B - Description - Geographic tier, National, Region, Area, or District.

Columns C - O - Other Direct Expenses - MSC - Other direct expenses assigned to the MSC network element.

Column C - National Assignment - The portion of National tier expenses assigned to individual Regions. (The total National expense is found on the Other Direct and Common Expense Summary Worksheet.)

Column D - Regional - Total expenses in the Regional tier.

Column E - Regional Assignment - Total Regional expenses plus the portion of National expenses assigned each Area. National expenses are assigned to individual Areas based upon the actual network element investment in each Area.

Column F - Area - Total expenses in the Area tier.

Column E - Area Assignment - Total Area expenses plus the portion of Regional expenses assigned each District. Area expenses are assigned to individual District based upon the actual network element investment in each District.

Column H - District - Total expenses in the District tier.

Column I - Total District - Total District expenses plus the portion of Area expenses assigned each District. Equal to Column G plus Column H.

Column J - Not used.

Column K - Return On Other Direct Assets at x.xx% - Equal to the percent of investment assign to this District (Network Input Worksheet, Column N) times the Total Other Direct Investment (Investment Input Worksheet, Column I) times the percentage rate (Annual Charge Factor Module, Rate of Return Worksheet, Column I). Note that Cell K153 contains total Sprint PCS expense.

Column L - Composite Tax On Return at x.xx% - Equal to Column K times the percentage rate (Annual Charge Factor Module, Income Taxes Worksheet, Item L).

Column M - Gross Return On Other Direct Assets - Equal to the sum of Column K plus Column L.

Column N - Depreciation on Other Assets - Equal to the percent of Column K assigned to each District times the total other direct depreciation (Depreciation Input Worksheet, Column F).

Columns O - AC - Other Direct Expense - BTS - Other direct expenses assigned to the BTS network element. Individual descriptions of these columns are the same as Columns C - I. Note that Cell Y153 contains total Sprint PCS expense.

Columns AE - AQ - Other Direct Expense - Structure - Other direct expenses assigned to the Structure network element. Individual descriptions of these columns are the same as Columns C - I. Note that Cell AM153 contains total Sprint PCS expense.

7. COMMON EXPENSE ASSIGNMENTS WORKSHEET

The Common Expense Assignments Worksheet assigns common costs (corporate overhead) to individual geographic tiers.

Column A - Row #

Column B - Description - Geographic tier, National, Region, Area, or District.

Columns C - O - Common Expenses - MSC - Common expenses assigned to the MSC network element.

Column C - National Assignment - The portion of National tier expenses assigned to individual Regions. (The total National expense is found on the Other Direct and Common Expense Summary Worksheet.)

Column D - Regional - Total expenses in the Regional tier.

Column E - Regional Assignment - Total Regional expenses plus the portion of National expenses assigned each Area. National expenses are assigned to individual Areas based upon the actual network element investment in each Area.

Column F - Area - Total expenses in the Area tier.

Column E - Area Assignment - Total Area expenses plus the portion of Regional expenses assigned each District. Area expenses are assigned to individual District based upon the actual network element investment in each District.

Column H - District - Total expenses in the District tier.

Column I - Total District - Total District expenses plus the portion of Area expenses assigned each District. Equal to Column G plus Column H.

Column J - Not used.

Column K - Return On Other Direct Assets at x.xx% - Equal to the percent of subscribers assign to this District (Subscriber Input Worksheet, Column L) times the Total Other Direct Investment (Investment Input Worksheet, Column I) times the percentage rate (Annual Charge Factor Module, Rate of Return Worksheet, Column I). Note that Cell K153 contains total Sprint PCS expense.

Column L - Composite Tax On Return at x.xx% - Equal to Column K times the percentage rate (Annual Charge Factor Module, Income Taxes Worksheet, Item L).

Column M - Return On Common Assets Gross of Taxes - Equal to the sum of Column K plus Column L.

Column N - Depreciation on Common Assets - Equal to the percent of Column K assigned to each District times the total common depreciation (Depreciation Input Worksheet, Column F).

Columns O - AC - Common Expense - BTS - Other direct expenses assigned to the BTS network element. Individual descriptions of these columns are the same as Columns C - I. Note that Cell Y153 contains total Sprint PCS expense.

Columns AE - AQ - Common Expense - Structure - Other direct expenses assigned to the Structure network element. Individual descriptions of these columns are the same as Columns C - I. Note that Cell AM153 contains total Sprint PCS expense.

8. COLLOCATION EXPENSE ASSIGNMENTS WORKSHEET

The Collocation Expense Worksheet assigns collocation revenues to individual geographic tiers. Collocation represents revenues received by Sprint PCS for leasing space on its structures (towers and mono-poles). The model treats these revenues as contra-expenses applicable to the Structure network element.

Column A - Row #

Column B - Description - Geographic tier, National, Region, Area, or District.

Column C - National Assignment - The portion of National tier expenses assigned to individual Regions. (The total National expense is found on the Collocation Expense Summary Worksheet.)

Column D - Regional - Total expenses in the Regional tier.

Column E - Regional Assignment - Total Regional expenses plus the portion of National expenses assigned each Area. National expenses are assigned to individual Areas based upon the actual network element investment in each Area.

Column F - Area - Total expenses in the Area tier.

Column E - Area Assignment - Total Area expenses plus the portion of Regional expenses assigned each District. Area expenses are assigned to individual District based upon the actual network element investment in each District.

Column H - District - Total expenses in the District tier.

Column I - Total District - Total District expenses plus the portion of Area expenses assigned each District. Equal to Column G plus Column H.

9. EXCLUDED EXPENSES ASSIGNMENTS WORKSHEET

The Excluded Expenses Worksheet assigns excluded revenues to individual geographic tiers. Excluded expenses are primarily retail-related, and are excluded from a TELRIC study.

Column A - Row #

Column B - Description - Geographic tier, National, Region, Area, or District.

Column C - National Assignment - The portion of National tier expenses assigned to individual Regions. (The total National expense is found on the Other Direct and Common Expense Summary Worksheet, Column M.)

Column D - Regional - Total expenses in the Regional tier.

Column E - Regional Assignment - Total Regional expenses plus the portion of National expenses assigned each Area. National expenses are assigned to individual Areas based upon the actual network element investment in each Area.

Column F - Area - Total expenses in the Area tier.

Column E - Area Assignment - Total Area expenses plus the portion of Regional expenses assigned each District. Area expenses are assigned to individual District based upon the actual network element investment in each District.

Column H - District - Total expenses in the District tier.

Column I - Total District - Total District expenses plus the portion of Area expenses assigned each District. Equal to Column G plus Column H.

10. DIRECT EXPENSE SUMMARY WORKSHEET

The Direct Expense Summary Worksheet assigns direct expenses (maintenance) for each of the three individual network elements (MSC, BTS, and Structure) to an individual geographic tier.

Column A - Row #

Column B - Description - Geographic tier, National, Region, Area, or District.

Column C - ID - Code for each geographic tier, National, Region, Area, or District.

Column D - MSC Direct - Direct expenses assigned to the MSC network element.

Column E - BTS Direct - Direct expenses assigned to the BTS network element.

Column F - Structure Direct - Direct expenses assigned to the Structure network element.

Column G - Total Direct - The sum of Columns D - F.

11. OTHER DIRECT AND COMMON EXPENSE SUMMARY WORKSHEET

The Other Direct and Common Expense Summary Worksheet assigns other direct (network and general support) and common (corporate overhead) expenses to an individual geographic tier.

Column A - Row #

Column B - Description - Geographic tier, National, Region, Area, or District.

Column C - ID - Code for each geographic tier, National, Region, Area, or District.

Column D - MSC Other Direct - Other direct expenses assigned to the MSC network element.

Column E - MSC Common - Common expenses assigned to the MSC network element.

Column F - MSC Total - The sum of Columns D - E.

Column G - BTS Other Direct - Other direct expenses assigned to the BTS network element.

Column H - BTS Common - Common expenses assigned to the BTS network element.

Column I - BTS Total - The sum of Columns G - H.

Column J - Structure Other Direct - Other direct expenses assigned to the Structure network element.

Column K - Structure Common - Common expenses assigned to the Structure network element.

Column L - BTS Total - The sum of Columns J - K.

Column M - Excluded and Non-Recoverable - Expenses which are primarily retail-related, and thus are excluded from the TELRIC study.

Column N - Grand Total - Equal to Columns F + I + L + M.

12. COLLOCATION EXPENSE SUMMARY WORKSHEET

The Collocation Expense Summary Worksheet assigns collocation revenues to an individual geographic tier. Collocation represents revenues received by Sprint PCS for leasing space on its structures (towers and mono-poles). The model treats these revenues as contra-expenses applicable to the Structure network element.

Column A - Row #

Column B - Description - Geographic tier, National, Region, Area, or District.

Column C - Description

Column D - Cost Category - Assigns each investment account to one of four categories: Direct (D), Other Direct (O), Common (C), or Excluded (E).

Column E - Network Assignment - Code which determines to which of five network elements each investment category is assigned. The five network elements are:

1. MSC (Mobile Switching Center)
2. BTS (Base station Transceiver System)
3. Structure (towers and antennae)
4. Spectrum License
5. Retail (Excluded from TELRIC study)

The eight assignment driver codes are:

1. MSC - Investment is assigned to MSC only.
2. BTS - Investment is assigned to BTS only.
3. STR - Investment is assigned to structure only.
4. SPC - Investment is assigned to spectrum license only.
5. CEL - Investment is assigned to all cell site investment, i.e. BTS and structure.
6. NET - Investment is assigned to MSC, BTS, and Structure.
7. ALL - Investment is assigned to all four network elements.
8. RTL - Investment is assigned to retail functions, and is thus excluded from the TELRIC study.

Column F - Beginning Asset Balance - Investment amount at beginning of study period.

Column G - Ending Asset Balance - Investment amount at end of study period.

Column H - Average Asset Balance - Average investment amount for study period. Equal to Column F plus Column G, divided by two.

Column I - MSC - The amount of Column H assigned to the MSC network element.

Column J - BTS - The amount of Column H assigned to the BTS network element.

Column K - Structure - The amount of Column H assigned to the Structure network element.

Column L - Retail - The amount of Column H assigned to the Retail activity.

Column M - Spectrum License - The amount of Column H assigned to the Spectrum License network element.

Column I - Total Assigned - The sum of Columns I - M.

15. INVESTMENT ASSIGNMENT WORKSHEET

The Investment Assignment Worksheet is the input for all investments by network element by geographic tier. Only those areas applicable to the study area are included. This worksheet also develops investment assignment ratios for each network element.

Column A - Row #

Column B - Description - Geographic tier, National, Region, Area, or District.

Column C - ID - Code for each geographic tier, National, Region, Area, or District.

Column D - MSC Investment - Total MSC investment by geographic tier.

Column E - BTS Investment - Total BTS investment by geographic tier.

Column F - Structure Investment - Total Structure investment by geographic tier.

Column G - Spectrum License Investment - Total Spectrum License investment by geographic tier.

Column H - Total Investment - The sum of Columns D - G.

Columns J - O - MSC Investment Assignments - The percent of total MSC investment by network element by geographic tier.

Columns Q - V - BTS Investment Assignments - The percent of total BTS investment by network element by geographic tier.

Columns X - AC - Structure Investment Assignments - The percent of total Structure investment by network element by geographic tier.

16. EXPENSE INPUT WORKSHEET

The Expense Input Worksheet is the input for all expense accounts and cost centers. Only those areas applicable to the study area are included. Columns B - G identify the various cost centers. Columns K - Y are other direct, common, and retail expenses which cannot be directly assigned to network elements. Columns AR - BD are those expenses which can be directly attributed to network elements.

Column A - Row #

Column B - Cost Center - A unique code for each accounting cost center.

Column C - Description

Column D - Key - Code for each geographic tier, National, Region, Area, or District.

Column E - Category - One character code for Other Direct expense (O), Common expense (C), or Excluded (E).

Column F - Driver - Code which determines to which of five network elements each cost center category is assigned. The five network elements are:

1. MSC (Mobile Switching Center)
2. BTS (Base station Transceiver System)
3. Structure (towers and antennae)
4. Spectrum License
5. Retail (Excluded from TELRIC study)

The three assignment driver codes are:

1. ALL - Investment is assigned to all four network elements.
2. CEL - Investment is assigned to all cell site investment, i.e. BTS and structure.
3. EXC - Excluded. Retail-related cost centers are excluded from the TELRIC study.

Column G - Level - Identifies the code in Column D as National, Region, Area, or District.

Column H - Region - Identifies the specific Region code if Column G is Region.

Column I - Area - Identifies the specific Area code if Column G is Area.

Column J - District - Identifies the specific District code if Column G is District

Columns K - Y - Other, Common, and Excluded Assigned Expenses - Each column input represents a unique set of expense accounts used in the TELRIC study. (Note that Direct expenses are in Columns AR - BA.)

Column Z - Subtotal - The sum of Columns K - Y.

Columns AA - AB - Excluded Expenses - Retail-related expenses which are excluded from the TELRIC study.

Column AD - MSC - Other Direct - Other Direct expenses assigned to the MSC network element.

Column AE - MSC - Common - Common expenses assigned to the MSC network element.

Column AG - BTS - Other Direct - Other Direct expenses assigned to the BTS network element.

Column AH - BTS - Common - Common expenses assigned to the BTS network element.

Column AJ - Structure - Other Direct - Other Direct expenses assigned to the Structure network element.

Column AK - Structure - Common - Common expenses assigned to the Structure network element.

Column AM - Non-Recoverable Assets - Other Direct - Other Direct expenses assigned to Non-Recoverable Assets, and thus are excluded from a TELRIC study.

Column AN - Structure - Common - Non-Recoverable Assets - Common - Common expenses assigned to Non-Recoverable Assets, and thus are excluded from a TELRIC study.

Column AO - Other & Common Excluded - Excluded expenses. Retail-related expenses which are excluded from the TELRIC study.

Column AP - Total Assigned Expenses - The sum of Columns AD - AO. Represents total Other Direct and Common Expenses, including excluded expenses. Note that Cell AP2844 contains total Sprint PCS expenses.

Columns AR - BA - Direct Network Expenses - Each column input represents a unique set of expense accounts used in the TELRIC study. (Note that Other Direct and Common expenses are in Columns K - Y.)

Column BB - Excluded Direct - The sum of Column AT (Backhaul) plus Column AW (National Platform). These expenses are considered separately in the Input Module, and thus are excluded from this analysis to exclude double-counting.

Column BD - Grand Total - The sum of Columns AP - BA. Represents total TELRIC expenses, Direct, Other Direct, and Common. Does not include Excluded expenses.

17. SUBSCRIBER INPUT WORKSHEET

The Subscriber Input Worksheet is used to assign Common expenses to individual geographic tiers. Only those areas applicable to the study area are included.

Column A - Row #

Column B - Description - Geographic tier, National, Region, Area, or District.

Column C - National Subscriber Counts - Average number of National subscribers for the study period.

Column D - Region Subscriber Counts - Average number of subscribers by Region for the study period.

Column E - Area Subscriber Counts - Average number of subscribers by Area for the study period.

Column F - Average District Subscriber Counts - Average number of subscribers by District for the study period. Equal to the Sum of Column G plus Column H, divided by two.

Column G - Year-End District Subscriber Counts - Input for end-of-period number of subscribers by District.

Column H - Beginning of Year District Subscriber Counts - Input for beginning-of-period number of subscribers by District.

Columns J - N - The percent of total subscribers by geographic tier.

18. STUDY AREA INPUT WORKSHEET

The Study Area Worksheet is used to identify the individual districts which define the desired study area for the TELRIC cost study.

Column A - Row #

Column B - Description

Column C - Study Area - Input area for all Districts to be included in TELRIC study.

Sprint PCS Cost Model

Version 2, April 2000

Welcome to the **Sprint-PCS Cost Model**, Expense Module. This model develops the Other Direct and Common Expense Factors.

Data Time Period: Twelve Months Ending December 31, 1999

A brief description of each worksheet follows.

Expense Module Worksheet Descriptions:

(All inputs linked to other workbooks or worksheets are in GREEN font)

Introduction	Introduction
Direct Factor Development	Develops the Direct Expense Factor used in the ACF calculation
ODC Factor Development	Develops the Other Direct and Common Expense Factors
Backhaul	This worksheet is not used.
Collocation	Summarizes the collocation revenue associated with the current study area
Assignment - Direct	Assigns direct expenses (maintenance) to individual geographic tiers.
Assignment - Other	Assigns other direct expenses (shared) to individual geographic tiers.
Assignment - Common	Assigns common expenses (overhead) to individual geographic tiers.
Assignment - Backhaul	This worksheet is not used.
Assignment - Collocated	Assigns collocation revenue (contra-expense) to individual geographic tiers.
Assignment - Excluded	Assigns excluded expenses (retail) to individual geographic tiers.
Direct Expense Summary	Summarizes the development of the direct expenses associated with the current study area.
Other Direct and Common Expense Summary	Summarizes the development of the Other Direct and Common expenses associated with the current study area.
Backhaul Expense Summary	This worksheet is not used.
Collocation Expense Summary	Summarizes the development of the collocation expenses associated with the current study area.
Deprectiation Input	Assigns depreciation associated with other direct and common investments to individual network elements.
Investment Input	Assigns investment accounts to individual network elements.
Investment Assignment	Assigns investment to individual geographic tiers.
Expense Input	Input for all cost centers and expense account information.
Subscriber Input	Subscriber information.
Study Area Input	Study area identification.

Sprint PCS - Florida
Expense Module
Direct Expense Factor Development Worksheet

A	B	C	D	E	F	G
Row #	Description	Source/Input	MSC	BTS	Structure	Total
8						
9	**Direct Expense Factor Development**					
10						
11	Direct Expenses					
12	District #1	DYTA DISTRICT				
13	District #2	JACK DISTRICT				
14	District #3	ORLN DISTRICT				
15	District #4	TALA DISTRICT				
16	District #5	TAPA DISTRICT				
17	District #6	SEFL DISTRICT				
18	District #7	SWFL DISTRICT				
19	District #8	NONE				
20	District #9	NONE				
21	District #10	NONE				
22	District #11	NONE				
23	District #12	NONE				
24						
25	Total Direct Expenses					
26						
27	Book Investment					
28	District #1	DYTA DISTRICT				
29	District #2	JACK DISTRICT				
30	District #3	ORLN DISTRICT				
31	District #4	TALA DISTRICT				
32	District #5	TAPA DISTRICT				
33	District #6	SEFL DISTRICT				
34	District #7	SWFL DISTRICT				
35	District #8	NONE				
36	District #9	NONE				
37	District #10	NONE				
38	District #11	NONE				
39	District #12	NONE				
40						
41	Total Book Investment					
42						
43	Direct Expense Factor					

Sprint PCS - Florida
Expense Module
Other Direct and Common Expense Factor Development Worksheet

A	B	C	D	E	F	G
Row #	**Description**	**Source/Input**	**MSC**	**BTS**	**Structure**	**Total**
8						
9	**Other Direct Factor Development**					
10						
11	Other Direct Costs					
12	District #1	DYTA DISTRICT				
13	District #2	JACK DISTRICT				
14	District #3	ORLN DISTRICT				
15	District #4	TALA DISTRICT				
16	District #5	TAPA DISTRICT				
17	District #6	SEFL DISTRICT				
18	District #7	SWFL DISTRICT				
19	District #8	NONE				
20	District #9	NONE				
21	District #10	NONE				
22	District #11	NONE				
23	District #12	NONE				
24						
25	Total Other Direct Costs					
26						
27	TELRIC Investment					
28						
29	Other Direct Factor					
30						

Sprint PCS - Florida
Expense Module
Other Direct and Common Expense Factor Development Worksheet

A	B	C	D	E	F	G
Row #	Description	Source/Input	MSC	BTS	Structure	Total
31	**Common Factor Development**					
32						
33	Common Costs					
34	District #1	DYTA DISTRICT				
35	District #2	JACK DISTRICT				
36	District #3	ORLN DISTRICT				
37	District #4	TALA DISTRICT				
38	District #5	TAPA DISTRICT				
39	District #6	SEFL DISTRICT				
40	District #7	SWFL DISTRICT				
41	District #8	NONE				
42	District #9	NONE				
43	District #10	NONE				
44	District #11	NONE				
45	District #12	NONE				
46						
47	Total Common Costs					
48						
49	Less Common Cost Excluded (Retail Related)	0.00%				
50						
51	Total Recoverable Common Cost					
52						
53	TELRIC Investment					
54						
55	TELRIC ACF					
56						
57	Total TELRIC Cost					
58						
59	Common Cost Factor					

Sprint PCS - Florida
Expense Module
Collocation Worksheet

A	B	C	D
Row #	Description	Source/Input	Collocation
8			
9	**Collocation Factor Development**		
10			
11	Collocation Expenses		
12	District #1	DYTA DISTRICT	
13	District #2	JACK DISTRICT	
14	District #3	ORLN DISTRICT	
15	District #4	TALA DISTRICT	
16	District #5	TAPA DISTRICT	
17	District #6	SEFL DISTRICT	
18	District #7	SWFL DISTRICT	
19	District #8	NONE	
20	District #9	NONE	
21	District #10	NONE	
22	District #11	NONE	
23	District #12	NONE	
24			
25	Total Collocation Expenses		

Sprint PCS - Florida
Expense Module
Direct Expense Assignments Worksheet

A	B	C	D	E	F	G	H	I
		Direct Expense - MSC						
Row #	Description	National Assignment	Regional	Regional Assignment	Area	Area Assignment	District	Total District
8								
70								
71	**SOET REGION**							
72								
73	ATLA AREA							
74	ATLA DISTRICT							
75	BIRM DISTRICT							
76								
77	DALL AREA							
78	DALL DISTRICT							
79	OKCY DISTRICT							
80	TLSA DISTRICT							
81								
82	HSTN AREA							
83	HSTN DISTRICT							
84	NWOR DISTRICT							
85								
86	NOFL AREA							
87	DYTA DISTRICT							
88	JACK DISTRICT							
89	ORLN DISTRICT							
90	TALA DISTRICT							
91	TAPA DISTRICT							
92								
93	SANA AREA							
94	AUST DISTRICT							
95	CRPS DISTRICT							
96	RGVY DISTRICT							
97	SANA DISTRICT							
98								
99	SOFL AREA							
100	SEFL DISTRICT							
101	SWFL DISTRICT							
102								

Sprint PCS - Florida
Expense Module
Direct Expense Assignm

A	B	J	K	L	M	N	O	P	Q
			Direct Expense - BTS						
Row #	[illegible]		National Assignment	Regional	Regional Assignment	Area	Area Assignment	District	Total District
8									
70									
71	SOET REGION								
72									
73	ATLA AREA								
74	ATLA DISTRICT								
75	BIRM DISTRICT								
76									
77	DALL AREA								
78	DALL DISTRICT								
79	OKCY DISTRICT								
80	TLSA DISTRICT								
81									
82	HSTN AREA								
83	HSTN DISTRICT								
84	NWOR DISTRICT								
85									
86	NOFL AREA								
87	DYTA DISTRICT								
88	JACK DISTRICT								
89	ORLN DISTRICT								
90	TALA DISTRICT								
91	TAPA DISTRICT								
92									
93	SANA AREA								
94	AUST DISTRICT								
95	CRPS DISTRICT								
96	RGVY DISTRICT								
97	SANA DISTRICT								
98									
99	SOFL AREA								
100	SEFL DISTRICT								
101	SWFL DISTRICT								
102									

Sprint PCS - Florida
Expense Module
Direct Expense Assignm

A	B	R	S	T	U	V	W	X	Y
			Direct Expense - Structure						
Row #	Description		National Assignment	Regional	Regional Assignment	Area	Area Assignment	District	Total District
8									
70									
71	SOET REGION								
72									
73	ATLA AREA								
74	ATLA DISTRICT								
75	BIRM DISTRICT								
76									
77	DALL AREA								
78	DALL DISTRICT								
79	OKCY DISTRICT								
80	TLSA DISTRICT								
81									
82	HSTN AREA								
83	HSTN DISTRICT								
84	NWOR DISTRICT								
85									
86	NOFL AREA								
87	DYTA DISTRICT								
88	JACK DISTRICT								
89	ORLN DISTRICT								
90	TALA DISTRICT								
91	TAPA DISTRICT								
92									
93	SANA AREA								
94	AUST DISTRICT								
95	CRPS DISTRICT								
96	RGVY DISTRICT								
97	SANA DISTRICT								
98									
99	SOFL AREA								
100	SEFL DISTRICT								
101	SWFL DISTRICT								
102									

Sprint PCS - Florida
Expense Module
Other Direct Expense Assignments Worksheet

A	B	C	D	E	F	G	H	I
		Other Direct Expenses - MSC						
Row #	Description	National Assignment	Regional	Regional Assignment	Area	Area Assignment	District	Total District
8								
70								
71	SOET REGION							
72								
73	ATLA AREA							
74	ATLA DISTRICT							
75	BIRM DISTRICT							
76								
77	DALL AREA							
78	DALL DISTRICT							
79	OKCY DISTRICT							
80	TLSA DISTRICT							
81								
82	HSTN AREA							
83	HSTN DISTRICT							
84	NWOR DISTRICT							
85								
86	NOFL AREA							
87	DYTA DISTRICT							
88	JACK DISTRICT							
89	ORLN DISTRICT							
90	TALA DISTRICT							
91	TAPA DISTRICT							
92								
93	SANA AREA							
94	AUST DISTRICT							
95	CRPS DISTRICT							
96	RGVY DISTRICT							
97	SANA DISTRICT							
98								
99	SOFL AREA							
100	SEFL DISTRICT							
101	SWFL DISTRICT							
102								

Sprint PCS - Florida
Expense Module
Other Direct Expense A

A	B	J	K	L	M	N	O
			Gross Return on Other Direct Assets				
[redacted]			Return on Other Direct Assets at .%	Income Tax Factor at .%	Gross Return on Other Direct Assets	Depreciation on Other Assets	Total TELRIC Cost
8							
70							
71	**SOET REGION**						
72							
73	ATLA AREA						
74	ATLA DISTRICT						
75	BIRM DISTRICT						
76							
77	DALL AREA						
78	DALL DISTRICT						
79	OKCY DISTRICT						
80	TLSA DISTRICT						
81							
82	HSTN AREA						
83	HSTN DISTRICT						
84	NWOR DISTRICT						
85							
86	NOFL AREA						
87	DYTA DISTRICT						
88	JACK DISTRICT						
89	ORLN DISTRICT						
90	TALA DISTRICT						
91	TAPA DISTRICT						
92							
93	SANA AREA						
94	AUST DISTRICT						
95	CRPS DISTRICT						
96	RGVY DISTRICT						
97	SANA DISTRICT						
98							
99	SOFL AREA						
100	SEFL DISTRICT						
101	SWFL DISTRICT						
102							

Sprint PCS - Florida
Expense Module
Other Direct Expense A

A	B	P	Q	R	S	T	U	V	W
			Other Direct Expenses - BTS						
Row #	Description		National Assignment	Regional	Regional Assignment	Area	Area Assignment	District	Total District
8									
70									
71	**SOET REGION**								
72									
73	ATLA AREA								
74	ATLA DISTRICT								
75	BIRM DISTRICT								
76									
77	DALL AREA								
78	DALL DISTRICT								
79	OKCY DISTRICT								
80	TLSA DISTRICT								
81									
82	HSTN AREA								
83	HSTN DISTRICT								
84	NWOR DISTRICT								
85									
86	NOFL AREA								
87	DYTA DISTRICT								
88	JACK DISTRICT								
89	ORLN DISTRICT								
90	TALA DISTRICT								
91	TAPA DISTRICT								
92									
93	SANA AREA								
94	AUST DISTRICT								
95	CRPS DISTRICT								
96	RGVY DISTRICT								
97	SANA DISTRICT								
98									
99	SOFL AREA								
100	SEFL DISTRICT								
101	SWFL DISTRICT								
102									

Sprint PCS - Florida
Expense Module
Other Direct Expense A

	A	B	X	Y	Z	AA	AB	AC
				Gross Return on Other Direct Assets				
	[redacted]			Return on Other Direct Assets at .%	Composite Tax On Return at .%	Gross Return on Other Direct Assets	Depreciation on Other Assets	Total TELRIC Cost
8								
70								
71		**SOET REGION**						
72								
73		ATLA AREA						
74		ATLA DISTRICT						
75		BIRM DISTRICT						
76								
77		DALL AREA						
78		DALL DISTRICT						
79		OKCY DISTRICT						
80		TLSA DISTRICT						
81								
82		HSTN AREA						
83		HSTN DISTRICT						
84		NWOR DISTRICT						
85								
86		NOFL AREA						
87		DYTA DISTRICT						
88		JACK DISTRICT						
89		ORLN DISTRICT						
90		TALA DISTRICT						
91		TAPA DISTRICT						
92								
93		SANA AREA						
94		AUST DISTRICT						
95		CRPS DISTRICT						
96		RGVY DISTRICT						
97		SANA DISTRICT						
98								
99		SOFL AREA						
100		SEFL DISTRICT						
101		SWFL DISTRICT						
102								

Sprint PCS - Florida
Expense Module
Other Direct Expense A

A	B	AD	AE	AF	AG	AH	AI	AJ	AK
			Other Direct Expenses - Structure						
Row #	Description		National Assignment	Regional	Regional Assignment	Area	Area Assignment	District	Total District
8									
70									
71	SOET REGION								
72									
73	ATLA AREA								
74	ATLA DISTRICT								
75	BIRM DISTRICT								
76									
77	DALL AREA								
78	DALL DISTRICT								
79	OKCY DISTRICT								
80	TLSA DISTRICT								
81									
82	HSTN AREA								
83	HSTN DISTRICT								
84	NWOR DISTRICT								
85									
86	NOFL AREA								
87	DYTA DISTRICT								
88	JACK DISTRICT								
89	ORLN DISTRICT								
90	TALA DISTRICT								
91	TAPA DISTRICT								
92									
93	SANA AREA								
94	AUST DISTRICT								
95	CRPS DISTRICT								
96	RGVY DISTRICT								
97	SANA DISTRICT								
98									
99	SOFL AREA								
100	SEFL DISTRICT								
101	SWFL DISTRICT								
102									

Sprint PCS - Florida
Expense Module
Other Direct Expense A

A	B	AL	AM	AN	AO	AP	AQ
			Gross Return on Other Direct Assets				
Row #	Description		Return on Other Direct Assets at .%	Income tax Factor at .%	Gross Return on Other Direct Assets	Depreciation on Other Assets	Total TELRIC Cost
8							
70							
71	SOET REGION						
72							
73	ATLA AREA						
74	ATLA DISTRICT						
75	BIRM DISTRICT						
76							
77	DALL AREA						
78	DALL DISTRICT						
79	OKCY DISTRICT						
80	TLSA DISTRICT						
81							
82	HSTN AREA						
83	HSTN DISTRICT						
84	NWOR DISTRICT						
85							
86	NOFL AREA						
87	DYTA DISTRICT						
88	JACK DISTRICT						
89	ORLN DISTRICT						
90	TALA DISTRICT						
91	TAPA DISTRICT						
92							
93	SANA AREA						
94	AUST DISTRICT						
95	CRPS DISTRICT						
96	RGVY DISTRICT						
97	SANA DISTRICT						
98							
99	SOFL AREA						
100	SEFL DISTRICT						
101	SWFL DISTRICT						
102							

Sprint PCS - Florida
Expense Module
Common Cost Assignments Worksheet

A	B	C	D	E	F	G	H	I
		Common Expenses - MSC						
Row #	Description	National Assignment	Regional	Regional Assignment	Area	Area Assignment	District	Total District
8								
70								
71	**SOET REGION**							
72								
73	ATLA AREA							
74	ATLA DISTRICT							
75	BIRM DISTRICT							
76								
77	DALL AREA							
78	DALL DISTRICT							
79	OKCY DISTRICT							
80	TLSA DISTRICT							
81								
82	HSTN AREA							
83	HSTN DISTRICT							
84	NWOR DISTRICT							
85								
86	NOFL AREA							
87	DYTA DISTRICT							
88	JACK DISTRICT							
89	ORLN DISTRICT							
90	TALA DISTRICT							
91	TAPA DISTRICT							
92								
93	SANA AREA							
94	AUST DISTRICT							
95	CRPS DISTRICT							
96	RGVY DISTRICT							
97	SANA DISTRICT							
98								
99	SOFL AREA							
100	SEFL DISTRICT							
101	SWFL DISTRICT							
102								

Sprint PCS - Florida
Expense Module
Common Cost Assignme

A	B	J	K	L	M	N	O
			Gross Return on Common Assets				
Row	Description		Return on Common Assets at .%	Income Tax Factor at .%	Return on Common Assets Gross of Taxes	Depreciation on Common Assets	Total TELRIC Cost
8							
70							
71	**SOET REGION**						
72							
73	ATLA AREA						
74	ATLA DISTRICT						
75	BIRM DISTRICT						
76							
77	DALL AREA						
78	DALL DISTRICT						
79	OKCY DISTRICT						
80	TLSA DISTRICT						
81							
82	HSTN AREA						
83	HSTN DISTRICT						
84	NWOR DISTRICT						
85							
86	NOFL AREA						
87	DYTA DISTRICT						
88	JACK DISTRICT						
89	ORLN DISTRICT						
90	TALA DISTRICT						
91	TAPA DISTRICT						
92							
93	SANA AREA						
94	AUST DISTRICT						
95	CRPS DISTRICT						
96	RGVY DISTRICT						
97	SANA DISTRICT						
98							
99	SOFL AREA						
100	SEFL DISTRICT						
101	SWFL DISTRICT						
102							

Sprint PCS - Florida
Expense Module
Common Cost Assignme

A	B	P	Q	R	S	T	U	V	W
			Common Expenses - BTS						
Row #	Description		National Assignment	Regional	Regional Assignment	Area	Area Assignment	District	Total District
8									
70									
71	SOET REGION								
72									
73	ATLA AREA								
74	ATLA DISTRICT								
75	BIRM DISTRICT								
76									
77	DALL AREA								
78	DALL DISTRICT								
79	OKCY DISTRICT								
80	TLSA DISTRICT								
81									
82	HSTN AREA								
83	HSTN DISTRICT								
84	NWOR DISTRICT								
85									
86	NOFL AREA								
87	DYTA DISTRICT								
88	JACK DISTRICT								
89	ORLN DISTRICT								
90	TALA DISTRICT								
91	TAPA DISTRICT								
92									
93	SANA AREA								
94	AUST DISTRICT								
95	CRPS DISTRICT								
96	RGVY DISTRICT								
97	SANA DISTRICT								
98									
99	SOFL AREA								
100	SEFL DISTRICT								
101	SWFL DISTRICT								
102									

Sprint PCS - Florida
Expense Module
Common Cost Assignme

	A	B	X	Y	Z	AA	AB	AC
				Gross Return on Common Assets				
		[redacted]		Return on Common Assets at .%	Income Tax Factor at .%	Return on Common Assets Gross of Taxes	Depreication on Common Assets	Total TELRIC Cost
8								
70								
71		**SOET REGION**						
72								
73		ATLA AREA						
74		ATLA DISTRICT						
75		BIRM DISTRICT						
76								
77		DALL AREA						
78		DALL DISTRICT						
79		OKCY DISTRICT						
80		TLSA DISTRICT						
81								
82		HSTN AREA						
83		HSTN DISTRICT						
84		NWOR DISTRICT						
85								
86		NOFL AREA						
87		DYTA DISTRICT						
88		JACK DISTRICT						
89		ORLN DISTRICT						
90		TALA DISTRICT						
91		TAPA DISTRICT						
92								
93		SANA AREA						
94		AUST DISTRICT						
95		CRPS DISTRICT						
96		RGVY DISTRICT						
97		SANA DISTRICT						
98								
99		SOFL AREA						
100		SEFL DISTRICT						
101		SWFL DISTRICT						
102								

Sprint PCS - Florida
Expense Module
Common Cost Assignme

A	B	AE	AF	AG	AH	AI	AJ	AK
		Common Expenses - Structure						
Row #	Description	National Assignment	Regional	Regional Assignment	Area	Area Assignment	District	Total District
8								
70								
71	SOET REGION							
72								
73	ATLA AREA							
74	ATLA DISTRICT							
75	BIRM DISTRICT							
76								
77	DALL AREA							
78	DALL DISTRICT							
79	OKCY DISTRICT							
80	TLSA DISTRICT							
81								
82	HSTN AREA							
83	HSTN DISTRICT							
84	NWOR DISTRICT							
85								
86	NOFL AREA							
87	DYTA DISTRICT							
88	JACK DISTRICT							
89	ORLN DISTRICT							
90	TALA DISTRICT							
91	TAPA DISTRICT							
92								
93	SANA AREA							
94	AUST DISTRICT							
95	CRPS DISTRICT							
96	RGVY DISTRICT							
97	SANA DISTRICT							
98								
99	SOFL AREA							
100	SEFL DISTRICT							
101	SWFL DISTRICT							
102								

Sprint PCS - Florida
Expense Module
Common Cost Assignme

A	B	AM	AN	AO	AP	AQ
		Gross Return on Common Assets				
Row #	Description	Return on Common Assets at .%	Income Tax Factor at .%	Return on Common Assets Gross of Taxes	Depreciation on Common Assets	Total TELRIC Cost
8						
70						
71	**SOET REGION**					
72						
73	ATLA AREA					
74	ATLA DISTRICT					
75	BIRM DISTRICT					
76						
77	DALL AREA					
78	DALL DISTRICT					
79	OKCY DISTRICT					
80	TLSA DISTRICT					
81						
82	HSTN AREA					
83	HSTN DISTRICT					
84	NWOR DISTRICT					
85						
86	NOFL AREA					
87	DYTA DISTRICT					
88	JACK DISTRICT					
89	ORLN DISTRICT					
90	TALA DISTRICT					
91	TAPA DISTRICT					
92						
93	SANA AREA					
94	AUST DISTRICT					
95	CRPS DISTRICT					
96	RGVY DISTRICT					
97	SANA DISTRICT					
98						
99	SOFL AREA					
100	SEFL DISTRICT					
101	SWFL DISTRICT					
102						

Sprint PCS - Florida
Expense Module
Collocation Expense Assignments Worksheet

A	B	C	D	E	F	G	H	I
		Collocation Expenses						
Row #	Description	National Assignment	Regional	Regional Assignment	Area	Area Assignment	District	Total District
8								
70								
71	**SOET REGION**							
72								
73	ATLA AREA							
74	ATLA DISTRICT							
75	BIRM DISTRICT							
76								
77	DALL AREA							
78	DALL DISTRICT							
79	OKCY DISTRICT							
80	TLSA DISTRICT							
81								
82	HSTN AREA							
83	HSTN DISTRICT							
84	NWOR DISTRICT							
85								
86	NOFL AREA							
87	DYTA DISTRICT							
88	JACK DISTRICT							
89	ORLN DISTRICT							
90	TALA DISTRICT							
91	TAPA DISTRICT							
92								
93	SANA AREA							
94	AUST DISTRICT							
95	CRPS DISTRICT							
96	RGVY DISTRICT							
97	SANA DISTRICT							
98								
99	SOFL AREA							
100	SEFL DISTRICT							
101	SWFL DISTRICT							
102								

Sprint PCS - Florida
Expense Module
Excluded Expenses Assignments Worksheet

A	B	C	D	E	F	G	H	I
			Excluded Expenses					
Row #	[illegible]	[illegible] Assignment	Regional	Regional Assignment	Area	Area Assignment	District	Total District
8								
70								
71	SOET REGION							
72								
73	ATLA AREA							
74	ATLA DISTRICT							
75	BIRM DISTRICT							
76								
77	DALL AREA							
78	DALL DISTRICT							
79	OKCY DISTRICT							
80	TLSA DISTRICT							
81								
82	HSTN AREA							
83	HSTN DISTRICT							
84	NWOR DISTRICT							
85								
86	NOFL AREA							
87	DYTA DISTRICT							
88	JACK DISTRICT							
89	ORLN DISTRICT							
90	TALA DISTRICT							
91	TAPA DISTRICT							
92								
93	SANA AREA							
94	AUST DISTRICT							
95	CRPS DISTRICT							
96	RGVY DISTRICT							
97	SANA DISTRICT							
98								
99	SOFL AREA							
100	SEFL DISTRICT							
101	SWFL DISTRICT							
102								

Sprint PCS - Florida
Expense Module
Direct Expense Summary Worksheet

A	B	C	D	E	F	G
Row	Description	ID	MSC Direct	BTS Direct	Structure Direct	Total Direct
70						
71	**SOET REGION**	R-SOET				
72						
73	ATLA AREA	A-ATLA				
74	ATLA DISTRICT	D-ATLA				
75	BIRM DISTRICT	D-BIRM				
76						
77	DALL AREA	A-DALL				
78	DALL DISTRICT	D-DALL				
79	OKCY DISTRICT	D-OKCY				
80	TLSA DISTRICT	D-TLSA				
81						
82	HSTN AREA	A-HSTN				
83	HSTN DISTRICT	D-HSTN				
84	NWOR DISTRICT	D-NWOR				
85						
86	NOFL AREA	A-NOFL				
87	DYTA DISTRICT	D-DYTA				
88	JACK DISTRICT	D-JACK				
89	ORLN DISTRICT	D-ORLN				
90	TALA DISTRICT	D-TALA				
91	TAPA DISTRICT	D-TAPA				
92						
93	SANA AREA	A-SANA				
94	AUST DISTRICT	D-AUST				
95	CRPS DISTRICT	D-CRPS				
96	RGVY DISTRICT	D-RGVY				
97	SANA DISTRICT	D-SANA				
98						
99	SOFL AREA	A-SOFL				
100	SEFL DISTRICT	D-SEFL				
101	SWFL DISTRICT	D-SWFL				
102						

Sprint PCS - Florida
Expense Module
Other Direct and Common Expense Summary Worksheet

A	B	C	D	E	F	G	H	I
			MSC			BTS		
Row #	[illegible]	[illegible]	O - Other Direct	C - Common	Total	O - Other Direct	C - Common	Total
71	**SOET REGION**	R-SOET						
72								
73	ATLA AREA	A-ATLA						
74	ATLA DISTRICT	D-ATLA						
75	BIRM DISTRICT	D-BIRM						
76								
77	DALL AREA	A-DALL						
78	DALL DISTRICT	D-DALL						
79	OKCY DISTRICT	D-OKCY						
80	TLSA DISTRICT	D-TLSA						
81								
82	HSTN AREA	A-HSTN						
83	HSTN DISTRICT	D-HSTN						
84	NWOR DISTRICT	D-NWOR						
85								
86	NOFL AREA	A-NOFL						
87	DYTA DISTRICT	D-DYTA						
88	JACK DISTRICT	D-JACK						
89	ORLN DISTRICT	D-ORLN						
90	TALA DISTRICT	D-TALA						
91	TAPA DISTRICT	D-TAPA						
92								
93	SANA AREA	A-SANA						
94	AUST DISTRICT	D-AUST						
95	CRPS DISTRICT	D-CRPS						
96	RGVY DISTRICT	D-RGVY						
97	SANA DISTRICT	D-SANA						
98								
99	SOFL AREA	A-SOFL						
100	SEFL DISTRICT	D-SEFL						
101	SWFL DISTRICT	D-SWFL						
102								

Sprint PCS - Florida
Expense Module
Other Direct and Common Exper

A	B	C	J	K	L	M	N
			Structure				
Row #	Description	ID	O - Other Direct	C - Common	Total	E - Excluded and Non-Recoverable	Grand Total
71	**SOET REGION**	R-SOET					
72							
73	ATLA AREA	A-ATLA					
74	ATLA DISTRICT	D-ATLA					
75	BIRM DISTRICT	D-BIRM					
76							
77	DALL AREA	A-DALL					
78	DALL DISTRICT	D-DALL					
79	OKCY DISTRICT	D-OKCY					
80	TLSA DISTRICT	D-TLSA					
81							
82	HSTN AREA	A-HSTN					
83	HSTN DISTRICT	D-HSTN					
84	NWOR DISTRICT	D-NWOR					
85							
86	NOFL AREA	A-NOFL					
87	DYTA DISTRICT	D-DYTA					
88	JACK DISTRICT	D-JACK					
89	ORLN DISTRICT	D-ORLN					
90	TALA DISTRICT	D-TALA					
91	TAPA DISTRICT	D-TAPA					
92							
93	SANA AREA	A-SANA					
94	AUST DISTRICT	D-AUST					
95	CRPS DISTRICT	D-CRPS					
96	RGVY DISTRICT	D-RGVY					
97	SANA DISTRICT	D-SANA					
98							
99	SOFL AREA	A-SOFL					
100	SEFL DISTRICT	D-SEFL					
101	SWFL DISTRICT	D-SWFL					
102							

Sprint PCS - Florida
Expense Module
Collocation Expenses Summary Worksheet

A	B	C	D
Row #	Description	ID	Collocation
8			
70			
71	**SOET REGION**	R-SOET	
72			
73	ATLA AREA	A-ATLA	
74	ATLA DISTRICT	D-ATLA	
75	BIRM DISTRICT	D-BIRM	
76			
77	DALL AREA	A-DALL	
78	DALL DISTRICT	D-DALL	
79	OKCY DISTRICT	D-OKCY	
80	TLSA DISTRICT	D-TLSA	
81			
82	HSTN AREA	A-HSTN	
83	HSTN DISTRICT	D-HSTN	
84	NWOR DISTRICT	D-NWOR	
85			
86	NOFL AREA	A-NOFL	
87	DYTA DISTRICT	D-DYTA	
88	JACK DISTRICT	D-JACK	
89	ORLN DISTRICT	D-ORLN	
90	TALA DISTRICT	D-TALA	
91	TAPA DISTRICT	D-TAPA	
92			
93	SANA AREA	A-SANA	
94	AUST DISTRICT	D-AUST	
95	CRPS DISTRICT	D-CRPS	
96	RGVY DISTRICT	D-RGVY	
97	SANA DISTRICT	D-SANA	
98			
99	SOFL AREA	A-SOFL	
100	SEFL DISTRICT	D-SEFL	
101	SWFL DISTRICT	D-SWFL	
102			

Sprint PCS - Florida
Expense Module
Depreciation Input Worksheet

A	B	C	D	E	F	G	H	I
Row #	Description	Account Number	Classification	Depreciation	MSC	BTS	STR	Total
8								
9	Depreciation Leasehold Improvements	609101	C					
10	Amortization Expense Leased Office Assets	609101	C					
11	Depreciation Administrative Buildings and Improvements	609103	C					
12	Depreciation Administrative Furniture and Fixture	609104	C					
13	Depreciation Network Support Equipment	609105	O					
14	Depreciation Expense Other Network Capital	609110	O					
15								
16								
17	Total Depreciation							
18								
19	Total Common Depreciation							
20								
21	Total Other Direct Depreciation							

Sprint PCS - Florida
Expense Module
Investment Input Worksheet

A	B	C	D	E	F	G	H
Row #		Account Description	Cost Category	Network Assignment	Beginning Asset Balance	Ending Asset Balance	Average Asset Balance
8							
9	103001	OFFICE ASSETS - LAND	C	ALL			
10	103002	OFF ASSETS - LAND IMPROVEMENTS	C	ALL			
11	103003	OFF ASSETS - LEASEHOLD IMPROV	C	ALL			
12	103004	OFF ASSETS - BUILDINGS	C	ALL			
13	103101	ADMIN LAND IN-SVC	C	ALL			
14	103102	ADMIN LAND IMP IN-SVC	C	ALL			
15	103103	ADMIN LEASE IMP IN-SVC	C	ALL			
16	103104	ADMIN BUILDINGS IN-SVC	C	ALL			
17	103110	PURCHASE PRICE ADJ LHI BLDGS	C	ALL			
18	104001	OFFICE EQUIP-FURN & FIXTURES	C	ALL			
19	104002	OFFICE EQUIP-COMPUTERS & PERIP	C	ALL			
20	104003	OFFICE TELECOMM EQUIP	C	ALL			
21	104004	OTHER OFFICE SUPPORT EQUIP	C	ALL			
22	104005	OFF SPPT - COMPUTER SYSTEMS	C	ALL			
23	104006	OFF SPPT - COMPUTER SOFTWARE	C	ALL			
24	104101	ADMIN FURN & FIXTURES IN-SVC	C	ALL			
25	104102	ADMIN COMP & PERIP IN-SVC	C	ALL			
26	104103	ADMIN TELECOM EQ IN-SVC	C	ALL			
27	104104	OTHER ADMIN SUPP EQ IN-SVC	C	ALL			
28	104105	ADMIN SUPP-COMP HDWR IN-SVC	C	ALL			
29	104106	ADMIN SUPP-SYSTEM SFTW IN-SVC	C	ALL			
30	104110	PURPRICE ADJ FURN AND FIXTURES	C	ALL			
31	105001	NTWK SPPT EQUIP - VEHICLES	O	NET			
32	105002	NTWK SPPT - TOOLS & TEST EQUIP	O	NET			
33	105003	NTWK SPPT - CELL PHONES/PAGERS	O	NET			
34	105101	NETWORK SUPP VEHICLES IN-SVC	O	NET			
35	105102	NTWK SUPP TOOLS&TEST EQUIP IN	O	NET			
36	105110	PURPRICE ADJ NETWORK EQUIP	D	NET			
37	106001	CELL/SWITCH SITE - LAND	O	NET			
38	106002	CELL/SWITCH-SITE ACQUISITION	D	STR			
39	106003	CELL/SWITCH SITE-YARD IMPROV	O	NET			
40	106004	CELL/SWITCH-LEASEHOLD IMPROV	D	STR			
41	106005	BLDG-CELL SITE CONSTRUCT	O	CEL			
42	106006	BLDG-SWITCH SITE CONSTRUCT	O	MSC			
43	106007	CELL/SWITCH-BUILD IMPROV	O	NET			
44	106008	TOWER - STEALTH	D	STR			
45	106009	TOWER - NON-STEALTH	D	STR			
46	106010	CONSTRUCTION MANAGEMENT	D	CEL			
47	106011	DISASTER PREVENTION SYSTEM	D	STR			
48	106012	PROJECT MANAGEMENT	D	CEL			
49	106099	OTHER SITE CAPITAL	D	CEL			
50	106101	CELL/SWITCH SITE LAND IN-SVC	O	NET			
51	106102	CELL/SWITCH SITE ACQ IN-SVC	D	STR			
52	106103	CELL/SWITCH SITE YD IMPROV INS	O	NET			

Sprint PCS - Florida
Expense Module
Investment Input Worksheet

A	B	C	D	E	F	G	H
Row #	Act [redacted]	Account Description	Cost Category	Network Assignment	Beginning Asset Balance	Ending Asset Balance	Average Asset Balance
53	106104	CELL/SWITCH LEASE IMPROV IN-SV	D	STR			
54	106105	CELL SITE BLDGS IN-SVC	O	CEL			
55	106106	SWITCH SITE BLDGS IN-SVC	O	MSC			
56	106107	CELL/SWITCH BLDG IMPROV IN-SVC	O	NET			
57	106108	CELL SITE STEALTH TOWER IN-SVC	D	STR			
58	106109	CELL SITE NONSTEALTH TOWER INS	D	STR			
59	106110	CELL SITE CONSTR MGMT IN-SVC	D	CEL			
60	106111	CELL SITE DIS PREV SYS IN-SVC	D	STR			
61	106112	CELL SITE PROJ MGMT IN-SVC	D	CEL			
62	106199	CELL SITE OTHER SITE CAPTL INS	D	CEL			
63	107001	CELL SITE ANTENNAS	D	STR			
64	107002	MICROWAVE ANTENNA SYSTEM	D	STR			
65	107003	CELL SITE - CELL ON WHEELS	D	STR			
66	107099	OTHER ANTENNA SYSTEM	D	STR			
67	107101	CELL SITE ANTENNAS IN-SVC	D	STR			
68	107102	CELL SITE MICRO ANT SYS IN-SVC	D	STR			
69	107103	CELL SITE COW IN-SVC	D	STR			
70	107199	CELL SITE OTHER ANT SYS IN-SVC	D	STR			
71	108001	CELL SITE EQUIP-RF ENGINEERING	D	BTS			
72	108002	BTS EQUIPMENT	D	BTS			
73	108003	EMERGENCY POWER EQUIPMENT	D	BTS			
74	108004	TRANSMISSION EQUIPMENT-T1	D	BTS			
75	108005	TRNSMISSION EQUIPMENT-OTHER	D	BTS			
76	108006	CELL SITE-CMI EQUIPMENT	D	BTS			
77	108007	CELL SITE-HIC EQUIIPMENT	D	BTS			
78	108008	CABLE SYSTEMS	D	BTS			
79	108099	OTHER CELL SITE EQUIPMENT	D	BTS			
80	108101	CELL SITE RD ENG IN-SVC	D	BTS			
81	108102	CELL SITE BTS EQUIP IN-SVC	D	BTS			
82	108103	CELL SITE EMER POWER EQUIP INS	D	BTS			
83	108104	CELL SITE TRANS EQUIP TI IN-SV	D	BTS			
84	108105	CELL SITE OTHR TRANSEQUIP IN-S	D	BTS			
85	108106	CELL SITE CMI EQUIP IN-SVC	D	BTS			
86	108107	CELL SITE HIC EQUIP IN-SVC	D	BTS			
87	108108	CABLE SYSTEMS - IN SERVICE	D	BTS			
88	108199	CELL SITE OTHR CEL SITE EQP IN	D	BTS			
89	109001	MOBILE EQUIP - SWITCH HARDWARE	D	MSC			
90	109002	MOBILE EQUIP - SWITCH SOFTWARE	D	MSC			
91	109003	SWITCH/NTWK EQUIP - HECU	D	MSC			
92	109004	SWITCH/NTWK EQUIP - DACS	D	MSC			
93	109005	SWITCH/NTWK EQUIP - BSC	D	MSC			
94	109006	SWITCH/NTWK EQUIP - HLR/VLR	D	MSC			
95	109007	SWITCH/NTWK EQUIP - SS7	D	MSC			
96	109008	ANCILLARY SWITCH EQUIPMENT	E	MSC			
97	109009	SWITCH-POWER EQUIPMENT	D	MSC			

Sprint PCS - Florida
Expense Module
Investment Input Worksheet

A	B	C	D	E	F	G	H
Row #	Act Num	Account Description	Cost Category	Network Assignment	Beginning Asset Balance	Ending Asset Balance	Average Asset Balance
98	109099	OTHER SWITCH/NET EQUIPMENT	D	MSC			
99	109101	SWITCH SITE HARDWARE IN-SVC	D	MSC			
100	109102	SWITCH SITE SOFTWARE IN-SVC	D	MSC			
101	109103	SWITCH SITE HECU EQUIP IN-SVC	D	MSC			
102	109104	SWITCH SITE TRANS EQUIP IN-SVC	D	MSC			
103	109105	SWITCH SITE BSC EQUIP IN-SVC	D	MSC			
104	109106	SWITCH SITE HLR/VLR EQP IN-SVC	D	MSC			
105	109107	SWITCH SITE SS7 EQUIP IN-SVC	D	MSC			
106	109108	SWITCH SITE ANCILLARY EQP IN-S	E	MSC			
107	109109	SWITCH SITE POWER EQUIP IN-SVC	D	MSC			
108	109199	SWITCH SITE OTHER EQP IN-SVC	D	MSC			
109	110001	DIGITAL MICROWAVE SYSTEMS	E	BTS			
110	110002	OTHER NETWORK CAPITAL	D	NET			
111	110101	DIGITAL MICRO SYS IN-SVC	E	BTS			
112	110102	OTHER NTWK CAPTL IN-SVC	D	NET			
113	111001	OAM & P HARDWARE	D	MSC			
114	111002	OAM & P SOFTWARE	D	MSC			
115	111003	OAM & P WRKSTN AND PERIPHERALS	D	MSC			
116	111101	OAM&P HARDWARE IN-SVC	D	MSC			
117	111102	OAM&P SOFTWARE IN-SVC	D	MSC			
118	111103	OAM&P WORKSTATIONS & PERIP INS	D	MSC			
119	112001	CLEARING ON ASSET ACQ / DISPOS	D	NET			
120	113001	CAPITALIZED OVERHEAD	D	NET			
121	113002	CAPITALIZED LABOR	D	NET			
122	113003	CAPITALIZED INTEREST	D	NET			
123	113104	CAP. INT. - LICENSES IN SERV	E	SPC			
124	113101	CAPITALIZED OVERHEAD - IN SRV	D	NET			
125	113102	CAPITALIZED LABOR - IN SRV	D	NET			
126	113103	CAPITALIZED INTEREST - IN SRV	D	NET			
127	114003	GSM ADMIN TELECOMM EQUIP	C	ALL			
128	114006	GSM ADMIN-SYSTEM S/W	C	ALL			
129	114103	GSM TELECOMM EQUIP-IN-SERV	C	ALL			
130	114105	GSM ADMIN-COMP H/W-IN-SERV	C	ALL			
131	114106	GSM ADMIN-SYSTEM S/W-IN-SERV	C	ALL			
132	115002	GSM TOOLS & TEST EQUIPMENT	O	NET			
133	115003	APC CAPITAL LEASES-COMPUTERS	C	ALL			
134	115005	APC CAPITAL LEASES-EQUIP	C	ALL			
135	115102	GSM TOOLS & TEST-IN-SERVICE	O	NET			
136	115103	CAPITAL LEASES-COMP-IN-SERVICE	C	ALL			
137	115105	CAPITAL LEASES-EQUIP-IN-SERV	C	ALL			
138	115107	CAPITAL LEASES-FURN-IN-SERV	C	ALL			
139	116002	GSM SITE ACQUISITION	D	STR			
140	116004	GSM CELL/SWITCH LHI	D	STR			
141	116010	GSM CONSTRUCTION MANAGEMENT	D	CEL			
142	116102	GSM SITE ACQ-IN-SERVICE	D	STR			

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A	B	C	D	E	F	G	H
Row #	Acct	Account Description	Cost Category	Network Assignment	Beginning Asset Balance	Ending Asset Balance	Average Asset Balance
143	116104	GSM CELL/SWITHC LHI-IN-SERVICE	D	STR			
144	116110	GSM CONSTRUCTION MGMT-IN-SERV	D	CEL			
145	117002	GSM RETAIL LHI	E	RTL			
146	117013	GSM OAM&P WORKSTATIONS	D	MSC			
147	117101	GSM ANTENNAS-IN-SERVICE	D	STR			
148	117102	GSM RETAIL LHI-IN-SERVICE	E	RTL			
149	117111	GSM OAM&P H/W-IN-SERV	D	MSC			
150	117112	GSM OAM&P S/W-IN-SERVICE	D	MSC			
151	117113	GSM OAMP&PWORKSTATIONS-IN-SERV	D	MSC			
152	118001	GSM RF ENGINEERING	D	BTS			
153	118002	GSM CELL SITE-BTS EQUIPMENT	D	BTS			
154	118003	GSM EMERGENCY POWER EQUIPMENT	D	BTS			
155	118101	GSM RE ENGINEERING-IN-SERV	D	BTS			
156	118102	GSM BTS EQUIP-IN-SERVICE	D	BTS			
157	118103	GSM EMER POWER EQUIP-IN-SERV	D	BTS			
158	118104	GSM T1-IN SERVICE	D	BTS			
159	119001	GSM SWITCH HARDWARE	D	MSC			
160	119005	GSM SWITCH BSC EQUIPMENT	D	MSC			
161	119026	GSM NETWORK INVENTORY	D	NET			
162	119101	GSM SWITCH H/W-IN-SERVICE	D	MSC			
163	119102	GSM SWITCH S/W-IN-SERVICE	D	MSC			
164	119104	GSM TRANSMISSION EQUIP-IN-SERV	D	MSC			
165	119105	GSM SWITCH BSC EQUIP-IN-SERV	D	MSC			
166	119106	GSM HLR/VLR EQUIP-IN-SERV	D	MSC			
167	119107	GSM SWITHC SS7 EQUIP-IN-SERV	D	MSC			
168	119108	GSM ANCILLARY EQUIP-IN-SERV	E	MSC			
169	119126	GSM - Network Inv In-Service	D	NET			
170	120001	CONSTR WORK IN PROG - MATERIAL	D	NET			
171	120002	CONSTR WORK IN PROG - LABOR	D	NET			
172	120003	CONSTR WORK IN PROG - OVERHEAD	D	NET			
173	123001	RETAIL LEASEHOLD IMPROVEMENTS	E	RTL			
174	123002	RETAIL FIXTURES	E	RTL			
175	123003	RETAIL KIOSKS	E	RTL			
176	123004	RETAIL - RADIO SHACK	E	RTL			
177	123101	RETAIL LEASE IMPROV IN-SVC	E	RTL			
178	123102	RETAIL FIXTURES IN-SVC	E	RTL			
179	123103	RETAIL KIOSKS IN-SVC	E	RTL			
180	123104	RETAIL RADIO SHACK IN-SVC	E	RTL			
181	125001	INVESTMENT IN PCS LICENSES	E	SPC			
182	125002	MICROWAVE RELOCATIONS	E	SPC			
183	125003	MICROWAVE RELO. REIMBURSEMENT	E	SPC			
184	125102	MICROWAVE RELOCATION IN-SRVC	E	SPC			
185	125103	MICROWAVE RELO REIMBURSE IN-SV	E	SPC			
186	125110	PURCHASE PRICE ADJ LICENSES	E	SPC			
187	126001	NTWK INV-SPRINT NORTH SUPPLY	D	NET			

Sprint PCS - Florida
Expense Module
Investment Input Worksheet

A	B	C	D	E	F	G	H
Row #	Acct	Account Description	Cost Category	Network Assignment	Beginning Asset Balance	Ending Asset Balance	Average Asset Balance
188	127001	Motorola Equipment Purch Disc	D	BTS			
189							
190							
191		Total					
192							
193		Total Direct Investment	D				
194		Total Other Direct Investment	O				
195		Total Common Investment	C				
196		Total Excluded Investment	E				
197							
198		Total Allocated Investment					
199							
200							
201		**Assignment Factors**					
202							
203		Direct to the MSC and BSC		MSC			
204		Direct to the BTS		BTS			
205		Direct to the Structure		STR			
206		Retail Related Assets		RTL			
207		Spectrum		SPC			
208		Allocated between Structure & BTS based on direct inv		CEL			
209		Allocated among MSC/BSC, BTS and Structure		NET			
210		Allocated among all tangible assets		ALL			

Sprint PCS - Florida
Expense Module
Investment Input Worksheet

A	B	C	I	J	K	L	M	N
Row #	Act. Num	[illegible] Description	MSC MSC	BTS BTS	Structure STR	Retail Related RTL	Spectrum Lic. SPC	Total Assigned
8								
9	103001	OFFICE ASSETS - LAND						
10	103002	OFF ASSETS - LAND IMPROVEMENTS						
11	103003	OFF ASSETS - LEASEHOLD IMPROV						
12	103004	OFF ASSETS - BUILDINGS						
13	103101	ADMIN LAND IN-SVC						
14	103102	ADMIN LAND IMP IN-SVC						
15	103103	ADMIN LEASE IMP IN-SVC						
16	103104	ADMIN BUILDINGS IN-SVC						
17	103110	PURCHASE PRICE ADJ LHI BLDGS						
18	104001	OFFICE EQUIP-FURN & FIXTURES						
19	104002	OFFICE EQUIP-COMPUTERS & PERIP						
20	104003	OFFICE TELECOMM EQUIP						
21	104004	OTHER OFFICE SUPPORT EQUIP						
22	104005	OFF SPPT - COMPUTER SYSTEMS						
23	104006	OFF SPPT - COMPUTER SOFTWARE						
24	104101	ADMIN FURN & FIXTURES IN-SVC						
25	104102	ADMIN COMP & PERIP IN-SVC						
26	104103	ADMIN TELECOM EQ IN-SVC						
27	104104	OTHER ADMIN SUPP EQ IN-SVC						
28	104105	ADMIN SUPP-COMP HDWR IN-SVC						
29	104106	ADMIN SUPP-SYSTEM SFTW IN-SVC						
30	104110	PURPRICE ADJ FURN AND FIXTURES						
31	105001	NTWK SPPT EQUIP - VEHICLES						
32	105002	NTWK SPPT - TOOLS & TEST EQUIP						
33	105003	NTWK SPPT - CELL PHONES/PAGERS						
34	105101	NETWORK SUPP VEHICLES IN-SVC						
35	105102	NTWK SUPP TOOLS&TEST EQUIP IN						
36	105110	PURPRICE ADJ NETWORK EQUIP						
37	106001	CELL/SWITCH SITE - LAND						
38	106002	CELL/SWITCH-SITE ACQUISITION						
39	106003	CELL/SWITCH SITE-YARD IMPROV						
40	106004	CELL/SWITCH-LEASEHOLD IMPROV						
41	106005	BLDG-CELL SITE CONSTRUCT						
42	106006	BLDG-SWITCH SITE CONSTRUCT						
43	106007	CELL/SWITCH-BUILD IMPROV						
44	106008	TOWER - STEALTH						
45	106009	TOWER - NON-STEALTH						
46	106010	CONSTRUCTION MANAGEMENT						
47	106011	DISASTER PREVENTION SYSTEM						
48	106012	PROJECT MANAGEMENT						
49	106099	OTHER SITE CAPITAL						
50	106101	CELL/SWITCH SITE LAND IN-SVC						
51	106102	CELL/SWITCH SITE ACQ IN-SVC						
52	106103	CELL/SWITCH SITE YD IMPROV INS						

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A	B	C	I	J	K	L	M	N
Row #	Act. Num	Account Description	MSC MSC	BTS BTS	Structure STR	Retail Related RTL	Spectrum Lic. SPC	Total Assigned
53	106104	CELL/SWITCH LEASE IMPROV IN-SV						
54	106105	CELL SITE BLDGS IN-SVC						
55	106106	SWITCH SITE BLDGS IN-SVC						
56	106107	CELL/SWITCH BLDG IMPROV IN-SVC						
57	106108	CELL SITE STEALTH TOWER IN-SVC						
58	106109	CELL SITE NONSTEALTH TOWER INS						
59	106110	CELL SITE CONSTR MGMT IN-SVC						
60	106111	CELL SITE DIS PREV SYS IN-SVC						
61	106112	CELL SITE PROJ MGMT IN-SVC						
62	106199	CELL SITE OTHER SITE CAPTL INS						
63	107001	CELL SITE ANTENNAS						
64	107002	MICROWAVE ANTENNA SYSTEM						
65	107003	CELL SITE - CELL ON WHEELS						
66	107099	OTHER ANTENNA SYSTEM						
67	107101	CELL SITE ANTENNAS IN-SVC						
68	107102	CELL SITE MICRO ANT SYS IN-SVC						
69	107103	CELL SITE COW IN-SVC						
70	107199	CELL SITE OTHER ANT SYS IN-SVC						
71	108001	CELL SITE EQUIP-RF ENGINEERING						
72	108002	BTS EQUIPMENT						
73	108003	EMERGENCY POWER EQUIPMENT						
74	108004	TRANSMISSION EQUIPMENT-T1						
75	108005	TRNSMISSION EQUIPMENT-OTHER						
76	108006	CELL SITE-CMI EQUIPMENT						
77	108007	CELL SITE-HIC EQUIIPMENT						
78	108008	CABLE SYSTEMS						
79	108099	OTHER CELL SITE EQUIPMENT						
80	108101	CELL SITE RD ENG IN-SVC						
81	108102	CELL SITE BTS EQUIP IN-SVC						
82	108103	CELL SITE EMER POWER EQUIP INS						
83	108104	CELL SITE TRANS EQUIP TI IN-SV						
84	108105	CELL SITE OTHR TRANSEQUIP IN-S						
85	108106	CELL SITE CMI EQUIP IN-SVC						
86	108107	CELL SITE HIC EQUIP IN-SVC						
87	108108	CABLE SYSTEMS - IN SERVICE						
88	108199	CELL SITE OTHR CEL SITE EQP IN						
89	109001	MOBILE EQUIP - SWITCH HARDWARE						
90	109002	MOBILE EQUIP - SWITCH SOFTWARE						
91	109003	SWITCH/NTWK EQUIP - HECU						
92	109004	SWITCH/NTWK EQUIP - DACS						
93	109005	SWITCH/NTWK EQUIP - BSC						
94	109006	SWITCH/NTWK EQUIP - HLR/VLR						
95	109007	SWITCH/NTWK EQUIP - SS7						
96	109008	ANCILLARY SWITCH EQUIPMENT						
97	109009	SWITCH-POWER EQUIPMENT						

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Investment Input Worksheet

A	B	C	I	J	K	L	M	N
Row #	Act. Num	Account Description	MSC MSC	BTS BTS	Structure STR	Retail Related RTL	Spectrum Lic. SPC	Total Assigned
98	109099	OTHER SWITCH/NET EQUIPMENT						
99	109101	SWITCH SITE HARDWARE IN-SVC						
100	109102	SWITCH SITE SOFTWARE IN-SVC						
101	109103	SWITCH SITE HECU EQUIP IN-SVC						
102	109104	SWITCH SITE TRANS EQUIP IN-SVC						
103	109105	SWITCH SITE BSC EQUIP IN-SVC						
104	109106	SWITCH SITE HLR/VLR EQP IN-SVC						
105	109107	SWITCH SITE SS7 EQUIP IN-SVC						
106	109108	SWITCH SITE ANCILLARY EQP IN-S						
107	109109	SWITCH SITE POWER EQUIP IN-SVC						
108	109199	SWITCH SITE OTHER EQP IN-SVC						
109	110001	DIGITAL MICROWAVE SYSTEMS						
110	110002	OTHER NETWORK CAPITAL						
111	110101	DIGITAL MICRO SYS IN-SVC						
112	110102	OTHER NTWK CAPTL IN-SVC						
113	111001	OAM & P HARDWARE						
114	111002	OAM & P SOFTWARE						
115	111003	OAM & P WRKSTN AND PERIPHERALS						
116	111101	OAM&P HARDWARE IN-SVC						
117	111102	OAM&P SOFTWARE IN-SVC						
118	111103	OAM&P WORKSTATIONS & PERIP INS						
119	112001	CLEARING ON ASSET ACQ / DISPOS						
120	113001	CAPITALIZED OVERHEAD						
121	113002	CAPITALIZED LABOR						
122	113003	CAPITALIZED INTEREST						
123	113104	CAP. INT. - LICENSES IN SERV						
124	113101	CAPITALIZED OVERHEAD - IN SRV						
125	113102	CAPITALIZED LABOR - IN SRV						
126	113103	CAPITALIZED INTEREST - IN SRV						
127	114003	GSM ADMIN TELECOMM EQUIP						
128	114006	GSM ADMIN-SYSTEM S/W						
129	114103	GSM TELECOMM EQUIP-IN-SERV						
130	114105	GSM ADMIN-COMP H/W-IN-SERV						
131	114106	GSM ADMIN-SYSTEM S/W-IN-SERV						
132	115002	GSM TOOLS & TEST EQUIPMENT						
133	115003	APC CAPITAL LEASES-COMPUTERS						
134	115005	APC CAPITAL LEASES-EQUIP						
135	115102	GSM TOOLS & TEST-IN-SERVICE						
136	115103	CAPITAL LEASES-COMP-IN-SERVICE						
137	115105	CAPITAL LEASES-EQUIP-IN-SERV						
138	115107	CAPITAL LEASES-FURN-IN-SERV						
139	116002	GSM SITE ACQUISITION						
140	116004	GSM CELL/SWITCH LHI						
141	116010	GSM CONSTRUCTION MANAGEMENT						
142	116102	GSM SITE ACQ-IN-SERVICE						

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Expense Module
Investment Input Worksheet

A	B	C	I	J	K	L	M	N
Row #	Act. Num	Account Description	MSC MSC	BTS BTS	Structure STR	Retail Related RTL	Spectrum Lic. SPC	Total Assigned
143	116104	GSM CELL/SWITHC LHI-IN-SERVICE						
144	116110	GSM CONSTRUCTION MGMT-IN-SERV						
145	117002	GSM RETAIL LHI						
146	117013	GSM OAM&P WORKSTATIONS						
147	117101	GSM ANTENNAS-IN-SERVICE						
148	117102	GSM RETAIL LHI-IN-SERVICE						
149	117111	GSM OAM&P H/W-IN-SERV						
150	117112	GSM OAM&P S/W-IN-SERVICE						
151	117113	GSM OAMP&PWORKSTATIONS-IN-SERV						
152	118001	GSM RF ENGINEERING						
153	118002	GSM CELL SITE-BTS EQUIPMENT						
154	118003	GSM EMERGENCY POWER EQUIPMENT						
155	118101	GSM RE ENGINEERING-IN-SERV						
156	118102	GSM BTS EQUIP-IN-SERVICE						
157	118103	GSM EMER POWER EQUIP-IN-SERV						
158	118104	GSM T1-IN SERVICE						
159	119001	GSM SWITCH HARDWARE						
160	119005	GSM SWITCH BSC EQUIPMENT						
161	119026	GSM NETWORK INVENTORY						
162	119101	GSM SWITCH H/W-IN-SERVICE						
163	119102	GSM SWITCH S/W-IN-SERVICE						
164	119104	GSM TRANSMISSION EQUIP-IN-SERV						
165	119105	GSM SWITCH BSC EQUIP-IN-SERV						
166	119106	GSM HLR/VLR EQUIP-IN-SERV						
167	119107	GSM SWITHC SS7 EQUIP-IN-SERV						
168	119108	GSM ANCILLARY EQUIP-IN-SERV						
169	119126	GSM - Network Inv In-Service						
170	120001	CONSTR WORK IN PROG - MATERIAL						
171	120002	CONSTR WORK IN PROG - LABOR						
172	120003	CONSTR WORK IN PROG - OVERHEAD						
173	123001	RETAIL LEASEHOLD IMPROVEMENTS						
174	123002	RETAIL FIXTURES						
175	123003	RETAIL KIOSKS						
176	123004	RETAIL - RADIO SHACK						
177	123101	RETAIL LEASE IMPROV IN-SVC						
178	123102	RETAIL FIXTURES IN-SVC						
179	123103	RETAIL KIOSKS IN-SVC						
180	123104	RETAIL RADIO SHACK IN-SVC						
181	125001	INVESTMENT IN PCS LICENSES						
182	125002	MICROWAVE RELOCATIONS						
183	125003	MICROWAVE RELO. REIMBURSEMENT						
184	125102	MICROWAVE RELOCATION IN-SRVC						
185	125103	MICROWAVE RELO REIMBURSE IN-SV						
186	125110	PURCHASE PRICE ADJ LICENSES						
187	126001	NTWK INV-SPRINT NORTH SUPPLY						

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Investment Input Worksheet

A	B	C	I	J	K	L	M	N
			MSC	BTS	Structure	Retail Related	Spectrum Lic.	
Row #	Act. Num	Account Description	MSC	BTS	STR	RTL	SPC	Total Assigned
188	127001	Motorola Equipment Purch Disc						
189								
190								
191		Total						
192								
193		Total Direct Investment						
194		Total Other Direct Investment						
195		Total Common Investment						
196		Total Excluded Investment						
197								
198		Total Allocated Investment						
199								
200								
201		**Assignment Factors**						
202			MSC	BTS	STR	RTL	SPC	Total Allocated
203		Direct to the MSC and BSC						
204		Direct to the BTS						
205		Direct to the Structure						
206		Retail Related Assets						
207		Spectrum						
208		Allocated between Structure & BTS based c						
209		Allocated among MSC/BSC, BTS and Struc						
210		Allocated among all tangible assets						

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Investment Assignment Worksheet

A	B	C	D	E	F	G	H
Row #	[redacted]	ID	MSC Investment	BTS Investment	Structure Investment	Spectrum License Investment	Total Investment
71	SOET REGION	R-SOET					
72							
73	ATLA AREA	A-ATLA					
74	ATLA DISTRICT	D-ATLA					
75	BIRM DISTRICT	D-BIRM					
76							
77	DALL AREA	A-DALL					
78	DALL DISTRICT	D-DALL					
79	OKCY DISTRICT	D-OKCY					
80	TLSA DISTRICT	D-TLSA					
81							
82	HSTN AREA	A-HSTN					
83	HSTN DISTRICT	D-HSTN					
84	NWOR DISTRICT	D-NWOR					
85							
86	NOFL AREA	A-NOFL					
87	DYTA DISTRICT	D-DYTA					
88	JACK DISTRICT	D-JACK					
89	ORLN DISTRICT	D-ORLN					
90	TALA DISTRICT	D-TALA					
91	TAPA DISTRICT	D-TAPA					
92							
93	SANA AREA	A-SANA					
94	AUST DISTRICT	D-AUST					
95	CRPS DISTRICT	D-CRPS					
96	RGVY DISTRICT	D-RGVY					
97	SANA DISTRICT	D-SANA					
98							
99	SOFL AREA	A-SOFL					
100	SEFL DISTRICT	D-SEFL					
101	SWFL DISTRICT	D-SWFL					
102							

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Investment Assignment Worksheet

A	B	C	I	J	K	L	M	N	O
				MSC					
Row #	Description	ID		National Investment Percent	Region Investment Percent	Area Investment Percent	District Investment Percent	District Investment / Total Investments	GL Balance Direct Investment Assignment
71	SOET REGION	R-SOET							
72									
73	ATLA AREA	A-ATLA							
74	ATLA DISTRICT	D-ATLA							
75	BIRM DISTRICT	D-BIRM							
76									
77	DALL AREA	A-DALL							
78	DALL DISTRICT	D-DALL							
79	OKCY DISTRICT	D-OKCY							
80	TLSA DISTRICT	D-TLSA							
81									
82	HSTN AREA	A-HSTN							
83	HSTN DISTRICT	D-HSTN							
84	NWOR DISTRICT	D-NWOR							
85									
86	NOFL AREA	A-NOFL							
87	DYTA DISTRICT	D-DYTA							
88	JACK DISTRICT	D-JACK							
89	ORLN DISTRICT	D-ORLN							
90	TALA DISTRICT	D-TALA							
91	TAPA DISTRICT	D-TAPA							
92									
93	SANA AREA	A-SANA							
94	AUST DISTRICT	D-AUST							
95	CRPS DISTRICT	D-CRPS							
96	RGVY DISTRICT	D-RGVY							
97	SANA DISTRICT	D-SANA							
98									
99	SOFL AREA	A-SOFL							
100	SEFL DISTRICT	D-SEFL							
101	SWFL DISTRICT	D-SWFL							
102									

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Investment Assignment Worksheet

A	B	C	P	Q	R	S	T	U	V
				BTS					
Row #	Description	ID		National Investment Percent	Region Investment Percent	Area Investment Percent	District Investment Percent	District Investment / Total Investments	GL Balance Direct Investment Assignment
71	SOET REGION	R-SOET							
72									
73	ATLA AREA	A-ATLA							
74	ATLA DISTRICT	D-ATLA							
75	BIRM DISTRICT	D-BIRM							
76									
77	DALL AREA	A-DALL							
78	DALL DISTRICT	D-DALL							
79	OKCY DISTRICT	D-OKCY							
80	TLSA DISTRICT	D-TLSA							
81									
82	HSTN AREA	A-HSTN							
83	HSTN DISTRICT	D-HSTN							
84	NWOR DISTRICT	D-NWOR							
85									
86	NOFL AREA	A-NOFL							
87	DYTA DISTRICT	D-DYTA							
88	JACK DISTRICT	D-JACK							
89	ORLN DISTRICT	D-ORLN							
90	TALA DISTRICT	D-TALA							
91	TAPA DISTRICT	D-TAPA							
92									
93	SANA AREA	A-SANA							
94	AUST DISTRICT	D-AUST							
95	CRPS DISTRICT	D-CRPS							
96	RGVY DISTRICT	D-RGVY							
97	SANA DISTRICT	D-SANA							
98									
99	SOFL AREA	A-SOFL							
100	SEFL DISTRICT	D-SEFL							
101	SWFL DISTRICT	D-SWFL							
102									

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Investment Assignment Worksheet

A	B	C	W	X	Y	Z	AA	AB	AC
				Structure					
Row #	Description	ID		National Investment Percent	Region Investment Percent	Area Investment Percent	District Investment Percent	District Investment / Total Investments	GL Balance Direct Investment Assignment
71	SOET REGION	R-SOET							
72									
73	ATLA AREA	A-ATLA							
74	ATLA DISTRICT	D-ATLA							
75	BIRM DISTRICT	D-BIRM							
76									
77	DALL AREA	A-DALL							
78	DALL DISTRICT	D-DALL							
79	OKCY DISTRICT	D-OKCY							
80	TLSA DISTRICT	D-TLSA							
81									
82	HSTN AREA	A-HSTN							
83	HSTN DISTRICT	D-HSTN							
84	NWOR DISTRICT	D-NWOR							
85									
86	NOFL AREA	A-NOFL							
87	DYTA DISTRICT	D-DYTA							
88	JACK DISTRICT	D-JACK							
89	ORLN DISTRICT	D-ORLN							
90	TALA DISTRICT	D-TALA							
91	TAPA DISTRICT	D-TAPA							
92									
93	SANA AREA	A-SANA							
94	AUST DISTRICT	D-AUST							
95	CRPS DISTRICT	D-CRPS							
96	RGVY DISTRICT	D-RGVY							
97	SANA DISTRICT	D-SANA							
98									
99	SOFL AREA	A-SOFL							
100	SEFL DISTRICT	D-SEFL							
101	SWFL DISTRICT	D-SWFL							
102									

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Expense Input Worksheet

Highlight Parameters: Start 0 Stop 0

A	B	C	D	E	F	G	H	I	J
Row #	Cost Center	Description	Key	Category	Driver	Level	Region	Area	District
9	10000	CEO - STV	NATIONAL	C	ALL	NATIONAL			
10	10100	CEO - APC	NATIONAL	C	ALL	NATIONAL			
11	11000	Coo - Stv	NATIONAL	C	ALL	NATIONAL			
12	11100	Field Staff Roll-Out	NATIONAL	C	ALL	NATIONAL			
13	11200	National Accounts	NATIONAL	E	EXL	NATIONAL			
14	11201	NATIONAL ACCOUNTS - CORPORATE	NATIONAL	C	ALL	NATIONAL			
15	11202	BUSINESS SALES OPS & SUPPORT	NATIONAL	C	ALL	NATIONAL			
16	11210	NATIONAL ACCOUNTS - EAST	NATIONAL	E	EXL	NATIONAL			
17	11211	TELESALES COX/S.CAL	NATIONAL	E	EXL	NATIONAL			
18	11212	Natl Sales NE - Sales Operations	NATIONAL	E	EXL	NATIONAL			
19	11213	Natl Sales NE - New England Area Dir	NATIONAL	E	EXL	NATIONAL			
20	11214	Natl Sales NE - Fed Govt Area Dir	NATIONAL	E	EXL	NATIONAL			
21	11215	Natl Sales NE - Philadelphia/Wash Area Dir	NATIONAL	E	EXL	NATIONAL			
22	11220	Natl Accounts - NC Region	NATIONAL	E	EXL	NATIONAL			
23	11221	Natl Sales NC - Sales Operations	NATIONAL	E	EXL	NATIONAL			
24	11222	Natl Sales NC - Chicago Area Dir	NATIONAL	E	EXL	NATIONAL			
25	11223	Natl Sales - Kansas City Area Dir	NATIONAL	E	EXL	NATIONAL			
26	11230	NATL SALES SOUTHEAST REGION	NATIONAL	E	EXL	NATIONAL			
27	11231	Natl Sales SE - Sales Operations	NATIONAL	E	EXL	NATIONAL			
28	11232	Natl Sales SE - Dallas Area Dir	NATIONAL	E	EXL	NATIONAL			
29	11233	Natl Sales SE - Atlanta Area Dir	NATIONAL	E	EXL	NATIONAL			
30	11240	NATIONAL ACCOUNTS - CENTRAL	NATIONAL	E	EXL	NATIONAL			
31	11275	NATIONAL ACCOUNTS - WEST	NATIONAL	E	EXL	NATIONAL			
32	11276	TELESALES AFFILIATES	NATIONAL	E	EXL	NATIONAL			
33	11277	Natl Sales W - Sales Operations	NATIONAL	E	EXL	NATIONAL			
34	11278	Natl Sales W - LA Area Dir	NATIONAL	E	EXL	NATIONAL			
35	11279	Natl Sales W - SF Area Dir	NATIONAL	E	EXL	NATIONAL			
36	11300	CORPORATE TRAINING	NATIONAL	E	EXL	NATIONAL			
37	11301	STAFF OPERATIONS	NATIONAL	E	EXL	NATIONAL			
38	11302	ADV ENHAN - VOICE PRODUCTS	NATIONAL	E	EXL	NATIONAL			
39	11303	ADV ENHAN - DATA PRODUCTS	NATIONAL	E	EXL	NATIONAL			
40	11304	SYSTEM ADMIN-TIER 3 HELP DESK	NATIONAL	E	EXL	NATIONAL			
41	11305	SYSTEM ADMIN - SYSTEM ENHANCE	NATIONAL	E	EXL	NATIONAL			
42	11306	F/O - COMMISSIONS/INCENTIVES	NATIONAL	E	EXL	NATIONAL			
43	11307	F/O - OPERATIONAL ANALY & RPT	NATIONAL	E	EXL	NATIONAL			
44	11308	F/O - METHODS & PROCEDURES	NATIONAL	E	EXL	NATIONAL			
45	11309	F/O - COMPLIANCE	NATIONAL	E	EXL	NATIONAL			
46	11310	FIELD OPS - PROCESS SUPPORT	NATIONAL	E	EXL	NATIONAL			
47	11311	CORPORATE TRAINING DELIVERY	NATIONAL	E	EXL	NATIONAL			
48	11400	Materials Mgmt - Logistics	NATIONAL	E	EXL	NATIONAL			
49	11500	RETAIL STORE IMPLEMENTATION	NATIONAL	E	EXL	NATIONAL			
50	11600	Radio Shack Equipment Subsidy	NATIONAL	E	EXL	NATIONAL			
51	11610	Sony Equipment Subsidy	NATIONAL	E	EXL	NATIONAL			

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Highlight Parameters: Start 0 Stop 0

	A	B	C	D	E	F	G	H	I	J
	[redacted]	[redacted]	[redacted]	Key	Category	Driver	Level	Region	Area	District
52		11620	May Equipment Subsidy	NATIONAL	E	EXL	NATIONAL			
53		11630	Dillards - Equipment Subsidy	NATIONAL	E	EXL	NATIONAL			
54		11690	SUBSIDY - REGIONAL 3P RETAILER	NATIONAL	E	EXL	NATIONAL			
55		11699	Subsidy Allocation	NATIONAL	E	EXL	NATIONAL			
56		11700	Market Laucnh SWAT Team	NATIONAL	E	EXL	NATIONAL			
57		12000	CMO - STV	NATIONAL	E	EXL	NATIONAL			
58		12001	VP - STRATEGIC PLANNING	NATIONAL	E	EXL	NATIONAL			
59		12002	VP - Spec Proj	NATIONAL	E	EXL	NATIONAL			
60		12010	SR VP SALES & Distribution	NATIONAL	E	EXL	NATIONAL			
61		12011	Sales Operations	NATIONAL	E	EXL	NATIONAL			
62		12012	SYSTEM SUPPORT & DEVELOPMENT	NATIONAL	E	EXL	NATIONAL			
63		12013	DISTRIBUTION	NATIONAL	E	EXL	NATIONAL			
64		12015	E-COMMERCE - HEADQUARTERS	NATIONAL	E	EXL	NATIONAL			
65		12016	E-COMMERCE - CHANNEL	NATIONAL	E	EXL	NATIONAL			
66		12017	ONE SPRINT INTERNET	NATIONAL	E	EXL	NATIONAL			
67		12020	Marketing - New Entrants	NATIONAL	E	EXL	NATIONAL			
68		12040	MARKETING - CONSUMER SBU	NATIONAL	E	EXL	NATIONAL			
69		12060	Marketing - Businesses	NATIONAL	E	EXL	NATIONAL			
70		12080	Marketing - Loyalty	NATIONAL	E	EXL	NATIONAL			
71		12100	VP - Marketing	NATIONAL	E	EXL	NATIONAL			
72		12110	Planning & Analysis	NATIONAL	E	EXL	NATIONAL			
73		12120	Business Marketing	NATIONAL	E	EXL	NATIONAL			
74		12130	Advertising, Marketing Comm	NATIONAL	E	EXL	NATIONAL			
75		12135	Marketing - APC	NATIONAL	E	EXL	NATIONAL			
76		12140	MARKET INSIGHTS GROUP	NATIONAL	E	EXL	NATIONAL			
77		12145	Marketing Operations	NATIONAL	E	EXL	NATIONAL			
78		12150	Pricing Strategies	NATIONAL	E	EXL	NATIONAL			
79		12155	RETAIL STORE IMPLEMENTATION	NATIONAL	E	EXL	NATIONAL			
80		12160	Market Launch	NATIONAL	E	EXL	NATIONAL			
81		12170	National Distribution Channels	NATIONAL	E	EXL	NATIONAL			
82		12174	Telesales-Loyalty	NATIONAL	E	EXL	NATIONAL			
83		12175	TELEMARKETING SALES - CORP.	NATIONAL	E	EXL	NATIONAL			
84		12176	TELEMARKETING SALES - FIELD	NATIONAL	E	EXL	NATIONAL			
85		12177	TELEMARKETING - SPRING CSG	NATIONAL	E	EXL	NATIONAL			
86		12178	THIRD PARTY - BUSINESS	NATIONAL	E	EXL	NATIONAL			
87		12179	One Sprint Integrated Bill TS	NATIONAL	E	EXL	NATIONAL			
88		12180	PARTNERS - SPRINT	NATIONAL	E	EXL	NATIONAL			
89		12190	THIRD PARTY RETAIL SALES	NATIONAL	E	EXL	NATIONAL			
90		12191	Retail Marketing - Training	NATIONAL	E	EXL	NATIONAL			
91		12192	Rtail Mktg-RadioShack Alliance	NATIONAL	E	EXL	NATIONAL			
92		12193	Retail Mktg - Direct Rtl Merch	NATIONAL	E	EXL	NATIONAL			
93		12194	Rtl Mktg-Admin,Vendor Coop Fee	NATIONAL	E	EXL	NATIONAL			
94		12200	VP - PRODUCT MGMT & DEVELPMENT	NATIONAL	E	EXL	NATIONAL			

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Highlight Parameters: Start 0 Stop 0

A	B	C	D	E	F	G	H	I	J
Row #	Cost Center	Description	Key	Category	Driver	Level	Region	Area	District
95	12210	Product Planning	NATIONAL	E	EXL	NATIONAL			
96	12220	USER REQUIREMENTS & USABILITY	NATIONAL	E	EXL	NATIONAL			
97	12230	MESSAGING SERVICES	NATIONAL	E	EXL	NATIONAL			
98	12240	BILLING SERVICES	NATIONAL	E	EXL	NATIONAL			
99	12250	Subscriber Equipment	NATIONAL	E	EXL	NATIONAL			
100	12260	OPERATIONAL ECONOMICS	NATIONAL	E	EXL	NATIONAL			
101	12270	GEOANALYSIS & PRESENTATION	NATIONAL	E	EXL	NATIONAL			
102	12300	SR VP CUSTOMER CARE	NATIONAL	E	EXL	NATIONAL			
103	12310	EDUCATION & DEVELOPMENT	NATIONAL	E	EXL	NATIONAL			
104	12311	EDUCATION - FT. WORTH	NATIONAL	E	EXL	NATIONAL			
105	12312	EDUCATION CALL - RIO RANCHO	NATIONAL	E	EXL	NATIONAL			
106	12313	EDUCATION CALL - CHARLOTTE	NATIONAL	E	EXL	NATIONAL			
107	12314	EDUCATION - CHICAGO	NATIONAL	E	EXL	NATIONAL			
108	12315	EDUCATION CALL - CENTER APC	NATIONAL	E	EXL	NATIONAL			
109	12316	Education - Hawaii	NATIONAL	E	EXL	NATIONAL			
110	12317	EDUCATION CALL - CENTER COX	NATIONAL	E	EXL	NATIONAL			
111	12318	EDUCATION- NASHVILLE	NATIONAL	E	EXL	NATIONAL			
112	12319	EDUCATION - OKLAHOMA CITY	NATIONAL	E	EXL	NATIONAL			
113	12320	Service Management Support	NATIONAL	E	EXL	NATIONAL			
114	12321	MISSION CONTROL - FT. WORTH	NATIONAL	E	EXL	NATIONAL			
115	12322	MISSION CONTROL - RIO RANCHO	NATIONAL	E	EXL	NATIONAL			
116	12323	MISSION CONTROL - CHARLOTTE	NATIONAL	E	EXL	NATIONAL			
117	12324	MISSION CONTROL-CHICAGO	NATIONAL	E	EXL	NATIONAL			
118	12325	Mission Control - Herndon	NATIONAL	E	EXL	NATIONAL			
119	12326	Mission Control - Hawaii	NATIONAL	E	EXL	NATIONAL			
120	12327	MISSION CONTRL-CALL CENTER COX	NATIONAL	E	EXL	NATIONAL			
121	12328	MISSION CONTROL - NASHVILLE	NATIONAL	E	EXL	NATIONAL			
122	12329	MISSION CONTROL- OKLAHOMA CITY	NATIONAL	E	EXL	NATIONAL			
123	12330	SPECIAL INITIATIVES	NATIONAL	E	EXL	NATIONAL			
124	12340	Partner Service Operations	NATIONAL	E	EXL	NATIONAL			
125	12350	BUSINESS PROCESSES	NATIONAL	E	EXL	NATIONAL			
126	12351	HELP DESK - FT. WORTH	NATIONAL	E	EXL	NATIONAL			
127	12352	HELP DESK - RIO RANCHO	NATIONAL	E	EXL	NATIONAL			
128	12353	HELP DESK - CHARLOTTE	NATIONAL	E	EXL	NATIONAL			
129	12354	HELP DESK - CHICAGO	NATIONAL	E	EXL	NATIONAL			
130	12355	Help Desk - Herdon	NATIONAL	E	EXL	NATIONAL			
131	12356	Help Desk - Kansas City	NATIONAL	E	EXL	NATIONAL			
132	12357	Help Desk - Irvin	NATIONAL	E	EXL	NATIONAL			
133	12358	Help Desk- Nashville	NATIONAL	E	EXL	NATIONAL			
134	12359	HELP DESK - OKLAHOMA CITY	NATIONAL	E	EXL	NATIONAL			
135	12360	USER ACCEPTANCE LAB	NATIONAL	E	EXL	NATIONAL			
136	12370	QUALITY & STATISTICAL ANALYSIS	NATIONAL	E	EXL	NATIONAL			
137	12400	CALL CENTER OPERATIONS	NATIONAL	E	EXL	NATIONAL			

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A	B	C	D	E	F	G	H	I	J
Row #	Cost Center	Description	Key	Category	Driver	Level	Region	Area	District
138	12401	TELECOM MGMT - W/OUT COX	NATIONAL	E	EXL	NATIONAL			
139	12402	TELECOM MGMT - COX	NATIONAL	E	EXL	NATIONAL			
140	12404	Call Center Ops 2	NATIONAL	E	EXL	NATIONAL			
141	12405	Vendors & Expansion	NATIONAL	E	EXL	NATIONAL			
142	12410	FORT WORTH CALL CENTER	NATIONAL	E	EXL	NATIONAL			
143	12411	ONE SPRINT-IB AT FT. WORTH	NATIONAL	E	EXL	NATIONAL			
144	12415	Call Center #10	NATIONAL	E	EXL	NATIONAL			
145	12420	RIO RANCHO CALL CENTER	NATIONAL	E	EXL	NATIONAL			
146	12425	Call Center #11	NATIONAL	E	EXL	NATIONAL			
147	12430	CHARLOTTE CALL CENTER	NATIONAL	E	EXL	NATIONAL			
148	12435	Call Center #12	NATIONAL	E	EXL	NATIONAL			
149	12440	CUSTOMER CARE CENTER 4	NATIONAL	E	EXL	NATIONAL			
150	12450	CUSTOMER CARE CENTER APC	NATIONAL	E	EXL	NATIONAL			
151	12460	HAWAII CALL CENTER	NATIONAL	E	EXL	NATIONAL			
152	12465	COLLECTIONS - COX	NATIONAL	E	EXL	NATIONAL			
153	12470	CUSTOMER CARE CENTER COX	NATIONAL	E	EXL	NATIONAL			
154	12480	NASHVILLE CALL CENTER	NATIONAL	E	EXL	NATIONAL			
155	12490	OKLAHOMA CITY CALL CENTER	NATIONAL	E	EXL	NATIONAL			
156	12500	OS/DA	NATIONAL	E	EXL	NATIONAL			
157	12510	COLLECTIONS - FORT WORTH	NATIONAL	E	EXL	NATIONAL			
158	12515	Collections - Call Center 10	NATIONAL	E	EXL	NATIONAL			
159	12520	COLLECTIONS - RIO RANCHO	NATIONAL	E	EXL	NATIONAL			
160	12530	COLLECTIONS - CALL CENTER 3	NATIONAL	E	EXL	NATIONAL			
161	12540	Collections - Chicago	NATIONAL	E	EXL	NATIONAL			
162	12550	COLLECTIONS - CALL CENTER APC	NATIONAL	E	EXL	NATIONAL			
163	12570	COLLECTIONS - CALL CENTER COX	NATIONAL	E	EXL	NATIONAL			
164	12580	Collections - Nashville	NATIONAL	E	EXL	NATIONAL			
165	12590	COLLECTIONS - OKLAHOMA CITY	NATIONAL	E	EXL	NATIONAL			
166	12600	CONVERGYS - CINCINNATI	NATIONAL	E	EXL	NATIONAL			
167	12610	Education Call Center #10	NATIONAL	E	EXL	NATIONAL			
168	12611	Education Call Center #11	NATIONAL	E	EXL	NATIONAL			
169	12612	Education Call Center #12	NATIONAL	E	EXL	NATIONAL			
170	12619	Leadership Development	NATIONAL	E	EXL	NATIONAL			
171	12620	Mission Control Cc #10	NATIONAL	E	EXL	NATIONAL			
172	12621	Mission Control Cc #11	NATIONAL	E	EXL	NATIONAL			
173	12622	Mission Control Cc #12	NATIONAL	E	EXL	NATIONAL			
174	12650	Help Desk Cc #10	NATIONAL	E	EXL	NATIONAL			
175	12651	Help Desk Cc #11	NATIONAL	E	EXL	NATIONAL			
176	12652	Help Desk Cc #12	NATIONAL	E	EXL	NATIONAL			
177	12657	Product & Business Development	NATIONAL	E	EXL	NATIONAL			
178	12658	TS&NO Business Processes	NATIONAL	E	EXL	NATIONAL			
179	12659	Strategic Business Solutions	NATIONAL	E	EXL	NATIONAL			
180	12700	CONVERGYS - LOGAN	NATIONAL	E	EXL	NATIONAL			

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A	B	C	D	E	F	G	H	I	J
Row #	Cost Center	Description	Key	Category	Driver	Level	Region	Area	District
181	12710	STI - FLORIDA	NATIONAL	E	EXL	NATIONAL			
182	12720	COX VENDOR - IDRC	NATIONAL	E	EXL	NATIONAL			
183	12730	COX VENDOR - ITI	NATIONAL	E	EXL	NATIONAL			
184	12790	Facilty & Admin - Cox Hdqrts	NATIONAL	E	EXL	NATIONAL			
185	12805	PRODUCT DVLPMT - GENERAL MGR	NATIONAL	E	EXL	NATIONAL			
186	12810	WIRELESS MESSAGING TEAM	NATIONAL	E	EXL	NATIONAL			
187	12815	PROVISIONING, FRD & PRVCY TEAM	NATIONAL	E	EXL	NATIONAL			
188	12820	VOICE SERVICES	NATIONAL	E	EXL	NATIONAL			
189	12825	OTASP 1	NATIONAL	E	EXL	NATIONAL			
190	12830	MANAGEMENT REPORTING	NATIONAL	E	EXL	NATIONAL			
191	12835	WIRELESS DATA TEAM	NATIONAL	E	EXL	NATIONAL			
192	12840	BUSINESS UNIT SUPPORT	NATIONAL	E	EXL	NATIONAL			
193	12845	DATA SERVICES	NATIONAL	E	EXL	NATIONAL			
194	12850	E-CENTER OPERATIONS	NATIONAL	E	EXL	NATIONAL			
195	12855	E-BUSINESS PRODUCT DEVELOPMENT	NATIONAL	E	EXL	NATIONAL			
196	12860	Fraud - APC	NATIONAL	E	EXL	NATIONAL			
197	12900	Regulatory Operations	NATIONAL	C	ALL	NATIONAL			
198	12910	E911	NATIONAL	E	EXL	NATIONAL			
199	13000	Technology Officer	NATIONAL	C	ALL	NATIONAL			
200	13020	YEAR 2000 PROJECT	NATIONAL	C	ALL	NATIONAL			
201	13100	Chief Information Officer	NATIONAL	C	ALL	NATIONAL			
202	13101	Enterprise Data Warehse Enviro	NATIONAL	C	ALL	NATIONAL			
203	13102	Release Mgmt/ Product Testing	NATIONAL	C	ALL	NATIONAL			
204	13103	App Delivery/ Vendor Mgmt	NATIONAL	C	ALL	NATIONAL			
205	13104	Operations	NATIONAL	C	ALL	NATIONAL			
206	13105	Client Services	NATIONAL	C	ALL	NATIONAL			
207	13106	Internal Support	NATIONAL	C	ALL	NATIONAL			
208	13107	Network Services	NATIONAL	C	ALL	NATIONAL			
209	13108	Capacity	NATIONAL	C	ALL	NATIONAL			
210	13109	SOFTWARE	NATIONAL	C	ALL	NATIONAL			
211	13110	Operational Data Layer	NATIONAL	C	ALL	NATIONAL			
212	13111	Data Management	NATIONAL	C	ALL	NATIONAL			
213	13112	Architecture	NATIONAL	C	ALL	NATIONAL			
214	13113	Performance Support/ Training	NATIONAL	C	ALL	NATIONAL			
215	13114	Staffing Operations	NATIONAL	C	ALL	NATIONAL			
216	13115	IT Planning	NATIONAL	C	ALL	NATIONAL			
217	13116	Quality Assurance	NATIONAL	C	ALL	NATIONAL			
218	13117	Bus Cont Plng/ Disaster Recvry	NATIONAL	C	ALL	NATIONAL			
219	13118	Contracts/ Policy Admin	NATIONAL	C	ALL	NATIONAL			
220	13119	Documentation	NATIONAL	C	ALL	NATIONAL			
221	13120	Services Management	NATIONAL	C	ALL	NATIONAL			
222	13121	App Delivery- Fin/Bus Dvlpmt	NATIONAL	C	ALL	NATIONAL			
223	13122	App Dlvry-E&O/Special Projects	NATIONAL	C	ALL	NATIONAL			

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A	B	C	D	E	F	G	H	I	J
Row #	Cost Center	Description	Key	Category	Driver	Level	Region	Area	District
224	13123	App Dlvry-Sales Expe/Cust Care	NATIONAL	C	ALL	NATIONAL			
225	13124	App Dlvry- Mrktg/ Corp Systems	NATIONAL	C	ALL	NATIONAL			
226	13125	App Delivery- Revenue Ops	NATIONAL	C	ALL	NATIONAL			
227	13126	Deployment	NATIONAL	C	ALL	NATIONAL			
228	13127	Administration	NATIONAL	C	ALL	NATIONAL			
229	13128	IT - APC	NATIONAL	C	ALL	NATIONAL			
230	13129	APPL. DEL. - CLIENT FUND PROJ.	NATIONAL	C	ALL	NATIONAL			
231	13130	SERVICE DELIVERY Y2K	NATIONAL	C	ALL	NATIONAL			
232	13131	IT TECHNOLOGY INTEGRATION	NATIONAL	C	ALL	NATIONAL			
233	13132	Technical & Network Y2K	NATIONAL	C	ALL	NATIONAL			
234	13133	APP DEVLMNT-BUS DEV/TASD SUPPT	NATIONAL	C	ALL	NATIONAL			
235	13134	IT Change Management	NATIONAL	C	ALL	NATIONAL			
236	13140	MARKET LAUNCH OPERATIONS	NATIONAL	C	ALL	NATIONAL			
237	13150	Wireline Implementation	NATIONAL	C	ALL	NATIONAL			
238	13200	VP NETWORK SERVICES	NATIONAL	O	ALL	NATIONAL			
239	13201	AVP of Ops	NATIONAL	O	ALL	NATIONAL			
240	13202	Benchmarking & Quality Control	NATIONAL	O	ALL	NATIONAL			
241	13203	Service Assurance	NATIONAL	O	ALL	NATIONAL			
242	13210	RVP - SOUTH EAST	R-SOET	O	ALL	REGIONAL	SOET		
246	13230	TECHNOLOGY & ADVANCES SYS DEV	NATIONAL	O	ALL	NATIONAL			
247	13232	NETWORK DESIGN - LUCENT	NATIONAL	O	ALL	NATIONAL			
248	13233	TECHNOLOGY RESCH & DEVELOPMENT	NATIONAL	O	ALL	NATIONAL			
249	13234	NETWORK MGMT SYS DEVELOPMENT	NATIONAL	O	ALL	NATIONAL			
251	13240	VP ENGINEERING	NATIONAL	O	ALL	NATIONAL			
252	13241	NATIONAL SITE DEVELOPMENT	NATIONAL	O	ALL	NATIONAL			
256	13245	National Site Development	NATIONAL	O	ALL	NATIONAL			
257	13246	SITE DEVEL. DIRECTOR - S.EAST	R-SOET	O	ALL	REGIONAL	SOET		
259	13248	DISTRIBUTED WIRELESS	NATIONAL	O	ALL	NATIONAL			
260	13249	SITE DEVELOPMENT NRTHEAST - NY	NATIONAL	O	ALL	NATIONAL			
261	13250	NATIONAL PROJECT MANAGEMENT	NATIONAL	O	ALL	NATIONAL			
265	13254	DIR NET OPS SOUTHEAST REGION	R-SOET	O	ALL	REGIONAL	SOET		
267	13260	VP NETWORK FIELD OPERATIONS	NATIONAL	O	ALL	NATIONAL			
271	13270	VP SITE DEVEL & PROJECT MGMT	NATIONAL	O	ALL	NATIONAL			
276	13283	Ops Cox - APC - INACTIVE	NATIONAL	O	ALL	NATIONAL			
277	13290	Cox Tech Services Transition	NATIONAL	O	ALL	NATIONAL			
278	13327	VP CENTRALIZED NETWORK SRVCS	NATIONAL	O	ALL	NATIONAL			
279	13328	WIN PLANNING AND DEVELOPMENT	NATIONAL	O	ALL	NATIONAL			
280	13329	NATL. TECH. ASST. CNTR IRVINE	NATIONAL	O	ALL	NATIONAL			
281	13330	VP CENTRALIZED NET SERVICES	NATIONAL	O	ALL	NATIONAL			
282	13331	Network Management Center	NATIONAL	O	ALL	NATIONAL			
283	13332	NATIONAL NETWORK ENGINEERING	NATIONAL	O	ALL	NATIONAL			
284	13333	National Translations	NATIONAL	O	ALL	NATIONAL			
285	13334	Ntwk Prfrmnc Anal Cntr (NPAC)	NATIONAL	O	ALL	NATIONAL			

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A	B	C	D	E	F	G	H	I	J
Row #	Cost Center	Description	Key	Category	Driver	Level	Region	Area	District
286	13335	NW Sys Planning and Develop	NATIONAL	O	ALL	NATIONAL			
287	13336	N.T.A.C. & Change Mgmt Control	NATIONAL	O	ALL	NATIONAL			
288	13337	NETWORK SECURITY	NATIONAL	O	ALL	NATIONAL			
289	13338	Systems & Tech Integration Ctr	NATIONAL	O	ALL	NATIONAL			
290	13339	Network Planning and Operation	NATIONAL	O	ALL	NATIONAL			
291	13340	AVP-Engineering	NATIONAL	O	ALL	NATIONAL			
292	13341	RF Engineering	NATIONAL	O	CEL	NATIONAL			
293	13342	Director Integrations/Standard	NATIONAL	O	ALL	NATIONAL			
294	13343	Director-Network Engineering	NATIONAL	O	ALL	NATIONAL			
295	13344	Contract / Vendor Mgmt	NATIONAL	O	ALL	NATIONAL			
296	13345	Microwave Relocation	NATIONAL	O	ALL	NATIONAL			
297	13346	PROPERTY & CONSTRUCTION	NATIONAL	O	ALL	NATIONAL			
298	13347	Wireless Industry Standards	NATIONAL	O	ALL	NATIONAL			
299	13348	NETWORK INVENTORY MANAGEMENT	NATIONAL	O	ALL	NATIONAL			
300	13349	ENGINEERING STANDARDS	NATIONAL	O	ALL	NATIONAL			
301	13350	NOT USED	NATIONAL	O	ALL	NATIONAL			
302	13351	Sprint Com Contract Admin	NATIONAL	O	ALL	NATIONAL			
303	13352	RF ENGINEERING - CORPORATE	NATIONAL	O	CEL	NATIONAL			
308	13357	RF ENGINEERING - S.EAST REGION	R-SOET	O	CEL	REGIONAL	SOET		
309	13358	NTWK DSGN - NORTEL & MOTOROLA	NATIONAL	O	ALL	NATIONAL			
310	13359	GSM CONVERSION COSTS	NATIONAL	O	ALL	NATIONAL			
311	13360	Staff Operations	NATIONAL	O	ALL	NATIONAL			
312	13361	Network Buildout Center	NATIONAL	O	ALL	NATIONAL			
313	13362	Logistics	NATIONAL	O	ALL	NATIONAL			
314	13363	Training	NATIONAL	O	ALL	NATIONAL			
315	13364	NOT USED	NATIONAL	O	ALL	NATIONAL			
316	13365	Logistics - APC	NATIONAL	O	ALL	NATIONAL			
317	13370	NOT USED	NATIONAL	O	ALL	NATIONAL			
318	13381	OPER. SUPPORT SYSTEMS CENTER	NATIONAL	O	ALL	NATIONAL			
319	13382	OPAC/CMC & Security	NATIONAL	O	ALL	NATIONAL			
320	13400	NOT USED	NATIONAL	E	EXL	NATIONAL			
321	13921	NPTL - Directory Assistance	NATIONAL	E	EXL	NATIONAL			
322	13922	NPTL - Voice Mail Systems	NATIONAL	O	MSC	NATIONAL			
323	13923	NPTL - Prepaid Platform	NATIONAL	O	MSC	NATIONAL			
324	13924	NPTL - Operator Services	NATIONAL	E	EXL	NATIONAL			
325	13925	NPTL - OSSN	NATIONAL	O	MSC	NATIONAL			
326	13926	NPTL - OSSC	NATIONAL	O	MSC	NATIONAL			
327	13927	SS7 Messaging	NATIONAL	O	MSC	NATIONAL			
328	13928	NPTL - SS7 A Links	NATIONAL	O	MSC	NATIONAL			
329	13929	NPTL - Voice Activated Dialing	NATIONAL	E	EXL	NATIONAL			
330	13930	NPTL - Frame Relay	NATIONAL	O	MSC	NATIONAL			
331	13931	NPTL - 177	NATIONAL	O	MSC	NATIONAL			
332	13932	NPTL - OTAF	NATIONAL	E	EXL	NATIONAL			

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Row #	Cost Center	Description	Key	Category	Driver	Level	Region	Area	District
333	13933	NPTL - Miscellaneous	NATIONAL	E	EXL	NATIONAL			
334	14000	CFO - STV	NATIONAL	C	ALL	NATIONAL			
335	14001	Simpson Thacher Costs	NATIONAL	C	ALL	NATIONAL			
336	14100	ACCOUNTING & FSS	NATIONAL	C	ALL	NATIONAL			
337	14110	CREDIT CARD ADMIN FEE	NATIONAL	C	ALL	NATIONAL			
338	14120	Financl Sys Supp & Mgmt Rprtg	NATIONAL	C	ALL	NATIONAL			
339	14130	Access Verification	NATIONAL	C	ALL	NATIONAL			
340	14140	Accounts Receivable	NATIONAL	C	ALL	NATIONAL			
341	14150	Access Billing	NATIONAL	C	ALL	NATIONAL			
342	14160	Accounting - APC	NATIONAL	C	ALL	NATIONAL			
343	14170	ACCOUNTS PAYABLE	NATIONAL	C	ALL	NATIONAL			
344	14180	FINANCIAL SYSTEM SERVICES	NATIONAL	C	ALL	NATIONAL			
345	14190	SETTLEMENTS AND ALLOCATIONS	NATIONAL	C	ALL	NATIONAL			
346	14191	AFFILIATE SETTLEMENTS	NATIONAL	C	ALL	NATIONAL			
347	14192	Integrated Billing	NATIONAL	C	ALL	NATIONAL			
348	14200	Financial Planning & Analysis	NATIONAL	C	ALL	NATIONAL			
349	14225	OPERATIONS FINANCE	NATIONAL	C	ALL	NATIONAL			
350	14250	Finance - APC	NATIONAL	C	ALL	NATIONAL			
351	14300	Finance Operations	NATIONAL	C	ALL	NATIONAL			
352	14310	FORECASTS & RESULTS	NATIONAL	C	ALL	NATIONAL			
353	14311	NATL SALES, CUSTCARE, RETAIL	NATIONAL	C	ALL	NATIONAL			
354	14312	FINANCE OPERATIONS - E&O	NATIONAL	C	ALL	NATIONAL			
355	14313	MANAGEMENT REPORTING/PROC	NATIONAL	C	ALL	NATIONAL			
356	14314	FINANCE COLLEGE RECRUITING	NATIONAL	C	ALL	NATIONAL			
357	14315	PRICING	NATIONAL	C	ALL	NATIONAL			
358	14316	IT - FINANCE	NATIONAL	C	ALL	NATIONAL			
359	14320	FINANCE OPS: REGIONAL - SW	R-SOET	C	ALL	REGIONAL	SOET		
373	14340	FINANCE OPS: REGIONAL - S EAST	R-SOET	C	ALL	REGIONAL	SOET		
374	14341	FINANCE OPS: AREA - Miami	D-SEFL	C	ALL	DISTRICT	SOET	SOFL	SEFL
394	14370	Finance Ops- Orlando	D-ORLN	C	ALL	DISTRICT	SOET	NOFL	ORLN
404	14400	Tax	NATIONAL	C	ALL	NATIONAL			
405	14410	Tax - Property Taxes	NATIONAL	C	ALL	NATIONAL			
406	14420	SALES TAX - EQUIPMENTCO LEASE	NATIONAL	C	ALL	NATIONAL			
407	14499	EQUIPMENTCO LEASE INCOME	NATIONAL	C	ALL	NATIONAL			
408	14500	Treasury	NATIONAL	C	ALL	NATIONAL			
409	14510	Treasury - Insurance	NATIONAL	C	ALL	NATIONAL			
410	14511	NOT USED	NATIONAL	C	ALL	NATIONAL			
411	14520	INTEREST	NATIONAL	C	ALL	NATIONAL			
412	14530	CONSUMER LOCKBOX FEES	NATIONAL	C	ALL	NATIONAL			
413	14540	Treasury Department - Credit	NATIONAL	C	ALL	NATIONAL			
414	14600	REVENUE OPERATIONS	NATIONAL	C	ALL	NATIONAL			
415	14610	REVENUE OPERATIONS - FRAUD	NATIONAL	C	ALL	NATIONAL			
416	14620	VENDOR FEES	NATIONAL	C	ALL	NATIONAL			

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A	B	C	D	E	F	G	H	I	J
Row #	Cost Center	Description	Key	Category	Driver	Level	Region	Area	District
417	14630	SPEC. BILL & QTLY ASSURANCE	NATIONAL	C	ALL	NATIONAL			
418	14640	INV. STRAT & MAJOR PRODUCTS	NATIONAL	C	ALL	NATIONAL			
419	14700	BUSINESS SERVICES	NATIONAL	C	ALL	NATIONAL			
420	14800	FINANCE ADMINISTRATION	NATIONAL	C	ALL	NATIONAL			
421	14900	CORPORATE ASSURANCE	NATIONAL	C	ALL	NATIONAL			
422	15000	Business Development	NATIONAL	C	ALL	NATIONAL			
423	15110	AFTER MARKET SUPPORT	NATIONAL	C	ALL	NATIONAL			
424	15200	AUTOMOTIVE DEVELOPMENT	NATIONAL	C	ALL	NATIONAL			
425	15210	NEW BUSINESS DEVELOPMENT	NATIONAL	C	ALL	NATIONAL			
426	15211	International Group	NATIONAL	E	EXL	NATIONAL			
427	15220	FIXED WIRELESS SERVICES	NATIONAL	E	EXL	NATIONAL			
428	15221	FIXED WIRELESS-DES MOINES	NATIONAL	E	EXL	NATIONAL			
429	15310	ROAMING DEVELOPMENTS	NATIONAL	E	EXL	NATIONAL			
430	15320	WHOLESALE DEVELOPMENT	NATIONAL	E	EXL	NATIONAL			
431	15321	Pls Refurb Handsets	NATIONAL	E	EXL	NATIONAL			
432	15330	AFFILIATE RELATIONS	NATIONAL	E	EXL	NATIONAL			
433	15410	INTRCARRIER SRVCS- GEN MANAGER	NATIONAL	E	EXL	NATIONAL			
434	15411	INTERCARRIER SERVCS - DIR #1	NATIONAL	E	EXL	NATIONAL			
435	15412	Intercarrier Srvcs Director #2	NATIONAL	E	EXL	NATIONAL			
436	15413	Intercarrier Srvcs Director #3	NATIONAL	E	EXL	NATIONAL			
437	15414	Bus Dvlmnt - Service Delivery	NATIONAL	E	EXL	NATIONAL			
438	15415	TOWERCO	NATIONAL	E	EXL	NATIONAL			
439	15416	NE_SSUSA_SSLP	NATIONAL	E	EXL	NATIONAL			
440	15417	SE_SSUSA_SSLP	NATIONAL	E	EXL	NATIONAL			
441	15418	NC_SSUSA_SSLP	NATIONAL	E	EXL	NATIONAL			
442	15419	SC_SSUSA_SSLP	NATIONAL	E	EXL	NATIONAL			
443	15420	W_SSUSA_SSLP	NATIONAL	E	EXL	NATIONAL			
444	15421	NE_SSUSA_PC	NATIONAL	E	EXL	NATIONAL			
445	15422	NE_SSUSA_APC	NATIONAL	E	EXL	NATIONAL			
446	15423	SE_SSUSA_SC	NATIONAL	E	EXL	NATIONAL			
447	15424	NC_SSUSA_SC	NATIONAL	E	EXL	NATIONAL			
448	15425	SC_SSUSA_SC	NATIONAL	E	EXL	NATIONAL			
449	15426	W_SSUSA_SC	NATIONAL	E	EXL	NATIONAL			
450	15427	S_SSUSA_COX	NATIONAL	E	EXL	NATIONAL			
451	16000	General Counsel	NATIONAL	C	ALL	NATIONAL			
452	16010	Security	NATIONAL	C	ALL	NATIONAL			
453	16100	Federal Regulatory	NATIONAL	C	ALL	NATIONAL			
454	16200	State Regulatory	NATIONAL	C	ALL	NATIONAL			
455	16300	Business Law	NATIONAL	C	ALL	NATIONAL			
456	16400	External Affairs	NATIONAL	C	ALL	NATIONAL			
457	16401	Affilate Legal - Lgl - APC	NATIONAL	C	ALL	NATIONAL			
458	16500	Public Relations	NATIONAL	C	ALL	NATIONAL			
459	16501	PR - MEDIA RELATIONS	NATIONAL	C	ALL	NATIONAL			

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Row #	Cost Center	Description	Key	Category	Driver	Level	Region	Area	District
503	17270	FACILITY & ADMIN 7701 COLLEGE	NATIONAL	C	ALL	NATIONAL			
504	17275	Facility & Admin -7900 College	NATIONAL	C	ALL	NATIONAL			
505	17277	EXEC CENTRE I - 10881 LOWELL	NATIONAL	C	ALL	NATIONAL			
506	17278	EXEC CENTRE II - 10895 LOWELL	NATIONAL	C	ALL	NATIONAL			
507	17280	8001 College	NATIONAL	C	ALL	NATIONAL			
508	17283	9401 INDIAN CREEK PARKWAY	NATIONAL	C	ALL	NATIONAL			
509	17285	Farmers - 11880 College	NATIONAL	C	ALL	NATIONAL			
510	17290	FACILITY & ADMIN - COX HDQTRS	NATIONAL	C	ALL	NATIONAL			
511	17291	Facility & Admin - Future Space	NATIONAL	C	ALL	NATIONAL			
512	18000	APC EARNINGS	NATIONAL	E	EXL	NATIONAL			
513	18001	APC G&A AFFILIATE ALLOCATIONS	NATIONAL	E	EXL	NATIONAL			
514	18002	APC - SLS & MKTG AFFIL. ALLOC.	NATIONAL	E	EXL	NATIONAL			
515	18003	APC OPERATIONS AFFIL. ALLOC.	NATIONAL	E	EXL	NATIONAL			
516	18004	APC Region	NATIONAL	E	EXL	NATIONAL			
517	18005	APC Affiliate Revenue	NATIONAL	E	EXL	NATIONAL			
518	18006	APC COST RECOVERY	NATIONAL	E	EXL	NATIONAL			
519	18010	EQUITY IN EARNINGS - L.A. COX	NATIONAL	E	EXL	NATIONAL			
523	18025	PHILLIECO AFFILIATE REVENUE	NATIONAL	E	EXL	NATIONAL			
524	18030	SprintCom Affiliate Fee	NATIONAL	E	EXL	NATIONAL			
525	18031	SPRINTCOM COST RECOVERY	NATIONAL	E	EXL	NATIONAL			
526	18032	CORPORATE ALLOCATION - MRKTG	NATIONAL	E	EXL	NATIONAL			
527	18033	BTA - ALLOCATION	NATIONAL	E	EXL	NATIONAL			
528	18100	Equity In Earnings- Affiliate	NATIONAL	E	EXL	NATIONAL			
529	18200	Management fees	NATIONAL	E	EXL	NATIONAL			
530	18300	AMORTIZATION OF PCS LICENSE	NATIONAL	E	EXL	NATIONAL			
531	18801	Fees/Recovery - Airgate	NATIONAL	E	EXL	NATIONAL			
532	18802	FEES/RECOVERY-ALAMOSA	NATIONAL	E	EXL	NATIONAL			
533	18803	Fees/Recovery - Horizon	NATIONAL	E	EXL	NATIONAL			
534	18804	FEES/RECOVERY-ROBERTS	NATIONAL	E	EXL	NATIONAL			
535	18805	FEES/RECOVERY-SOUTHWEST PCS	NATIONAL	E	EXL	NATIONAL			
536	18806	FEES/RECOVERY MERETEL/USU	NATIONAL	E	EXL	NATIONAL			
537	18807	FEES/RECOVERY-LA UNWIRED	NATIONAL	E	EXL	NATIONAL			
538	18808	FEES/RECOVERY-BROOKING/SWIFTEL	NATIONAL	E	EXL	NATIONAL			
539	18809	FEES/RECOVERY-GA INDEP PCS	NATIONAL	E	EXL	NATIONAL			
540	18810	FEES/RECOVERY-ENTERPRISE	NATIONAL	E	EXL	NATIONAL			
541	18811	Fees/Recovery - Ubiquitel	NATIONAL	E	EXL	NATIONAL			
542	18812	Fees/Recovery - CWP (VIA)	NATIONAL	E	EXL	NATIONAL			
543	18813	Fees/Recovery - Illinois PCS	NATIONAL	E	EXL	NATIONAL			
544	18814	Fees/Recovery - IWO	NATIONAL	E	EXL	NATIONAL			
545	18815	Fees/Recovery - Midwest PCS	NATIONAL	E	EXL	NATIONAL			
546	18816	Fees/Recovery - Wash/Oreg	NATIONAL	E	EXL	NATIONAL			
547	18817	FEES/RECOVERY-SHENTEL	NATIONAL	E	EXL	NATIONAL			
548	18818	Fees/Recovery - Shentel CDMA	NATIONAL	E	EXL	NATIONAL			

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Row #	Cost Center	Description	Key	Category	Driver	Level	Region	Area	District
549	18819	Fees/Recovery - Bright PCS	NATIONAL	E	EXL	NATIONAL			
550	18820	Fees/Recovery - Alamosa WI	NATIONAL	E	EXL	NATIONAL			
551	18850	Fees/RecoveryUnsigned Type 1&2	NATIONAL	E	EXL	NATIONAL			
552	18851	Fees/Recovery Unsigned Type 3	NATIONAL	E	EXL	NATIONAL			
553	19000	APC - Non-SPCS Activity	NATIONAL	E	EXL	NATIONAL			
554	19100	19100 - temp	NATIONAL	E	EXL	NATIONAL			
555	19200	19200 - '	NATIONAL	E	EXL	NATIONAL			
556	19600	Sprint 240600	NATIONAL	E	EXL	NATIONAL			
557	19700	Sprint 240700	NATIONAL	E	EXL	NATIONAL			
558	19800	Sprint 240800	NATIONAL	E	EXL	NATIONAL			
640	21500	Implementation - Miami	D-SEFL	O	ALL	DISTRICT	SOET	SOFL	SEFL
641	21501	NW Dsgn & Interconnect - Miami	D-SEFL	O	ALL	DISTRICT	SOET	SOFL	SEFL
642	21502	RF Design-Miami	D-SEFL	O	CEL	DISTRICT	SOET	SOFL	SEFL
643	21503	Property-Miami	D-SEFL	O	CEL	DISTRICT	SOET	SOFL	SEFL
644	21504	Network Design-Miami	D-SEFL	O	ALL	DISTRICT	SOET	SOFL	SEFL
645	21505	Wireless Imp.-Miami	D-SEFL	O	ALL	DISTRICT	SOET	SOFL	SEFL
646	21506	Wireline Imp.-Miami	D-SEFL	O	ALL	DISTRICT	SOET	SOFL	SEFL
647	21507	Network Ops.-Miami	D-SEFL	O	ALL	DISTRICT	SOET	SOFL	SEFL
648	21508	Budgets-Miami	D-SEFL	O	ALL	DISTRICT	SOET	SOFL	SEFL
649	21509	Property - Miami	D-SEFL	O	ALL	DISTRICT	SOET	SOFL	SEFL
1016	31166	Fairfield Cnty F/O Prtnr Chan	NATIONAL	E	EXL	NATIONAL			
1154	33000	SE F/O REGIONAL PRESIDENT	R-SOET	E	EXL	REGIONAL	SOET		
1155	33001	SE F/O Reg VP-Sales & Mktg	R-SOET	E	EXL	REGIONAL	SOET		
1156	33002	SE F/O Regional Dir - Sales	R-SOET	E	EXL	REGIONAL	SOET		
1157	33003	SE F/O Reg Dir - Mkt Dvp	R-SOET	E	EXL	REGIONAL	SOET		
1158	33004	SE F/O Reg Dir - PR & Media	R-SOET	E	EXL	REGIONAL	SOET		
1159	33005	SE F/O - DIRECTOR OF OPERATION	R-SOET	E	EXL	REGIONAL	SOET		
1160	33007	SOUTHEAST- H/R	R-SOET	E	EXL	REGIONAL	SOET		
1161	33100	S FL F/O AREA VP	A-SOFL	E	EXL	AREA	SOET	SOFL	
1162	33101	S FL F/O AREA SYSTEMS IT MGR	A-SOFL	E	EXL	AREA	SOET	SOFL	
1163	33102	S FL F/O AREA DIRECTOR OF MKTG	D-SWFL	E	EXL	DISTRICT	SOET	SOFL	SWFL
1164	33110	MIA F/O Miami Dist(MID) Mgr	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
1165	33111	WPB - DISTRICT MANAGER	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
1166	33112	Ft. Myers-District Director	D-SWFL	E	EXL	DISTRICT	SOET	SOFL	SWFL
1167	33120	MIA F/O MID-Retail Merch.	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
1168	33121	SFL F/O WPB - Retail Store Mgr	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
1169	33122	SFL F/O SW - Retail Store Mgr	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
1170	33130	MIA F/O MID-Direct Acct Exec	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
1171	33131	WPB - DIRECT ACCOUNT EXECS	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
1172	33132	Ft. Myers-Direct Acc. Exec	D-SWFL	E	EXL	DISTRICT	SOET	SOFL	SWFL
1173	33140	MIA F/O MID-Direct Major Accts	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
1174	33141	WPB - DIRECT MAJOR ACCOUNTS	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
1175	33142	Ft. Myers-Direct Major Accts	D-SWFL	E	EXL	DISTRICT	SOET	SOFL	SWFL

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Row #	Cost Center	Description	Key	Category	Driver	Level	Region	Area	District
1176	33150	MIA F/O MID-LOCAL 3RD PTY	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
1177	33151	WPB - INDIRECT REPS	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
1178	33152	FT. MEYERS-LOCAL 3RD PTY	D-SWFL	E	EXL	DISTRICT	SOET	SOFL	SWFL
1179	33160	MIA F/O MID - NATIONAL 3RD PTY	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
1180	33161	WPB - PARTNER CHANNELS	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
1181	33162	FT. MEYERS - NATIONAL 3RD PTY	D-SWFL	E	EXL	DISTRICT	SOET	SOFL	SWFL
1182	33170	MIA F/O - KIOSK STORES	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
1183	33172	SOUTHWEST-RADIO SHACK REPS	D-SWFL	E	EXL	DISTRICT	SOET	SOFL	SWFL
1184	33181	SOUTHEAST BUSINESS DEALER	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
1185	33182	SFL F/O SW Business Dealer	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
1345	35000	South East	R-SOET	E	EXL	REGIONAL	SOET		
1346	35001	SE F/O REG VP-SALES & MKTG	R-SOET	E	EXL	REGIONAL	SOET		
1347	35002	SE F/O REGIONAL DIR-SALES	R-SOET	E	EXL	REGIONAL	SOET		
1348	35003	SE F/O REG DIR - MKT DVP	R-SOET	E	EXL	REGIONAL	SOET		
1349	35004	SE F/O REG DIR - PR & MEDIA	R-SOET	E	EXL	REGIONAL	SOET		
1350	35005	SE F/O - DIRECTOR OF OPERATION	R-SOET	E	EXL	REGIONAL	SOET		
1351	35006	SE F/O - DIRECTOR, B2B SALES	R-SOET	E	EXL	REGIONAL	SOET		
1352	35007	SE F/O - H/R	R-SOET	E	EXL	REGIONAL	SOET		
1650	40200	TAMPA - DIRECTOR	D-TAPA	O	ALL	DISTRICT	SOET	NOFL	TAPA
1651	40201	TAMPA-ACCESS/INTERCNCT CHGS	D-TAPA	O	ALL	DISTRICT	SOET	NOFL	TAPA
1652	40202	TAMPA - RF DESIGN	D-TAPA	O	CEL	DISTRICT	SOET	NOFL	TAPA
1653	40203	TAMPA - PROPERTY	D-TAPA	O	CEL	DISTRICT	SOET	NOFL	TAPA
1654	40204	TAMPA - NETWORK DESIGN	D-TAPA	O	ALL	DISTRICT	SOET	NOFL	TAPA
1655	40205	TAMPA - WIRELESS IMP.	D-TAPA	O	ALL	DISTRICT	SOET	NOFL	TAPA
1656	40206	TAMPA - WIRELINE IMP.	D-TAPA	O	ALL	DISTRICT	SOET	NOFL	TAPA
1657	40207	TAMPA - NETWORK OPS.	D-TAPA	O	ALL	DISTRICT	SOET	NOFL	TAPA
1658	40208	Budgets - Tampa	D-TAPA	O	ALL	DISTRICT	SOET	NOFL	TAPA
1659	40209	TAMPA - OPER. EXP.	D-TAPA	O	ALL	DISTRICT	SOET	NOFL	TAPA
1730	41000	TALLAHASSEE - DIRECTOR	D-TALA	O	ALL	DISTRICT	SOET	NOFL	TALA
1731	41001	TALLAHASSEE-ACCESS/INTERCNCT C	D-TALA	O	ALL	DISTRICT	SOET	NOFL	TALA
1732	41002	TALLAHASSEE - RF DESIGN	D-TALA	O	CEL	DISTRICT	SOET	NOFL	TALA
1733	41003	Property - Tallahassee INACTVE	D-TALA	O	CEL	DISTRICT	SOET	NOFL	TALA
1734	41004	Network Design - Tallahassee	D-TALA	O	ALL	DISTRICT	SOET	NOFL	TALA
1735	41005	Wireless Imp. - Tallahassee	D-TALA	O	ALL	DISTRICT	SOET	NOFL	TALA
1736	41006	TALLAHASSEE - WIRELINE IMP.	D-TALA	O	ALL	DISTRICT	SOET	NOFL	TALA
1737	41007	TALLAHASSEE - NETWORK OPS.	D-TALA	O	ALL	DISTRICT	SOET	NOFL	TALA
1738	41008	Budgets - Tallahassee	D-TALA	O	ALL	DISTRICT	SOET	NOFL	TALA
1739	41009	TALLAHASSEE - OPER. EXP.	D-TALA	O	ALL	DISTRICT	SOET	NOFL	TALA
1740	41100	JACKSONVILLE - DIRECTOR	D-JACK	O	ALL	DISTRICT	SOET	NOFL	JACK
1741	41101	JACKSONVILLE-ACCESS/INTERCNCT	D-JACK	O	ALL	DISTRICT	SOET	NOFL	JACK
1742	41102	JACKSONVILLE - RF DESIGN	D-JACK	O	CEL	DISTRICT	SOET	NOFL	JACK
1743	41103	JACKSONVILLE - PROPERTY	D-JACK	O	CEL	DISTRICT	SOET	NOFL	JACK
1744	41104	JACKSONVILLE - NETWORK DESIGN	D-JACK	O	ALL	DISTRICT	SOET	NOFL	JACK

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Row #	Cost Center	Description	Key	Category	Driver	Level	Region	Area	District
1745	41105	JACKSONVILLE - WIRELESS IMP.	D-JACK	O	ALL	DISTRICT	SOET	NOFL	JACK
1746	41106	JACKSONVILLE - WIRELINE IMP.	D-JACK	O	ALL	DISTRICT	SOET	NOFL	JACK
1747	41107	JACKSONVILLE - NETWORK OPS.	D-JACK	O	ALL	DISTRICT	SOET	NOFL	JACK
1748	41108	JACKSONVILLE - BUDGETS	D-JACK	O	ALL	DISTRICT	SOET	NOFL	JACK
1749	41109	JACKSONVILLE - OPER. EXP.	D-JACK	O	ALL	DISTRICT	SOET	NOFL	JACK
1861	42500	ORLANDO - DIRECTOR	D-ORLN	O	ALL	DISTRICT	SOET	NOFL	ORLN
1862	42501	ORLANDO-ACCESS/INTERCNCT CHGS	D-ORLN	O	ALL	DISTRICT	SOET	NOFL	ORLN
1863	42502	ORLANDO - RF DESIGN	D-ORLN	O	CEL	DISTRICT	SOET	NOFL	ORLN
1864	42503	ORLANDO - PROPERTY	D-ORLN	O	CEL	DISTRICT	SOET	NOFL	ORLN
1865	42504	ORLANDO - NETWORK DESIGN	D-ORLN	O	ALL	DISTRICT	SOET	NOFL	ORLN
1866	42505	ORLANDO - WIRELESS IMP.	D-ORLN	O	ALL	DISTRICT	SOET	NOFL	ORLN
1867	42506	ORLANDO - WIRELINE IMP.	D-ORLN	O	ALL	DISTRICT	SOET	NOFL	ORLN
1868	42507	ORLANDO - NETWORK OPS.	D-ORLN	O	ALL	DISTRICT	SOET	NOFL	ORLN
1869	42508	Budgets - Orlando	D-ORLN	O	ALL	DISTRICT	SOET	NOFL	ORLN
1870	42509	ORLANDO - OPER. EXP.	D-ORLN	O	ALL	DISTRICT	SOET	NOFL	ORLN
1871	42600	Sarasota - Director	D-ORLN	O	ALL	DISTRICT	SOET	NOFL	ORLN
1872	42601	Sarasota - Open	D-ORLN	O	ALL	DISTRICT	SOET	NOFL	ORLN
1873	42602	Sarasota - RF Design	D-ORLN	O	CEL	DISTRICT	SOET	NOFL	ORLN
1874	42603	Sarasota - Property	D-ORLN	O	CEL	DISTRICT	SOET	NOFL	ORLN
1875	42604	Sarasota - Network Design	D-ORLN	O	ALL	DISTRICT	SOET	NOFL	ORLN
1876	42605	SARASOTA - WIRELESS IMP.	D-ORLN	O	ALL	DISTRICT	SOET	NOFL	ORLN
1877	42606	Sarasota - Wireline Imp.	D-ORLN	O	ALL	DISTRICT	SOET	NOFL	ORLN
1878	42607	Sarasota - Network Ops.	D-ORLN	O	ALL	DISTRICT	SOET	NOFL	ORLN
1879	42608	Sarasota - Budgets	D-ORLN	O	ALL	DISTRICT	SOET	NOFL	ORLN
1880	42609	SARASOTA - OPER. EXP.	D-ORLN	O	ALL	DISTRICT	SOET	NOFL	ORLN
1881	42700	OCALA - DIRECTOR	D-ORLN	O	ALL	DISTRICT	SOET	NOFL	ORLN
1882	42701	Ocala - Open	D-ORLN	O	ALL	DISTRICT	SOET	NOFL	ORLN
1883	42702	OCALA - RF DESIGN	D-ORLN	O	CEL	DISTRICT	SOET	NOFL	ORLN
1884	42703	Ocala - Property	D-ORLN	O	CEL	DISTRICT	SOET	NOFL	ORLN
1885	42704	Ocala - Network Design	D-ORLN	O	ALL	DISTRICT	SOET	NOFL	ORLN
1886	42705	Ocala - Wireless Imp.	D-ORLN	O	ALL	DISTRICT	SOET	NOFL	ORLN
1887	42706	OCALA - WIRELINE IMP.	D-ORLN	O	ALL	DISTRICT	SOET	NOFL	ORLN
1888	42707	Ocala - Network Ops.	D-ORLN	O	ALL	DISTRICT	SOET	NOFL	ORLN
1889	42708	Ocala - Budgets	D-ORLN	O	ALL	DISTRICT	SOET	NOFL	ORLN
1890	42709	Ocala - Oper. Exp.	D-ORLN	O	ALL	DISTRICT	SOET	NOFL	ORLN
1919	45100	N. FLA F/O - Area VP	A-NOFL	E	EXL	AREA	SOET	NOFL	
1920	45101	N. FLA F/O - Area IT	A-NOFL	E	EXL	AREA	SOET	NOFL	
1921	45102	N. FLA F/O - Area Dir of Mktg	A-NOFL	E	EXL	AREA	SOET	NOFL	
1922	45110	JACK F/O Dist - Mgr	D-JACK	E	EXL	DISTRICT	SOET	NOFL	JACK
1923	45111	Tmp/Orln FO Dist- Manager	D-TAPA	E	EXL	DISTRICT	SOET	NOFL	TAPA
1924	45112	Orlando-District Manager	D-ORLN	E	EXL	DISTRICT	SOET	NOFL	ORLN
1925	45113	TALLAHASSEE - DISTRICT MANAGER	D-TALA	E	EXL	DISTRICT	SOET	NOFL	TALA
1926	45114	DAYTONA - DISTRICT MANAGER	D-DYTA	E	EXL	DISTRICT	SOET	NOFL	DYTA

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A	B	C	D	E	F	G	H	I	J
Row #	Cost Center	Description	Key	Category	Driver	Level	Region	Area	District
1927	45115	Gainesville F/O Dist Mgr	D-JACK	E	EXL	DISTRICT	SOET	NOFL	JACK
1928	45120	JACK F/O DIST - RETAIL MERCH.	D-JACK	E	EXL	DISTRICT	SOET	NOFL	JACK
1929	45121	TMP/ORLN FO DIST-RETAIL MERCH.	D-TAPA	E	EXL	DISTRICT	SOET	NOFL	TAPA
1930	45122	ORLANDO DIST - RETAIL MERCH.	D-ORLN	E	EXL	DISTRICT	SOET	NOFL	ORLN
1931	45123	TALLAHASSEE F/O RETAIL MERCH	D-TALA	E	EXL	DISTRICT	SOET	NOFL	TALA
1932	45124	DAYTONA F/O RETAIL MERCH	D-DYTA	E	EXL	DISTRICT	SOET	NOFL	DYTA
1933	45125	Gainesville F/O - Retail Merch	D-JACK	E	EXL	DISTRICT	SOET	NOFL	JACK
1934	45130	JACK F/O Dist - Dir Acct Exec	D-JACK	E	EXL	DISTRICT	SOET	NOFL	JACK
1935	45131	Tmp/Orln FO Dist-Dir Acct Exec	D-TAPA	E	EXL	DISTRICT	SOET	NOFL	TAPA
1936	45132	Orlando-Dist Dir Acct Exe	D-ORLN	E	EXL	DISTRICT	SOET	NOFL	ORLN
1937	45133	TALLAHASSEE - DIST DIR AC EXEC	D-TALA	E	EXL	DISTRICT	SOET	NOFL	TALA
1938	45134	NFL F/O Day Dist-Dir Acct Exec	D-DYTA	E	EXL	DISTRICT	SOET	NOFL	DYTA
1939	45135	Gainesville F/O Drct Acct Exec	D-JACK	E	EXL	DISTRICT	SOET	NOFL	JACK
1940	45140	JACK F/O Dist- Dir Major Acct	D-JACK	E	EXL	DISTRICT	SOET	NOFL	JACK
1941	45141	Tmp/Orln FO Dist-Dir Mjr Accts	D-TAPA	E	EXL	DISTRICT	SOET	NOFL	TAPA
1942	45142	Orlando-Dist Dire Major Acct	D-ORLN	E	EXL	DISTRICT	SOET	NOFL	ORLN
1943	45143	TALLAHASSEE - DIST DIR MAJ ACT	D-TALA	E	EXL	DISTRICT	SOET	NOFL	TALA
1944	45144	NFL F/O Day Dist-Dir Maj Accts	A-NOFL	E	EXL	AREA	SOET	NOFL	
1945	45145	Gainesville F/O Drct Maj Accts	D-JACK	E	EXL	DISTRICT	SOET	NOFL	JACK
1946	45150	JACK F/O DIST-LOCAL 3RD PTY	D-JACK	E	EXL	DISTRICT	SOET	NOFL	JACK
1947	45151	TMP/ORLN FO DIST-LOCAL 3RD PTY	D-TAPA	E	EXL	DISTRICT	SOET	NOFL	TAPA
1948	45152	ORLANDO-DIST LOCAL 3RD PTY	D-ORLN	E	EXL	DISTRICT	SOET	NOFL	ORLN
1949	45153	TALLAHASSEE - LOCAL 3RD PTY	D-TALA	E	EXL	DISTRICT	SOET	NOFL	TALA
1950	45154	DAYTONA - DIST LOCAL 3RD PTY	D-DYTA	E	EXL	DISTRICT	SOET	NOFL	DYTA
1951	45155	Gainesville F/O Local 3rd Pty	D-JACK	E	EXL	DISTRICT	SOET	NOFL	JACK
1952	45160	JACK F/O Dist-NATIONAL 3RD PTY	D-JACK	E	EXL	DISTRICT	SOET	NOFL	JACK
1953	45161	TMP/ORLN FO DIST-NATL 3RD PTY	D-TAPA	E	EXL	DISTRICT	SOET	NOFL	TAPA
1954	45162	ORLANDO-DIST NATIONAL 3RD PTY	D-ORLN	E	EXL	DISTRICT	SOET	NOFL	ORLN
1955	45163	TALLAHASSEE - NATIONAL 3RD PTY	D-TALA	E	EXL	DISTRICT	SOET	NOFL	TALA
1956	45164	DAYTONA - NATIONAL 3RD PTY	D-DYTA	E	EXL	DISTRICT	SOET	NOFL	DYTA
1957	45165	Gainesville F/O - Nat 3rd Pty	D-JACK	E	EXL	DISTRICT	SOET	NOFL	JACK
1958	45170	JACK F/O DIST-RADIO SHACK REPS	D-JACK	E	EXL	DISTRICT	SOET	NOFL	JACK
1959	45171	TMP/ORLN FO DIST-RADIO SHK REP	D-TAPA	E	EXL	DISTRICT	SOET	NOFL	TAPA
1960	45172	ORLANDO-DIST RADIO SHACK REPS	D-ORLN	E	EXL	DISTRICT	SOET	NOFL	ORLN
1961	45173	TALLHASSEE - RADIO SHACK REPS	D-TALA	E	EXL	DISTRICT	SOET	NOFL	TALA
1962	45174	DAYTONA - RADIO SHACK REPS	D-DYTA	E	EXL	DISTRICT	SOET	NOFL	DYTA
1963	45175	Gainesville F/O - Radio Shack	D-DYTA	E	EXL	DISTRICT	SOET	NOFL	DYTA
1964	45180	JAC F/O JAD BUSINESS DEALER	D-JACK	E	EXL	DISTRICT	SOET	NOFL	JACK
1965	45181	NFL F/O TAD Business Dealer	A-NOFL	E	EXL	AREA	SOET	NOFL	
1966	45182	NFL F/O ORD Dist Bus Dealer	A-NOFL	E	EXL	AREA	SOET	NOFL	
1967	45183	NFL F/O TAL Business Dealer	A-NOFL	E	EXL	AREA	SOET	NOFL	
1968	45184	NFL F/O Dayt Business Dealer	A-NOFL	E	EXL	AREA	SOET	NOFL	
1969	45185	Gainesville F/O Business Dealr	D-JACK	E	EXL	DISTRICT	SOET	NOFL	JACK

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A	B	C	D	E	F	G	H	I	J
Row #	Cost Center	Description	Key	Category	Driver	Level	Region	Area	District
2154	48110	New York City Service Centers	NATIONAL	E	EXL	NATIONAL			
2155	48150	Plano Texas Service Center	NATIONAL	E	EXL	NATIONAL			
2156	48501	Austin Tech Service Center	NATIONAL	E	EXL	NATIONAL			
2157	48540	Houston Service Center	NATIONAL	E	EXL	NATIONAL			
2158	48610	KC Plaza Service Center	NATIONAL	E	EXL	NATIONAL			
2159	48830	LAS VEGAS SERVICE CENTER	NATIONAL	E	EXL	NATIONAL			
2160	49110	JACKSONVILLE-BAYMEADOWS DRIVE	D-JACK	E	EXL	DISTRICT	SOET	NOFL	JACK
2161	49111	Jacksonville-Retail Store #2	D-JACK	E	EXL	DISTRICT	SOET	NOFL	JACK
2162	49112	SSC APPALACHEE PKWY KIOSK	D-TALA	E	EXL	DISTRICT	SOET	NOFL	TALA
2163	49113	DEERWOOD ADMIN LOBBY KIOSK	D-TALA	E	EXL	DISTRICT	SOET	NOFL	TALA
2164	49114	Tallahassee Kiosk #1	D-TALA	E	EXL	DISTRICT	SOET	NOFL	TALA
2165	49115	Jacksonville Kiosk #1	D-JACK	E	EXL	DISTRICT	SOET	NOFL	JACK
2166	49116	Jacksonville Kiosk #2	D-JACK	E	EXL	DISTRICT	SOET	NOFL	JACK
2167	49120	TAMPA - KENNEDY BOULEVARD	D-TAPA	E	EXL	DISTRICT	SOET	NOFL	TAPA
2168	49121	TMP/ORLN - HERNDON VILLAGE	D-TAPA	E	EXL	DISTRICT	SOET	NOFL	TAPA
2169	49122	TAMPA - PALM HARBOR	D-TAPA	E	EXL	DISTRICT	SOET	NOFL	TAPA
2170	49123	TAMPA - STORE #4	D-TAPA	E	EXL	DISTRICT	SOET	NOFL	TAPA
2171	49124	ORLANDO - FLORIDA MALL	D-ORLN	E	EXL	DISTRICT	SOET	NOFL	ORLN
2172	49125	ORLANDO - E. COLONIAL DRIVE	D-ORLN	E	EXL	DISTRICT	SOET	NOFL	ORLN
2173	49126	ORLANDO - W. COLONIAL DRIVE	D-ORLN	E	EXL	DISTRICT	SOET	NOFL	ORLN
2174	49127	ORLANDO - STORE #4	D-ORLN	E	EXL	DISTRICT	SOET	NOFL	ORLN
2175	49128	TAMPA - SARASOTA ADMIN STORE	D-TAPA	E	EXL	DISTRICT	SOET	NOFL	TAPA
2176	49129	Tampa - Tamiami Trail	D-TAPA	E	EXL	DISTRICT	SOET	NOFL	TAPA
2177	49130	TALLAHASSEE - VILLAGE SQUARE	D-TALA	E	EXL	DISTRICT	SOET	NOFL	TALA
2178	49131	TAMPA - ADMIN LOBBY KIOSK	D-TAPA	E	EXL	DISTRICT	SOET	NOFL	TAPA
2179	49132	MAITLAND ADMIN LOBBY KIOSK	D-ORLN	E	EXL	DISTRICT	SOET	NOFL	ORLN
2180	49133	SSC KISSIMEE KIOSK	D-ORLN	E	EXL	DISTRICT	SOET	NOFL	ORLN
2181	49140	49140 - HOLD FOR FUTURE USE	D-TAPA	E	EXL	DISTRICT	SOET	NOFL	TAPA
2182	49141	Tampa Kiosk	D-TAPA	E	EXL	DISTRICT	SOET	NOFL	TAPA
2183	49142	Tampa Kiosk #2	D-TAPA	E	EXL	DISTRICT	SOET	NOFL	TAPA
2184	49143	Orlando Retail Store #1	D-ORLN	E	EXL	DISTRICT	SOET	NOFL	ORLN
2185	49144	Orlando Retail Store 12	D-ORLN	E	EXL	DISTRICT	SOET	NOFL	ORLN
2186	49145	OVIEDO KIOSK	D-ORLN	E	EXL	DISTRICT	SOET	NOFL	ORLN
2187	49146	LEESBURG KIOSK	D-ORLN	E	EXL	DISTRICT	SOET	NOFL	ORLN
2188	49150	DAYTONA RETAIL STORE #1	D-DYTA	E	EXL	DISTRICT	SOET	NOFL	DYTA
2189	49151	Daytona - Melbourne Kiosk	D-DYTA	E	EXL	DISTRICT	SOET	NOFL	DYTA
2190	49152	Daytona Kiosk #2	D-DYTA	E	EXL	DISTRICT	SOET	NOFL	DYTA
2319	50000	FEDERAL EXPRESS CORPORATION	NATIONAL	E	EXL	NATIONAL			
2320	50001	First Bank Procurement	NATIONAL	E	EXL	NATIONAL			
2321	50002	KELLY SERVICES INC.	NATIONAL	E	EXL	NATIONAL			
2322	50003	North Supply Company	NATIONAL	E	EXL	NATIONAL			
2323	50004	Corporate Express	NATIONAL	E	EXL	NATIONAL			
2426	63100	SE - PRADO RETAIL	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL

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A	B	C	D	E	F	G	H	I	J
Row #	Cost Center	Description	Key	Category	Driver	Level	Region	Area	District
2427	63101	SE - WESTON RETAIL	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
2428	63110	SE - HIALEAH RETAIL	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
2429	63120	SE - AVENTURA RETAIL	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
2430	63130	SE - DELRAY RETAIL	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
2431	63140	SE - PEMBROKE RETAIL	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
2432	63145	SE RETAIL CORAL SPRINGS	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
2433	63150	SW RETAIL - FT MYERS	D-SWFL	E	EXL	DISTRICT	SOET	SOFL	SWFL
2434	63155	SE RETAIL - KENDALL	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
2435	63160	SE - FT LAUDERDALE RETAIL	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
2436	63165	SE Florida Coral Gables	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
2437	63170	SE - WEST PALM BEACH RETAIL	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
2438	63175	SE Florida Plantation	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
2439	63180	SW - NAPLES RETAIL	D-SWFL	E	EXL	DISTRICT	SOET	SOFL	SWFL
2440	63185	Se Retail #3	D-SWFL	E	EXL	DISTRICT	SOET	SOFL	SWFL
2441	63190	SE ADMIN #1	D-SWFL	E	EXL	DISTRICT	SOET	SOFL	SWFL
2442	63195	SE Admin #2	D-SWFL	E	EXL	DISTRICT	SOET	SOFL	SWFL
2558	66210	HOLD FOR FUTURE USE	NATIONAL	E	EXL	NATIONAL			
2559	66220	66220 - HOLD FOR FUTURE USE	NATIONAL	E	EXL	NATIONAL			
2672	71750	MIAMI KIOSK #1	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
2673	71800	WEST PALM BEACH KIOSK #1	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
2674	71810	Southwest - Kiosk #1	D-SEFL	E	EXL	DISTRICT	SOET	SOFL	SEFL
2792	74101	New Kiosk 2	NATIONAL	E	EXL	NATIONAL			
2793	74102	New Kiosk 3	NATIONAL	E	EXL	NATIONAL			
2794	74103	New Kiosk 4	NATIONAL	E	EXL	NATIONAL			
2795	74104	New Kiosk 5	NATIONAL	E	EXL	NATIONAL			
2796	74105	New Kiosk 6	NATIONAL	E	EXL	NATIONAL			
2797	74106	New Kiosk 7	NATIONAL	E	EXL	NATIONAL			
2798	74107	New Kiosk 8	NATIONAL	E	EXL	NATIONAL			
2799	74108	New Kiosk 9	NATIONAL	E	EXL	NATIONAL			
2800	74109	New Kiosk 10	NATIONAL	E	EXL	NATIONAL			
2801	74110	New Kiosk 11	NATIONAL	E	EXL	NATIONAL			
2802	74111	New Kiosk 12	NATIONAL	E	EXL	NATIONAL			
2803	74112	New Kiosk 13	NATIONAL	E	EXL	NATIONAL			
2804	74113	New Kiosk 14	NATIONAL	E	EXL	NATIONAL			
2805	74114	New Kiosk 15	NATIONAL	E	EXL	NATIONAL			
2806	74115	New Kiosk 16	NATIONAL	E	EXL	NATIONAL			
2807	74116	New Kiosk 17	NATIONAL	E	EXL	NATIONAL			
2808	74117	New Kiosk 18	NATIONAL	E	EXL	NATIONAL			
2809	74118	New Kiosk 19	NATIONAL	E	EXL	NATIONAL			
2810	74119	New Kiosk 20	NATIONAL	E	EXL	NATIONAL			
2811	75050	Cox - LV Districts Kiosks	NATIONAL	E	EXL	NATIONAL			
2812	80010	ENTERPRISE	NATIONAL	E	EXL	NATIONAL			
2813	90000	INVENTORY VALUATION	NATIONAL	E	EXL	NATIONAL			

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	A	B	C	D	E	F	G	H	I	J
				Key	Category	Driver	Level	Region	Area	District
2816		90300	Fin Ops Reorganization Costs	NATIONAL	C	ALL	NATIONAL			
2817		90400	IT - Reorganization Costs	NATIONAL	C	ALL	NATIONAL			
2818		90900	TSNO D&E REORGANIZATION	NATIONAL	O	ALL	NATIONAL			
2819		95000	Proj Approved Amount PT&R ONLY	NATIONAL	E	EXL	NATIONAL			
2820		95100	HQ Depreciation Budget	NATIONAL	E	EXL	NATIONAL			
2821		99010	SPCS BUDGET OVERLAY	NATIONAL	E	EXL	NATIONAL			
2822		99011	Sales & Marketing Overlay	NATIONAL	E	EXL	NATIONAL			
2823		99012	Operations Overlay	NATIONAL	E	EXL	NATIONAL			
2824		99013	General & Admin Overlay	NATIONAL	E	EXL	NATIONAL			
2825		99020	PCS Other Operations	NATIONAL	E	EXL	NATIONAL			
2826		99030	SPCS Budget Overlay - Unused	NATIONAL	E	EXL	NATIONAL			
2827		99995	Rent Leveling	NATIONAL	E	EXL	NATIONAL			
2828		99997	SPRINT CORPORATE ALLOCATIONS	NATIONAL	E	EXL	NATIONAL			
2829		99998	ACCOUNTING RESERVES	NATIONAL	E	EXL	NATIONAL			
2830		99999	CBIS REVENUE & COST	NATIONAL	C	ALL	NATIONAL			
2833			Total							
2834										
2835										
2836										
2837										
2838										
2839										
2840										
2841										
2842										
2843										
2844										
2845										
2846										
2847										
2848										
2849										
2850										

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A	B	K	L	M	N	O	P	Q	R	S
								Other, Common, and Excluded Assigned Expenses		
Row #	Cost Center	Salaries	Benefits	Facilities	OS Labor	Recruiting	Trvl & Entment	Training	Insurance & Fees	Computer
9	10000									
10	10100									
11	11000									
12	11100									
13	11200									
14	11201									
15	11202									
16	11210									
17	11211									
18	11212									
19	11213									
20	11214									
21	11215									
22	11220									
23	11221									
24	11222									
25	11223									
26	11230									
27	11231									
28	11232									
29	11233									
30	11240									
31	11275									
32	11276									
33	11277									
34	11278									
35	11279									
36	11300									
37	11301									
38	11302									
39	11303									
40	11304									
41	11305									
42	11306									
43	11307									
44	11308									
45	11309									
46	11310									
47	11311									
48	11400									
49	11500									
50	11600									
51	11610									

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A	B	K	L	M	N	O	P	Q	R	S
								Other, Common, and Excluded Assigned Expenses		
Row #	Cost Center	[illegible]	Facilities	OS Labor	Recruiting	Trvl & Entment	Training	Insurance & Fees	Computer	
52	11620									
53	11630									
54	11690									
55	11699									
56	11700									
57	12000									
58	12001									
59	12002									
60	12010									
61	12011									
62	12012									
63	12013									
64	12015									
65	12016									
66	12017									
67	12020									
68	12040									
69	12060									
70	12080									
71	12100									
72	12110									
73	12120									
74	12130									
75	12135									
76	12140									
77	12145									
78	12150									
79	12155									
80	12160									
81	12170									
82	12174									
83	12175									
84	12176									
85	12177									
86	12178									
87	12179									
88	12180									
89	12190									
90	12191									
91	12192									
92	12193									
93	12194									
94	12200									

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A	B	K	L	M	N	O	P	Q	R	S
								Other, Common, and Excluded Assigned Expenses		
Row #	Cost Center	[redacted]	[redacted]	Facilities	OS Labor	Recruiting	Trvl & Entment	Training	Insurance & Fees	Computer
95	12210									
96	12220									
97	12230									
98	12240									
99	12250									
100	12260									
101	12270									
102	12300									
103	12310									
104	12311									
105	12312									
106	12313									
107	12314									
108	12315									
109	12316									
110	12317									
111	12318									
112	12319									
113	12320									
114	12321									
115	12322									
116	12323									
117	12324									
118	12325									
119	12326									
120	12327									
121	12328									
122	12329									
123	12330									
124	12340									
125	12350									
126	12351									
127	12352									
128	12353									
129	12354									
130	12355									
131	12356									
132	12357									
133	12358									
134	12359									
135	12360									
136	12370									
137	12400									

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A	B	K	L	M	N	O	P	Q	R	S
								Other, Common, and Excluded Assigned Expenses		
Row #	Cost Center	[redacted]		Facilities	OS Labor	Recruiting	Trvl & Entment	Training	Insurance & Fees	Computer
138	12401									
139	12402									
140	12404									
141	12405									
142	12410									
143	12411									
144	12415									
145	12420									
146	12425									
147	12430									
148	12435									
149	12440									
150	12450									
151	12460									
152	12465									
153	12470									
154	12480									
155	12490									
156	12500									
157	12510									
158	12515									
159	12520									
160	12530									
161	12540									
162	12550									
163	12570									
164	12580									
165	12590									
166	12600									
167	12610									
168	12611									
169	12612									
170	12619									
171	12620									
172	12621									
173	12622									
174	12650									
175	12651									
176	12652									
177	12657									
178	12658									
179	12659									
180	12700									

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A	B	K	L	M	N	O	P	Q	R	S
								Other, Common, and Excluded Assigned Expenses		
Row #	Cost Center	[redacted]	[redacted]	Facilities	OS Labor	Recruiting	Trvl & Entment	Training	Insurance & Fees	Computer
181	12710									
182	12720									
183	12730									
184	12790									
185	12805									
186	12810									
187	12815									
188	12820									
189	12825									
190	12830									
191	12835									
192	12840									
193	12845									
194	12850									
195	12855									
196	12860									
197	12900									
198	12910									
199	13000									
200	13020									
201	13100									
202	13101									
203	13102									
204	13103									
205	13104									
206	13105									
207	13106									
208	13107									
209	13108									
210	13109									
211	13110									
212	13111									
213	13112									
214	13113									
215	13114									
216	13115									
217	13116									
218	13117									
219	13118									
220	13119									
221	13120									
222	13121									
223	13122									

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A	B	K	L	M	N	O	P	Q	R	S
								Other, Common, and Excluded Assigned Expenses		
Row #	Cost Center	Salaries	Benefits	Facilities	OS Labor	Recruiting	Trvl & Entment	Training	Insurance & Fees	Computer
224	13123									
225	13124									
226	13125									
227	13126									
228	13127									
229	13128									
230	13129									
231	13130									
232	13131									
233	13132									
234	13133									
235	13134									
236	13140									
237	13150									
238	13200									
239	13201									
240	13202									
241	13203									
242	13210									
246	13230									
247	13232									
248	13233									
249	13234									
251	13240									
252	13241									
256	13245									
257	13246									
259	13248									
260	13249									
261	13250									
265	13254									
267	13260									
271	13270									
276	13283									
277	13290									
278	13327									
279	13328									
280	13329									
281	13330									
282	13331									
283	13332									
284	13333									
285	13334									

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A	B	K	L	M	N	O	P	Q	R	S
								Other, Common, and Excluded Assigned Expenses		
Row #	Cost Center	Salaries & Benefits		Facilities	OS Labor	Recruiting	Trvl & Entment	Training	Insurance & Fees	Computer
286	13335									
287	13336									
288	13337									
289	13338									
290	13339									
291	13340									
292	13341									
293	13342									
294	13343									
295	13344									
296	13345									
297	13346									
298	13347									
299	13348									
300	13349									
301	13350									
302	13351									
303	13352									
308	13357									
309	13358									
310	13359									
311	13360									
312	13361									
313	13362									
314	13363									
315	13364									
316	13365									
317	13370									
318	13381									
319	13382									
320	13400									
321	13921									
322	13922									
323	13923									
324	13924									
325	13925									
326	13926									
327	13927									
328	13928									
329	13929									
330	13930									
331	13931									
332	13932									

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A	B	K	L	M	N	O	P	Q	R	S
								Other, Common, and Excluded Assigned Expenses		
Row #	Cost Center	[illegible]	[illegible]	Facilities	OS Labor	Recruiting	Trvl & Entment	Training	Insurance & Fees	Computer
333	13933									
334	14000									
335	14001									
336	14100									
337	14110									
338	14120									
339	14130									
340	14140									
341	14150									
342	14160									
343	14170									
344	14180									
345	14190									
346	14191									
347	14192									
348	14200									
349	14225									
350	14250									
351	14300									
352	14310									
353	14311									
354	14312									
355	14313									
356	14314									
357	14315									
358	14316									
359	14320									
373	14340									
374	14341									
394	14370									
404	14400									
405	14410									
406	14420									
407	14499									
408	14500									
409	14510									
410	14511									
411	14520									
412	14530									
413	14540									
414	14600									
415	14610									
416	14620									

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A	B	K	L	M	N	O	P	Q	R	S
								Other, Common, and Excluded Assigned Expenses		
Row #	Cost Center	[redacted]	Facilities	OS Labor	Recruiting	Trvl & Entment	Training	Insurance & Fees	Computer	
417	14630									
418	14640									
419	14700									
420	14800									
421	14900									
422	15000									
423	15110									
424	15200									
425	15210									
426	15211									
427	15220									
428	15221									
429	15310									
430	15320									
431	15321									
432	15330									
433	15410									
434	15411									
435	15412									
436	15413									
437	15414									
438	15415									
439	15416									
440	15417									
441	15418									
442	15419									
443	15420									
444	15421									
445	15422									
446	15423									
447	15424									
448	15425									
449	15426									
450	15427									
451	16000									
452	16010									
453	16100									
454	16200									
455	16300									
456	16400									
457	16401									
458	16500									
459	16501									

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A	B	K	L	M	N	O	P	Q	R	S
								Other, Common, and Excluded Assigned Expenses		
Row #	Cost Center	[redacted]		Facilities	OS Labor	Recruiting	Trvl & Entment	Training	Insurance & Fees	Computer
460	16502									
461	16503									
462	16504									
463	16600									
464	17000									
465	17100									
466	17110									
467	17120									
468	17130									
469	17131									
470	17140									
471	17141									
472	17150									
473	17160									
474	17170									
475	17200									
476	17210									
477	17211									
478	17212									
479	17213									
480	17215									
481	17218									
482	17220									
483	17221									
484	17225									
485	17230									
486	17231									
487	17235									
488	17236									
489	17237									
490	17238									
491	17239									
492	17240									
493	17241									
494	17242									
495	17243									
496	17244									
497	17245									
498	17250									
499	17260									
500	17262									
501	17265									
502	17267									

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Expense Mod
Expense Inpu

A	B	K	L	M	N	O	P	Q	R	S
								Other, Common, and Excluded Assigned Expenses		
Row #	Cost Center	Salaries	Benefits	Facilities	OS Labor	Recruiting	Trvl & Entment	Training	Insurance & Fees	Computer
503	17270									
504	17275									
505	17277									
506	17278									
507	17280									
508	17283									
509	17285									
510	17290									
511	17291									
512	18000									
513	18001									
514	18002									
515	18003									
516	18004									
517	18005									
518	18006									
519	18010									
523	18025									
524	18030									
525	18031									
526	18032									
527	18033									
528	18100									
529	18200									
530	18300									
531	18801									
532	18802									
533	18803									
534	18804									
535	18805									
536	18806									
537	18807									
538	18808									
539	18809									
540	18810									
541	18811									
542	18812									
543	18813									
544	18814									
545	18815									
546	18816									
547	18817									
548	18818									

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Expense Mod
Expense Inpu

A	B	K	L	M	N	O	P	Q	R	S
								Other, Common, and Excluded Assigned Expenses		
Row #	Cost Center	[redacted]	Facilities	OS Labor	Recruiting	Trvl & Entment	Training	Insurance & Fees	Computer	
549	18819									
550	18820									
551	18850									
552	18851									
553	19000									
554	19100									
555	19200									
556	19600									
557	19700									
558	19800									
640	21500									
641	21501									
642	21502									
643	21503									
644	21504									
645	21505									
646	21506									
647	21507									
648	21508									
649	21509									
1016	31166									
1154	33000									
1155	33001									
1156	33002									
1157	33003									
1158	33004									
1159	33005									
1160	33007									
1161	33100									
1162	33101									
1163	33102									
1164	33110									
1165	33111									
1166	33112									
1167	33120									
1168	33121									
1169	33122									
1170	33130									
1171	33131									
1172	33132									
1173	33140									
1174	33141									
1175	33142									

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A	B	K	L	M	N	O	P	Q	R	S
								Other, Common, and Excluded Assigned Expenses		
Row #	Cost Center	[illegible]	[illegible]	Facilities	OS Labor	Recruiting	Trvl & Entment	Training	Insurance & Fees	Computer
1176	33150									
1177	33151									
1178	33152									
1179	33160									
1180	33161									
1181	33162									
1182	33170									
1183	33172									
1184	33181									
1185	33182									
1345	35000									
1346	35001									
1347	35002									
1348	35003									
1349	35004									
1350	35005									
1351	35006									
1352	35007									
1650	40200									
1651	40201									
1652	40202									
1653	40203									
1654	40204									
1655	40205									
1656	40206									
1657	40207									
1658	40208									
1659	40209									
1730	41000									
1731	41001									
1732	41002									
1733	41003									
1734	41004									
1735	41005									
1736	41006									
1737	41007									
1738	41008									
1739	41009									
1740	41100									
1741	41101									
1742	41102									
1743	41103									
1744	41104									

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A	B	K	L	M	N	O	P	Q	R	S
								Other, Common, and Excluded Assigned Expenses		
Row #	Cost Center	[redacted]		Facilities	OS Labor	Recruiting	Trvl & Entment	Training	Insurance & Fees	Computer
1745	41105									
1746	41106									
1747	41107									
1748	41108									
1749	41109									
1861	42500									
1862	42501									
1863	42502									
1864	42503									
1865	42504									
1866	42505									
1867	42506									
1868	42507									
1869	42508									
1870	42509									
1871	42600									
1872	42601									
1873	42602									
1874	42603									
1875	42604									
1876	42605									
1877	42606									
1878	42607									
1879	42608									
1880	42609									
1881	42700									
1882	42701									
1883	42702									
1884	42703									
1885	42704									
1886	42705									
1887	42706									
1888	42707									
1889	42708									
1890	42709									
1919	45100									
1920	45101									
1921	45102									
1922	45110									
1923	45111									
1924	45112									
1925	45113									
1926	45114									

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A	B	K	L	M	N	O	P	Q	R	S
								Other, Common, and Excluded Assigned Expenses		
Row #	Cost Center	[redacted]	[redacted]	Facilities	OS Labor	Recruiting	Trvl & Entment	Training	Insurance & Fees	Computer
1927	45115									
1928	45120									
1929	45121									
1930	45122									
1931	45123									
1932	45124									
1933	45125									
1934	45130									
1935	45131									
1936	45132									
1937	45133									
1938	45134									
1939	45135									
1940	45140									
1941	45141									
1942	45142									
1943	45143									
1944	45144									
1945	45145									
1946	45150									
1947	45151									
1948	45152									
1949	45153									
1950	45154									
1951	45155									
1952	45160									
1953	45161									
1954	45162									
1955	45163									
1956	45164									
1957	45165									
1958	45170									
1959	45171									
1960	45172									
1961	45173									
1962	45174									
1963	45175									
1964	45180									
1965	45181									
1966	45182									
1967	45183									
1968	45184									
1969	45185									

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Expense Mod
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A	B	K	L	M	N	O	P	Q	R	S
								Other, Common, and Excluded Assigned Expenses		
Row #	Cost Center	[redacted]	Facilities	OS Labor	Recruiting	Trvl & Entment	Training	Insurance & Fees	Computer	
2154	48110									
2155	48150									
2156	48501									
2157	48540									
2158	48610									
2159	48830									
2160	49110									
2161	49111									
2162	49112									
2163	49113									
2164	49114									
2165	49115									
2166	49116									
2167	49120									
2168	49121									
2169	49122									
2170	49123									
2171	49124									
2172	49125									
2173	49126									
2174	49127									
2175	49128									
2176	49129									
2177	49130									
2178	49131									
2179	49132									
2180	49133									
2181	49140									
2182	49141									
2183	49142									
2184	49143									
2185	49144									
2186	49145									
2187	49146									
2188	49150									
2189	49151									
2190	49152									
2319	50000									
2320	50001									
2321	50002									
2322	50003									
2323	50004									
2426	63100									

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Expense Mod
Expense Inpu

A	B	K	L	M	N	O	P	Q	R	S
								Other, Common, and Excluded Assigned Expenses		
Row #	Cost Center	[redacted]		Facilities	OS Labor	Recruiting	Trvl & Entment	Training	Insurance & Fees	Computer
2427	63101									
2428	63110									
2429	63120									
2430	63130									
2431	63140									
2432	63145									
2433	63150									
2434	63155									
2435	63160									
2436	63165									
2437	63170									
2438	63175									
2439	63180									
2440	63185									
2441	63190									
2442	63195									
2558	66210									
2559	66220									
2672	71750									
2673	71800									
2674	71810									
2792	74101									
2793	74102									
2794	74103									
2795	74104									
2796	74105									
2797	74106									
2798	74107									
2799	74108									
2800	74109									
2801	74110									
2802	74111									
2803	74112									
2804	74113									
2805	74114									
2806	74115									
2807	74116									
2808	74117									
2809	74118									
2810	74119									
2811	75050									
2812	80010									
2813	90000									

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A	B	K	L	M	N	O	P	Q	R	S
								Other, Common, and Excluded Assigned Expenses		
Row	Cost Center			Facilities	OS Labor	Recruiting	Trvl & Entment	Training	Insurance & Fees	Computer
2816	90300									
2817	90400									
2818	90900									
2819	95000									
2820	95100									
2821	99010									
2822	99011									
2823	99012									
2824	99013									
2825	99020									
2826	99030									
2827	99995									
2828	99997									
2829	99998									
2830	99999									
2833										
2834										
2835										
2836										
2837										
2838										
2839										
2840										
2841										
2842										
2843										
2844										
2845										
2846										
2847										
2848										
2849										
2850										

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A	B	T	U	V	W	X	Y	Z	AA	AB
									Excluded Expenses	
Row #	Cost Center	[illegible] Equipment	[illegible] Supplies	Phones	Miscellaneous	Affiliate Recovery	Cap Labor and OH	Subtotal	Mkt & Ad	Selling
9	10000									
10	10100									
11	11000									
12	11100									
13	11200									
14	11201									
15	11202									
16	11210									
17	11211									
18	11212									
19	11213									
20	11214									
21	11215									
22	11220									
23	11221									
24	11222									
25	11223									
26	11230									
27	11231									
28	11232									
29	11233									
30	11240									
31	11275									
32	11276									
33	11277									
34	11278									
35	11279									
36	11300									
37	11301									
38	11302									
39	11303									
40	11304									
41	11305									
42	11306									
43	11307									
44	11308									
45	11309									
46	11310									
47	11311									
48	11400									
49	11500									
50	11600									
51	11610									

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Expense Inpu

A	B	T	U	V	W	X	Y	Z	AA	AB
									Excluded Expenses	
Row #	Cost Center	Other Equipment	Supplies	Phones	Miscellaneous	Affiliate Recovery	Cap Labor and OH	Subtotal	Mkt & Ad	Selling
52	11620									
53	11630									
54	11690									
55	11699									
56	11700									
57	12000									
58	12001									
59	12002									
60	12010									
61	12011									
62	12012									
63	12013									
64	12015									
65	12016									
66	12017									
67	12020									
68	12040									
69	12060									
70	12080									
71	12100									
72	12110									
73	12120									
74	12130									
75	12135									
76	12140									
77	12145									
78	12150									
79	12155									
80	12160									
81	12170									
82	12174									
83	12175									
84	12176									
85	12177									
86	12178									
87	12179									
88	12180									
89	12190									
90	12191									
91	12192									
92	12193									
93	12194									
94	12200									

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A	B	T	U	V	W	X	Y	Z	AA	AB
									Excluded Expenses	
Row #	Cost Center	[illegible]	[illegible]	Phones	Miscellaneous	Affiliate Recovery	Cap Labor and OH	Subtotal	Mkt & Ad	Selling
95	12210									
96	12220									
97	12230									
98	12240									
99	12250									
100	12260									
101	12270									
102	12300									
103	12310									
104	12311									
105	12312									
106	12313									
107	12314									
108	12315									
109	12316									
110	12317									
111	12318									
112	12319									
113	12320									
114	12321									
115	12322									
116	12323									
117	12324									
118	12325									
119	12326									
120	12327									
121	12328									
122	12329									
123	12330									
124	12340									
125	12350									
126	12351									
127	12352									
128	12353									
129	12354									
130	12355									
131	12356									
132	12357									
133	12358									
134	12359									
135	12360									
136	12370									
137	12400									

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A	B	T	U	V	W	X	Y	Z	AA	AB
									Excluded Expenses	
Row #	Cost Center	Other Equipment	Supplies	Phones	Miscellaneous	Affiliate Recovery	Cap Labor and OH	Subtotal	Mkt & Ad	Selling
138	12401									
139	12402									
140	12404									
141	12405									
142	12410									
143	12411									
144	12415									
145	12420									
146	12425									
147	12430									
148	12435									
149	12440									
150	12450									
151	12460									
152	12465									
153	12470									
154	12480									
155	12490									
156	12500									
157	12510									
158	12515									
159	12520									
160	12530									
161	12540									
162	12550									
163	12570									
164	12580									
165	12590									
166	12600									
167	12610									
168	12611									
169	12612									
170	12619									
171	12620									
172	12621									
173	12622									
174	12650									
175	12651									
176	12652									
177	12657									
178	12658									
179	12659									
180	12700									

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A	B	T	U	V	W	X	Y	Z	AA	AB
									Excluded Expenses	
Row #	Cost Center	[redacted]	[redacted]	Phones	Miscellaneous	Affiliate Recovery	Cap Labor and OH	Subtotal	Mkt & Ad	Selling
181	12710									
182	12720									
183	12730									
184	12790									
185	12805									
186	12810									
187	12815									
188	12820									
189	12825									
190	12830									
191	12835									
192	12840									
193	12845									
194	12850									
195	12855									
196	12860									
197	12900									
198	12910									
199	13000									
200	13020									
201	13100									
202	13101									
203	13102									
204	13103									
205	13104									
206	13105									
207	13106									
208	13107									
209	13108									
210	13109									
211	13110									
212	13111									
213	13112									
214	13113									
215	13114									
216	13115									
217	13116									
218	13117									
219	13118									
220	13119									
221	13120									
222	13121									
223	13122									

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A	B	T	U	V	W	X	Y	Z	AA	AB
									Excluded Expenses	
Row #	Cost Center	Other Equipment	Supplies	Phones	Miscellaneous	Affiliate Recovery	Cap Labor and OH	Subtotal	Mkt & Ad	Selling
224	13123									
225	13124									
226	13125									
227	13126									
228	13127									
229	13128									
230	13129									
231	13130									
232	13131									
233	13132									
234	13133									
235	13134									
236	13140									
237	13150									
238	13200									
239	13201									
240	13202									
241	13203									
242	13210									
246	13230									
247	13232									
248	13233									
249	13234									
251	13240									
252	13241									
256	13245									
257	13246									
259	13248									
260	13249									
261	13250									
265	13254									
267	13260									
271	13270									
276	13283									
277	13290									
278	13327									
279	13328									
280	13329									
281	13330									
282	13331									
283	13332									
284	13333									
285	13334									

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A	B	T	U	V	W	X	Y	Z	AA	AB
									Excluded Expenses	
Row #	Cost Center	Other [illegible]	[illegible] Supplies	Phones	Miscellaneous	Affiliate Recovery	Cap Labor and OH	Subtotal	Mkt & Ad	Selling
286	13335									
287	13336									
288	13337									
289	13338									
290	13339									
291	13340									
292	13341									
293	13342									
294	13343									
295	13344									
296	13345									
297	13346									
298	13347									
299	13348									
300	13349									
301	13350									
302	13351									
303	13352									
308	13357									
309	13358									
310	13359									
311	13360									
312	13361									
313	13362									
314	13363									
315	13364									
316	13365									
317	13370									
318	13381									
319	13382									
320	13400									
321	13921									
322	13922									
323	13923									
324	13924									
325	13925									
326	13926									
327	13927									
328	13928									
329	13929									
330	13930									
331	13931									
332	13932									

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A	B	T	U	V	W	X	Y	Z	AA	AB
									Excluded Expenses	
Row #	Cost Center	Other [illegible] Supplies		Phones	Miscellaneous	Affiliate Recovery	Cap Labor and OH	Subtotal	Mkt & Ad	Selling
333	13933									
334	14000									
335	14001									
336	14100									
337	14110									
338	14120									
339	14130									
340	14140									
341	14150									
342	14160									
343	14170									
344	14180									
345	14190									
346	14191									
347	14192									
348	14200									
349	14225									
350	14250									
351	14300									
352	14310									
353	14311									
354	14312									
355	14313									
356	14314									
357	14315									
358	14316									
359	14320									
373	14340									
374	14341									
394	14370									
404	14400									
405	14410									
406	14420									
407	14499									
408	14500									
409	14510									
410	14511									
411	14520									
412	14530									
413	14540									
414	14600									
415	14610									
416	14620									

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A	B	T	U	V	W	X	Y	Z	AA	AB
									Excluded Expenses	
Row #	Cost Center	Other [illegible] Supplies		Phones	Miscellaneous	Affiliate Recovery	Cap Labor and OH	Subtotal	Mkt & Ad	Selling
417	14630									
418	14640									
419	14700									
420	14800									
421	14900									
422	15000									
423	15110									
424	15200									
425	15210									
426	15211									
427	15220									
428	15221									
429	15310									
430	15320									
431	15321									
432	15330									
433	15410									
434	15411									
435	15412									
436	15413									
437	15414									
438	15415									
439	15416									
440	15417									
441	15418									
442	15419									
443	15420									
444	15421									
445	15422									
446	15423									
447	15424									
448	15425									
449	15426									
450	15427									
451	16000									
452	16010									
453	16100									
454	16200									
455	16300									
456	16400									
457	16401									
458	16500									
459	16501									

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A	B	T	U	V	W	X	Y	Z	AA	AB
									Excluded Expenses	
Row #	Cost Center	[redacted]	Supplies	Phones	Miscellaneous	Affiliate Recovery	Cap Labor and OH	Subtotal	Mkt & Ad	Selling
460	16502									
461	16503									
462	16504									
463	16600									
464	17000									
465	17100									
466	17110									
467	17120									
468	17130									
469	17131									
470	17140									
471	17141									
472	17150									
473	17160									
474	17170									
475	17200									
476	17210									
477	17211									
478	17212									
479	17213									
480	17215									
481	17218									
482	17220									
483	17221									
484	17225									
485	17230									
486	17231									
487	17235									
488	17236									
489	17237									
490	17238									
491	17239									
492	17240									
493	17241									
494	17242									
495	17243									
496	17244									
497	17245									
498	17250									
499	17260									
500	17262									
501	17265									
502	17267									

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Expense Mod
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A	B	T	U	V	W	X	Y	Z	AA	AB
									Excluded Expenses	
Row #	Cost Center	[redacted]	[redacted]	Phones	Miscellaneous	Affiliate Recovery	Cap Labor and OH	Subtotal	Mkt & Ad	Selling
503	17270									
504	17275									
505	17277									
506	17278									
507	17280									
508	17283									
509	17285									
510	17290									
511	17291									
512	18000									
513	18001									
514	18002									
515	18003									
516	18004									
517	18005									
518	18006									
519	18010									
523	18025									
524	18030									
525	18031									
526	18032									
527	18033									
528	18100									
529	18200									
530	18300									
531	18801									
532	18802									
533	18803									
534	18804									
535	18805									
536	18806									
537	18807									
538	18808									
539	18809									
540	18810									
541	18811									
542	18812									
543	18813									
544	18814									
545	18815									
546	18816									
547	18817									
548	18818									

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A	B	T	U	V	W	X	Y	Z	AA	AB
									Excluded Expenses	
Row #	Cost Center	[illegible]	[illegible]	Phones	Miscellaneous	Affiliate Recovery	Cap Labor and OH	Subtotal	Mkt & Ad	Selling
549	18819									
550	18820									
551	18850									
552	18851									
553	19000									
554	19100									
555	19200									
556	19600									
557	19700									
558	19800									
640	21500									
641	21501									
642	21502									
643	21503									
644	21504									
645	21505									
646	21506									
647	21507									
648	21508									
649	21509									
1016	31166									
1154	33000									
1155	33001									
1156	33002									
1157	33003									
1158	33004									
1159	33005									
1160	33007									
1161	33100									
1162	33101									
1163	33102									
1164	33110									
1165	33111									
1166	33112									
1167	33120									
1168	33121									
1169	33122									
1170	33130									
1171	33131									
1172	33132									
1173	33140									
1174	33141									
1175	33142									

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Expense Mod
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A	B	T	U	V	W	X	Y	Z	AA	AB
									Excluded Expenses	
Row #	Cost Center	[redacted]		Phones	Miscellaneous	Affiliate Recovery	Cap Labor and OH	Subtotal	Mkt & Ad	Selling
1176	33150									
1177	33151									
1178	33152									
1179	33160									
1180	33161									
1181	33162									
1182	33170									
1183	33172									
1184	33181									
1185	33182									
1345	35000									
1346	35001									
1347	35002									
1348	35003									
1349	35004									
1350	35005									
1351	35006									
1352	35007									
1650	40200									
1651	40201									
1652	40202									
1653	40203									
1654	40204									
1655	40205									
1656	40206									
1657	40207									
1658	40208									
1659	40209									
1730	41000									
1731	41001									
1732	41002									
1733	41003									
1734	41004									
1735	41005									
1736	41006									
1737	41007									
1738	41008									
1739	41009									
1740	41100									
1741	41101									
1742	41102									
1743	41103									
1744	41104									

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Expense Mod
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A	B	T	U	V	W	X	Y	Z	AA	AB
									Excluded Expenses	
Row #	Cost Center	[illegible]		Phones	Miscellaneous	Affiliate Recovery	Cap Labor and OH	Subtotal	Mkt & Ad	Selling
1745	41105									
1746	41106									
1747	41107									
1748	41108									
1749	41109									
1861	42500									
1862	42501									
1863	42502									
1864	42503									
1865	42504									
1866	42505									
1867	42506									
1868	42507									
1869	42508									
1870	42509									
1871	42600									
1872	42601									
1873	42602									
1874	42603									
1875	42604									
1876	42605									
1877	42606									
1878	42607									
1879	42608									
1880	42609									
1881	42700									
1882	42701									
1883	42702									
1884	42703									
1885	42704									
1886	42705									
1887	42706									
1888	42707									
1889	42708									
1890	42709									
1919	45100									
1920	45101									
1921	45102									
1922	45110									
1923	45111									
1924	45112									
1925	45113									
1926	45114									

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Expense Mod
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A	B	T	U	V	W	X	Y	Z	AA	AB
									Excluded Expenses	
Row #	Cost Center	Other [illegible] Supplies		Phones	Miscellaneous	Affiliate Recovery	Cap Labor and OH	Subtotal	Mkt & Ad	Selling
1927	45115									
1928	45120									
1929	45121									
1930	45122									
1931	45123									
1932	45124									
1933	45125									
1934	45130									
1935	45131									
1936	45132									
1937	45133									
1938	45134									
1939	45135									
1940	45140									
1941	45141									
1942	45142									
1943	45143									
1944	45144									
1945	45145									
1946	45150									
1947	45151									
1948	45152									
1949	45153									
1950	45154									
1951	45155									
1952	45160									
1953	45161									
1954	45162									
1955	45163									
1956	45164									
1957	45165									
1958	45170									
1959	45171									
1960	45172									
1961	45173									
1962	45174									
1963	45175									
1964	45180									
1965	45181									
1966	45182									
1967	45183									
1968	45184									
1969	45185									

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A	B	T	U	V	W	X	Y	Z	AA	AB
									Excluded Expenses	
Row #	Cost Center	Other [illegible]	Supplies	Phones	Miscellaneous	Affiliate Recovery	Cap Labor and OH	Subtotal	Mkt & Ad	Selling
2154	48110									
2155	48150									
2156	48501									
2157	48540									
2158	48610									
2159	48830									
2160	49110									
2161	49111									
2162	49112									
2163	49113									
2164	49114									
2165	49115									
2166	49116									
2167	49120									
2168	49121									
2169	49122									
2170	49123									
2171	49124									
2172	49125									
2173	49126									
2174	49127									
2175	49128									
2176	49129									
2177	49130									
2178	49131									
2179	49132									
2180	49133									
2181	49140									
2182	49141									
2183	49142									
2184	49143									
2185	49144									
2186	49145									
2187	49146									
2188	49150									
2189	49151									
2190	49152									
2319	50000									
2320	50001									
2321	50002									
2322	50003									
2323	50004									
2426	63100									

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Expense Mod
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A	B	T	U	V	W	X	Y	Z	AA	AB
									Excluded Expenses	
Row #	Cost Center	[illegible]	[illegible] Supplies	Phones	Miscellaneous	Affiliate Recovery	Cap Labor and OH	Subtotal	Mkt & Ad	Selling
2427	63101									
2428	63110									
2429	63120									
2430	63130									
2431	63140									
2432	63145									
2433	63150									
2434	63155									
2435	63160									
2436	63165									
2437	63170									
2438	63175									
2439	63180									
2440	63185									
2441	63190									
2442	63195									
2558	66210									
2559	66220									
2672	71750									
2673	71800									
2674	71810									
2792	74101									
2793	74102									
2794	74103									
2795	74104									
2796	74105									
2797	74106									
2798	74107									
2799	74108									
2800	74109									
2801	74110									
2802	74111									
2803	74112									
2804	74113									
2805	74114									
2806	74115									
2807	74116									
2808	74117									
2809	74118									
2810	74119									
2811	75050									
2812	80010									
2813	90000									

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A	B	T	U	V	W	X	Y	Z	AA	AB
									Excluded Expenses	
Row	Cost Center	[redacted]	[redacted]	Phones	Miscellaneous	Affiliate Recovery	Cap Labor and OH	Subtotal	Mkt & Ad	Selling
2816	90300									
2817	90400									
2818	90900									
2819	95000									
2820	95100									
2821	99010									
2822	99011									
2823	99012									
2824	99013									
2825	99020									
2826	99030									
2827	99995									
2828	99997									
2829	99998									
2830	99999									
2833										
2834										
2835										
2836										
2837										
2838										
2839										
2840										
2841										
2842										
2843										
2844										
2845										
2846										
2847										
2848										
2849										
2850										

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A	B	AD	AE	AG	AH	AJ	AK	AM	AN	AO	AP
		MSC		BTS		Structure		Non-Recoverable Assets			
Row #	Cost Center	O - Other Direct	C - Common	O - Other Direct	C - Common	O - Other Direct	C - Common	O - Other Direct	C - Common	E - Excluded	Total Assigned Expenses
95	12210										
96	12220										
97	12230										
98	12240										
99	12250										
100	12260										
101	12270										
102	12300										
103	12310										
104	12311										
105	12312										
106	12313										
107	12314										
108	12315										
109	12316										
110	12317										
111	12318										
112	12319										
113	12320										
114	12321										
115	12322										
116	12323										
117	12324										
118	12325										
119	12326										
120	12327										
121	12328										
122	12329										
123	12330										
124	12340										
125	12350										
126	12351										
127	12352										
128	12353										
129	12354										
130	12355										
131	12356										
132	12357										
133	12358										
134	12359										
135	12360										
136	12370										
137	12400										

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A	B	AD	AE	AG	AH	AJ	AK	AM	AN	AO	AP
		MSC		BTS		Structure		Non-Recoverable Assets			
Row #	Cost Center	O - Other Direct	C - Common	O - Other Direct	C - Common	O - Other Direct	C - Common	O - Other Direct	C - Common	E - Excluded	Total Assigned Expenses
138	12401										
139	12402										
140	12404										
141	12405										
142	12410										
143	12411										
144	12415										
145	12420										
146	12425										
147	12430										
148	12435										
149	12440										
150	12450										
151	12460										
152	12465										
153	12470										
154	12480										
155	12490										
156	12500										
157	12510										
158	12515										
159	12520										
160	12530										
161	12540										
162	12550										
163	12570										
164	12580										
165	12590										
166	12600										
167	12610										
168	12611										
169	12612										
170	12619										
171	12620										
172	12621										
173	12622										
174	12650										
175	12651										
176	12652										
177	12657										
178	12658										
179	12659										
180	12700										

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A	B	AD	AE	AG	AH	AJ	AK	AM	AN	AO	AP
		MSC		BTS		Structure		Non-Recoverable Assets			
Row #	Cost Center	O - Other Direct	C - Common	O - Other Direct	C - Common	O - Other Direct	C - Common	O - Other Direct	C - Common	E - Excluded	Total Assigned Expenses
181	12710										
182	12720										
183	12730										
184	12790										
185	12805										
186	12810										
187	12815										
188	12820										
189	12825										
190	12830										
191	12835										
192	12840										
193	12845										
194	12850										
195	12855										
196	12860										
197	12900										
198	12910										
199	13000										
200	13020										
201	13100										
202	13101										
203	13102										
204	13103										
205	13104										
206	13105										
207	13106										
208	13107										
209	13108										
210	13109										
211	13110										
212	13111										
213	13112										
214	13113										
215	13114										
216	13115										
217	13116										
218	13117										
219	13118										
220	13119										
221	13120										
222	13121										
223	13122										

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A	B	AD	AE	AG	AH	AJ	AK	AM	AN	AO	AP
		MSC		BTS		Structure		Non-Recoverable Assets			
Row #	Cost Center	O - Other Direct	C - Common	O - Other Direct	C - Common	O - Other Direct	C - Common	O - Other Direct	C - Common	E - Excluded	Total Assigned Expenses
224	13123										
225	13124										
226	13125										
227	13126										
228	13127										
229	13128										
230	13129										
231	13130										
232	13131										
233	13132										
234	13133										
235	13134										
236	13140										
237	13150										
238	13200										
239	13201										
240	13202										
241	13203										
242	13210										
246	13230										
247	13232										
248	13233										
249	13234										
251	13240										
252	13241										
256	13245										
257	13246										
259	13248										
260	13249										
261	13250										
265	13254										
267	13260										
271	13270										
276	13283										
277	13290										
278	13327										
279	13328										
280	13329										
281	13330										
282	13331										
283	13332										
284	13333										
285	13334										

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A	B	AD	AE	AG	AH	AJ	AK	AM	AN	AO	AP
		MSC		BTS		Structure		Non-Recoverable Assets			
Row #	Cost Center	O - Other Direct	C - Common	O - Other Direct	C - Common	O - Other Direct	C - Common	O - Other Direct	C - Common	E - Excluded	Total Assigned Expenses
286	13335										
287	13336										
288	13337										
289	13338										
290	13339										
291	13340										
292	13341										
293	13342										
294	13343										
295	13344										
296	13345										
297	13346										
298	13347										
299	13348										
300	13349										
301	13350										
302	13351										
303	13352										
308	13357										
309	13358										
310	13359										
311	13360										
312	13361										
313	13362										
314	13363										
315	13364										
316	13365										
317	13370										
318	13381										
319	13382										
320	13400										
321	13921										
322	13922										
323	13923										
324	13924										
325	13925										
326	13926										
327	13927										
328	13928										
329	13929										
330	13930										
331	13931										
332	13932										

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A	B	AD	AE	AG	AH	AJ	AK	AM	AN	AO	AP
		MSC		BTS		Structure		Non-Recoverable Assets			
Row #	Cost Center	O - Other Direct	C - Common	O - Other Direct	C - Common	O - Other Direct	C - Common	O - Other Direct	C - Common	E - Excluded	Total Assigned Expenses
333	13933										
334	14000										
335	14001										
336	14100										
337	14110										
338	14120										
339	14130										
340	14140										
341	14150										
342	14160										
343	14170										
344	14180										
345	14190										
346	14191										
347	14192										
348	14200										
349	14225										
350	14250										
351	14300										
352	14310										
353	14311										
354	14312										
355	14313										
356	14314										
357	14315										
358	14316										
359	14320										
373	14340										
374	14341										
394	14370										
404	14400										
405	14410										
406	14420										
407	14499										
408	14500										
409	14510										
410	14511										
411	14520										
412	14530										
413	14540										
414	14600										
415	14610										
416	14620										

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A	B	AD	AE	AG	AH	AJ	AK	AM	AN	AO	AP
		MSC		BTS		Structure		Non-Recoverable Assets			
Row #	Cost Center	O - Other Direct	C - Common	O - Other Direct	C - Common	O - Other Direct	C - Common	O - Other Direct	C - Common	E - Excluded	Total Assigned Expenses
417	14630										
418	14640										
419	14700										
420	14800										
421	14900										
422	15000										
423	15110										
424	15200										
425	15210										
426	15211										
427	15220										
428	15221										
429	15310										
430	15320										
431	15321										
432	15330										
433	15410										
434	15411										
435	15412										
436	15413										
437	15414										
438	15415										
439	15416										
440	15417										
441	15418										
442	15419										
443	15420										
444	15421										
445	15422										
446	15423										
447	15424										
448	15425										
449	15426										
450	15427										
451	16000										
452	16010										
453	16100										
454	16200										
455	16300										
456	16400										
457	16401										
458	16500										
459	16501										

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AD	AE	AG	AH	AJ	AK	AM	AN	AO	AP
		MSC		BTS		Structure		Non-Recoverable Assets			
Row #	Cost Center	O - Other Direct	C - Common	O - Other Direct	C - Common	O - Other Direct	C - Common	O - Other Direct	C - Common	E - Excluded	Total Assigned Expenses
460	16502										
461	16503										
462	16504										
463	16600										
464	17000										
465	17100										
466	17110										
467	17120										
468	17130										
469	17131										
470	17140										
471	17141										
472	17150										
473	17160										
474	17170										
475	17200										
476	17210										
477	17211										
478	17212										
479	17213										
480	17215										
481	17218										
482	17220										
483	17221										
484	17225										
485	17230										
486	17231										
487	17235										
488	17236										
489	17237										
490	17238										
491	17239										
492	17240										
493	17241										
494	17242										
495	17243										
496	17244										
497	17245										
498	17250										
499	17260										
500	17262										
501	17265										
502	17267										

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AD	AE	AG	AH	AJ	AK	AL	AM	AN	AO	AP
		MSC		BTS		Structure			Non-Recoverable Assets			
Row #	Cost Center	O - Other Direct	C - Common	O - Other Direct	C - Common	O - Other Direct	C - Common		O - Other Direct	C - Common	E - Excluded	Total Assigned Expenses
503	17270											
504	17275											
505	17277											
506	17278											
507	17280											
508	17283											
509	17285											
510	17290											
511	17291											
512	18000											
513	18001											
514	18002											
515	18003											
516	18004											
517	18005											
518	18006											
519	18010											
523	18025											
524	18030											
525	18031											
526	18032											
527	18033											
528	18100											
529	18200											
530	18300											
531	18801											
532	18802											
533	18803											
534	18804											
535	18805											
536	18806											
537	18807											
538	18808											
539	18809											
540	18810											
541	18811											
542	18812											
543	18813											
544	18814											
545	18815											
546	18816											
547	18817											
548	18818											

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AD	AE	AG	AH	AJ	AK	AL	AM	AN	AO	AP
		MSC		BTS		Structure			Non-Recoverable Assets			
Row #	Cost Center	O - Other Direct	C - Common	O - Other Direct	C - Common	O - Other Direct	C - Common		O - Other Direct	C - Common	E - Excluded	Total Assigned Expenses
549	18819											
550	18820											
551	18850											
552	18851											
553	19000											
554	19100											
555	19200											
556	19600											
557	19700											
558	19800											
640	21500											
641	21501											
642	21502											
643	21503											
644	21504											
645	21505											
646	21506											
647	21507											
648	21508											
649	21509											
1016	31166											
1154	33000											
1155	33001											
1156	33002											
1157	33003											
1158	33004											
1159	33005											
1160	33007											
1161	33100											
1162	33101											
1163	33102											
1164	33110											
1165	33111											
1166	33112											
1167	33120											
1168	33121											
1169	33122											
1170	33130											
1171	33131											
1172	33132											
1173	33140											
1174	33141											
1175	33142											

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AD	AE	AG	AH	AJ	AK	AM	AN	AO	AP
		MSC		BTS		Structure		Non-Recoverable Assets			
Row #	Cost Center	O - Other Direct	C - Common	O - Other Direct	C - Common	O - Other Direct	C - Common	O - Other Direct	C - Common	E - Excluded	Total Assigned Expenses
1176	33150										
1177	33151										
1178	33152										
1179	33160										
1180	33161										
1181	33162										
1182	33170										
1183	33172										
1184	33181										
1185	33182										
1345	35000										
1346	35001										
1347	35002										
1348	35003										
1349	35004										
1350	35005										
1351	35006										
1352	35007										
1650	40200										
1651	40201										
1652	40202										
1653	40203										
1654	40204										
1655	40205										
1656	40206										
1657	40207										
1658	40208										
1659	40209										
1730	41000										
1731	41001										
1732	41002										
1733	41003										
1734	41004										
1735	41005										
1736	41006										
1737	41007										
1738	41008										
1739	41009										
1740	41100										
1741	41101										
1742	41102										
1743	41103										
1744	41104										

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AD	AE	AG	AH	AJ	AK	AM	AN	AO	AP
		MSC		BTS		Structure		Non-Recoverable Assets			
Row #	Cost Center	O - Other Direct	C - Common	O - Other Direct	C - Common	O - Other Direct	C - Common	O - Other Direct	C - Common	E - Excluded	Total Assigned Expenses
1745	41105										
1746	41106										
1747	41107										
1748	41108										
1749	41109										
1861	42500										
1862	42501										
1863	42502										
1864	42503										
1865	42504										
1866	42505										
1867	42506										
1868	42507										
1869	42508										
1870	42509										
1871	42600										
1872	42601										
1873	42602										
1874	42603										
1875	42604										
1876	42605										
1877	42606										
1878	42607										
1879	42608										
1880	42609										
1881	42700										
1882	42701										
1883	42702										
1884	42703										
1885	42704										
1886	42705										
1887	42706										
1888	42707										
1889	42708										
1890	42709										
1919	45100										
1920	45101										
1921	45102										
1922	45110										
1923	45111										
1924	45112										
1925	45113										
1926	45114										

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AD	AE	AG	AH	AJ	AK	AM	AN	AO	AP
		MSC		BTS		Structure		Non-Recoverable Assets			
Row #	Cost Center	O - Other Direct	C - Common	O - Other Direct	C - Common	O - Other Direct	C - Common	O - Other Direct	C - Common	E - Excluded	Total Assigned Expenses
2427	63101										
2428	63110										
2429	63120										
2430	63130										
2431	63140										
2432	63145										
2433	63150										
2434	63155										
2435	63160										
2436	63165										
2437	63170										
2438	63175										
2439	63180										
2440	63185										
2441	63190										
2442	63195										
2558	66210										
2559	66220										
2672	71750										
2673	71800										
2674	71810										
2792	74101										
2793	74102										
2794	74103										
2795	74104										
2796	74105										
2797	74106										
2798	74107										
2799	74108										
2800	74109										
2801	74110										
2802	74111										
2803	74112										
2804	74113										
2805	74114										
2806	74115										
2807	74116										
2808	74117										
2809	74118										
2810	74119										
2811	75050										
2812	80010										
2813	90000										

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AD	AE	AG	AH	AJ	AK	AL	AM	AN	AO	AP
		MSC		BTS		Structure			Non-Recoverable Assets			
Row #	Cost Center	Other Direct	C - Common	O - Other Direct	C - Common	O - Other Direct	C - Common		O - Other Direct	C - Common	E - Excluded	Total Assigned Expenses
2816	90300											
2817	90400											
2818	90900											
2819	95000											
2820	95100											
2821	99010											
2822	99011											
2823	99012											
2824	99013											
2825	99020											
2826	99030											
2827	99995											
2828	99997											
2829	99998											
2830	99999											
2833												
2834												
2835												
2836												
2837												
2838												
2839												
2840												
2841												
2842												
2843												
2844												
2845												
2846												
2847												
2848												
2849												
2850												

Operating Expense Analysis
Other Direct % of OD & Common
Other Direct Portion of Excluded
Other Direct - Non-Recoverable
Direct Excluded
Total Excluded Direct & Other Direct

Direct
Direct Excluded
Other Direct
Other Direct - Non-Recoverable
Other Direct Portion of Excluded
Total Direct & Other Direct

Percent of Operating Expenses Related to Retail

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AR	AS	AT	AU	AV	AW	AX	AY
								Direct Network Expenses	
Row #	Cost Center	[illegible]	Backhaul - Recurring	Backhaul Non-Reccuring	Cell Site Leases	Collocation Revenue	Nat Platfm	Software Maint	Switch Main. & Util
9	10000								
10	10100								
11	11000								
12	11100								
13	11200								
14	11201								
15	11202								
16	11210								
17	11211								
18	11212								
19	11213								
20	11214								
21	11215								
22	11220								
23	11221								
24	11222								
25	11223								
26	11230								
27	11231								
28	11232								
29	11233								
30	11240								
31	11275								
32	11276								
33	11277								
34	11278								
35	11279								
36	11300								
37	11301								
38	11302								
39	11303								
40	11304								
41	11305								
42	11306								
43	11307								
44	11308								
45	11309								
46	11310								
47	11311								
48	11400								
49	11500								
50	11600								
51	11610								

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AR	AS	AT	AU	AV	AW	AX	AY
			Direct Network Expenses						
Row #	Cost Center	[redacted]	Backhaul - Recurring	Backhaul Non-Reccuring	Cell Site Leases	Collocation Revenue	Nat Platfm	Software Maint	Switch Main. & Util
52	11620								
53	11630								
54	11690								
55	11699								
56	11700								
57	12000								
58	12001								
59	12002								
60	12010								
61	12011								
62	12012								
63	12013								
64	12015								
65	12016								
66	12017								
67	12020								
68	12040								
69	12060								
70	12080								
71	12100								
72	12110								
73	12120								
74	12130								
75	12135								
76	12140								
77	12145								
78	12150								
79	12155								
80	12160								
81	12170								
82	12174								
83	12175								
84	12176								
85	12177								
86	12178								
87	12179								
88	12180								
89	12190								
90	12191								
91	12192								
92	12193								
93	12194								
94	12200								

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AR	AS	AT	AU	AV	AW	AX	AY
								Direct Network Expenses	
Row #	Cost Center	[redacted]	Backhaul - Recurring	Backhaul Non-Reccuring	Cell Site Leases	Collocation Revenue	Nat Platfm	Software Maint	Switch Main. & Util
95	12210								
96	12220								
97	12230								
98	12240								
99	12250								
100	12260								
101	12270								
102	12300								
103	12310								
104	12311								
105	12312								
106	12313								
107	12314								
108	12315								
109	12316								
110	12317								
111	12318								
112	12319								
113	12320								
114	12321								
115	12322								
116	12323								
117	12324								
118	12325								
119	12326								
120	12327								
121	12328								
122	12329								
123	12330								
124	12340								
125	12350								
126	12351								
127	12352								
128	12353								
129	12354								
130	12355								
131	12356								
132	12357								
133	12358								
134	12359								
135	12360								
136	12370								
137	12400								

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AR	AS	AT	AU	AV	AW	AX	AY
			Direct Network Expenses						
Row #	Cost Center	[redacted]	Backhaul - Recurring	Backhaul Non-Reccuring	Cell Site Leases	Collocation Revenue	Nat Platfm	Software Maint	Switch Main. & Util
181	12710								
182	12720								
183	12730								
184	12790								
185	12805								
186	12810								
187	12815								
188	12820								
189	12825								
190	12830								
191	12835								
192	12840								
193	12845								
194	12850								
195	12855								
196	12860								
197	12900								
198	12910								
199	13000								
200	13020								
201	13100								
202	13101								
203	13102								
204	13103								
205	13104								
206	13105								
207	13106								
208	13107								
209	13108								
210	13109								
211	13110								
212	13111								
213	13112								
214	13113								
215	13114								
216	13115								
217	13116								
218	13117								
219	13118								
220	13119								
221	13120								
222	13121								
223	13122								

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AR	AS	AT	AU	AV	AW	AX	AY
								Direct Network Expenses	
Row #	Cost Cen		Backhaul - Recurring	Backhaul Non-Reccuring	Cell Site Leases	Collocation Revenue	Nat Platfm	Software Maint	Switch Main. & Util
224	13123								
225	13124								
226	13125								
227	13126								
228	13127								
229	13128								
230	13129								
231	13130								
232	13131								
233	13132								
234	13133								
235	13134								
236	13140								
237	13150								
238	13200								
239	13201								
240	13202								
241	13203								
242	13210								
246	13230								
247	13232								
248	13233								
249	13234								
251	13240								
252	13241								
256	13245								
257	13246								
259	13248								
260	13249								
261	13250								
265	13254								
267	13260								
271	13270								
276	13283								
277	13290								
278	13327								
279	13328								
280	13329								
281	13330								
282	13331								
283	13332								
284	13333								
285	13334								

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AR	AS	AT	AU	AV	AW	AX	AY
								Direct Network Expenses	
Row #	Cost Center	[redacted]	Backhaul - Recurring	Backhaul Non-Reccuring	Cell Site Leases	Collocation Revenue	Nat Platfm	Software Maint	Switch Main. & Util
286	13335								
287	13336								
288	13337								
289	13338								
290	13339								
291	13340								
292	13341								
293	13342								
294	13343								
295	13344								
296	13345								
297	13346								
298	13347								
299	13348								
300	13349								
301	13350								
302	13351								
303	13352								
308	13357								
309	13358								
310	13359								
311	13360								
312	13361								
313	13362								
314	13363								
315	13364								
316	13365								
317	13370								
318	13381								
319	13382								
320	13400								
321	13921								
322	13922								
323	13923								
324	13924								
325	13925								
326	13926								
327	13927								
328	13928								
329	13929								
330	13930								
331	13931								
332	13932								

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AR	AS	AT	AU	AV	AW	AX	AY
								Direct Network Expenses	
Row #	Cost Center	Cell Site & Switch	Backhaul - Recurring	Backhaul Non-Reccuring	Cell Site Leases	Collocation Revenue	Nat Platfm	Software Maint	Switch Main. & Util
333	13933								
334	14000								
335	14001								
336	14100								
337	14110								
338	14120								
339	14130								
340	14140								
341	14150								
342	14160								
343	14170								
344	14180								
345	14190								
346	14191								
347	14192								
348	14200								
349	14225								
350	14250								
351	14300								
352	14310								
353	14311								
354	14312								
355	14313								
356	14314								
357	14315								
358	14316								
359	14320								
373	14340								
374	14341								
394	14370								
404	14400								
405	14410								
406	14420								
407	14499								
408	14500								
409	14510								
410	14511								
411	14520								
412	14530								
413	14540								
414	14600								
415	14610								
416	14620								

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AR	AS	AT	AU	AV	AW	AX	AY
								Direct Network Expenses	
Row #	Cost Center	[redacted]	Backhaul - Recurring	Backhaul Non-Reccuring	Cell Site Leases	Collocation Revenue	Nat Platfm	Software Maint	Switch Main. & Util
417	14630								
418	14640								
419	14700								
420	14800								
421	14900								
422	15000								
423	15110								
424	15200								
425	15210								
426	15211								
427	15220								
428	15221								
429	15310								
430	15320								
431	15321								
432	15330								
433	15410								
434	15411								
435	15412								
436	15413								
437	15414								
438	15415								
439	15416								
440	15417								
441	15418								
442	15419								
443	15420								
444	15421								
445	15422								
446	15423								
447	15424								
448	15425								
449	15426								
450	15427								
451	16000								
452	16010								
453	16100								
454	16200								
455	16300								
456	16400								
457	16401								
458	16500								
459	16501								

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AR	AS	AT	AU	AV	AW	AX	AY
								Direct Network Expenses	
Row #	Cost Center	[redacted]	Backhaul - Recurring	Backhaul Non-Reccuring	Cell Site Leases	Collocation Revenue	Nat Platfm	Software Maint	Switch Main. & Util
460	16502								
461	16503								
462	16504								
463	16600								
464	17000								
465	17100								
466	17110								
467	17120								
468	17130								
469	17131								
470	17140								
471	17141								
472	17150								
473	17160								
474	17170								
475	17200								
476	17210								
477	17211								
478	17212								
479	17213								
480	17215								
481	17218								
482	17220								
483	17221								
484	17225								
485	17230								
486	17231								
487	17235								
488	17236								
489	17237								
490	17238								
491	17239								
492	17240								
493	17241								
494	17242								
495	17243								
496	17244								
497	17245								
498	17250								
499	17260								
500	17262								
501	17265								
502	17267								

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AR	AS	AT	AU	AV	AW	AX	AY
								Direct Network Expenses	
Row #	Cost Center	[illegible]	Backhaul - Recurring	Backhaul Non-Reccuring	Cell Site Leases	Collocation Revenue	Nat Platfm	Software Maint	Switch Main. & Util
503	17270								
504	17275								
505	17277								
506	17278								
507	17280								
508	17283								
509	17285								
510	17290								
511	17291								
512	18000								
513	18001								
514	18002								
515	18003								
516	18004								
517	18005								
518	18006								
519	18010								
523	18025								
524	18030								
525	18031								
526	18032								
527	18033								
528	18100								
529	18200								
530	18300								
531	18801								
532	18802								
533	18803								
534	18804								
535	18805								
536	18806								
537	18807								
538	18808								
539	18809								
540	18810								
541	18811								
542	18812								
543	18813								
544	18814								
545	18815								
546	18816								
547	18817								
548	18818								

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AC	AR	AS	AT	AU	AV	AW	AX	AY
									Direct Network Expenses	
Row #	Cost Center			Backhaul - Recurring	Backhaul Non-Reccuring	Cell Site Leases	Collocation Revenue	Nat Platfm	Software Maint	Switch Main. & Util
1745	41105									
1746	41106									
1747	41107									
1748	41108									
1749	41109									
1861	42500									
1862	42501									
1863	42502									
1864	42503									
1865	42504									
1866	42505									
1867	42506									
1868	42507									
1869	42508									
1870	42509									
1871	42600									
1872	42601									
1873	42602									
1874	42603									
1875	42604									
1876	42605									
1877	42606									
1878	42607									
1879	42608									
1880	42609									
1881	42700									
1882	42701									
1883	42702									
1884	42703									
1885	42704									
1886	42705									
1887	42706									
1888	42707									
1889	42708									
1890	42709									
1919	45100									
1920	45101									
1921	45102									
1922	45110									
1923	45111									
1924	45112									
1925	45113									
1926	45114									

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AR	AS	AT	AU	AV	AW	AX	AY
								Direct Network Expenses	
Row #	Cost Center		Backhaul - Recurring	Backhaul Non-Reccuring	Cell Site Leases	Collocation Revenue	Nat Platfm	Software Maint	Switch Main. & Util
1927	45115								
1928	45120								
1929	45121								
1930	45122								
1931	45123								
1932	45124								
1933	45125								
1934	45130								
1935	45131								
1936	45132								
1937	45133								
1938	45134								
1939	45135								
1940	45140								
1941	45141								
1942	45142								
1943	45143								
1944	45144								
1945	45145								
1946	45150								
1947	45151								
1948	45152								
1949	45153								
1950	45154								
1951	45155								
1952	45160								
1953	45161								
1954	45162								
1955	45163								
1956	45164								
1957	45165								
1958	45170								
1959	45171								
1960	45172								
1961	45173								
1962	45174								
1963	45175								
1964	45180								
1965	45181								
1966	45182								
1967	45183								
1968	45184								
1969	45185								

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AR	AS	AT	AU	AV	AW	AX	AY
								Direct Network Expenses	
Row #	Cost Center	[redacted]	Backhaul - Recurring	Backhaul Non-Reccuring	Cell Site Leases	Collocation Revenue	Nat Platfm	Software Maint	Switch Main. & Util
2154	48110								
2155	48150								
2156	48501								
2157	48540								
2158	48610								
2159	48830								
2160	49110								
2161	49111								
2162	49112								
2163	49113								
2164	49114								
2165	49115								
2166	49116								
2167	49120								
2168	49121								
2169	49122								
2170	49123								
2171	49124								
2172	49125								
2173	49126								
2174	49127								
2175	49128								
2176	49129								
2177	49130								
2178	49131								
2179	49132								
2180	49133								
2181	49140								
2182	49141								
2183	49142								
2184	49143								
2185	49144								
2186	49145								
2187	49146								
2188	49150								
2189	49151								
2190	49152								
2319	50000								
2320	50001								
2321	50002								
2322	50003								
2323	50004								
2426	63100								

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AR	AS	AT	AU	AV	AW	AX	AY
								Direct Network Expenses	
Row #	Cost Center	Cell Main. & Util.	Backhaul - Recurring	Backhaul Non-Reccuring	Cell Site Leases	Collocation Revenue	Nat Platfm	Software Maint	Switch Main. & Util
2427	63101								
2428	63110								
2429	63120								
2430	63130								
2431	63140								
2432	63145								
2433	63150								
2434	63155								
2435	63160								
2436	63165								
2437	63170								
2438	63175								
2439	63180								
2440	63185								
2441	63190								
2442	63195								
2558	66210								
2559	66220								
2672	71750								
2673	71800								
2674	71810								
2792	74101								
2793	74102								
2794	74103								
2795	74104								
2796	74105								
2797	74106								
2798	74107								
2799	74108								
2800	74109								
2801	74110								
2802	74111								
2803	74112								
2804	74113								
2805	74114								
2806	74115								
2807	74116								
2808	74117								
2809	74118								
2810	74119								
2811	75050								
2812	80010								
2813	90000								

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AC	AR	AS	AT	AU	AV	AW	AX	AY
									Direct Network Expenses	
				Backhaul - Recurring	Backhaul Non-Recurring	Cell Site Leases	Collocation Revenue	Nat Platfm	Software Maint	Switch Main. & Util.
2816	90300									
2817	90400									
2818	90900									
2819	95000									
2820	95100									
2821	99010									
2822	99011									
2823	99012									
2824	99013									
2825	99020									
2826	99030									
2827	99995									
2828	99997									
2829	99998									
2830	99999									
2833										
2834										
2835										
2836										
2837										
2838										
2839										
2840										
2841										
2842										
2843										
2844										
2845										
2846										
2847										
2848										
2849										
2850										

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AZ	BA	BB	BC	BD	BE	BF	BG
Row #	Cost Center	[redacted]	Network Hard/Software and Testing	Number Ordering	Network Decommissioning	E911	Excluded Direct	Total Direct	Grand Total
9	10000								
10	10100								
11	11000								
12	11100								
13	11200								
14	11201								
15	11202								
16	11210								
17	11211								
18	11212								
19	11213								
20	11214								
21	11215								
22	11220								
23	11221								
24	11222								
25	11223								
26	11230								
27	11231								
28	11232								
29	11233								
30	11240								
31	11275								
32	11276								
33	11277								
34	11278								
35	11279								
36	11300								
37	11301								
38	11302								
39	11303								
40	11304								
41	11305								
42	11306								
43	11307								
44	11308								
45	11309								
46	11310								
47	11311								
48	11400								
49	11500								
50	11600								
51	11610								

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AZ	BA	BB	BC	BD	BE	BF	BG
Row #	Cost Center	[redacted]	Network Hard/Software and Testing	Number Ordering	Network Decommissioning	E911	Excluded Direct	Total Direct	Grand Total
52	11620								
53	11630								
54	11690								
55	11699								
56	11700								
57	12000								
58	12001								
59	12002								
60	12010								
61	12011								
62	12012								
63	12013								
64	12015								
65	12016								
66	12017								
67	12020								
68	12040								
69	12060								
70	12080								
71	12100								
72	12110								
73	12120								
74	12130								
75	12135								
76	12140								
77	12145								
78	12150								
79	12155								
80	12160								
81	12170								
82	12174								
83	12175								
84	12176								
85	12177								
86	12178								
87	12179								
88	12180								
89	12190								
90	12191								
91	12192								
92	12193								
93	12194								
94	12200								

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AZ	BA	BB	BC	BD	BE	BF	BG
Row #	Cost Center	[redacted]	Network Hard/Software and Testing	Number Ordering	Network Decommissioning	E911	Excluded Direct	Total Direct	Grand Total
95	12210								
96	12220								
97	12230								
98	12240								
99	12250								
100	12260								
101	12270								
102	12300								
103	12310								
104	12311								
105	12312								
106	12313								
107	12314								
108	12315								
109	12316								
110	12317								
111	12318								
112	12319								
113	12320								
114	12321								
115	12322								
116	12323								
117	12324								
118	12325								
119	12326								
120	12327								
121	12328								
122	12329								
123	12330								
124	12340								
125	12350								
126	12351								
127	12352								
128	12353								
129	12354								
130	12355								
131	12356								
132	12357								
133	12358								
134	12359								
135	12360								
136	12370								
137	12400								

Sprint PCS Cost Model

Version 2, April 2000

Welcome to the Sprint-PCS Cost Model, Version 1, Calculation Module. This module can develop the cost for a single or multilple MSAs, depending upon the inputs. The module allows inputs for up to 12 MSCs (Mobile Switching Center). It is written in Microsoft Excel 97. All calculations are contained within the Excel workbooks; no calculations are "hidden" within marcos.

A brief description of each worksheet follows.

Calculation Module Worksheet Descriptions:

(All inputs linked to other workbooks or worksheets are in GREEN font)

Intro	Introduction
Summary	Calculates the final cost results
Investment Summary	Develops the average annual investment by major category.
Investment	Calculates the equipment investment by year.
Unit Costs	Calculates the total cost of each network component
Spectrum	Calculates the cost of spectrum licenses and spectrum clearing.
Backhaul	Calculates the cost of backhaul facilities from the Cell Site to the MSC (Mobile Switching Center).
SS7	Calculates the cost of SS7 expense.
National Platform	Calculates the National Platform investment and assignment to this study area.
Collocation	Calculates the revenue (contra-expense) of collocation.

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AZ	BA	BB	BC	BD	BE	BF	BG
Row #	Cost Center	[redacted]	Network Hard/Software and Testing	Number Ordering	Network Decommissioning	E911	Excluded Direct	Total Direct	Grand Total
333	13933								
334	14000								
335	14001								
336	14100								
337	14110								
338	14120								
339	14130								
340	14140								
341	14150								
342	14160								
343	14170								
344	14180								
345	14190								
346	14191								
347	14192								
348	14200								
349	14225								
350	14250								
351	14300								
352	14310								
353	14311								
354	14312								
355	14313								
356	14314								
357	14315								
358	14316								
359	14320								
373	14340								
374	14341								
394	14370								
404	14400								
405	14410								
406	14420								
407	14499								
408	14500								
409	14510								
410	14511								
411	14520								
412	14530								
413	14540								
414	14600								
415	14610								
416	14620								

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AZ	BA	BB	BC	BD	BE	BF	BG
Row #	Cost Center	[illegible]	Network Hard/Software and Testing	Number Ordering	Network Decommissioning	E911	Excluded Direct	Total Direct	Grand Total
417	14630								
418	14640								
419	14700								
420	14800								
421	14900								
422	15000								
423	15110								
424	15200								
425	15210								
426	15211								
427	15220								
428	15221								
429	15310								
430	15320								
431	15321								
432	15330								
433	15410								
434	15411								
435	15412								
436	15413								
437	15414								
438	15415								
439	15416								
440	15417								
441	15418								
442	15419								
443	15420								
444	15421								
445	15422								
446	15423								
447	15424								
448	15425								
449	15426								
450	15427								
451	16000								
452	16010								
453	16100								
454	16200								
455	16300								
456	16400								
457	16401								
458	16500								
459	16501								

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AZ	BA	BB	BC	BD	BE	BF	BG
Row #	Cost Center	[illegible]	Network Hard/Software and Testing	Number Ordering	Network Decommissioning	E911	Excluded Direct	Total Direct	Grand Total
460	16502								
461	16503								
462	16504								
463	16600								
464	17000								
465	17100								
466	17110								
467	17120								
468	17130								
469	17131								
470	17140								
471	17141								
472	17150								
473	17160								
474	17170								
475	17200								
476	17210								
477	17211								
478	17212								
479	17213								
480	17215								
481	17218								
482	17220								
483	17221								
484	17225								
485	17230								
486	17231								
487	17235								
488	17236								
489	17237								
490	17238								
491	17239								
492	17240								
493	17241								
494	17242								
495	17243								
496	17244								
497	17245								
498	17250								
499	17260								
500	17262								
501	17265								
502	17267								

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AZ	BA	BB	BC	BD	BE	BF	BG
Row #	Cost Center	[redacted]	Network Hard/Software and Testing	Number Ordering	Network Decommissioning	E911	Excluded Direct	Total Direct	Grand Total
503	17270								
504	17275								
505	17277								
506	17278								
507	17280								
508	17283								
509	17285								
510	17290								
511	17291								
512	18000								
513	18001								
514	18002								
515	18003								
516	18004								
517	18005								
518	18006								
519	18010								
523	18025								
524	18030								
525	18031								
526	18032								
527	18033								
528	18100								
529	18200								
530	18300								
531	18801								
532	18802								
533	18803								
534	18804								
535	18805								
536	18806								
537	18807								
538	18808								
539	18809								
540	18810								
541	18811								
542	18812								
543	18813								
544	18814								
545	18815								
546	18816								
547	18817								
548	18818								

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AZ	BA	BB	BC	BD	BE	BF	BG
Row #	Cost Center	[redacted]	Network Hard/Software and Testing	Number Ordering	Network Decommissioning	E911	Excluded Direct	Total Direct	Grand Total
549	18819								
550	18820								
551	18850								
552	18851								
553	19000								
554	19100								
555	19200								
556	19600								
557	19700								
558	19800								
640	21500								
641	21501								
642	21502								
643	21503								
644	21504								
645	21505								
646	21506								
647	21507								
648	21508								
649	21509								
1016	31166								
1154	33000								
1155	33001								
1156	33002								
1157	33003								
1158	33004								
1159	33005								
1160	33007								
1161	33100								
1162	33101								
1163	33102								
1164	33110								
1165	33111								
1166	33112								
1167	33120								
1168	33121								
1169	33122								
1170	33130								
1171	33131								
1172	33132								
1173	33140								
1174	33141								
1175	33142								

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AZ	BA	BB	BC	BD	BE	BF	BG
Row #	Cost Center	[redacted]	Network Hard/Software and Testing	Number Ordering	Network Decommissioning	E911	Excluded Direct	Total Direct	Grand Total
1176	33150								
1177	33151								
1178	33152								
1179	33160								
1180	33161								
1181	33162								
1182	33170								
1183	33172								
1184	33181								
1185	33182								
1345	35000								
1346	35001								
1347	35002								
1348	35003								
1349	35004								
1350	35005								
1351	35006								
1352	35007								
1650	40200								
1651	40201								
1652	40202								
1653	40203								
1654	40204								
1655	40205								
1656	40206								
1657	40207								
1658	40208								
1659	40209								
1730	41000								
1731	41001								
1732	41002								
1733	41003								
1734	41004								
1735	41005								
1736	41006								
1737	41007								
1738	41008								
1739	41009								
1740	41100								
1741	41101								
1742	41102								
1743	41103								
1744	41104								

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AZ	BA	BB	BC	BD	BE	BF	BG
Row #	Cost Center	[redacted]	Network Hard/Software and Testing	Number Ordering	Network Decommissioning	E911	Excluded Direct	Total Direct	Grand Total
1927	45115								
1928	45120								
1929	45121								
1930	45122								
1931	45123								
1932	45124								
1933	45125								
1934	45130								
1935	45131								
1936	45132								
1937	45133								
1938	45134								
1939	45135								
1940	45140								
1941	45141								
1942	45142								
1943	45143								
1944	45144								
1945	45145								
1946	45150								
1947	45151								
1948	45152								
1949	45153								
1950	45154								
1951	45155								
1952	45160								
1953	45161								
1954	45162								
1955	45163								
1956	45164								
1957	45165								
1958	45170								
1959	45171								
1960	45172								
1961	45173								
1962	45174								
1963	45175								
1964	45180								
1965	45181								
1966	45182								
1967	45183								
1968	45184								
1969	45185								

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AZ	BA	BB	BC	BD	BE	BF	BG
Row #	Cost Cen	[redacted]	Network Hard/Software and Testing	Number Ordering	Network Decommissioning	E911	Excluded Direct	Total Direct	Grand Total
2154	48110								
2155	48150								
2156	48501								
2157	48540								
2158	48610								
2159	48830								
2160	49110								
2161	49111								
2162	49112								
2163	49113								
2164	49114								
2165	49115								
2166	49116								
2167	49120								
2168	49121								
2169	49122								
2170	49123								
2171	49124								
2172	49125								
2173	49126								
2174	49127								
2175	49128								
2176	49129								
2177	49130								
2178	49131								
2179	49132								
2180	49133								
2181	49140								
2182	49141								
2183	49142								
2184	49143								
2185	49144								
2186	49145								
2187	49146								
2188	49150								
2189	49151								
2190	49152								
2319	50000								
2320	50001								
2321	50002								
2322	50003								
2323	50004								
2426	63100								

Sprint PCS - I
Expense Mod
Expense Inpu

A	B	AZ	BA	BB	BC	BD	BE	BF	BG
Row #	Cost Center	[redacted]	Network Hard/Software and Testing	Number Ordering	Network Decommissioning	E911	Excluded Direct	Total Direct	Grand Total
2427	63101								
2428	63110								
2429	63120								
2430	63130								
2431	63140								
2432	63145								
2433	63150								
2434	63155								
2435	63160								
2436	63165								
2437	63170								
2438	63175								
2439	63180								
2440	63185								
2441	63190								
2442	63195								
2558	66210								
2559	66220								
2672	71750								
2673	71800								
2674	71810								
2792	74101								
2793	74102								
2794	74103								
2795	74104								
2796	74105								
2797	74106								
2798	74107								
2799	74108								
2800	74109								
2801	74110								
2802	74111								
2803	74112								
2804	74113								
2805	74114								
2806	74115								
2807	74116								
2808	74117								
2809	74118								
2810	74119								
2811	75050								
2812	80010								
2813	90000								

Sprint PCS - I
Expense Mod
Expense Inpu

	A	B	AZ	BA	BB	BC	BD	BE	BF	BG
				Network and Software Testing	Number Ordering	Network Decommissioning	E911	Excluded Direct	Total Direct	Grand Total
2816		90300								
2817		90400								
2818		90900								
2819		95000								
2820		95100								
2821		99010								
2822		99011								
2823		99012								
2824		99013								
2825		99020								
2826		99030								
2827		99995								
2828		99997								
2829		99998								
2830		99999								
2833										
2834										
2835										
2836										
2837										
2838										
2839										
2840										
2841										
2842										
2843										
2844										
2845										
2846										
2847										
2848										
2849										
2850										

Sprint PCS - Florida
Expense Module
Subscriber Input Worksheet

A	B	C	D	E	F	G	H
		National Subscriber Counts	Region Subscriber Counts	Area Subscriber Counts	Average District Subscriber Counts	Year-End District Subscriber Counts	Beginning of Year District Subscriber
8							
70							
71	**SOET REGION**						
72							
73	ATLA AREA						
74	ATLA DISTRICT						
75	BIRM DISTRICT						
76							
77	DALL AREA						
78	DALL DISTRICT						
79	OKCY DISTRICT						
80	TLSA DISTRICT						
81							
82	HSTN AREA						
83	HSTN DISTRICT						
84	NWOR DISTRICT						
85							
86	NOFL AREA						
87	DYTA DISTRICT						
88	JACK DISTRICT						
89	ORLN DISTRICT						
90	TALA DISTRICT						
91	TAPA DISTRICT						
92							
93	SANA AREA						
94	AUST DISTRICT						
95	CRPS DISTRICT						
96	RGVY DISTRICT						
97	SANA DISTRICT						
98							
99	SOFL AREA						
100	SEFL DISTRICT						
101	SWFL DISTRICT						
102							

Sprint PCS - Florida
Expense Module
Subscriber Input Worksh

	A	B	I	J	K	L	M	N
				National Subscriber Percent	Region Subscriber Percent	Area Subscriber Percent	District Subscriber Percent	District Subscribers / Total
6								
70								
71		**SOET REGION**						
72								
73		ATLA AREA						
74		ATLA DISTRICT						
75		BIRM DISTRICT						
76								
77		DALL AREA						
78		DALL DISTRICT						
79		OKCY DISTRICT						
80		TLSA DISTRICT						
81								
82		HSTN AREA						
83		HSTN DISTRICT						
84		NWOR DISTRICT						
85								
86		NOFL AREA						
87		DYTA DISTRICT						
88		JACK DISTRICT						
89		ORLN DISTRICT						
90		TALA DISTRICT						
91		TAPA DISTRICT						
92								
93		SANA AREA						
94		AUST DISTRICT						
95		CRPS DISTRICT						
96		RGVY DISTRICT						
97		SANA DISTRICT						
98								
99		SOFL AREA						
100		SEFL DISTRICT						
101		SWFL DISTRICT						
102								

Sprint PCS - Florida
Expense Module
Study Area Input Worksheet

A	B	C
[illegible]	[illegible]	[illegible]
8		
9	Direct Expenses	
10	District #1	DYTA DISTRICT
11	District #2	JACK DISTRICT
12	District #3	ORLN DISTRICT
13	District #4	TALA DISTRICT
14	District #5	TAPA DISTRICT
15	District #6	SEFL DISTRICT
16	District #7	SWFL DISTRICT
17	District #8	NONE
18	District #9	NONE
19	District #10	NONE
20	District #11	NONE
21	District #12	NONE

SPRINT PCS COST MODEL

DESCRIPTION OF INPUT MODULE (SPCS_INPUT_XX.xls)

The Input Module contains all inputs used by the Calculations Module. This workbook contains third-party proprietary information.

1. INTRODUCTION WORKSHEET

The Introduction Worksheet lists all of the worksheets within the workbook.

2. LABELS WORKSHEET

The Labels Worksheet provides labels for several titles and column headers.

Column A - Row #

Column B - Description

Column C - Input - Column header description.

3. UNIT COST WORKSHEET

The Unit Costs Worksheet contains a list of all major traffic sensitive components of the Sprint PCS network, and the most recent vendor prices. This worksheet contains third-party proprietary information. A descriptive list of each individual network component is attached to the end of this document.

Column A - Row

Column B - Description

Column C - Per Unit Costs - Material Initial - The price of each individual network component at the time of initial deployment. Only traffic-sensitive components are included. The model assumes all equipment acquired in the first year of service is purchased at the initial price.

Column D - Per Unit Costs - Material Expansion - The price of each individual network component at any time after initial deployment. Only traffic-sensitive components are included. The model assumes all equipment acquired after the first year of service is purchased at the expansion price.

Column E - Per Unit Costs - EF&I - The vendor EF&I (Engineered, Furnished & Installed) cost of each individual network component, which applies to both initial and expansion prices.

Column F - Per Unit Costs - Services - The vendor services cost of each individual network component, which applies to both initial and expansion prices.

Rows 9 - 35 - MTX (Mobile Telephone Exchange) - Per unit costs of individual components of the MTX.

Rows 37 - 47 - BSC #1 (Base Station Controller) - Per unit costs of individual components of the first BSC.

Rows 49 - 65 - BTS 1st Carrier (Basestation Transceiver System) - Per unit costs of individual components of the first carrier for all BTSs associated with the first BSC.

Rows 67 - 71 - BTS 2nd Carrier (Basestation Transceiver System) - Per unit costs of individual components of the second carrier (if present) for all BTSs associated with the first BSC.

Rows 73 - 76 - BTS 3rd Carrier (Basestation Transceiver System) - Per unit costs of individual components of the third carrier (if present) for all BTSs associated with the first BSC.

Rows 78 - 90 - BSC #2 (Base Station Controller) - Per unit costs of individual components of the second BSC (if present).

Rows 90 - 104 - BTS 1st Carrier (Basestation Transceiver System) - Per unit costs of individual components of the first carrier for all BTSs associated with the second BSC.

Rows 106 - 110 - BTS 2nd Carrier (Basestation Transceiver System) - Per unit costs of individual components of the second carrier (if present) for all BTSs associated with the second BSC.

Rows 112 - 115 - BTS 3rd Carrier (Basestation Transceiver System) - Per unit costs of individual components of the third carrier (if present) for all BTSs associated with the second BSC.

Rows 117 - 135 - Transmission - Per unit costs of individual transmission components within the MSC (Mobile Switching Center).

4. UNITS WORKSHEET

The Units Worksheet contains the cumulative number of each network component in service at year-end, for each individual MSC (Mobile Switching Center).

Column A - Row

Column B - Description

Column C - Not used.

Column D - MSC #1 Base - For each individual component, the cumulative number of units in service at year-end in the base-year, for MSC #1 (Mobile Switching Center).

Column E - MSC #1 2000 - For each individual component, the cumulative number of units in service at year-end 2000, for MSC #1 (Mobile Switching Center).

Column F - MSC #1 2001 - For each individual component, the cumulative number of units in service at year-end 2001, for MSC #1 (Mobile Switching Center).

Column G - MSC #1 2002 - For each individual component, the cumulative number of units in service at year-end 2002, for MSC #1 (Mobile Switching Center).

Columns H - BJ - The same information in Columns D - G, for MSCs # 2 - 12.

Rows 9 - 135 - Cumulative number of units of each network component, using the same component list as the Unit Cost Worksheet.

5. ASSUMPTION WORKSHEET

The number of units of each network component which are included in the purchase of the Initial MTX Processor. This worksheet prevents these items from being purchased twice in the model. This worksheet also contains miscellaneous inputs.

Column A - Row #

Column B - Description -

Column C - Initial Purchase Units - The number of units of each network component which are included in the purchase of the Initial MTX Processor.

Column D - Not used.

Column E - Description

- Sales Tax - Study-area-specific sales tax rate.
- Sales Tax Application - Specifies to which price components the sales tax applies.
  1. Material Only
  2. Material and EF&I
  3. Material, EF&I, and Services
- Sprint PCS EF&I - The capitalized portion of Sprint PCS-specific EF&I, as calculated in the Expense Module.

Column F - Amount - Provides the user a location to input the quantity of the items described in column E.

Rows 9 - 135 - The number of units of each network component which are included in the purchase of the Initial MTX Processor, using the same component list as the Unit Cost Worksheet.

6. SPECTRUM LICENSES WORKSHEET

The Spectrum License Worksheet contains input information concerning the capitalized cost of spectrum licenses and spectrum clearing.

Column A - Row #

Column B - Not used.

Column C - Description

Column D - Base - The cumulative investment in spectrum licenses and spectrum clearing at year-end in the base year, by market area.

Column E - 2000 - The cumulative investment in spectrum licenses and spectrum clearing at year-end 2000, by market area.

Column F - 2001 - The cumulative investment in spectrum licenses and spectrum clearing at year-end 2001, by market area.

Column G - 2002 - The cumulative investment in spectrum licenses and spectrum clearing at year-end 2002, by market area.

7. BACKHAUL WORKSHEET

The Backhaul Worksheet contains the average monthly rate for T-1 backhaul facilities from the cell site to the MSC.

Column A - Row #

Column B - Description

Column C - Amount - the average monthly rate for T-1 backhaul facilities from the MSC to the cell site.

8. SS7 WORKSHEET

The SS7 Worksheet contains information on national SS7 investments and expenses.

Column A - Row #

Column B - Description

- Ports/A-Links - Number of A-Links.
- ISUP Messages - Annual number of ISUP messages.
- IS-41 Messages - Annual number of IS-41 messages.
- A-Link/IXC Lease - Annual lease expense for A-Links.
- STP Port
  - Expense Monthly - Monthly rate for the STP port.
  - Non-Recurring - Non-recurring rate for the STP port.
- ISUP Message Rate - Per message ISUP rate.
- IS-41 Message Rate - Per message IS-41 rate.

Column C - Base - The appropriate value in the base year.

Column D - 2000 - The appropriate value for the year 2000.

Column E - 2001 - The appropriate value for the year 2001.

Column F - 2002 - The appropriate value for the year 2002.

9. DEMAND WORKSHEET

The Demand Worksheet contains total forecasted annual MOU demand, by year. There are two different levels of demand. The first and greater demand applies only to the MTX. The second and lesser demand applies to all other network components: BSC, Backhaul, BTS, Antennae, Structure, and Spectrum Licenses. The MTX has the greater demand because all traffic must pass though it, including traffic routed to voice

mail and incomplete calls. Only completed calls traverse the remaining network components.

Column A - Row #

Column B - Description

- Total MTX MOU - Annual forecast of MOU at the MTX.
- Total BSC / BTS / Antennae / Structure MOU - Annual forecast of MOU at the BSC, BTS, Antennae, Structure, and Spectrum License
- % MOU Requiring Multiple MTXs - The percent of traffic that is routed through multiple MTXs.

Column C - Base - The appropriate value in the base year.

Column D - 2000 - The appropriate value for the year 2000.

Column E - 2001 - The appropriate value for the year 2001.

Column F - 2002 - The appropriate value for the year 2002.

10. ANNUAL CHARGE FACTOR WORKSHEET

The Annual Charge Factor Worksheet contains the Direct Expense Factors (depreciation, maintenance, return, and taxes), Other Direct Expense Factors (network and general support), and Common Expense Factors (corporate overhead), by network component, as calculated by the Annual Charge Factor Module and the Expense Module.

Column A - Row #

Column B - Description

- MTX / BSC
- BTS
- Antennae
- Structure
- Spectrum License
- Spectrum Clearing

Column C - Direct Expenses - The Direct Expense Factor (depreciation, maintenance, return, and taxes) as calculated by the Annual Charge Factor Module.

Column D - Other Direct Expenses - The Other Direct Expense Factor (network and general support) as calculated by the Expense Module.

Column E - TELRIC ACF - The sum of Columns C and D.

Column F - Common Expenses - The Common Expense Factor (corporate overhead) as calculated by the Expense Module.

11. NATIONAL PLATFORMS WORKSHEET

The National Platforms Worksheet contains information concerning the HLR (Home Location Register) national platform. Since this is a national level expense, it is assigned to individual geographic districts based upon the number of subscribers.

Column A - Row #

Column B - Not used.

Column C - Description

Column D - Base - The appropriate value in the base year.

Column E - 2000 - The appropriate value for the year 2000.

Column F - 2001 - The appropriate value for the year 2001.

Column G - 2002 - The appropriate value for the year 2002.

Rows 9 - 14 - National Platform Investments - The cumulative investment in national platform by year.

Rows 16 - 28 - Subscribers - End of Period - The number of subscribers, used to assign the national investment to individual districts.

12. COLLOCATION WORKSHEET

The Collocation Worksheet contains information on the rent revenue Sprint PCS receives for renting space on its structures. The amount increases in future years based upon the forecasted number of BTS locations.

Column A - Row #

Column B - Description

- Annual Collocation Revenue - The annual amount of collocation revenue as calculated by the Expense Module.
- Number of BTS Locations - The current number of BTS locations.

Column C - Amount

Sprint PCS Cost Model (SPCS_CM)

Version 2, April 2000

Welcome to the Sprint-PCS Cost Model, Version 1, Input module. This model can develop the cost for a single or multilple MSAs, depending upon the inputs. The model allows inputs for up to 12 MSCs (Mobile Switching Center). It is written in Microsoft Excel 97. All calculations are contained within the Excel workbooks; no calculations are "hidden" in macros.

A brief description of each worksheet follows.

Input Module Worksheet Descriptions:

(All inputs are in BLUE font)
(All inputs linked to other workbooks or worksheets are in GREEN font)

Introduction	Introduction
Labels	Frequently used labels and headers.
Unit Costs	Material and EF&I cost of each network component.
Units	Forecasted quantities of each network component.
Assumptions	Miscellaneous input assumptions.
Spectrum	The cost of spectrum licenses and spectrum clearing.
Backhaul	The cost of backhaul facilities from the Cell Site to the MSC (Mobile Switching Center).
SS7	The cost of SS7 facilities.
Demand	Minute of use demand data.
ACF	Annual charge factor data.
Nat. Plat.	The cost of National Platform investment, and assignment to this study area.
Collocation	Revenues received from structure collocation.

Sprint PCS - Florida
Input Module
Labels Input Worksheet

A	B	C
Row #	Description	Input
8		
9	Base =	Base
10	Year 1 =	2000
11	Year 2 =	2001
12	Year 3 =	2002

Sprint PCS - Florida
Input Module
Unit Cost Input Worksheet

A	B	C	D	E	F
		Per Unit Costs			
Row #	Description	Material Initial	Material Expansion	Vendor EF&I	Vendor Services
8					
9	(MTX) Mobile Telephone Exchange				
10	Initial MTX SN70 Processor (Initial Purchase)				
11	MS-4 Port Cards (FRONT)				
12	DS-30 PB				
13	DS-30 STP PB				
14	ENET Shelves				
15	Crosspoint Cards				
16	DS512 Quad PB				
17	LPP				
18	Enhanced CAU				
19	Enhanced CIU				
20	RMU				
21	MCTM				
22	DTC				
23	MCAM-3 (power, service, and I/O)				
24	MCAM-3 (power only)				
25	SMC				
26	DAT (225 mb)				
27	DDU (1.0G)				
28	Initial Software				
29	Spares				
30	ATM				
31	ATM Peripherals				
32	ATM Spares				
33	XA CORE				
34	Power Initial Switch Per MSC				
35	Additional Power Per MSC w/Additional MSC				
36					

Sprint PCS - Florida
Input Module
Unit Cost Input Worksheet

A	B	C	D	E	F
		Per Unit Costs			
Row #	Description	Material Initial	Material Expansion	Vendor EF&I	Vendor Services
37	(BSC) #1 Base Station Controller				
38	Initial BSC (1 CIS, 8 BCNI, 1 SBS Rack , 2 SBS Shelves, 1 BIU Rack, 12 CDSU Kits, 2 BIU PS)				
39	BCNI				
40	BIU				
41	CDSU				
42	SBS Rack (Rack Only)				
43	SBS Shelves with SEL cards				
44	SBS shelves with ESEL cards				
45	EVRC Software				
46	BSC Spares				
47	BSS Manager Spares				
48					
49	(BTS) 1st Carrier Initial - Base Station Transceiver				
50	Tower 1 - <100 feet				
51	Tower 2 - 100-200 feet				
52	Tower 3 - >250 feet				
53	Tower 4 - Collocate				
54	Tower 5 - Rooftop				
55	Antenna 1				
56	Antenna 2				
57	Antenna 3				
58	Antenna 4				
59	Antenna 5				
60	RF Engineering				
61	Power Protection Closure				
62	Digital Enclosure (DE) CDMA MetroCell Outdoor				
63	Radio Enclosure (RE) CDMA MetroCell Outdoor				
64	External Battery Enclosure (EBC)				
65	BTS Spares (Initial Per Market)				
66	BTS Spares (Per BTS)				
67	Rehoming				
68					
69	(BTS) 2nd Carrier - Base Station Tranceiver (Add)				
70	Digital Enclosure (DE) CDMA MetroCell Outdoor				
71	Radio Enclosure (RE) CDMA MetroCell Outdoor				
72	External Battery Enclosure (EBC)				
73	Rehoming				
74					
75	(BTS) 3rd Carrier - Base Station Tranceiver (Add)				
76	Radio Enclosure (RE) CDMA MetroCell Outdoor				
77	External Battery Enclosure (EBC)				
78	Rehoming				

Sprint PCS - Florida
Input Module
Unit Cost Input Worksheet

A	B	C	D	E	F
		Per Unit Costs			
Row #	Description	Material Initial	Material Expansion	Vendor EF&I	Vendor Services
79					
80	(BSC) #2 Base Station Controller				
81	Initial BSC (1 CIS, 8 BCNI, 1 SBS Rack , 2 SBS Shelves, 1 BIU Rack, 12 CDSU Kits, 2 BIU PS)				
82	BCNI				
83	BIU				
84	CDSU				
85	SBS Rack (Rack Only)				
86	SBS Shelves with SEL cards				
87	SBS shelves with ESEL cards				
88	EVRC Software				
89	BSC Spares				
90	BSS Manager Spares				
91					
92	(BTS) 1st Carrier Initial - Base Station Transceiver				
93	Tower 1 - <100 feet				
94	Tower 2 - 100-200 feet				
95	Tower 3 - >250 feet				
96	Tower 4 - Collocate				
97	Tower 5 - Rooftop				
98	Antenna 1				
99	Antenna 2				
100	Antenna 3				
101	Antenna 4				
102	Antenna 5				
103	RF Engineering				
104	Power Protection Closure				
105	Digital Enclosure (DE) CDMA MetroCell Outdoor				
106	Radio Enclosure (RE) CDMA MetroCell Outdoor				
107	External Battery Enclosure (EBC)				
108	Rehoming				
109					
110	(BTS) 2nd Carrier - Base Station Tranceiver (Add)				
111	Digital Enclosure (DE) CDMA MetroCell Outdoor				
112	Radio Enclosure (RE) CDMA MetroCell Outdoor				
113	External Battery Enclosure (EBC)				
114	Rehoming				
115					
116	(BTS) 3rd Carrier - Base Station Tranceiver (Add)				
117	Radio Enclosure (RE) CDMA MetroCell Outdoor				
118	External Battery Enclosure (EBC)				
119	Rehoming				
120					

Sprint PCS - Florida
Input Module
Unit Cost Input Worksheet

A	B	C	D	E	F
		Per Unit Costs			
Row #	Description	Material Initial	Material Expansion	Vendor EF&I	Vendor Services
121	Transmission				
122	Digital Cross-Connect Sys./DS1 Cards - Octal				
123	Digital Cross-Connect Sys./DS1 Shelf				
124	Digital Cross-Connect Sys./DS1 Bay				
125	Digital Cross-Connect Sys./DS3 Cards				
126	Digital Cross-Connect Sys./DS3 Shelf				
127	Digital Cross-Connect Sys./DS3 Bay				
128	Digital Cross-Connect Sys./Admin Bay 128				
129	Digital Cross-Connect Sys./Admin Bay 256				
130	MDF				
131	Hekimian				
132	DSX-1 Relay Racks (Bays)				
133	DSX-3 Cards				
134	DSX-3 Shelves				
135	Echo Cards				
136	Echo Shelves				
137	Echo Relay Racks (Bays)				
138	Channel Banks				
139	Cable Rack				
140					

Sprint PCS - Florida
Input Module
Unit Input Worksheet (Cumulative)

A	B	D	E	F	G	I	J	K	L	N	O	P	Q	S	T	U	V
		Miami (Dade 1)				Miami (Dade 2)				Deerfield Beach				Jacksonville 1			
Row #	Description	Base	2000	2001	2002	Base	2000	2001	2002	Base	2000	2001	2002	Base	2000	2001	2002
8																	
9	(MTX) Mobile Telephone Exchange																
10	Initial MTX SN70 Processor (Initial Purchase)																
11	MS-4 Port Cards (FRONT)																
12	DS-30 PB																
13	DS-30 STP PB																
14	ENET Shelves																
15	Crosspoint Cards																
16	DS512 Quad PB																
17	LPP																
18	Enhanced CAU																
19	Enhanced CIU																
20	RMU																
21	MCTM																
22	DTC																
23	MCAM-3 (power, service, and I/O)																
24	MCAM-3 (power only)																
25	SMC																
26	DAT (225 mb)																
27	DDU (1.0G)																
28	Initial Software																
29	Spares																
30	ATM																
31	ATM Peripherals																
32	ATM Spares																
33	XA CORE																
34	Power Initial Switch Per MSC																
35	Additional Power Per MSC w/Additional MSC																
36																	

Sprint PCS - Florida
Input Module
Unit Input Worksheet (Cumulative)

A	B	D	E	F	G	I	J	K	L	N	O	P	Q	S	T	U	V
		Miami (Dade 1)				Miami (Dade 2)				Deerfield Beach				Jacksonville 1			
Row #	Description	Base	2000	2001	2002	Base	2000	2001	2002	Base	2000	2001	2002	Base	2000	2001	2002
37	(BSC) #1 Base Station Controller																
38	Initial BSC (1 CIS, 8 BCNI, 1 SBS Rack , 2 SBS Shelves, 1 BIU Rack, 12 CDSU Kits, 2 BIU PS)																
39	BCNI																
40	BIU																
41	CDSU																
42	SBS Rack (Rack Only)																
43	SBS Shelves with SEL cards																
44	SBS shelves with ESEL cards																
45	EVRC Software																
46	BSC Spares																
47	BSS Manager Spares																
48																	
49	(BTS) 1st Carrier Initial - Base Station Transceiver																
50	Tower 1 - <100 feet																
51	Tower 2 - 100-200 feet																
52	Tower 3 - >250 feet																
53	Tower 4 - Collocate																
54	Tower 5 - Rooftop																
55	Antenna 1																
56	Antenna 2																
57	Antenna 3																
58	Antenna 4																
59	Antenna 5																
60	RF Engineering																
61	Power Protection Closure																
62	Digital Enclosure (DE) CDMA MetroCell Outdoor																
63	Radio Enclosure (RE) CDMA MetroCell Outdoor																
64	External Battery Enclosure (EBC)																
65	BTS Spares (Initial Per Market)																
66	BTS Spares (Per BTS)																
67	Rehoming																
68																	
69	(BTS) 2nd Carrier - Base Station Tranceiver (Add)																
70	Digital Enclosure (DE) CDMA MetroCell Outdoor																
71	Radio Enclosure (RE) CDMA MetroCell Outdoor																
72	External Battery Enclosure (EBC)																
73	Rehoming																
74																	
75	(BTS) 3rd Carrier - Base Station Tranceiver (Add)																
76	Radio Enclosure (RE) CDMA MetroCell Outdoor																
77	External Battery Enclosure (EBC)																
78	Rehoming																

Sprint PCS - Florida
Input Module
Unit Input Worksheet (Cumulative)

A	B	D	E	F	G	I	J	K	L	N	O	P	Q	S	T	U	V
		Miami (Dade 1)				Miami (Dade 2)				Deerfield Beach				Jacksonville 1			
Row #	Description	Base	2000	2001	2002	Base	2000	2001	2002	Base	2000	2001	2002	Base	2000	2001	2002
79																	
80	(BSC) #2 Base Station Controller																
81	Initial BSC (1 CIS, 8 BCNI, 1 SBS Rack , 2 SBS Shelves, 1 BIU Rack, 12 CDSU Kits, 2 BIU PS)																
82	BCNI																
83	BIU																
84	CDSU																
85	SBS Rack (Rack Only)																
86	SBS Shelves with SEL cards																
87	SBS shelves with ESEL cards																
88	EVRC Software																
89	BSC Spares																
90	BSS Manager Spares																
91																	
92	(BTS) 1st Carrier Initial - Base Station Transceiver																
93	Tower 1 - <100 feet																
94	Tower 2 - 100-200 feet																
95	Tower 3 - >250 feet																
96	Tower 4 - Collocate																
97	Tower 5 - Rooftop																
98	Antenna 1																
99	Antenna 2																
100	Antenna 3																
101	Antenna 4																
102	Antenna 5																
103	RF Engineering																
104	Power Protection Closure																
105	Digital Enclosure (DE) CDMA MetroCell Outdoor																
106	Radio Enclosure (RE) CDMA MetroCell Outdoor																
107	External Battery Enclosure (EBC)																
108	Rehoming																
109																	
110	(BTS) 2nd Carrier - Base Station Tranceiver (Add)																
111	Digital Enclosure (DE) CDMA MetroCell Outdoor																
112	Radio Enclosure (RE) CDMA MetroCell Outdoor																
113	External Battery Enclosure (EBC)																
114	Rehoming																
115																	
116	(BTS) 3rd Carrier - Base Station Tranceiver (Add)																
117	Radio Enclosure (RE) CDMA MetroCell Outdoor																
118	External Battery Enclosure (EBC)																
119	Rehoming																
120																	

Sprint PCS - Florida
Input Module
Unit Input Worksheet (Cumulative)

A	B	D	E	F	G	I	J	K	L	N	O	P	Q	S	T	U	V
		Miami (Dade 1)				Miami (Dade 2)				Deerfield Beach				Jacksonville 1			
Row #	Description	Base	2000	2001	2002	Base	2000	2001	2002	Base	2000	2001	2002	Base	2000	2001	2002
121	Transmission																
122	Digital Cross-Connect Sys./DS1 Cards - Octal																
123	Digital Cross-Connect Sys./DS1 Shelf																
124	Digital Cross-Connect Sys./DS1 Bay																
125	Digital Cross-Connect Sys./DS3 Cards																
126	Digital Cross-Connect Sys./DS3 Shelf																
127	Digital Cross-Connect Sys./DS3 Bay																
128	Digital Cross-Connect Sys./Admin Bay 128																
129	Digital Cross-Connect Sys./Admin Bay 256																
130	MDF																
131	Hekimian																
132	DSX-1 Relay Racks (Bays)																
133	DSX-3 Cards																
134	DSX-3 Shelves																
135	Echo Cards																
136	Echo Shelves																
137	Echo Relay Racks (Bays)																
138	Channel Banks																
139	Cable Rack																
140																	

Notes:
All unit inputs are cumulative.
Do not enter "0" (zero); rather leave cell blank.

Sprint PCS - Florida
Input Module
Unit Input Worksheet (Cumulative)

A	B	X	Y	Z	AA	AC	AD	AE	AF	AH	AI	AJ	AK
		Orlando 1				Orlando 2				Tampa			
Row #	Description	Base	2000	2001	2002	Base	2000	2001	2002	Base	2000	2001	2002
8													
9	(MTX) Mobile Telephone Exchange												
10	Initial MTX SN70 Processor (Initial Purchase)												
11	MS-4 Port Cards (FRONT)												
12	DS-30 PB												
13	DS-30 STP PB												
14	ENET Shelves												
15	Crosspoint Cards												
16	DS512 Quad PB												
17	LPP												
18	Enhanced CAU												
19	Enhanced CIU												
20	RMU												
21	MCTM												
22	DTC												
23	MCAM-3 (power, service, and I/O)												
24	MCAM-3 (power only)												
25	SMC												
26	DAT (225 mb)												
27	DDU (1.0G)												
28	Initial Software												
29	Spares												
30	ATM												
31	ATM Peripherals												
32	ATM Spares												
33	XA CORE												
34	Power Initial Switch Per MSC												
35	Additional Power Per MSC w/Additional MSC												
36													

Sprint PCS - Florida
Input Module
Unit Input Worksheet (Cumulative)

A	B	X	Y	Z	AA	AC	AD	AE	AF	AH	AI	AJ	AK
		Orlando 1				Orlando 2				Tampa			
Row #	Description	Base	2000	2001	2002	Base	2000	2001	2002	Base	2000	2001	2002
37	(BSC) #1 Base Station Controller												
38	Initial BSC (1 CIS, 8 BCNI, 1 SBS Rack , 2 SE												
39	BCNI												
40	BIU												
41	CDSU												
42	SBS Rack (Rack Only)												
43	SBS Shelves with SEL cards												
44	SBS shelves with ESEL cards												
45	EVRC Software												
46	BSC Spares												
47	BSS Manager Spares												
48													
49	(BTS) 1st Carrier Initial - Base Station Transce												
50	Tower 1 - <100 feet												
51	Tower 2 - 100-200 feet												
52	Tower 3 - >250 feet												
53	Tower 4 - Collocate												
54	Tower 5 - Rooftop												
55	Antenna 1												
56	Antenna 2												
57	Antenna 3												
58	Antenna 4												
59	Antenna 5												
60	RF Engineering												
61	Power Protection Closure												
62	Digital Enclosure (DE) CDMA MetroCell Outd												
63	Radio Enclosure (RE) CDMA MetroCell Outd												
64	External Battery Enclosure (EBC)												
65	BTS Spares (Initial Per Market)												
66	BTS Spares (Per BTS)												
67	Rehoming												
68													
69	(BTS) 2nd Carrier - Base Station Tranceiver (												
70	Digital Enclosure (DE) CDMA MetroCell Outd												
71	Radio Enclosure (RE) CDMA MetroCell Outd												
72	External Battery Enclosure (EBC)												
73	Rehoming												
74													
75	(BTS) 3rd Carrier - Base Station Tranceiver (A												
76	Radio Enclosure (RE) CDMA MetroCell Outd												
77	External Battery Enclosure (EBC)												
78	Rehoming												

Sprint PCS - Florida
Input Module
Unit Input Worksheet (Cumulative)

A	B	X	Y	Z	AA	AC	AD	AE	AF	AH	AI	AJ	AK
		Orlando 1				Orlando 2				Tampa			
Row #	Description	Base	2000	2001	2002	Base	2000	2001	2002	Base	2000	2001	2002
79													
80	(BSC) #2 Base Station Controller												
81	Initial BSC (1 CIS, 8 BCNI, 1 SBS Rack , 2 SE												
82	BCNI												
83	BIU												
84	CDSU												
85	SBS Rack (Rack Only)												
86	SBS Shelves with SEL cards												
87	SBS shelves with ESEL cards												
88	EVRC Software												
89	BSC Spares												
90	BSS Manager Spares												
91													
92	(BTS) 1st Carrier Initial - Base Station Transce												
93	Tower 1 - <100 feet												
94	Tower 2 - 100-200 feet												
95	Tower 3 - >250 feet												
96	Tower 4 - Collocate												
97	Tower 5 - Rooftop												
98	Antenna 1												
99	Antenna 2												
100	Antenna 3												
101	Antenna 4												
102	Antenna 5												
103	RF Engineering												
104	Power Protection Closure												
105	Digital Enclosure (DE) CDMA MetroCell Outd												
106	Radio Enclosure (RE) CDMA MetroCell Outd												
107	External Battery Enclosure (EBC)												
108	Rehoming												
109													
110	(BTS) 2nd Carrier - Base Station Tranceiver (A												
111	Digital Enclosure (DE) CDMA MetroCell Outd												
112	Radio Enclosure (RE) CDMA MetroCell Outd												
113	External Battery Enclosure (EBC)												
114	Rehoming												
115													
116	(BTS) 3rd Carrier - Base Station Tranceiver (A												
117	Radio Enclosure (RE) CDMA MetroCell Outd												
118	External Battery Enclosure (EBC)												
119	Rehoming												
120													

Sprint PCS - Florida
Input Module
Unit Input Worksheet (Cumulative)

A	B	X	Y	Z	AA	AC	AD	AE	AF	AH	AI	AJ	AK
		Orlando 1				Orlando 2				Tampa			
Row #	Description	Base	2000	2001	2002	Base	2000	2001	2002	Base	2000	2001	2002
121	Transmission												
122	Digital Cross-Connect Sys./DS1 Cards - Octal												
123	Digital Cross-Connect Sys./DS1 Shelf												
124	Digital Cross-Connect Sys./DS1 Bay												
125	Digital Cross-Connect Sys./DS3 Cards												
126	Digital Cross-Connect Sys./DS3 Shelf												
127	Digital Cross-Connect Sys./DS3 Bay												
128	Digital Cross-Connect Sys./Admin Bay 128												
129	Digital Cross-Connect Sys./Admin Bay 256												
130	MDF												
131	Hekimian												
132	DSX-1 Relay Racks (Bays)												
133	DSX-3 Cards												
134	DSX-3 Shelves												
135	Echo Cards												
136	Echo Shelves												
137	Echo Relay Racks (Bays)												
138	Channel Banks												
139	Cable Rack												
140													

Notes:
All unit inputs are cumulative.
Do not enter "0" (zero); rather leave cell bla

Sprint PCS - Florida
Input Module
Assumption Input Worksheet

A	B	C	D	E	F
Row #	Description	Initial Purchase Units		Description	Amount
8					
9	(MTX) Mobile Telephone Exchange			Sales Tax	
10	Initial MTX SN70 Processor (Initial Purchase)			Sales Tax Application	
11	MS-4 Port Cards (FRONT)			1 = Material only	
12	DS-30 PB			2 = Material + EF&I	
13	DS-30 STP PB			3 = Material + EF&I + Services	
14	ENET Shelves				
15	Crosspoint Cards				
16	DS512 Quad PB			Sprint PCS EF&I	
17	LPP				
18	Enhanced CAU				
19	Enhanced CIU				
20	RMU				
21	MCTM				
22	DTC				
23	MCAM-3 (power, service, and I/O)				
24	MCAM-3 (power only)				
25	SMC				
26	DAT (225 mb)				
27	DDU (1.0G)				
28	Initial Software				
29	Spares				
30	ATM				
31	ATM Peripherals				
32	ATM Spares				
33	XA CORE				
34	Power Initial Switch Per MSC				
35	Additional Power Per MSC w/Additional MSC				
36					

Sprint PCS - Florida
Input Module
Assumption Input Worksheet

A	B	C	D	E	F
Row #	Description	Initial Purchase Units		Description	Amount
37	(BSC) #1 Base Station Controller				
38	Initial BSC (1 CIS, 8 BCNI, 1 SBS Rack , 2 SBS Shelves, 1 BIU Rack, 12 CDSU Kits, 2 BIU PS)				
39	BCNI				
40	BIU				
41	CDSU				
42	SBS Rack (Rack Only)				
43	SBS Shelves with SEL cards				
44	SBS shelves with ESEL cards				
45	EVRC Software				
46	BSC Spares				
47	BSS Manager Spares				
48					
49	(BTS) 1st Carrier Initial - Base Station Transceiver				
50	Tower 1 - <100 feet				
51	Tower 2 - 100-200 feet				
52	Tower 3 - >250 feet				
53	Tower 4 - Collocate				
54	Tower 5 - Rooftop				
55	Antenna 1				
56	Antenna 2				
57	Antenna 3				
58	Antenna 4				
59	Antenna 5				
60	RF Engineering				
61	Power Protection Closure				
62	Digital Enclosure (DE) CDMA MetroCell Outdoor				
63	Radio Enclosure (RE) CDMA MetroCell Outdoor				
64	External Battery Enclosure (EBC)				
65	BTS Spares (Initial Per Market)				
66	BTS Spares (Per BTS)				
67	Rehoming				
68					
69	(BTS) 2nd Carrier - Base Station Tranceiver (Add)				
70	Digital Enclosure (DE) CDMA MetroCell Outdoor				
71	Radio Enclosure (RE) CDMA MetroCell Outdoor				
72	External Battery Enclosure (EBC)				
73	Rehoming				
74					
75	(BTS) 3rd Carrier - Base Station Tranceiver (Add)				
76	Radio Enclosure (RE) CDMA MetroCell Outdoor				
77	External Battery Enclosure (EBC)				
78	Rehoming				

Sprint PCS - Florida
Input Module
Assumption Input Worksheet

A	B	C	D	E	F
Row #	Description	Initial Purchase Units		Description	Amount
79					
80	(BSC) #2 Base Station Controller				
81	Initial BSC (1 CIS, 8 BCNI, 1 SBS Rack , 2 SBS Shelves, 1 BIU Rack, 12 CDSU Kits, 2 BIU PS)				
82	BCNI				
83	BIU				
84	CDSU				
85	SBS Rack (Rack Only)				
86	SBS Shelves with SEL cards				
87	SBS shelves with ESEL cards				
88	EVRC Software				
89	BSC Spares				
90	BSS Manager Spares				
91					
92	(BTS) 1st Carrier Initial - Base Station Transceiver				
93	Tower 1 - <100 feet				
94	Tower 2 - 100-200 feet				
95	Tower 3 - >250 feet				
96	Tower 4 - Collocate				
97	Tower 5 - Rooftop				
98	Antenna 1				
99	Antenna 2				
100	Antenna 3				
101	Antenna 4				
102	Antenna 5				
103	RF Engineering				
104	Power Protection Closure				
105	Digital Enclosure (DE) CDMA MetroCell Outdoor				
106	Radio Enclosure (RE) CDMA MetroCell Outdoor				
107	External Battery Enclosure (EBC)				
108	Rehoming				
109					
110	(BTS) 2nd Carrier - Base Station Tranceiver (Add)				
111	Digital Enclosure (DE) CDMA MetroCell Outdoor				
112	Radio Enclosure (RE) CDMA MetroCell Outdoor				
113	External Battery Enclosure (EBC)				
114	Rehoming				
115					
116	(BTS) 3rd Carrier - Base Station Tranceiver (Add)				
117	Radio Enclosure (RE) CDMA MetroCell Outdoor				
118	External Battery Enclosure (EBC)				
119	Rehoming				
120					

Sprint PCS - Florida
Input Module
Assumption Input Worksheet

A	B	C	D	E	F
Row #	Description	Initial Purchase Units		Description	Amount
121	Transmission				
122	Digital Cross-Connect Sys./DS1 Cards - Octal				
123	Digital Cross-Connect Sys./DS1 Shelf				
124	Digital Cross-Connect Sys./DS1 Bay				
125	Digital Cross-Connect Sys./DS3 Cards				
126	Digital Cross-Connect Sys./DS3 Shelf				
127	Digital Cross-Connect Sys./DS3 Bay				
128	Digital Cross-Connect Sys./Admin Bay 128				
129	Digital Cross-Connect Sys./Admin Bay 256				
130	MDF				
131	Hekimian				
132	DSX-1 Relay Racks (Bays)				
133	DSX-3 Cards				
134	DSX-3 Shelves				
135	Echo Cards				
136	Echo Shelves				
137	Echo Relay Racks (Bays)				
138	Channel Banks				
139	Cable Rack				
140					

Sprint PCS - Florida
Input Module
Spectrum Licenses Input Worksheet

A	B	C	D	E	F	G
Row #		Description	Base	2000	2001	2002
8	Spectrum Licenses					
9		Miami - Ft. Lauderdale				
10		Tampa - St Petersburg				
11		Jacksonville				
12		Market 4				
13		Market 5				
14		Market 6				
15		Market 7				
16		Market 8				
17		Market 9				
18		Market 10				
19						
20						
21						
22	Spectrum - Clearing Costs					
23		Miami - Ft. Lauderdale				
24		Tampa - St Petersburg				
25		Jacksonville				
26		Market 4				
27		Market 5				
28		Market 6				
29		Market 7				
30		Market 8				
31		Market 9				
32		Market 10				
33						
34						
35						
36		Please note inputs should be entered as cummulative totals by year.				
37						

Sprint PCS - Florida
Input Module
Backhaul Expenses Input Worksheet

A	B	C
Row #	Description	Amount
8		
9	Average Monthly T-1 Rate	

Sprint PCS - Florida
Input Module
SS7 Expenses Input Worksheet

A	B	C	D	E	F
Row #	**Description**	**Base**	**2000**	**2001**	**2002**
8					
9	Ports / A-Links				
10	ISUP Messages				
11	IS-41 Messages				
12					
13	A-Link / IXC Lease				
14					
15	STP Port				
16	Expense			/ Port / Month	
17	Non-Recurring			/ Port	
18					
19	ISUP Message			/ Message	
20					
21	IS-41 Message			/ Message	

Sprint PCS - Florida
Input Module
Demand Worksheet

A	B	C	D	E	F	G
Row #	Description	Base	2000	2001	2002	Total
8						
9						
10						
11	Total MTX MOU					
12						
13	Total BSC / BTS / Antennae / Structure MOU					
14						
15	% MOU Requiring Multiple MTXs					

Sprint PCS - Florida
Input Module
Annual Charge Factor Input Worksheet

A	B	C	D	E	F
Row #	Description	Direct Expenses	Other Direct Expenses	TELRIC ACF	Common Expenses
8				=C + D	
9	MTX / BSC				
10	BTS				
11	Antennae				
12	Structure				
13	Spectrum License				
14	Spectrum Clearing				
15					
16					
17	Rate of Return				

Sprint PCS - Florida
Input Module
National Platforms Input Worksheet

A	B	C	D	E	F	G
Row #		Description	Base	2000	2001	2002
9		National Platform Investments				
10						
11		HLR				
12		SCP				
13		SMS				
14		WIN Software				
15						
16		Subscribers - End of Period				
17		Total Sprint PCS				
18						
19		Jacksonville				
20		Miami				
21		Tampa				
22		Market 4				
23		Market 5				
24		Market 6				
25		Market 7				
26		Market 8				
27		Market 9				
28		Market 10				

Sprint PCS - Florida
Input Module
Collocation Input Worksheet

A	B	C
Row #	Description	Amount
8		
9	Annual Collocation Revenue	
10		
11	Number of BTS Locations	

SPRINT PCS COST MODEL

DESCRIPTION OF CALCULATION MODULE (SPCS_CALCULATION_XX.xls)

The Calculation Module contains all calculations within the Sprint PCS Cost Model. All inputs originate in the Input Module.

1. INTRODUCTION WORKSHEET

The Introduction Worksheet lists all of the worksheets within the workbook.

2. TELRIC SUMMARY WORKSHEET

The TELRIC Summary worksheet provides a summary by PCS network component, providing the investment, TELRIC annual charge factor, annual direct expense, and MOU demand to be utilized in the development of TELRIC cost on a per minute of use basis.

Column A - Row #

Column B - Not used.

Column C - Description

Column D - Not used.

Column E - Year 1 of the study.

Column F - Year 2 of the study.

Column G - Year 3 of the study.

Column H - Total

Row 8 - 32 - MSC (Mobile Switching Center)

Row 10 - Average Investment - As calculated in the Investment Summary worksheet, by year.

Row 11 - TELRIC ACF (Annual Charge Factor) - As calculated in the ACF Module. The annual charge factor includes direct expenses (depreciation, maintenance, return, and taxes), and other direct expense (network and general support).

Row 12 - Investment Related Annual Expense - The product of Row 10 times Row 11.

Row 21 - Other MTX Expenses - Other expenses not associated with the investment in Row 10.

Row 24 - Total MTX Expenses - The sum of all MTX expenses: Row 12 (MTX), Row 17 (National Platform), and Row 22 (Other MTX).

Row 25 - Discounted MTX Expenses - The product of Row 24 times Row 130. Equal to the present value of MTX expenses (Row 24) given the discount information in Row 130.

Row 27 - MTX MOU - As shown in the Input Module, Demand Worksheet.

Row 28 - Discounted MTX MOU - The product of Row 27 times Row 130. Equal to the present value of MTX MOU (Row 27) given the discount information in Row 130.

Row 30 - MTX Cost Per MOU - Row 25 (discounted expenses) divided by Row 28 (discounted MOU).

Row 31 - % MOU Requiring Multiple MTXs - The percentage of MOU that are routed through two MTXs, as shown in the Input Module, Demand Worksheet.

Row 32 - MTX COST PER MOU - Row 30 (cost per MTX MOU) times one plus Row 31 (% MOU requiring multiple MTXs). The result is the MSC Cost Per MOU reflecting a weighted cost per MOU for minutes that are routed through two MTXs.

The calculation process described on Rows 8 - 32 is repeated for each network component.

Rows 34 - 45 - BSC (Base Station Controller)

Rows 47 - 54 - Backhaul

Rows 56 - 67 - BTS (Basestation Transceiver System)

Rows 69 - 80 - Antennae

Rows 82 - 97 - Structure

Rows 99 - 110 - Spectrum Licenses

Rows 112 - 123 - Spectrum Clearing

Row 125 - TELRIC Per MOU - The total network cost per MOU. Equal to the sum of the costs per MOU of all the individual network components; the sum of Row 32 (MTX), Row 45 (BSC), Row 54 (backhaul, Row 67 (BTS), Row 80 (Antennae), Row 97 (Structure), Row 110 (Spectrum Licenses), and Row 123 (Spectrum Clearing).

Row 126 - Common Cost - The ratio of common expense to TELRIC expenses, as shown in the Input Module, ACF Worksheet.

Row 127 - Total Economic Cost Per MOU - TELRIC plus common cost; Row 125 times one plus Row 126.

Row 130 - Discount Factor at X.XX% - The present value of a future amount for a given time period. The formula $(P/F, i\%, N) = 1 / (1 + i)^{N.}$ were i equals the interest rate and N equals the number of periods, develops a time value factor for the present worth of a future amount. The interest rate for this formula is shown in cell D94 and the time periods are located on Row 131. These time value factors are utilized to developed the discounted present value of annual MOU and annual expenses.

3. SUMMARY WORKSHEET

The Summary Worksheet provides a one-page summary of the results found on the Economic Cost Summary Worksheet.

Column A - Row #

Column B - Description

Column C - Summary of economic costs by network component.

4. INVESTMENT SUMMARY WORKSHEET

The Investment Summary Worksheet summarizes the year-end investment results, by network component, of the Investment Worksheet. In addition, the Investment Summary Worksheet calculates the average investment, by network component, by year.

Column A - Row #

Column B - Description

Column C - Base Year results.

Column D - Year 2000 results.

Column E - Year 2001 results.

Column F - Year 2002 results.

Rows 9 - 11 - MTX (Mobile Telephone Exchange)

Row 10 - Total Investment - Year-end investment in MTX components, as calculated by the Investment Worksheet.

Row 11 - Average Investment - Annual average investment in MTX components. Equal to the beginning-of-year investment plus end-of-year investment, divided by two.

The calculation process described on Rows 9 - 11 is repeated for each network component.

Rows 13 - 15 - National Platforms

Rows 17 - 19 - BSC (Base Station Controller)

Rows 21 - 23 - BTS (Basestation Transceiver System)

Rows 25 - 27 - Antennae

Rows 29 - 31 - Structure

Rows 33 - 35 - Spectrum Licenses

Rows 37 - 39 - Spectrum Clearing

Rows 41 - 43 - Grand Total

5. INVESTMENT - WORKSHEET

The Investment Worksheet calculates the cumulative investment by network component, by MSC, by year. The vendor has a two-tier pricing structure. The initial price applies to all purchases made at the time of initial installation. The expansion

price, which is greater than the initial price, apples to all purchases made after the initial installation. The Investment Worksheet assumes all equipment purchases in the base year, or year of initial installation, are at the lower initial price.

Column A - Row #

Column B - Description

Column C - Not used.

Column D - Calculates the cumulative investment for MSC #1, by network component, for the base year.

Column E - Calculates the cumulative investment for MSC #1, by network component, for the year 2000.

Column F - Calculates the cumulative investment for MSC #1, by network component, for the year 2001.

Column G - Calculates the cumulative investment for MSC #1, by network component, for the year 2002.

The calculation process described on Columns D - G is repeated for each MSC in Columns I - BJ, as needed.

Rows 9 - 35 - MTX (Mobile Telephone Exchange) - Cumulative investment of individual components of the MTX.

Rows 37 - 47 - BSC #1 (Base Station Controller) - Cumulative investment of individual components of the first BSC.

Rows 49 - 65 - BTS 1st Carrier (Basestation Transceiver System) - Cumulative investment of individual components of the first carrier for all BTSs associated with the first BSC.

Rows 67 - 71 - BTS 2nd Carrier (Basestation Transceiver System) - Cumulative investment of individual components of the second carrier (if present) for all BTSs associated with the first BSC.

Rows 73 - 76 - BTS 3rd Carrier (Basestation Transceiver System) - Cumulative investment of individual components of the third carrier (if present) for all BTSs associated with the first BSC.

Rows 78 - 90 - BSC #2 (Base Station Controller) - Cumulative investment of individual components of the second BSC (if present).

Rows 90 - 104 - BTS 1st Carrier (Basestation Transceiver System) - Cumulative investment of individual components of the first carrier for all BTSs associated with the second BSC.

Rows 106 - 110 - BTS 2nd Carrier (Basestation Transceiver System) - Cumulative investment of individual components of the second carrier (if present) for all BTSs associated with the second BSC.

Rows 112 - 115 - BTS 3rd Carrier (Basestation Transceiver System) - Cumulative investment of individual components of the third carrier (if present) for all BTSs associated with the second BSC.

Rows 117 - 135 - Transmission - Cumulative investment of individual transmission components within the MSC (Mobile Switching Center).

6. UNIT COSTS WORKSHEET

The Unit Costs Worksheet calculates the total investment per unit by individual network component. The Unit Costs Worksheet reflects the vendor's two-tier pricing structure. The initial price applies to all purchases made at the time of initial installation. The expansion price, which is greater than the initial price, apples to all purchases made after the initial installation.

Column A - Row #

Column B - Description

Column C - Not used.

Columns D - H - Initial Investment.

Columns D - H apply to initial prices.

Column D - Material - The per unit vendor material investment by component, as found in the Input Module, Unit Costs Worksheet.

Column E - Vendor EF&I (Engineer Furnish & Install) - The per unit vendor EF&I investment by component, as found in the Input Module, Unit Costs Worksheet.

Column F - Vendor Services - The per unit vendor services investment by component, as found in the Input Module, Unit Costs Worksheet.

Column G - Sales Tax - The calculated sales tax by component. This formula utilizes a state specific tax factor and the method for application (Input Module, Assumption Worksheet). The methods of application are material only, material & EF&I only, or material, EF&I and services.

Column H - Sprint PCS EF&I - The Sprint PCS EF&I investment by component, as found in the Input Module, Assumptions Worksheet.

Column I - Total Investment - Total per unit investment by component. Equal to the sum of Columns D - H.

Column J - Not used.

Columns K - P - Expansion Investment

Column K - P perform the same functions as Columns D - I, but for expansion prices.

7. SPECTRUM LICENSES WORKSHEET

The Spectrum Licenses Worksheet calculates the total investment for Spectrum License and Spectrum Clearing for the study area.

Column A - Row #

Column B - Description

Column C - Base - The cumulative investment in spectrum licenses and spectrum clearing at year-end in the base year, by market area, as found in the Input Module, Spectrum Licenses Worksheet.

Column D - 2000 - The cumulative investment in spectrum licenses and spectrum clearing at year-end 2000, by market area, as found in the Input Module, Spectrum Licenses Worksheet.

Column E - 2001 - The cumulative investment in spectrum licenses and spectrum clearing at year-end 2001, by market area, as found in the Input Module, Spectrum Licenses Worksheet.

Column F - 2002 - The cumulative investment in spectrum licenses and spectrum clearing at year-end 2002, by market area, as found in the Input Module, Spectrum Licenses Worksheet.

8. BACKHAUL WORKSHEET

The Backhaul Worksheet calculates the annual backhaul expense, which represents facilities between the MSC (Mobile Switching Center) and the cell site. The Backhaul Worksheet assumes a single T-1 per cell site location for up to two carriers. A third carrier at an individual cell site requires a second T-1.

Column A - Row #

Column B - Not used.

Column C - Description

Column D - Base Year of the study.

Column E - Year 1 of the study.

Column F - Year 2 of the study.

Column G - Year 3 of the study.

Row 9 - Monthly T-1 Rate - The average T-1 rate for all backhaul facilities in the study area.

Rows 11 - 15 - Number of BTS Carriers - End of Year - The number of BTS carriers in service by year.

Rows 17 - 20 - Number of BTS Carriers - Mid-Year - The mid-year number of BTS carriers. Equal to the end-of-year amount plus the beginning-of-year amount, divided by two.

Row 22 - Number of T-1s - The average number of T-1s required by year. The calculation assumes a single T-1 per cell site location for up to two carriers. A third carrier at an individual cell site requires a second T-1.

Row 24 - Annual Backhaul Expenses - Equal to the product of Line 22 times Line 9.

9. SS7 WORKSHEET

The SS7 Worksheet calculates the annual SS7 expense.

Column A - Row #

Column B - Description

Column C - Base Year of the study.

Column D - Year 1 of the study.

Column E - Year 2 of the study.

Column F - Year 3 of the study.

Row 9 - Ports / A-Links - The year-end number of A-Links.

Row 10 - Ports / A-Links - Incremental - The annual increase in the number of A-Links.

Row 11 - Ports / A-Links - Mid-Year - The mid-year number of A-Links. Equal to the end-of-year number plus the beginning-of-year number, divided by two.

Row 12 - ISUP Messages - The annual number of ISUP messages.

Row 13 - IS-41 Messages - The annual number of IS-41 messages.

Row 15 - A-Link / IXC Lease - The annual expense for A-Links in the study area.

Row 18 - STP Port - Expense - The monthly recurring rate for STP Port.

Row 19 - STP Port - Non-Recurring - The non-recurring rate for STP Port.

Row 21 - ISUP Message - The per-message recurring rate for ISUP messages.

Row 23 - IS-41 Message- The per-message recurring rate for IS-41 messages.

Row 26 - Expenses - A-Link / IXC Lease - The annual expenses associated with A-Links. Equal to Row 15.

Row 27 - Expenses - STP Port - The annual recurring expenses associated with STP Port. Equal to Row 11 times Row 18.

Row 28 - Expenses - STP Port NRC - The annual non-recurring expenses associated with STP Port. Equal to Row 10 times Row 19.

Row 29 - Expenses - ISUP Messages - The annual expenses associated with ISUP messages. Equal to Row 12 times Row 21.

Row 30 - Expenses - IS-41 Messages - The annual expenses associated with IS-41 messages. Equal to Row 13 times Row 23.

10. NATIONAL PLATFORM WORKSHEET

The National Platform Worksheet calculates total investment in national platforms, specifically the HLR (Home Location Register), and assigns a portion of that investment to the study area based upon the number of subscribers.

Column A - Row #

Column B - Not used.

Column C - Description

Column D - Base Year of the study.

Column E - Year 1 of the study.

Column F - Year 2 of the study.

Column G - Year 3 of the study.

Row 12 - HLR - SCP - Cumulative investment in SCP by year.

Row 13 - HLR - SMS - Cumulative investment in SMS by year.

Row 14 - HLR - WIN Software - Cumulative investment in WIN Software by year.

Row 15 - Total - Total cumulative HLR investment by year.

Row 16 - Study Area Percent - The percent of national platform investment assigned to the study area, as calculated on Row 35.

Row 17 - Study Area Amount - The amount of national platform investment assigned to the study area. Equal to Row 15 times Row 16.

Row 20 - Subscribers - End of Period - Total Sprint PCS - The total number of subscribers supported by the national platform.

Rows 22 - 32 - Subscribers - End of Period - The total number of subscribers supported by the national platform within the study area.

Row 35 - Study Area Percent of Total Sprint PCS - The percent of national platform investment assigned to the study area. Equal to Row 32 divided by Row 20.

11. COLLOCATION WORKSHEET

The Collocation Worksheet calculates the annual collocation revenue for each of the three years for the study area being studied.

Column A - Row #

Column B - Not used.

Column C - Description

Column D - Base Year of the study.

Column E - Year 1 of the study.

Column F - Year 2 of the study.

Column G - Year 3 of the study.

Row - 9 - Annual Collocation Revenue - Annual amount of collocation revenue received by Sprint PCS, using the same time period as Row 10.

Row - 10 - Annual Collocation Revenue - Number of BTS Locations - Average number of BTS locations, using the same time period as Row 9.

Row - 11 - Annual Collocation Revenue - Per BTS Location - Average collocation revenue per BTS location. Equal to Row 9 divided by Row 10.

Row - 15 - Number of BTS Locations - End of Year - The year-end number of NTS locations, by year.

Row - 16 - Number of BTS Locations - Mid-Year - The mid-year number of NTS locations, by year. Equal to the end-of-year plus beginning-of-year, divided by two.

Row - 18 - Annual Collocation Revenue - Annual amount of collocation revenue, by year. Equal to Row 11 times Row 16.

Sprint PCS - Florida
Calculation Module
Economic Cost Development Worksheet

A	B	C	D	E	F	G	H
Row #		Description	Worksheet Source	2000	2001	2002	Total
8		**MSC (MOBILE SWITCHING CENTER)**					
9		**MTX (Mobile Telephone Exchange) Investment**					
10		Average Investment	Inv. Sum.				
11		TELRIC ACF	Input \ ACF				
12		Investment Related Annual Expense					
13							
14		**National Platform Investment***					
15		Average Investment	Inv. Sum.				
16		TELRIC ACF	Input \ ACF				
17		Investment Related Annual Expense					
18							
19		**Total Inv. Related Annual Expense**					
20							
21		**Other MTX Expenses**					
22		SS7 Expenses	SS7				
23							
24		**Total MTX Expenses**					
25		Discounted MTX Expenses					
26							
27		**MTX MOU**	Input \ Demand				
28		Discounted MOU					
29							
30		**MTX Cost Per MOU**					
31		% MOU Requiring Multiple MTXs **	Input \ Demand				
32		**MTX Cost Per MOU**					
33							
34		**BSC (Base Station Controller) Investment**					
35		Average Investment	Inv. Sum.				
36		TELRIC ACF	Input \ ACF				
37		Investment Related Annual Expense					
38							
39		Discounted BSC Expenses					
40							
41		**BSC MOU**	Input \ Demand				
42		Discounted MOU					
43							
44		**BSC Cost Per MOU**					
45							
46		**MSC Cost Per MOU**					
47							
48		**BACKHAUL**					
49		**Backhaul Expenses**	Backhaul				
50		Discounted Backhaul Expenses					
51							
52		**Backhaul MOU**	Input \ Demand				
53		Discounted MOU					
54							
55		**Bachhaul Cost Per MOU**					
56							
57		**BTS (BASESTATION TRANSCEIVER SYSTEM)**					
58		**BTS Investment**					
59		Average Investment	Inv. Sum.				
60		TELRIC ACF	Input \ ACF				
61		Investment Related Annual Expense					
62							
63		Discounted BTS Expenses					
64							
65		**BTS MOU**	Input \ Demand				
66		Discounted MOU					
67							
68		**BTS Cost Per MOU**					
69							
70		**ANTENNAE**					
71		**Antennae Investment**					
72		Average Investment	Inv. Sum.				
73		TELRIC ACF	Input \ ACF				
74		Investment Related Annual Expense					
75							
76		Discounted BTS Expenses					
77							
78		**Antennae MOU**	Input \ Demand				
79		Discounted MOU					
80							
81		**Antennae Cost Per MOU**					
82							

Sprint PCS - Florida
Calculation Module
Economic Cost Development Worksheet

A	B	C	D	E	F	G	H
Row #		Description	Worksheet Source	2000	2001	2002	Total
83		STRUCTURE					
84		Structure Investment					
85		Average Investment	Inv. Sum.				
86		TELRIC ACF	Input \ ACF				
87		Investment Related Annual Expense					
88							
89		Other Structure Expenses					
90		Collocation Expenses	Collocation				
91							
92		Total Structure Expenses					
93		Discounted Structure Expenses					
94							
95		Structure MOU	Input \ Demand				
96		Discounted MOU					
97							
98		Structure Cost Per MOU					
99							
100		TOTAL TELRIC PER MOU					
101		Common Cost					
102		TOTAL ECONOMIC COST PER MOU					
103							
104		SPECTRUM LICENSES					
105		Spectrum Licenses Investment					
106		Average Investment	Inv. Sum.				
107		TELRIC ACF	Input \ ACF				
108		Investment Related Annual Expense					
109							
110		Discounted Spectrum Licenses Expenses					
111							
112		Spectrum Licenses MOU	Input \ Demand				
113		Discounted MOU					
114							
115		Spectrum Licenses Cost Per MOU					
116							
117		SPECTRUM CLEARING					
118		Spectrum Clearing Investment					
119		Average Investment	Inv. Sum.				
120		TELRIC ACF	Input \ ACF				
121		Investment Related Annual Expense					
122							
123		Discounted Spectrum Clearing Expenses					
124							
125		Spectrum Clearing MOU	Input \ Demand				
126		Discounted MOU					
127							
128		Spectrum Clearing Cost Per MOU					
129							
130		TOTAL SPECTRUM LICENSES TELRIC PER MOU					
131		Common Cost					
132		TOTAL SPECTRUM LICENSES ECONOMIC COST PER MOU					
133							
134		GRAND TOTAL TELRIC PER MOU					
135							
136							
137		Discount Factor at					
138		Period					
139							
140		* HLR / SCP					
141		** Represents the percent of completed calls which are routed through two MTXs.					

Sprint PCS - Florida
Calculation Module
TELRIC / Economic Cost Summary Worksheet

A	B	C
Row #	Description	$ / MOU
8	MSC (MOBILE SWITCHING CENTER)	
9		
10	BACKHAUL	
11		
12	BTS (BASESTATION TRANSCEIVER SYSTEM)	
13		
14	ANTENNAE	
15		
16	STRUCTURE	
17		
18	COMMON COST	
19		
20	TOTAL ECONOMIC COST PER MOU	
21		
22	SPECTRUM LICENSES	
23		
24	COMMON COST	
25		
26	TOTAL SPECTRUM LICENSES ECONOMIC COST PER MOU	
27		
28	GRAND TOTAL ECONOMIC COST PER MOU	

Sprint PCS - Florida
Calculation Module
Investment Summary Worksheet

A	B		C	D	E	F
			Investment			
Row #	Description	Worksheet Source	Base	2000	2001	2002
8						
9	**MTX (Mobile Telephone Exchange)**					
10	Total Investment	Investment				
11	Average Investment					
12						
13	**National Platforms ***					
14	Total Investment	Nat. Plat.				
15	Average Investment					
16						
17	**BSC (Base Station Controller)**					
18	Total Investment	Investment				
19	Average Investment					
20						
21	**BTS (Base Station Transceiver)**					
22	Total Investment	Investment				
23	Average Investment					
24						
25	**Antenna**					
26	Total Investment	Investment				
27	Average Investment					
28						
29	**Structure**					
30	Total Investment	Investment				
31	Average Investment					
32						
33	**Spectrum Licenses**					
34	Total Investment	Spectrum				
35	Average Investment					
36						
37	**Spectrum - Clearing**					
38	Total Investment	Spectrum				
39	Average Investment					
40						
41	**Grand Total**					
42	Total Investment					
43	Average Investment					
44						
45						
46						

*HLR / SCP

Sprint PCS - Florida
Calculation Module
Investment Worksheet

A	B	D	E	F	G	I	J	K	L
		Miami (Dade 1)				Miami (Dade 2)			
Row #	Description	Base	Year 2000	Year 2001	Year 2002	Base	Year 2000	Year 2001	Year 2002
8									
9	**(MTX) Mobile Telephone Exchange**								
10	Initial MTX SN70 Processor (Initial Purchase)								
11	MS-4 Port Cards (FRONT)								
12	DS-30 PB								
13	DS-30 STP PB								
14	ENET Shelves								
15	Crosspoint Cards								
16	DS512 Quad PB								
17	LPP								
18	Enhanced CAU								
19	Enhanced CIU								
20	RMU								
21	MCTM								
22	DTC								
23	MCAM-3 (power, service, and I/O)								
24	MCAM-3 (power only)								
25	SMC								
26	DAT (225 mb)								
27	DDU (1.0G)								
28	Initial Software								
29	Spares								
30	ATM								
31	ATM Peripherals								
32	ATM Spares								
33	XA CORE								
34	Power Initial Switch Per MSC								
35	Additional Power Per MSC w/Additional MSC								
36									

Sprint PCS - Florida
Calculation Module
Investment Worksheet

A	B	D	E	F	G	I	J	K	L
		Miami (Dade 1)				Miami (Dade 2)			
Row #	Description	Base	Year 2000	Year 2001	Year 2002	Base	Year 2000	Year 2001	Year 2002
37	(BSC) #1 Base Station Controller								
38	Initial BSC (1 CIS, 8 BCNI, 1 SBS Rack , 2 SBS Shelves, 1 BIU Rack, 12 CDSU Kits, 2 BIU PS)								
39	BCNI								
40	BIU								
41	CDSU								
42	SBS Rack (Rack Only)								
43	SBS Shelves with SEL cards								
44	SBS shelves with ESEL cards								
45	EVRC Software								
46	BSC Spares								
47	BSS Manager Spares								
48									
49	(BTS) 1st Carrier Initial - Base Station Transceiver								
50	Tower 1 - <100 feet								
51	Tower 2 - 100-200 feet								
52	Tower 3 - >250 feet								
53	Tower 4 - Collocate								
54	Tower 5 - Rooftop								
55	Antenna 1								
56	Antenna 2								
57	Antenna 3								
58	Antenna 4								
59	Antenna 5								
60	RF Engineering								
61	Power Protection Closure								
62	Digital Enclosure (DE) CDMA MetroCell Outdoor								
63	Radio Enclosure (RE) CDMA MetroCell Outdoor								
64	External Battery Enclosure (EBC)								
65	BTS Spares (Initial Per Market)								
66	BTS Spares (Per BTS)								
67	Rehoming								
68									
69	(BTS) 2nd Carrier - Base Station Tranceiver (Add)								
70	Digital Enclosure (DE) CDMA MetroCell Outdoor								
71	Radio Enclosure (RE) CDMA MetroCell Outdoor								
72	External Battery Enclosure (EBC)								
73	Rehoming								
74									
75	(BTS) 3rd Carrier - Base Station Tranceiver (Add)								
76	Radio Enclosure (RE) CDMA MetroCell Outdoor								
77	External Battery Enclosure (EBC)								
78	Rehoming								

Sprint PCS - Florida
Calculation Module
Investment Worksheet

A	B	D	E	F	G	I	J	K	L
		Miami (Dade 1)				Miami (Dade 2)			
Row #	Description	Base	Year 2000	Year 2001	Year 2002	Base	Year 2000	Year 2001	Year 2002
79									
80	(BSC) #2 Base Station Controller								
81	Initial BSC (1 CIS, 8 BCNI, 1 SBS Rack , 2 SBS Shelves, 1 BIU Rack, 12 CDSU Kits, 2 BIU PS)								
82	BCNI								
83	BIU								
84	CDSU								
85	SBS Rack (Rack Only)								
86	SBS Shelves with SEL cards								
87	SBS shelves with ESEL cards								
88	EVRC Software								
89	BSC Spares								
90	BSS Manager Spares								
91									
92	(BTS) 1st Carrier Initial - Base Station Transceiver								
93	Tower 1 - <100 feet								
94	Tower 2 - 100-200 feet								
95	Tower 3 - >250 feet								
96	Tower 4 - Collocate								
97	Tower 5 - Rooftop								
98	Antenna 1								
99	Antenna 2								
100	Antenna 3								
101	Antenna 4								
102	Antenna 5								
103	RF Engineering								
104	Power Protection Closure								
105	Digital Enclosure (DE) CDMA MetroCell Outdoor								
106	Radio Enclosure (RE) CDMA MetroCell Outdoor								
107	External Battery Enclosure (EBC)								
108	Rehoming								
109									
110	(BTS) 2nd Carrier - Base Station Tranceiver (Add)								
111	Digital Enclosure (DE) CDMA MetroCell Outdoor								
112	Radio Enclosure (RE) CDMA MetroCell Outdoor								
113	External Battery Enclosure (EBC)								
114	Rehoming								
115									
116	(BTS) 3rd Carrier - Base Station Tranceiver (Add)								
117	Radio Enclosure (RE) CDMA MetroCell Outdoor								
118	External Battery Enclosure (EBC)								
119	Rehoming								
120									

Sprint PCS - Florida
Calculation Module
Investment Worksheet

A	B	D	E	F	G	I	J	K	L
		Miami (Dade 1)				Miami (Dade 2)			
Row #	Description	Base	Year 2000	Year 2001	Year 2002	Base	Year 2000	Year 2001	Year 2002
121	Transmission								
122	Digital Cross-Connect Sys./DS1 Cards - Octal								
123	Digital Cross-Connect Sys./DS1 Shelf								
124	Digital Cross-Connect Sys./DS1 Bay								
125	Digital Cross-Connect Sys./DS3 Cards								
126	Digital Cross-Connect Sys./DS3 Shelf								
127	Digital Cross-Connect Sys./DS3 Bay								
128	Digital Cross-Connect Sys./Admin Bay 128								
129	Digital Cross-Connect Sys./Admin Bay 256								
130	MDF								
131	Hekimian								
132	DSX-1 Relay Racks (Bays)								
133	DSX-3 Cards								
134	DSX-3 Shelves								
135	Echo Cards								
136	Echo Shelves								
137	Echo Relay Racks (Bays)								
138	Channel Banks								
139	Cable Rack								
140									
141									
142									
143									
144									
145									
146	Sub-Total (MSC) Mobile Switching Center								
147	Sub-Total (BSC) Base Station Controller								
148	Sub-Total (BTS) Base Station Transceiver								
149	Sub-Total Antenna								
150	Sub-Total Structure								
151	Grand Total								

Sprint PCS - Florida
Calculation Module
Investment Worksheet

A	B	N	O	P	Q	S	T	U	V
		Deerfield Beach				Jacksonville 1			
Row #	Description	Base	Year 2000	Year 2001	Year 2002	Base	Year 2000	Year 2001	Year 2002
8									
9	**(MTX) Mobile Telephone Exchange**								
10	Initial MTX SN70 Processor (Init								
11	MS-4 Port Cards (FRONT)								
12	DS-30 PB								
13	DS-30 STP PB								
14	ENET Shelves								
15	Crosspoint Cards								
16	DS512 Quad PB								
17	LPP								
18	Enhanced CAU								
19	Enhanced CIU								
20	RMU								
21	MCTM								
22	DTC								
23	MCAM-3 (power, service, and I/C								
24	MCAM-3 (power only)								
25	SMC								
26	DAT (225 mb)								
27	DDU (1.0G)								
28	Initial Software								
29	Spares								
30	ATM								
31	ATM Peripherals								
32	ATM Spares								
33	XA CORE								
34	Power Initial Switch Per MSC								
35	Additional Power Per MSC w/Adc								
36									

Sprint PCS - Florida
Calculation Module
Investment Worksheet

A	B	N	O	P	Q	S	T	U	V
		Deerfield Beach				Jacksonville 1			
Row #	Description	Base	Year 2000	Year 2001	Year 2002	Base	Year 2000	Year 2001	Year 2002
37	(BSC) #1 Base Station Controller								
38	Initial BSC (1 CIS, 8 BCNI, 1 SBS								
39	BCNI								
40	BIU								
41	CDSU								
42	SBS Rack (Rack Only)								
43	SBS Shelves with SEL cards								
44	SBS shelves with ESEL cards								
45	EVRC Software								
46	BSC Spares								
47	BSS Manager Spares								
48									
49	(BTS) 1st Carrier Initial - Base St								
50	Tower 1 - <100 feet								
51	Tower 2 - 100-200 feet								
52	Tower 3 - >250 feet								
53	Tower 4 - Collocate								
54	Tower 5 - Rooftop								
55	Antenna 1								
56	Antenna 2								
57	Antenna 3								
58	Antenna 4								
59	Antenna 5								
60	RF Engineering								
61	Power Protection Closure								
62	Digital Enclosure (DE) CDMA M								
63	Radio Enclosure (RE) CDMA Me								
64	External Battery Enclosure (EBC								
65	BTS Spares (Initial Per Market)								
66	BTS Spares (Per BTS)								
67	Rehoming								
68									
69	(BTS) 2nd Carrier - Base Station								
70	Digital Enclosure (DE) CDMA M								
71	Radio Enclosure (RE) CDMA Me								
72	External Battery Enclosure (EBC								
73	Rehoming								
74									
75	(BTS) 3rd Carrier - Base Station								
76	Radio Enclosure (RE) CDMA M								
77	External Battery Enclosure (EBC								
78	Rehoming								

Sprint PCS - Florida
Calculation Module
Investment Worksheet

A	B	N	O	P	Q	S	T	U	V
		Deerfield Beach				Jacksonville 1			
Row #	Description	Base	Year 2000	Year 2001	Year 2002	Base	Year 2000	Year 2001	Year 2002
79									
80	(BSC) #2 Base Station Controller								
81	Initial BSC (1 CIS, 8 BCNI, 1 SBS								
82	BCNI								
83	BIU								
84	CDSU								
85	SBS Rack (Rack Only)								
86	SBS Shelves with SEL cards								
87	SBS shelves with ESEL cards								
88	EVRC Software								
89	BSC Spares								
90	BSS Manager Spares								
91									
92	(BTS) 1st Carrier Initial - Base St								
93	Tower 1 - <100 feet								
94	Tower 2 - 100-200 feet								
95	Tower 3 - >250 feet								
96	Tower 4 - Collocate								
97	Tower 5 - Rooftop								
98	Antenna 1								
99	Antenna 2								
100	Antenna 3								
101	Antenna 4								
102	Antenna 5								
103	RF Engineering								
104	Power Protection Closure								
105	Digital Enclosure (DE) CDMA M								
106	Radio Enclosure (RE) CDMA Me								
107	External Battery Enclosure (EBC								
108	Rehoming								
109									
110	(BTS) 2nd Carrier - Base Station								
111	Digital Enclosure (DE) CDMA M								
112	Radio Enclosure (RE) CDMA Me								
113	External Battery Enclosure (EBC								
114	Rehoming								
115									
116	(BTS) 3rd Carrier - Base Station								
117	Radio Enclosure (RE) CDMA M								
118	External Battery Enclosure (EBC								
119	Rehoming								
120									

Sprint PCS - Florida
Calculation Module
Investment Worksheet

A	B	N	O	P	Q	S	T	U	V
		Deerfield Beach				Jacksonville 1			
Row #	Description	Base	Year 2000	Year 2001	Year 2002	Base	Year 2000	Year 2001	Year 2002
121	Transmission								
122	Digital Cross-Connect Sys./DS1								
123	Digital Cross-Connect Sys./DS1								
124	Digital Cross-Connect Sys./DS1								
125	Digital Cross-Connect Sys./DS3								
126	Digital Cross-Connect Sys./DS3								
127	Digital Cross-Connect Sys./DS3								
128	Digital Cross-Connect Sys./Admi								
129	Digital Cross-Connect Sys./Admi								
130	MDF								
131	Hekimian								
132	DSX-1 Relay Racks (Bays)								
133	DSX-3 Cards								
134	DSX-3 Shelves								
135	Echo Cards								
136	Echo Shelves								
137	Echo Relay Racks (Bays)								
138	Channel Banks								
139	Cable Rack								
140									
141									
142									
143									
144									
145									
146	Sub-Total (MSC) Mobile Switchin								
147	Sub-Total (BSC) Base Station Cc								
148	Sub-Total (BTS) Base Station Tr								
149	Sub-Total Antenna								
150	Sub-Total Structure								
151	Grand Total								

Sprint PCS - Florida
Calculation Module
Investment Worksheet

A	B	X	Y	Z	AA	AC	AD	AE	AF
		Orlando 1				Orlando 2			
Row #	Description	Base	Year 2000	Year 2001	Year 2002	Base	Year 2000	Year 2001	Year 2002
8									
9	**(MTX) Mobile Telephone Exchange**								
10	Initial MTX SN70 Processor (Init								
11	MS-4 Port Cards (FRONT)								
12	DS-30 PB								
13	DS-30 STP PB								
14	ENET Shelves								
15	Crosspoint Cards								
16	DS512 Quad PB								
17	LPP								
18	Enhanced CAU								
19	Enhanced CIU								
20	RMU								
21	MCTM								
22	DTC								
23	MCAM-3 (power, service, and I/C								
24	MCAM-3 (power only)								
25	SMC								
26	DAT (225 mb)								
27	DDU (1.0G)								
28	Initial Software								
29	Spares								
30	ATM								
31	ATM Peripherals								
32	ATM Spares								
33	XA CORE								
34	Power Initial Switch Per MSC								
35	Additional Power Per MSC w/Adc								
36									

Sprint PCS - Florida
Calculation Module
Investment Worksheet

A	B	X	Y	Z	AA	AC	AD	AE	AF
		Orlando 1				Orlando 2			
Row #	Description	Base	Year 2000	Year 2001	Year 2002	Base	Year 2000	Year 2001	Year 2002
37	(BSC) #1 Base Station Controller								
38	Initial BSC (1 CIS, 8 BCNI, 1 SBS								
39	BCNI								
40	BIU								
41	CDSU								
42	SBS Rack (Rack Only)								
43	SBS Shelves with SEL cards								
44	SBS shelves with ESEL cards								
45	EVRC Software								
46	BSC Spares								
47	BSS Manager Spares								
48									
49	(BTS) 1st Carrier Initial - Base St								
50	Tower 1 - <100 feet								
51	Tower 2 - 100-200 feet								
52	Tower 3 - >250 feet								
53	Tower 4 - Collocate								
54	Tower 5 - Rooftop								
55	Antenna 1								
56	Antenna 2								
57	Antenna 3								
58	Antenna 4								
59	Antenna 5								
60	RF Engineering								
61	Power Protection Closure								
62	Digital Enclosure (DE) CDMA M								
63	Radio Enclosure (RE) CDMA Me								
64	External Battery Enclosure (EBC								
65	BTS Spares (Initial Per Market)								
66	BTS Spares (Per BTS)								
67	Rehoming								
68									
69	(BTS) 2nd Carrier - Base Station								
70	Digital Enclosure (DE) CDMA M								
71	Radio Enclosure (RE) CDMA Me								
72	External Battery Enclosure (EBC								
73	Rehoming								
74									
75	(BTS) 3rd Carrier - Base Station								
76	Radio Enclosure (RE) CDMA M								
77	External Battery Enclosure (EBC								
78	Rehoming								

Sprint PCS - Florida
Calculation Module
Investment Worksheet

A	B	X	Y	Z	AA	AC	AD	AE	AF
		Orlando 1				Orlando 2			
Row #	Description	Base	Year 2000	Year 2001	Year 2002	Base	Year 2000	Year 2001	Year 2002
79									
80	(BSC) #2 Base Station Controller								
81	Initial BSC (1 CIS, 8 BCNI, 1 SBS								
82	BCNI								
83	BIU								
84	CDSU								
85	SBS Rack (Rack Only)								
86	SBS Shelves with SEL cards								
87	SBS shelves with ESEL cards								
88	EVRC Software								
89	BSC Spares								
90	BSS Manager Spares								
91									
92	(BTS) 1st Carrier Initial - Base St								
93	Tower 1 - <100 feet								
94	Tower 2 - 100-200 feet								
95	Tower 3 - >250 feet								
96	Tower 4 - Collocate								
97	Tower 5 - Rooftop								
98	Antenna 1								
99	Antenna 2								
100	Antenna 3								
101	Antenna 4								
102	Antenna 5								
103	RF Engineering								
104	Power Protection Closure								
105	Digital Enclosure (DE) CDMA M								
106	Radio Enclosure (RE) CDMA Me								
107	External Battery Enclosure (EBC								
108	Rehoming								
109									
110	(BTS) 2nd Carrier - Base Station								
111	Digital Enclosure (DE) CDMA M								
112	Radio Enclosure (RE) CDMA Me								
113	External Battery Enclosure (EBC								
114	Rehoming								
115									
116	(BTS) 3rd Carrier - Base Station								
117	Radio Enclosure (RE) CDMA M								
118	External Battery Enclosure (EBC								
119	Rehoming								
120									

Sprint PCS - Florida
Calculation Module
Investment Worksheet

A	B	X	Y	Z	AA	AC	AD	AE	AF
		Orlando 1				Orlando 2			
Row #	Description	Base	Year 2000	Year 2001	Year 2002	Base	Year 2000	Year 2001	Year 2002
121	Transmission								
122	Digital Cross-Connect Sys./DS1								
123	Digital Cross-Connect Sys./DS1								
124	Digital Cross-Connect Sys./DS1								
125	Digital Cross-Connect Sys./DS3								
126	Digital Cross-Connect Sys./DS3								
127	Digital Cross-Connect Sys./DS3								
128	Digital Cross-Connect Sys./Admi								
129	Digital Cross-Connect Sys./Admi								
130	MDF								
131	Hekimian								
132	DSX-1 Relay Racks (Bays)								
133	DSX-3 Cards								
134	DSX-3 Shelves								
135	Echo Cards								
136	Echo Shelves								
137	Echo Relay Racks (Bays)								
138	Channel Banks								
139	Cable Rack								
140									
141									
142									
143									
144									
145									
146	Sub-Total (MSC) Mobile Switchin								
147	Sub-Total (BSC) Base Station Cc								
148	Sub-Total (BTS) Base Station Tr								
149	Sub-Total Antenna								
150	Sub-Total Structure								
151	Grand Total								

Sprint PCS - Florida
Calculation Module
Investment Worksheet

A	B	AH	AI	AJ	AK
		Tampa			
Row #	Description	Base	Year 2000	Year 2001	Year 2002
8					
9	**(MTX) Mobile Telephone Exchange**				
10	Initial MTX SN70 Processor (Init				
11	MS-4 Port Cards (FRONT)				
12	DS-30 PB				
13	DS-30 STP PB				
14	ENET Shelves				
15	Crosspoint Cards				
16	DS512 Quad PB				
17	LPP				
18	Enhanced CAU				
19	Enhanced CIU				
20	RMU				
21	MCTM				
22	DTC				
23	MCAM-3 (power, service, and I/C				
24	MCAM-3 (power only)				
25	SMC				
26	DAT (225 mb)				
27	DDU (1.0G)				
28	Initial Software				
29	Spares				
30	ATM				
31	ATM Peripherals				
32	ATM Spares				
33	XA CORE				
34	Power Initial Switch Per MSC				
35	Additional Power Per MSC w/Adc				
36					

Sprint PCS - Florida
Calculation Module
Investment Worksheet

A	B	AH	AI	AJ	AK
		Tampa			
Row #	Description	Base	Year 2000	Year 2001	Year 2002
37	(BSC) #1 Base Station Controller				
38	Initial BSC (1 CIS, 8 BCNI, 1 SBS				
39	BCNI				
40	BIU				
41	CDSU				
42	SBS Rack (Rack Only)				
43	SBS Shelves with SEL cards				
44	SBS shelves with ESEL cards				
45	EVRC Software				
46	BSC Spares				
47	BSS Manager Spares				
48					
49	(BTS) 1st Carrier Initial - Base St				
50	Tower 1 - <100 feet				
51	Tower 2 - 100-200 feet				
52	Tower 3 - >250 feet				
53	Tower 4 - Collocate				
54	Tower 5 - Rooftop				
55	Antenna 1				
56	Antenna 2				
57	Antenna 3				
58	Antenna 4				
59	Antenna 5				
60	RF Engineering				
61	Power Protection Closure				
62	Digital Enclosure (DE) CDMA M				
63	Radio Enclosure (RE) CDMA Me				
64	External Battery Enclosure (EBC				
65	BTS Spares (Initial Per Market)				
66	BTS Spares (Per BTS)				
67	Rehoming				
68					
69	(BTS) 2nd Carrier - Base Station				
70	Digital Enclosure (DE) CDMA M				
71	Radio Enclosure (RE) CDMA Me				
72	External Battery Enclosure (EBC				
73	Rehoming				
74					
75	(BTS) 3rd Carrier - Base Station				
76	Radio Enclosure (RE) CDMA M				
77	External Battery Enclosure (EBC				
78	Rehoming				

Sprint PCS - Florida
Calculation Module
Investment Worksheet

A	B	AH	AI	AJ	AK
		Tampa			
Row #	Description	Base	Year 2000	Year 2001	Year 2002
79					
80	(BSC) #2 Base Station Controller				
81	Initial BSC (1 CIS, 8 BCNI, 1 SBS				
82	BCNI				
83	BIU				
84	CDSU				
85	SBS Rack (Rack Only)				
86	SBS Shelves with SEL cards				
87	SBS shelves with ESEL cards				
88	EVRC Software				
89	BSC Spares				
90	BSS Manager Spares				
91					
92	(BTS) 1st Carrier Initial - Base St				
93	Tower 1 - <100 feet				
94	Tower 2 - 100-200 feet				
95	Tower 3 - >250 feet				
96	Tower 4 - Collocate				
97	Tower 5 - Rooftop				
98	Antenna 1				
99	Antenna 2				
100	Antenna 3				
101	Antenna 4				
102	Antenna 5				
103	RF Engineering				
104	Power Protection Closure				
105	Digital Enclosure (DE) CDMA M				
106	Radio Enclosure (RE) CDMA Me				
107	External Battery Enclosure (EBC				
108	Rehoming				
109					
110	(BTS) 2nd Carrier - Base Station				
111	Digital Enclosure (DE) CDMA M				
112	Radio Enclosure (RE) CDMA Me				
113	External Battery Enclosure (EBC				
114	Rehoming				
115					
116	(BTS) 3rd Carrier - Base Station				
117	Radio Enclosure (RE) CDMA M				
118	External Battery Enclosure (EBC				
119	Rehoming				
120					

Sprint PCS - Florida
Calculation Module
Investment Worksheet

A	B	AH	AI	AJ	AK
		Tampa			
Row #	Description	Base	Year 2000	Year 2001	Year 2002
121	Transmission				
122	Digital Cross-Connect Sys./DS1				
123	Digital Cross-Connect Sys./DS1				
124	Digital Cross-Connect Sys./DS1				
125	Digital Cross-Connect Sys./DS3				
126	Digital Cross-Connect Sys./DS3				
127	Digital Cross-Connect Sys./DS3				
128	Digital Cross-Connect Sys./Admi				
129	Digital Cross-Connect Sys./Admi				
130	MDF				
131	Hekimian				
132	DSX-1 Relay Racks (Bays)				
133	DSX-3 Cards				
134	DSX-3 Shelves				
135	Echo Cards				
136	Echo Shelves				
137	Echo Relay Racks (Bays)				
138	Channel Banks				
139	Cable Rack				
140					
141					
142					
143					
144					
145					
146	Sub-Total (MSC) Mobile Switchin				
147	Sub-Total (BSC) Base Station Cc				
148	Sub-Total (BTS) Base Station Tr				
149	Sub-Total Antenna				
150	Sub-Total Structure				
151	Grand Total				

Sprint PCS - Florida
Calculation Module
Investment Worksheet

A	B	BL	BM	BN	BO
		Total Investment			
Row #	Description	Base	Year 2000	Year 2001	Year 2002
8					
9	**(MTX) Mobile Telephone Exchange**				
10	Initial MTX SN70 Processor (Init				
11	MS-4 Port Cards (FRONT)				
12	DS-30 PB				
13	DS-30 STP PB				
14	ENET Shelves				
15	Crosspoint Cards				
16	DS512 Quad PB				
17	LPP				
18	Enhanced CAU				
19	Enhanced CIU				
20	RMU				
21	MCTM				
22	DTC				
23	MCAM-3 (power, service, and I/C				
24	MCAM-3 (power only)				
25	SMC				
26	DAT (225 mb)				
27	DDU (1.0G)				
28	Initial Software				
29	Spares				
30	ATM				
31	ATM Peripherals				
32	ATM Spares				
33	XA CORE				
34	Power Initial Switch Per MSC				
35	Additional Power Per MSC w/Adc				
36					

Sprint PCS - Florida
Calculation Module
Investment Worksheet

A	B	BL	BM	BN	BO
		Total Investment			
Row #	Description	Base	Year 2000	Year 2001	Year 2002
37	(BSC) #1 Base Station Controller				
38	Initial BSC (1 CIS, 8 BCNI, 1 SBS				
39	BCNI				
40	BIU				
41	CDSU				
42	SBS Rack (Rack Only)				
43	SBS Shelves with SEL cards				
44	SBS shelves with ESEL cards				
45	EVRC Software				
46	BSC Spares				
47	BSS Manager Spares				
48					
49	(BTS) 1st Carrier Initial - Base St				
50	Tower 1 - <100 feet				
51	Tower 2 - 100-200 feet				
52	Tower 3 - >250 feet				
53	Tower 4 - Collocate				
54	Tower 5 - Rooftop				
55	Antenna 1				
56	Antenna 2				
57	Antenna 3				
58	Antenna 4				
59	Antenna 5				
60	RF Engineering				
61	Power Protection Closure				
62	Digital Enclosure (DE) CDMA M				
63	Radio Enclosure (RE) CDMA Me				
64	External Battery Enclosure (EBC				
65	BTS Spares (Initial Per Market)				
66	BTS Spares (Per BTS)				
67	Rehoming				
68					
69	(BTS) 2nd Carrier - Base Station				
70	Digital Enclosure (DE) CDMA M				
71	Radio Enclosure (RE) CDMA Me				
72	External Battery Enclosure (EBC				
73	Rehoming				
74					
75	(BTS) 3rd Carrier - Base Station				
76	Radio Enclosure (RE) CDMA M				
77	External Battery Enclosure (EBC				
78	Rehoming				

Sprint PCS - Florida
Calculation Module
Investment Worksheet

A	B	BL	BM	BN	BO
		Total Investment			
Row #	Description	Base	Year 2000	Year 2001	Year 2002
79					
80	(BSC) #2 Base Station Controller				
81	Initial BSC (1 CIS, 8 BCNI, 1 SBS				
82	BCNI				
83	BIU				
84	CDSU				
85	SBS Rack (Rack Only)				
86	SBS Shelves with SEL cards				
87	SBS shelves with ESEL cards				
88	EVRC Software				
89	BSC Spares				
90	BSS Manager Spares				
91					
92	(BTS) 1st Carrier Initial - Base St				
93	Tower 1 - <100 feet				
94	Tower 2 - 100-200 feet				
95	Tower 3 - >250 feet				
96	Tower 4 - Collocate				
97	Tower 5 - Rooftop				
98	Antenna 1				
99	Antenna 2				
100	Antenna 3				
101	Antenna 4				
102	Antenna 5				
103	RF Engineering				
104	Power Protection Closure				
105	Digital Enclosure (DE) CDMA M				
106	Radio Enclosure (RE) CDMA Me				
107	External Battery Enclosure (EBC				
108	Rehoming				
109					
110	(BTS) 2nd Carrier - Base Station				
111	Digital Enclosure (DE) CDMA M				
112	Radio Enclosure (RE) CDMA Me				
113	External Battery Enclosure (EBC				
114	Rehoming				
115					
116	(BTS) 3rd Carrier - Base Station				
117	Radio Enclosure (RE) CDMA M				
118	External Battery Enclosure (EBC				
119	Rehoming				
120					

Sprint PCS - Florida
Calculation Module
Investment Worksheet

A	B	BL	BM	BN	BO
		Total Investment			
Row #	Description	Base	Year 2000	Year 2001	Year 2002
121	Transmission				
122	Digital Cross-Connect Sys./DS1				
123	Digital Cross-Connect Sys./DS1				
124	Digital Cross-Connect Sys./DS1				
125	Digital Cross-Connect Sys./DS3				
126	Digital Cross-Connect Sys./DS3				
127	Digital Cross-Connect Sys./DS3				
128	Digital Cross-Connect Sys./Admi				
129	Digital Cross-Connect Sys./Admi				
130	MDF				
131	Hekimian				
132	DSX-1 Relay Racks (Bays)				
133	DSX-3 Cards				
134	DSX-3 Shelves				
135	Echo Cards				
136	Echo Shelves				
137	Echo Relay Racks (Bays)				
138	Channel Banks				
139	Cable Rack				
140					
141					
142					
143					
144					
145					
146	Sub-Total (MSC) Mobile Switchin				
147	Sub-Total (BSC) Base Station Cc				
148	Sub-Total (BTS) Base Station Tr				
149	Sub-Total Antenna				
150	Sub-Total Structure				
151	Grand Total				

Sprint PCS - Florida
Calculation Module
Unit Costs Worksheet

A	B	D	E	F	G	H	I
		Initial Investment					
Row #	Description	Material	Vendor EF&I	Vendor Services	Sales Tax	Sprint PCS EF&I	Total Investment
8							
9	**(MTX) Mobile Telephone Exchange**						
10	Initial MTX SN70 Processor (Initial Purchase)						
11	MS-4 Port Cards (FRONT)						
12	DS-30 PB						
13	DS-30 STP PB						
14	ENET Shelves						
15	Crosspoint Cards						
16	DS512 Quad PB						
17	LPP						
18	Enhanced CAU						
19	Enhanced CIU						
20	RMU						
21	MCTM						
22	DTC						
23	MCAM-3 (power, service, and I/O)						
24	MCAM-3 (power only)						
25	SMC						
26	DAT (225 mb)						
27	DDU (1.0G)						
28	Initial Software						
29	Spares						
30	ATM						
31	ATM Peripherals						
32	ATM Spares						
33	XA CORE						
34	Power Initial Switch Per MSC						
35	Additional Power Per MSC w/Additional MSC						
36							

Sprint PCS - Florida
Calculation Module
Unit Costs Worksheet

A	B	D	E	F	G	H	I
		Initial Investment					
Row #	Description	Material	Vendor EF&I	Vendor Services	Sales Tax	Sprint PCS EF&I	Total Investment
37	(BSC) #1 Base Station Controller						
38	Initial BSC (1 CIS, 8 BCNI, 1 SBS Rack , 2 SBS Shelves, 1 BIU Rack, 12 CDSU Kits, 2 BIU PS)						
39	BCNI						
40	BIU						
41	CDSU						
42	SBS Rack (Rack Only)						
43	SBS Shelves with SEL cards						
44	SBS shelves with ESEL cards						
45	EVRC Software						
46	BSC Spares						
47	BSS Manager Spares						
48							
49	(BTS) 1st Carrier Initial - Base Station Transceiver						
50	Tower 1 - <100 feet						
51	Tower 2 - 100-200 feet						
52	Tower 3 - >250 feet						
53	Tower 4 - Collocate						
54	Tower 5 - Rooftop						
55	Antenna 1						
56	Antenna 2						
57	Antenna 3						
58	Antenna 4						
59	Antenna 5						
60	RF Engineering						
61	Power Protection Closure						
62	Digital Enclosure (DE) CDMA MetroCell Outdoor						
63	Radio Enclosure (RE) CDMA MetroCell Outdoor						
64	External Battery Enclosure (EBC)						
65	BTS Spares (Initial Per Market)						
66	BTS Spares (Per BTS)						
67	Rehoming						
68							
69	(BTS) 2nd Carrier - Base Station Tranceiver (Add)						
70	Digital Enclosure (DE) CDMA MetroCell Outdoor						
71	Radio Enclosure (RE) CDMA MetroCell Outdoor						
72	External Battery Enclosure (EBC)						
73	Rehoming						
74							
75	(BTS) 3rd Carrier - Base Station Tranceiver (Add)						
76	Radio Enclosure (RE) CDMA MetroCell Outdoor						
77	External Battery Enclosure (EBC)						
78	Rehoming						

Sprint PCS - Florida
Calculation Module
Unit Costs Worksheet

A	B	D	E	F	G	H	I
		Initial Investment					
Row #	Description	Material	Vendor EF&I	Vendor Services	Sales Tax	Sprint PCS EF&I	Total Investment
79							
80	(BSC) #2 Base Station Controller						
81	Initial BSC (1 CIS, 8 BCNI, 1 SBS Rack , 2 SBS Shelves, 1 BIU Rack, 12 CDSU Kits, 2 BIU PS)						
82	BCNI						
83	BIU						
84	CDSU						
85	SBS Rack (Rack Only)						
86	SBS Shelves with SEL cards						
87	SBS shelves with ESEL cards						
88	EVRC Software						
89	BSC Spares						
90	BSS Manager Spares						
91							
92	(BTS) 1st Carrier Initial - Base Station Transceiver						
93	Tower 1 - <100 feet						
94	Tower 2 - 100-200 feet						
95	Tower 3 - >250 feet						
96	Tower 4 - Collocate						
97	Tower 5 - Rooftop						
98	Antenna 1						
99	Antenna 2						
100	Antenna 3						
101	Antenna 4						
102	Antenna 5						
103	RF Engineering						
104	Power Protection Closure						
105	Digital Enclosure (DE) CDMA MetroCell Outdoor						
106	Radio Enclosure (RE) CDMA MetroCell Outdoor						
107	External Battery Enclosure (EBC)						
108	Rehoming						
109							
110	(BTS) 2nd Carrier - Base Station Tranceiver (Add)						
111	Digital Enclosure (DE) CDMA MetroCell Outdoor						
112	Radio Enclosure (RE) CDMA MetroCell Outdoor						
113	External Battery Enclosure (EBC)						
114	Rehoming						
115							
116	(BTS) 3rd Carrier - Base Station Tranceiver (Add)						
117	Radio Enclosure (RE) CDMA MetroCell Outdoor						
118	External Battery Enclosure (EBC)						
119	Rehoming						
120							

Sprint PCS - Florida
Calculation Module
Unit Costs Worksheet

A	B	D	E	F	G	H	I
		Initial Investment					
Row #	Description	Material	Vendor EF&I	Vendor Services	Sales Tax	Sprint PCS EF&I	Total Investment
121	Transmission						
122	Digital Cross-Connect Sys./DS1 Cards - Octal						
123	Digital Cross-Connect Sys./DS1 Shelf						
124	Digital Cross-Connect Sys./DS1 Bay						
125	Digital Cross-Connect Sys./DS3 Cards						
126	Digital Cross-Connect Sys./DS3 Shelf						
127	Digital Cross-Connect Sys./DS3 Bay						
128	Digital Cross-Connect Sys./Admin Bay 128						
129	Digital Cross-Connect Sys./Admin Bay 256						
130	MDF						
131	Hekimian						
132	DSX-1 Relay Racks (Bays)						
133	DSX-3 Cards						
134	DSX-3 Shelves						
135	Echo Cards						
136	Echo Shelves						
137	Echo Relay Racks (Bays)						
138	Channel Banks						
139	Cable Rack						
140							
141							
142							

Sprint PCS - Florida
Calculation Module
Unit Costs Worksheet

A	B	K	L	M	N	O	P
		Expansion Investment					
Row #	Description	Material	Vendor EF&I	Vendor Services	Sales Tax	Sprint PCS EF&I	Total Investment
8							
9	**(MTX) Mobile Telephone Exchange**						
10	Initial MTX SN70 Processor (Initial Purchase)						
11	MS-4 Port Cards (FRONT)						
12	DS-30 PB						
13	DS-30 STP PB						
14	ENET Shelves						
15	Crosspoint Cards						
16	DS512 Quad PB						
17	LPP						
18	Enhanced CAU						
19	Enhanced CIU						
20	RMU						
21	MCTM						
22	DTC						
23	MCAM-3 (power, service, and I/O)						
24	MCAM-3 (power only)						
25	SMC						
26	DAT (225 mb)						
27	DDU (1.0G)						
28	Initial Software						
29	Spares						
30	ATM						
31	ATM Peripherals						
32	ATM Spares						
33	XA CORE						
34	Power Initial Switch Per MSC						
35	Additional Power Per MSC w/Additional MSC						
36							

Sprint PCS - Florida
Calculation Module
Unit Costs Worksheet

A	B	K	L	M	N	O	P
		Expansion Investment					
Row #	Description	Material	Vendor EF&I	Vendor Services	Sales Tax	Sprint PCS EF&I	Total Investment
37	(BSC) #1 Base Station Controller						
38	Initial BSC (1 CIS, 8 BCNI, 1 SBS Rack , 2 SBS Shelve						
39	BCNI						
40	BIU						
41	CDSU						
42	SBS Rack (Rack Only)						
43	SBS Shelves with SEL cards						
44	SBS shelves with ESEL cards						
45	EVRC Software						
46	BSC Spares						
47	BSS Manager Spares						
48							
49	(BTS) 1st Carrier Initial - Base Station Transceiver						
50	Tower 1 - <100 feet						
51	Tower 2 - 100-200 feet						
52	Tower 3 - >250 feet						
53	Tower 4 - Collocate						
54	Tower 5 - Rooftop						
55	Antenna 1						
56	Antenna 2						
57	Antenna 3						
58	Antenna 4						
59	Antenna 5						
60	RF Engineering						
61	Power Protection Closure						
62	Digital Enclosure (DE) CDMA MetroCell Outdoor						
63	Radio Enclosure (RE) CDMA MetroCell Outdoor						
64	External Battery Enclosure (EBC)						
65	BTS Spares (Initial Per Market)						
66	BTS Spares (Per BTS)						
67	Rehoming						
68							
69	(BTS) 2nd Carrier - Base Station Tranceiver (Add)						
70	Digital Enclosure (DE) CDMA MetroCell Outdoor						
71	Radio Enclosure (RE) CDMA MetroCell Outdoor						
72	External Battery Enclosure (EBC)						
73	Rehoming						
74							
75	(BTS) 3rd Carrier - Base Station Tranceiver (Add)						
76	Radio Enclosure (RE) CDMA MetroCell Outdoor						
77	External Battery Enclosure (EBC)						
78	Rehoming						

Sprint PCS - Florida
Calculation Module
Unit Costs Worksheet

A	B	K	L	M	N	O	P
		Expansion Investment					
Row #	Description	Material	Vendor EF&I	Vendor Services	Sales Tax	Sprint PCS EF&I	Total Investment
79							
80	(BSC) #2 Base Station Controller						
81	Initial BSC (1 CIS, 8 BCNI, 1 SBS Rack , 2 SBS Shelve						
82	BCNI						
83	BIU						
84	CDSU						
85	SBS Rack (Rack Only)						
86	SBS Shelves with SEL cards						
87	SBS shelves with ESEL cards						
88	EVRC Software						
89	BSC Spares						
90	BSS Manager Spares						
91							
92	(BTS) 1st Carrier Initial - Base Station Transceiver						
93	Tower 1 - <100 feet						
94	Tower 2 - 100-200 feet						
95	Tower 3 - >250 feet						
96	Tower 4 - Collocate						
97	Tower 5 - Rooftop						
98	Antenna 1						
99	Antenna 2						
100	Antenna 3						
101	Antenna 4						
102	Antenna 5						
103	RF Engineering						
104	Power Protection Closure						
105	Digital Enclosure (DE) CDMA MetroCell Outdoor						
106	Radio Enclosure (RE) CDMA MetroCell Outdoor						
107	External Battery Enclosure (EBC)						
108	Rehoming						
109							
110	(BTS) 2nd Carrier - Base Station Tranceiver (Add)						
111	Digital Enclosure (DE) CDMA MetroCell Outdoor						
112	Radio Enclosure (RE) CDMA MetroCell Outdoor						
113	External Battery Enclosure (EBC)						
114	Rehoming						
115							
116	(BTS) 3rd Carrier - Base Station Tranceiver (Add)						
117	Radio Enclosure (RE) CDMA MetroCell Outdoor						
118	External Battery Enclosure (EBC)						
119	Rehoming						
120							

Sprint PCS - Florida
Calculation Module
Unit Costs Worksheet

A	B	K	L	M	N	O	P
		Expansion Investment					
Row #	Description	Material	Vendor EF&I	Vendor Services	Sales Tax	Sprint PCS EF&I	Total Investment
121	Transmission						
122	Digital Cross-Connect Sys./DS1 Cards - Octal						
123	Digital Cross-Connect Sys./DS1 Shelf						
124	Digital Cross-Connect Sys./DS1 Bay						
125	Digital Cross-Connect Sys./DS3 Cards						
126	Digital Cross-Connect Sys./DS3 Shelf						
127	Digital Cross-Connect Sys./DS3 Bay						
128	Digital Cross-Connect Sys./Admin Bay 128						
129	Digital Cross-Connect Sys./Admin Bay 256						
130	MDF						
131	Hekimian						
132	DSX-1 Relay Racks (Bays)						
133	DSX-3 Cards						
134	DSX-3 Shelves						
135	Echo Cards						
136	Echo Shelves						
137	Echo Relay Racks (Bays)						
138	Channel Banks						
139	Cable Rack						
140							
141							
142							

Sprint PCS - Florida
Calculation Module
Spectrum Licenses Worksheet

A	B	C	D	E	F
Row #	**Description**	**Base**	**2000**	**2001**	**2002**
8	Spectrum Licenses				
9	Miami - Ft. Lauderdale				
10	Tampa - St Petersburg				
11	Jacksonville				
12	Market 4				
13	Market 5				
14	Market 6				
15	Market 7				
16	Market 8				
17	Market 9				
18	Market 10				
19	Total				
20					
21					
22	Spectrum - Clearing Costs				
23	Miami - Ft. Lauderdale				
24	Tampa - St Petersburg				
25	Jacksonville				
26	Market 4				
27	Market 5				
28	Market 6				
29	Market 7				
30	Market 8				
31	Market 9				
32	Market 10				
33	Total				

Sprint PCS - Florida
Calculation Module
Backhaul Expenses Worksheet

A	B	C	D	E	F	G
Row #		**Description**	**Base**	**2000**	**2001**	**2002**
8						
9		Monthly T-1 Rate				
10						
11		Number of BTS Carriers				
12		End of Year				
13		First Carrier				
14		Second Carrier				
15		Third Carrier				
16						
17		Mid-Year				
18		First Carrier				
19		Second Carrier				
20		Third Carrier				
21						
22		Number of T-1s				
23						
24		Annual Backhaul Expenses				

Sprint PCS - Florida
Calculation Module
SS7 Expenses Worksheet

A	B	C	D	E	F
Row #	**Description**	**Base**	**2000**	**2001**	**2002**
8					
9	Ports / A-Links				
10	Incremental				
11	Mid-Year				
12	ISUP Messages				
13	IS-41 Messages				
14					
15	A-Link / IXC Lease				
16					
17	STP Port				
18	Expense			/ Port / Month	
19	Non-Recurring			/ Port	
20					
21	ISUP Message			/ Message	
22					
23	IS-41 Message			/ Message	
24					
25	Expenses				
26	A-Link / IXC Lease				
27	STP Port				
28	STP Port NRC				
29	ISUP Messages				
30	IS-41 Messages				
31	Total				

Sprint PCS - Florida
Calculation Module
National Platform Investment Worksheet

A	B	C	D	E	F	G
Row #		Description	Base	2000	2001	2002
9		National Platform Investments				
10						
11		HLR				
12		SCP				
13		SMS				
14		WIN Software				
15						
16		Study Area Percent				
17		Study Area Amount				
18						
19		Subscribers - End of Period				
20		Total Sprint PCS				
21						
22		Jacksonville				
23		Miami				
24		Tampa				
25		Market 4				
26		Market 5				
27		Market 6				
28		Market 7				
29		Market 8				
30		Market 9				
31		Market 10				
32		Total				
33						
34		Study Area Percent				
35		of Total Sprint PCS				

Sprint PCS - Florida
Calculation Module
Collocation Revenue Worksheet

A	B	C	D	E	F	G
Row #	**Description**		**Base**	**2000**	**2001**	**2002**
8						
9	Annual Collocation Revenue					
10		Number of BTS Locations				
11		Per BTS Location				
12						
13						
14	Number of BTS Locations					
15		End of Year				
16		Mid-Year				
17						
18	Annual Collocation Revenue					

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY

OF

RANDY R. FARRAR

Q. Please state your name and business address.

A. My name is Randy G. Farrar. I am presently employed as Senior Manager - Network Costs for Sprint/United Management Company. My business address is 901 East 104th Street, Kansas City, Missouri, 64131.

Q. What is your educational background?

A. I received a Bachelor of Arts degree from The Ohio State University, Columbus, Ohio, in June 1976 with a major in history. Simultaneously, I completed a major program in economics. Subsequently, I received a Master of Business Administration degree, with an emphasis on market research, in March 1978, also from The Ohio State University.

Q. What is your work experience?

A. From 1978 to 1983 I was employed by the Public Utilities Commission of Ohio. My positions were Financial Analyst (1978 - 1980) and Senior Financial Analyst (1980-1983). My duties included the preparation of Staff Reports of Investigation concerning rate of return and cost of capital. I also designed rate structures, evaluated construction works in progress, measured productivity, evaluated

treatment of canceled plant, and performed financial analyses, for electric, gas, telephone, and water utilities. I presented written and oral testimony on behalf of the Commission Staff in over twenty rate cases.

I have worked for Sprint Corporation or one of its predecessor companies since 1983. From 1983 to 1986 I was Manager - Rate of Return. I presented written and oral testimony before state public utilities commissions in Iowa, Nebraska, South Carolina, and Oregon.

From 1986 to 1987 I was Manager - Local Exchange Pricing. I investigated alternate forms of pricing and rate design, including usage sensitive rates, extended area service alternatives, intraLATA toll pricing, and lifeline rates.

Since 1987, I have held various positions dealing with telecommunications cost issues. From 1987 to 1992 I was Manager - Local Exchange Costing. In 1992 I was promoted to Manager - Network Costing and Pricing. I performed financial analyses for various business cases, which analyze the profitability of entering new markets and expanding existing markets, including Custom Calling, Centrex, CLASS and Advanced Intelligent Network features, CPE products, Public Telephone and COCOT, and intraLATA toll. I was a member of the United States Telephone Association's New Services and Technologies Issues Subcommittee from 1989 to 1992, and the Economic Analysis Training Work Group from 1994 to 1995.

In 1997 I was promoted to my present position. I am an instructor for numerous training sessions designed to support corporate policy on pricing and costing theory, and to educate and support the use of various costing models. I am responsible for the development and support of cost models concerning unbundled network elements and wholesale discounts. Since 1995, I have presented written and/or oral testimony before the Illinois Commerce Commission, the Pennsylvania Public Utility Commission, the New Jersey Board of Public Utilities, the Florida Public Service Commission, the North Carolina Utilities Commission, and the Nevada Public Service Commission on the avoided costs of resold services, the cost of unbundled network elements, access reform, and universal service issues.

I. INTRODUCTION

Q. What is the purpose of your testimony?

A. My testimony sponsors the Sprint PCS Cost Model, which is included in this filing at Tab 3. In addition, I discuss and explain the Sprint PCS Cost Model, which calculates the Total Element Long Run Incremental Cost (TELRIC) of reciprocal compensation.

Sprint PCS witness Anthony Sabatino will discuss all the inputs in the Input Module, with the exception of the Demand, ACF, and Collocation worksheets, which I will discuss. Sprint witness John D. Quackenbush will discuss the Rate

of Return input in the ACF Module. I will discuss all other areas of the Sprint PCS Cost Model.

Q. Is Sprint's perspective on pricing and costing or reciprocal compensation from that of a wireless carrier or a Local Exchange carrier (LEC)?

A. Sprint's perspective on the pricing and costing of reciprocal compensation is neither solely one of a local telephone company, nor solely one of a wireless carrier. Rather, Sprint's perspective represents an accommodation of interests similar to those that the Florida Public Service Commission must balance in this docket. Sprint is a multi-billion dollar company providing traditional local exchange service, long distance service, and PCS/wireless communication. In addition, Sprint Communications Company, L.P. will compete as a competitive local exchange carrier (CLEC).

II. TELRIC-BASED METHODOLOGY

A. TELRIC-BASED METHODOLOGY

Q. What does the FCC 96-98 Final Order and Final Rules (Appendix B) say about the pricing of network interconnection?

A. Paragraph 1008 of the FCC Order states that wireless carriers provide "telecommunications", that LECs must enter into reciprocal compensation arrangements with wireless carriers, and establishes the same pricing standard.

All CMRS providers offer telecommunications. Accordingly, LECs are obligated, pursuant to section 251(b)(5) (and the corresponding pricing standards of section 252(d)(2)), to enter into reciprocal compensation arrangements with all CMRS providers, including paging providers, for the transport and termination of traffic on each others' networks, pursuant to the rules governing reciprocal compensation set forth in Section XI.B., below.

§ 51.505(a) defines the pricing standard as TELRIC plus common costs.

In general. The forward-looking economic cost of an element equals the sum of:

(1) the total element long-run incremental cost of the element ... ; and

(2) a reasonable allocation of forward-looking common costs ... .

§ 51.505(b) defines TELRIC.

Total element long-run incremental cost. The total element long-run incremental cost of an element is the forward-looking cost over the long run of the total quantity of the facilities and functions that are directly attributable to, or reasonably identifiable as incremental to, such element, ...

(1) *Efficient network configuration*. The total element long-run incremental cost of an element should be measured based on the use of the

most efficient telecommunications technology currently available and the lowest cost network configuration, ...

(2) *Forward-looking cost of capital*. The forward-looking cost of capital shall be used in calculating the total element long-run incremental cost of an element.

(3) *Depreciation rates*. The depreciation rates used in calculating forward-looking economic costs of elements shall be economic depreciation rates.

Q. Do the FCC Rules allow asymmetrical rates between an ILEC and a wireless carrier.

A. Yes. § 51.711(b) states,

> A state commission may establish asymmetrical rates for transport and termination of local telecommunications traffic only if the carrier other than the incumbent LEC (or smaller of two incumbent LECs) proves to the state commission on the basis of a cost study using the forward-looking economic cost based pricing methodology described in §§ 51.505 and 51.511 of this part, that the forward-looking costs for a network efficiently configured and operated by the carrier other than the incumbent LEC (or the smaller of the two incumbent LECs), exceed the costs incurred by the incumbent LEC (or the smaller of the two incumbent LECs), and, consequently, that such a higher rate is justified.

Q. Does the FCC Order recognize that wireless carrier's cost will be greater than that of LECs?

A. Yes. Paragraph 1117 states,

> Moreover, the record contains no estimates of the cost of CMRS termination. That cost is generally considered to be greater than the cost of LEC termination; [2725] but only one oral, *ex parte* estimate of CMRS cost has been offered: 2.25 to 4.0 cents per minute. [2726]

[2725] See, e.g., AT&T comments in CC Docket No. 95-185 at Attachment (Declaration of Bruce M. Owen), p. 5-6.

[2726] Steven R. Brenner and Bridger M. Mitchell, CTIA *ex parte* briefing, CC Docket No. 95-185, Mar. 21, 1996.

B. TSLRIC (TOTAL SERVICE LONG RUN INCREMENTAL COST)

Q. Please explain what is meant by TSLRIC.

A. TSLRIC represents the incremental cost of an entire service. In other words, TSLRIC represents all the costs directly caused by a service. TSLRIC includes all of the service-specific fixed costs and volume sensitive costs. It represents the total burden that the service places upon the resources of the company. In more precise terms, TSLRIC is the difference between (1) the total cost of a company that provides the service and a number of others, and (2) the total cost of that

same company if it provided all of its other services in the same quantities, but not the service in question.

C. TELRIC (TOTAL ELEMENT LONG RUN INCREMENTAL COST)

Q. Is TSLRIC costing different from TELRIC costing?

A. TSLRIC and TELRIC costing methodologies are similar. Their differences are related to the items being costed, not the method of developing the costs. In paragraph 678, the FCC states,

> While we are adopting a version of the methodology commonly referred to as TSLRIC as the basis for pricing interconnection and unbundled elements, we are coining the term "total element long run incremental cost" (TELRIC) to describe our vision of this methodology. The incumbent LEC offerings to be priced using this methodology generally will be "network elements," rather than "telecommunications services," as defined by the 1996 Act.

TSLRIC studies determine the forward-looking, long run incremental cost of services while TELRIC studies determine the forward-looking, long run incremental cost of network elements. The FCC chose the term total "element" long-run incremental cost to reflect that the "services" in question are, in reality,

"elements" of the network. The FCC also noted that unlike telecommunications services, network elements correspond to distinct network facilities.

As discussed below in Section II.D of my Direct Testimony, TELRIC includes a portion of shared costs. Costs that are shared at the TSLRIC level may be direct at the TELRIC level. Common costs are added to the TELRIC results to derive total economic costs.

Q. Please describe Sprint's position on an appropriately developed TELRIC cost of service study.

A. Sprint believes that paragraphs 674 through 703 of the FCC Order properly define the characteristics of an appropriately developed TELRIC study. The major characteristics are,

1. We conclude that, under a TELRIC methodology, incumbent LEC's prices for interconnection and unbundled network elements shall recover the forward-looking costs directly attributable to the specified element .... (paragraph 682).
2. ... as well as a reasonable allocation of forward-looking common costs. (Paragraph 682).
3. Per-unit costs shall be derived from total costs using reasonably accurate "fill factors" (estimates of the proportion of a facility that will be "filled" with network usage); that is, the per unit costs associated with a particular element must be derived by dividing the total cost associated with the

element by a reasonable projection of the actual total usage of the element. (Paragraph 682).

4. Directly attributable forward-looking costs also include the incremental costs of shared facilities and operations. Those costs shall be attributed to specific elements to the greatest extent possible. ... certain shared costs that have conventionally been treated as common costs (or overheads) shall be attributed to the individual elements to the greatest extent possible. (Paragraph 682).

5. ... the forward-looking pricing methodology for interconnection and unbundled network elements should be based on costs that assume that wire centers will be placed at the incumbent LEC's current wire center locations, but that the reconstructed local network will employ the most efficient technology for reasonably foreseeable capacity requirements. (Paragraph 685).

6. Only forward-looking, incremental costs shall be included in a TELRIC study. (Paragraph 690).

7. Retailing costs, such as marketing or customer billing costs associated with retail services, are not attributable to the production of network elements that are offered to interconnecting carriers and must not be included in the forward-looking direct cost of an element. (Paragraph 691).

8. We find that the TELRIC methodology we are adopting provides for such a reasonable profit and thus no additional profit is justified under the statutory language. (Paragraph 699).

9. ... we conclude that the currently authorized rate of return at the federal or state level is a reasonable starting point for TELRIC calculations .... (Paragraph 702).

10. We therefore decline to adopt embedded costs as the appropriate basis of setting prices for interconnection and access to unbundled network elements. (Paragraph 705).

11. Opportunity Costs - Efficient Component Pricing Rule. ... We conclude that ECPR is an improper method of setting prices of interconnection and unbundled network elements because the existing retail prices that would be used to compute incremental opportunity costs under ECPR are not cost-based. (Paragraph 709).

D. SHARED AND COMMON EXPENSES

Q. What are shared expenses?

A. Shared expenses are expenses that:

- support a group of services,
- are incremental to that group of services, and
- are unaffected by any individual service.

Another way of saying this is that shared expenses are essential to the provision of more than one service and do not vary with the output of any of the individual services. TELRIC includes those shared expenses attributable to unbundled elements.

Q. What are common expenses?

A. Common expenses are incurred to benefit all services offered by the company. These are expenses that do not change or go away unless the company goes out of business. The classic example is the president's desk.

Q. Does TELRIC include common expenses?

A. No, TELRIC does not include common expenses. However, Paragraph 672 of the FCC Order states that price is equal to TELRIC plus common costs. In addition, the FCC Order Appendix B - Final Rules, Section 51.505, defines "forward-looking economic cost" as the sum of TELRIC plus common costs.

Q. What does the FCC Order say about the treatment of shared expenses in TELRIC studies?

A. Paragraph 682 of the FCC Order states that a properly conducted TELRIC methodology will attribute shared costs to specific elements to the greatest possible extent.

Q. How does the FCC Order use the term "common cost?"

A. While the FCC Order uses the terms joint, shared, and common, they often use just the term "common" as a generic term.

> For purposes of our discussion, we refer to joint and common costs as simply common costs unless the distinction is relevant in a particular context. (Paragraph 676).

Q. Does the FCC Order provide any direction related to the magnitude of common costs to be included under the TELRIC methodology?

A. Yes. The FCC concluded that the level of common costs for network elements should be less than that for services, because network elements correspond to discrete network facilities that have distinct operating characteristics. Many shared costs at the service level may be direct at the element level.

> Because the unbundled network elements correspond, to a great extent, to discrete network facilities, and have different operating characteristics, we expect that the common costs should be smaller than the common costs associated with the long-run incremental cost of a service. We expect that many facility costs that may be common with respect to the individual services provided by the facilities can be directly attributed to the facilities when offered as unbundled network elements. (Paragraph 695).

In the Sprint PCS Cost Model, the Other Direct Expense Factor, discussed in Section III.C of my Direct Testimony, determines the amount of shared expenses which are directly attributable to reciprocal compensation.

Q. Does the FCC Order provide any guidance with respect to the allocation of common costs?

A. Yes. The FCC deemed two allocation methods to be reasonable and rejected another. The two reasonable methods are, according to the FCC Order,

> One reasonable allocation method would be to allocate common costs using a fixed allocator, such as a percentage markup over the directly attributable forward-looking costs. We conclude that a second reasonable allocation method would allocate only a relatively small share of common costs to certain critical network elements, such as the local loop and collocation, that are most difficult for entrants to replicate promptly (i.e. bottleneck facilities). (Paragraph 696).

An unreasonable method, according to the FCC Order is,

> ... certain other methods would not be reasonable. For example, we conclude that an allocation methodology that relies exclusively on allocating costs in inverse proportion to the sensitivity of demand for various network elements and services may not be used. We conclude

that such an allocation could unreasonably limit the extent of entry into local exchange markets by allocating more costs to, and thus raising the price of, the most critical bottleneck inputs, the demand for which tends to be relatively inelastic. (Paragraph 696).

Q. What is Sprint's recommendation on the size and allocation of common expenses?

A. Sprint recommends that the contribution to common costs be recovered on a percent of TELRIC basis. Sprint's calculation of the appropriate common expense factor is discussed in Section III.C of my Direct Testimony.

E. OTHER TELRIC CONSIDERATIONS

1. RETURN ON INVESTMENT

Q. Please describe cost of capital.

A. Cost of capital is what a company has to pay creditors and shareholders for the money the company uses. The payment to creditors is generally called interest. The payment to shareholders is generally called profit. Regulation and economic texts have long recognized that there is a normal level of profit, or return on investment, that shareholders need to receive if they are to continue to invest in the company. This normal level of profit is often referred to as the cost of equity.

Q. Is cost of capital part of TELRIC?

A. Yes. The incremental cost of network elements includes the cost of making additional investments. The money to make these investments comes from creditors and shareholders. As I explained above, the cost of obtaining money from creditors and shareholders is called the cost of capital.

Q. Does TELRIC include profit?

A. Yes. TELRIC provides for a reasonable profit consistent with Section 252(d)(1)(B) of the Act which states that rates for network elements "may include a reasonable profit." Because TELRIC includes the cost of capital, TELRIC includes a normal level of profit. In paragraph 700, the FCC Order states, "We conclude that allowing greater than normal profits would not be 'reasonable' under sections 251(c) and 251(d)(1)."

Q. What rate of return is used in the Sprint PCS Cost Model?

A. The model includes a rate of return of 14.91%, as discussed in the testimony of Sprint PCS witness John D. Quackenbush.

2. CURRENT WIRE CENTER LOCATIONS

Q. What is the significance of applying a standard that requires the use of "current wire center locations and the most efficient technology available" (FCC Order Paragraph 690)?

A. Forward-looking cost measurements require capturing the costs of network facilities that will be incurred in the future. For wireline carriers, the use of current wire center locations and the most efficient technology available in determining forward-looking economic costs is the approach that reasonably balances the interests of ILECs, other carriers, and consumers.

For wireless carriers, the use of existing MSC (Mobile Switching Center) and cell site locations meets this standard.

3. ECONOMIC DEPRECIATION RATES

Q. Please discuss the use of economic depreciation rates.

A. The use of economic depreciation rates in TELRIC ensures that costs represent the actual useful economic lives of ILEC facilities, instead of regulatory lives. The actual useful economic lives may be different from that reflected in the existing prescribed depreciation rates.

Q. What depreciation lives are used in the Sprint PCS Cost Model (SPCSCM)?

A. The SPCSCM uses depreciation rates consistent with those used by Sprint to develop economic costs for its unbundled network elements and reciprocal compensation for its local exchange territories

The Sprint PCS Cost Model uses the following economic depreciation lives.

- Switching - Includes MSC (Mobile Switching Center), BSC (Base Station Controller), and BTS (Basestation Transceiver System) - Eleven years, which is equal to that granted by this Commission in the Sprint LEC's most recent UNE arbitration with MCI (Docket 961230-TP).
- Antennae - Twelve years, which is equal to the current Sprint LEC book life for radio equipment (account 2231.3).
- Structure - Twenty-five years, which is equal to the Sprint LEC book life for towers (account 2121.4)
- Spectrum Licenses - Forty years, which is generally the longest depreciation period for any asset.

Note that these depreciation lives used in the Sprint PCS Cost Model are generally longer than the accounting book lives of the assets.

III. SPRINT PCS COST MODEL

Q. Please discuss the cost model principles.

A. The SPCSCM uses the costing principles required by the FCC 96-98 Order, as discussed above. These are the same principles used by Sprint to develop the economic costs of unbundled network elements and reciprocal compensation for its local exchange territories.

Q. How is the SPCSCM forward looking?

A. The SPCSCM has been explicitly designed to be a forward-looking model. The result is a TELRIC cost that is less than embedded costs. Specific forward-looking characteristics include:

- Using the current vendor prices, which are generally less than the cost of the embedded network.
- The existing network is rebuilt with the latest technology available.
- The existing network is rebuilt using "initial" vendor prices, which are lower than "expansion" prices. The embedded network is a blend of "initial" and "expansion" prices. (The vendor has a two-tier pricing structure, an "initial" price, and a higher "expansion" price.)
- The TELRIC investment developed by the SPCSCM is significantly less than the embedded investment, as shown in Exhibit RGF-1.
- Three-year subscriber forecasts are built into both the investment and demand projections.
- The economic depreciation lives used are generally longer than the existing book lives.
- There are fewer T-1 facilities between the MSC (Mobile Switching Center) and the cell sites than in the embedded network.

Q. Please describe the cost model process.

A. There are five major steps in the SPCSCM process. First, the existing traffic sensitive portion of the Sprint PCS network is redesigned using the most recent technology available, using the most recent vendor costs. The result is TELRIC

investment. All non-traffic sensitive investments have been removed from the study.

Second, a three-year forecast of network investment expansion is developed, which is based upon the subscriber forecast.

Third, a TELRIC annual charge factor is developed for each major network category. The TELRIC annual charge factor consists of direct expenses (depreciation, maintenance, return, and taxes) and other direct expenses (shared expenses such as network and general support). The TELRIC annual charge factor is multiplied by the TELRIC investment to calculated total TELRIC annual expenses.

Forth, recent MOU demand information and subscriber counts are used to determine the average MOU per subscriber. The three-year subscriber forecast is used with the average MOU per subscriber to develop a three-year forecast for MOU demand.

Fifth, the three-year demand and investment forecasts are discounted to present-year values to calculate an average cost per MOU per network element. The total MOU cost of each traffic sensitive network element is the TELRIC of a terminating MOU.

Q. Please describe the Sprint PCS Cost Model (SPCSCM).

A. The SPCSCM is written in Microsoft Excel. It consists of five modules. They are:

1. Demand Module
2. Annual Charge Factor Module
3. Expense Module
4. Input Module
5. Calculation Module

Each module is an individual Excel workbook. Note that a deliberate effort was made not to create a "black box". There are no macros in the model; rather, all calculations are performed within the Excel workbooks. (Note: in Excel terminology, a workbook refers to an actual file, while a worksheet is one of many tabs within a workbook.)

The Demand Module, Annual Charge Factor Module, and Expense Module provide back-up information for the inputs contained in the Input Module, and are directly linked to the Input Module. The Calculation Module obtains all inputs from the Input Module. Page 1 of the Cost Study (Tab 3 of the Petition for Arbitration) contains a diagram which illustrates the relationship between the various modules.

Q. How does the SPCSCM categorize traffic sensitive network investment?

A. There are six major network categories in the SPCSCM. They are:

1. MSC - Mobile Switching Center - consists of two components, the MTX (Mobile Telephone Exchange) and BSC (Base Station Controller)
2. Backhaul - Leased facilities from the MSC to the cell site
3. BTS - Basestation Transceiver System
4. Antennae
5. Structure - Monopoles and towers supporting the BTS and antennae
6. Spectrum Licenses - capitalized cost

Q. Does the SPCSCM include any retail-related investments or expenses?

A. No. The SPCSCM explicitly excludes all retail-related investments and expenses. Approximately two thirds of all Sprint PCS expenses are excluded from this TELRIC study, as shown in Exhibit RGF-2.

A. DEMAND MODULE

Q. Please describe how the SPCSCM considers demand information.

A. The MOU demand forecast consists of three steps. First, the average MOU per month per subscriber is calculated at both the MSC and at the cell site. This process uses actual MOU demand data from September 1999 through April 2000.

Second, the subscriber forecast through the year 2002 is obtained. This is the same subscriber forecast upon which all network investment forecasts are made.

Third, the average MOU per subscriber is multiplied by the forecasted number of subscribers through the year 2002 to determine forecasted MOU.

Q. Please describe the Demand Module.

A. The Demand Module calculates the average number of MOU per subscriber at both the MSC and at the cell site. The Demand Module consists of three worksheets. A detailed description of each worksheet is contained in Volume 1. A brief description of each worksheet follows:

1. Introduction
2. Calculations - Contains all of the necessary MOU and subscriber demand information.
3. Summary - Summary of MOU demand per subscriber by market area.

B. ANNUAL CHARGE FACTOR MODULE

Q. Please describe the development of the annual charge factor.

A. The annual charge factor includes all direct expenses, including depreciation, maintenance, rate of return, income taxes, and ad valorem taxes.

Q. Please describe the Annual Charge Factor Module.

A. The Annual Charge Factor Module consists of six worksheets. A detailed description of each worksheet is contained in Volume 1. A brief description of each worksheet follows:

1. Introduction
2. Inputs - Contains all necessary rate of return, income tax, ad valorem tax, maintenance factor, and depreciation lives information.
3. Summary - Summarizes the results of this Module.
4. Rate of Return - Calculates depreciation rates and rate of return .
5. Income Taxes - Calculates income tax rates.
6. Tax Depreciation - Contains a table used by the Income Taxes worksheet.

C. EXPENSE MODULE

Q. Please describe the various expense factors.

A. The Expense Module calculates three types of expense factors.

1. Direct Expense Factor - Direct maintenance expenses as a percent of investment. This factor is used by the ACF Module to calculate the direct annual charge factor.
2. Other Direct Expense Factor - General and network support expenses as a percent of investment. These are usually referred to as "shared" expenses. This factor is added to the direct annual charge factor within the Input Module to calculate the TELRIC annual charge factor.
3. Common Expense Factor - Corporate overhead expenses as a percent of TELRIC expenses. This factor is added to the TELRIC result within the Calculations Module to calculate total economic cost.

Q. Please describe how the expense factors are developed.

A. The development of expense factors consists of four steps. First, the Input Worksheets are populated with depreciation, investment, network, expense, subscriber, and study-area information. All expenses are categorized as direct, other direct, common, retail (or marketing), or excluded. All retail or marketing-related expense are removed from the TELRIC study.

Second, Summary Worksheets assign each TELRIC expense to one of five network elements (MSC, BTS, Structure, Spectrum License, or Excluded); and to a specific geographic tier. Sprint PCS accounting data is arranged in four geographic tiers.

1. National - accounting data which applies at a national level.
2. Regional - accounting data which applies specifically to one of four geographic regions. The Florida study-area is within the Southeast region.
3. Area - each region is divided into several Areas. The Florida study-area consists of two Areas, North Florida and South Florida.
4. District - Each Area is divided into several Districts. The Florida study-area consists of seven Districts, Daytona, Jacksonville, Orlando, Tallahassee, Tampa, Southeast Florida, and Southwest Florida.

Third, Assignment Worksheets assign TELRIC expenses to individual geographic districts. Generally, direct and other direct expenses are assigned based upon

investment amounts, and common expenses are assigned based upon subscriber counts.

Fourth, Factor Development Worksheets calculate the actual direct expense factor, other direct expense factor, and common expense factor. Only those expenses assigned to the geographic Districts which define the Florida study-area are included in the calculation.

Q. Please describe the Expense Module.

A. The Expense Module contains all accounting data for the study-area, Florida. The Expense Module consists of eighteen worksheets. A detailed description of each worksheet is contained in Volume 1. A brief description of each worksheet follows:

1. Introduction
2. Direct Expense Factor Development - Summarizes direct (maintenance) expenses for all geographic areas within the study-area.
3. Other Direct and Common Expense Factor Development - Summarizes other direct expenses (shared network and general support) and common costs (corporate overhead) for all geographic areas within the study-area.
4. Collocation - Revenue received for leasing space on Sprint PCS-owned structures. These revenues are considered contra-expenses.
5. Direct Expense Assignments -
6. Other Direct Expense Assignments -

7. Common Expense Assignments -

8. Collocation Expense Assignments -

9. Excluded Expense Assignments -

10. Direct Expense Summary - Assigns direct expenses to one of three network elements, MSC, BTS, and Structure.

11. Other Direct and Common Expense Summary - Assigns other direct (shared) and common expenses to one of three network elements, MSC, BTS, and Structure.

12. Collocation Expense Summary - Assigns collocation revenues (contra-expenses) to the Structure network element.

13. Depreciation Input -

14. Investment Input -

15. Investment Assignment -

16. Expense Input -

17. Subscriber Input - Average number of subscribers by district within the study-area.

18. Study-area Input - Identifies the districts to be included in the TELRIC study, which defines the study-area.

D. INPUT MODULE

Q. Please describe the Input Module.

A. The Input Module provides a single location for all inputs to the model. The Input Module consists of fourteen individual worksheets. A detailed description of each worksheet is contained in Volume 1. A brief description of each worksheet follows:

1. Introduction
2. Labels - Column headers and labels used throughout the model.
3. Unit Costs - The per unit cost of each traffic sensitive component of the Sprint PCS network.
4. Units - The cumulative number of units of each traffic sensitive component of the Sprint PCS network
5. Assumptions - The vendor has a two-tier pricing structure, initial and expansion. This worksheet shows the number of initial units to which the "initial" price applies. All additional units are acquired at the "expansion" price.
6. Spectrum Licenses - The capitalized cost of spectrum licenses and spectrum clearing in the study-area.
7. Backhaul - The average T-1 cost, facilities connecting the cell site to the MSC.
8. SS7 - The cost of SS7 facilities required for call processing.
9. Demand - The forecasted MOU demand.
10. Annual Charge Factor - The annual charge factor by network element, including return, taxes, depreciation, maintenance, and other direct (shared) expenses. Also includes the common cost factor.

11. Services - Per unit vendor costs, which are included in the Unit Costs worksheet.

12. National Platform - Traffic sensitive network items provided at a national level, not a specific study-area. Costs are assigned to the study-area based upon the number of subscribers.

13. Software - A national contract for MSC software upgrades, not study-area specific. Capitalized costs are assigned to the study-area based upon the number of MSCs.

14. Collocation - Represents revenues received from leasing structure to other carriers.

E. CALCULATIONS MODULE

Q. Please describe the Calculations Module.

A. All model calculations are included in the Calculations Module. The Calculations Module consists of eleven individual worksheets. A detailed description of each worksheet is contained in Volume 1. A brief description of each worksheet follows:

1. Introduction
2. Economic Cost - Summary of economic cost results by network element.
3. Summary - One-page summary of economic cost.
4. Investment Summary - Summary of cumulative investment by network element.

5. Investment - Calculates the cumulative investment by network element, by individual MSC, by year.
6. Unit Costs - Calculates the total per unit cost of each network element based upon the information provided in the Input Module, Unit Costs worksheet.
7. Spectrum License - Calculates the total cost of spectrum licenses and spectrum clearing in the study-area, based upon information provided in the Input Module, Spectrum License worksheet.
8. Backhaul - Calculates the total cost of backhaul (T-1 facilities between the MSC and cell sites), based upon information provided in the Input Module, Backhaul worksheet.
9. SS7 - Calculates the total cost of SS7 facilities required for call processing, based upon information provided in the Input Module, SS7 worksheet.
10. Collocation - Calculates the total collocation revenues, based upon information provided in the Input Module, Collocation worksheet.
11. Software - Calculates the annual MSC software investment.

The "Economic Cost" and "Summary" worksheets show the total economic cost of terminating traffic on the Sprint PCS network.

IV. CONCLUSION

Q. Please summarize your testimony.

A. The Sprint PCS Cost Model uses the costing principles required by the FCC 96-98 Order, as discussed above. These are the same principles used by Sprint to develop the economic costs of unbundled network elements and reciprocal compensation for its local exchange territories in Florida.

Exhibit RGF-3 shows the summary results of the SPCSCM for Florida.

Q. Does this conclude your direct testimony?

A. Yes, it does.

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TOTAL INVESTMENT

Network Component	Embedded Investment	TELRIC Investment	% Difference
MSC (Mobile Switching Center)			
BTS (Basestation Transceiver System)			
Structure (Tower and Antennae)			
Total			

Excluded Expenses

Account Description	Total Amount	Excluded Amount	% of Total
Other Direct and Common Expenses			
Salaries			
Benefits			
Facilities			
OS Labor			
Recruiting			
Trvl & Entment			
Training			
Insurance & Fees			
Computer			
Other Equipment			
Supplies			
Phones			
Miscellaneous			
Affiliate Recovery			
Cap Labor and OH			
Non-Recoverable Assets			
Total			
Retail Expenses			
Mkt & Ad			
Selling			
Total			
Direct Expenses			
Cell Main. & Util.			
Backhaul - Recurring			
Backhaul Non-Reccuring			
Cell Site Leases			
Collocation Revenue			
Nat Platfm			
Software Maint			
Switch Main. & Util			
Switch Site Leases			
Network Hard/Software and Testing			
Number Ordering			
Network Decommissioning			
E911			
Total			
Grand Total			

Sprint PCS - Florida
Calculation Module
TELRIC / Economic Cost Summary Worksheet

A	B	C
Row #	Description	$ / MOU
11	MSC (MOBILE SWITCHING CENTER)	$ 0.007129
12		
13	BACKHAUL	0.001578
14		
15	BTS (BASESTATION TRANSCEIVER SYSTEM)	0.017651
16		
17	ANTENNAE	0.002654
18		
19	STRUCTURE	0.015291
20		
21	COMMON COST	0.007384
22		
23	TOTAL ECONOMIC COST PER MOU	0.051687
24		
25	SPECTRUM LICENSES	0.012435
26		
27	COMMON COST	0.002072
28		
29	TOTAL SPECTRUM LICENSES ECONOMIC COST PER MOU	0.014507
30		
31	GRAND TOTAL ECONOMIC COST PER MOU	0.066194

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY

OF

BRIDGER M. MITCHELL

I. BACKGROUND AND INTRODUCTION

Q. Would you please state your name, position, and address?

A. My name is Bridger M. Mitchell. I am a vice president of Charles River Associates Incorporated, an economics, finance and business consulting firm with offices in Boston, Massachusetts and six other cities. I am the director of the Palo Alto office, which is located at 285 Hamilton Avenue, Palo Alto, California.

Q. Would you please briefly describe your professional qualifications?

A. I received an A.B. with a major in economics from Stanford University in 1962 and a Ph.D. in economics from M.I.T. in 1970. I was an assistant professor in the Department of Economics at Stanford University from 1966 to 1971, and have subsequently taught economics courses at Stanford as an acting associate professor and at UCLA as a lecturer in economics. In 1971 and 1972 I was an economics policy fellow at the Brookings Institution and the Department of Health, Education and Welfare. From 1972 to 1994 I was a senior economist at the RAND Corporation in Santa Monica, CA. I am a member of the American Economics Association and the International Telecommunications Society.

My fields of specialization within economics are industrial organization, regulation, and microeconomics. I have co-authored five books and written a large of number of articles published in professional journals and books. In the telecommunications industries I have conducted studies of telecommunications competition, incremental costs of local telephone networks, interconnection of telecommunications networks, demand for telephone services, pricing of telecommunications services, cable television regulation, and the allocation of spectrum resources. I have provided expert consultation and testimony in telecommunications cases, as listed in my curriculum vita.

Q. Can you describe in general terms the issues addressed in your testimony?

A. I have been asked by Sprint PCS to develop a methodology, consistent with the Federal Communications Commission's (FCC's) rules, for calculating the additional costs of terminating interconnected local calls on Personal Communications Services (PCS) networks. The methodology focuses on forward-looking economic cost, an analytical framework established by the FCC for conducting cost studies to calculate rates for the transport and termination of calls on the networks of Local Exchange Carriers (LECs) and on Commercial Mobile Radio Service (CMRS) networks such as the Sprint PCS network. The application of forward-looking cost principles to PCS networks raises significant issues of implementation that were not considered by the FCC in its analysis of wireline networks. This testimony seeks to resolve these issues through the application to PCS networks of the basic principles developed by the FCC for wireline networks.

II. FCC RECIPROCAL COMPENSATION COST RECOVERY RULES GENERALLY

A. Reciprocal Compensation Rules Generally

Q. Please describe what the federal Communications Act says about reciprocal compensation.

A. Section 251(b)(5) imposes on LECs, including BellSouth, "[t]he duty to establish reciprocal compensation arrangements for the transport and termination of telecommunications" (47 U.S.C. § 251(b)(5)). Congress imposed additional reciprocal compensation requirements pertaining to interconnection with incumbent LECs (ILECs). For interconnection with ILECs, Congress has further specifed that "each carrier" shall recover its "additional costs" of call termination. Section 252(d)(2)(A) of the Act provides:

> For the purpose of compliance by an incumbent local exchange carrier with section 251(b)(5), a State commission shall not consider the terms and conditions for reciprocal compensation to be just and reasonable unless —
>
> (i) such terms and conditions provide for the mutual and reciprocal recovery by each carrier of costs associated with the transport and termination on each carrier's network facilities of calls that originate on the network facilities of the other carrier; and
>
> (ii) such terms and conditions determine such costs on the basis of a

reasonable approximation of the additional costs of terminating such calls (47 U.S.C. § 252(d)(2)(A)).

Q. How has the FCC applied this statute?

A. The FCC has decided that if an interconnecting carrier does not want to prepare its own cost study of the additional costs of terminating calls, it may charge the ILEC for call termination the same rate that the ILEC charges it for call termination. This arrangement is known as symmetrical reciprocal compensation. FCC Rule 51.711(a) provides:

> Rates for transport and termination of local telecommunications traffic shall be symmetrical, except as provided in paragraphs (b) and (c).
>
> (1) For purposes of this subpart, symmetrical rates are rates that a carrier other than an incumbent LEC assesses upon an incumbent LEC for transport and termination of local telecommunications traffic equal to those that the incumbent LEC assesses upon the other carrier for the same services (47 C.F.R. § 51.711(a)(1)).

Q. Does the FCC require a symmetric reciprocal compensation arrangement between an ILEC and an interconnecting carrier like Sprint PCS?

A. No. While symmetric compensation rates might be justifiable when the interconnecting networks have similar cost structures, the FCC has made allowances for cost differences in wireless (and other) networks by ruling that reciprocal compensation rates may be asymmetric

"if the carrier other than the incumbent LEC (or the smaller of two incumbent LECs) proves to the state commission on the basis of a cost study using the forward-looking economic cost based pricing methodology ... that the forward looking costs for a network efficiently configured and operated by the carrier other than the incumbent LEC (or the smaller of two incumbent LECs), exceed the costs incurred by the incumbent LEC ..." (47 C.F.R. § 51.711(b)).

Q. How has the FCC defined the statutory phrase, "additional costs"?

A. The FCC has defined "additional costs" as the traffic sensitive costs that a carrier incurs in terminating a call that originates on another carrier's network. Conversely, the FCC has held that non-traffic-sensitive costs do not constitute an "additional cost" within the meaning of the Act:

> [T]he "additional cost" . . . of terminating a call that originates on another network includes only the usage-sensitive costs . . . , but not the non-traffic sensitive costs . . . . Such non-traffic-sensitive costs, by definition, do not vary in proportion to the number of calls terminating over the LEC's facilities and, thus, are not "additional costs." Local Competition Reconsideration Order, 11 FCC Rcd 13042, 13045 ¶ 6 (1996).

The rationale used by the FCC is clearly stated: *all* traffic sensitive costs and *only* traffic sensitive costs should be included in the additional costs of termination.

Q. Has the FCC applied these principles to ILEC networks?

A. Yes. The FCC has determined that ILECs generally use two network elements in terminating a call: the end-office switch and local loop. The FCC has further determined that consistent with its definition of "additional costs," ILECs may recover in reciprocal compensation only the traffic sensitive portion of these network elements —specifically, the traffic-sensitive component of local switching. The FCC stated:

> We find that, once a call has been delivered to the incumbent LEC end office serving the called party, the "additional cost" to the LEC of terminating a call that originates on a competing carrier's network primarily consists of the traffic-sensitive component of local switching. . . . The costs of local loops and line ports associated with local switches do not vary in proportion to the number of calls terminated over these facilities. We conclude that such non-traffic sensitive costs should not be considered "additional costs" when a LEC terminates a call that originated on the network of a competing carrier. Local Competition Order, 11 FCC Rcd 15499, 16024-25 at ¶ 1057 (1996).

The FCC therefore concluded with regard to ILECs that "[f]or the purposes of setting rates under section 252(d)(2), only that portion of the forward-looking, economic cost of end-office switching that is recovered on a usage-sensitive basis constitutes an "additional cost" to be recovered through termination charges." Id.

The FCC also determined that ILECs incur additional call termination costs if an interconnecting carrier delivers its traffic at an ILEC tandem switch rather than at the ILEC's end office switch serving the called party. In the former situation, the ILEC incurs additional traffic sensitive costs of switching the traffic at the tandem switch and transporting it to the end office switch. Id. at 16042 ¶ 1090. In formulating its rate structure standards, the FCC determined that tandem switching costs and the costs of shared transmission facilities may be recovered through usage-sensitive charges or in another manner consistent with the manner in which the incumbent LEC incurs those costs. (47 C.F.R. §§ 51.509(d) and (e).)

The FCC's forward-looking cost methodology applied to ILEC networks is based on the fundamental principle that the costs of all traffic-sensitive network elements used for transport and termination should be included in reciprocal compensation rates, while the costs of all non-traffic sensitive elements should be excluded.

Q. Has the FCC provided similar guidance relative to wireless, or CMRS, networks, including PCS networks?

A. Unfortunately, it has not. It is therefore the purpose of my testimony to apply the general principles and rules that the FCC has established for wireline networks to PCS networks.

B. Transport and Termination

Q. What, exactly, is meant by the term "transport and termination"?

A. Under Section 251(b)(5) of the Act, reciprocal compensation applies to "the transport and termination of telecommunications." The term "transport and termination" is not defined in the Act.

The FCC in its Local Competition Order has defined transport and termination for ILECs as two distinct services. *Transport* is defined as the "transmission of terminating traffic that is subject to section 251(b)(5) from the interconnection point between the two carriers to the terminating carrier's end office switch that directly serves the called party (or equivalent facility provided by a non-incumbent carrier)" (11 FCC Rcd at 16015 ¶ 1039; *see also* 47 C.F.R. § 51.701(c)). *Termination* is defined "as the switching of traffic that is subject to section 251(b)(5) at the terminating carrier's end office switch (or equivalent facility) and delivery of that traffic from that switch to the called party's premises" (11 FCC Rcd at 16015 ¶ 1040; *see also* 47 C.F.R. § 51.701(d)).

Q. How does the distinction drawn by the FCC between transport services and termination services on an ILEC's network promote the competitive goals of the Telecommunications Act?

A. It is technically feasible for a local carrier to obtain interconnection either at an ILEC's tandem switch or at an ILEC's end office switch . In the former case the carrier purchases transport and termination to subscribers served by all end offices that subtend the tandem, whereas when the carrier interconnects at the end office it purchases termination to all subscribers served by just that end office. By

providing for separate rates for transport and for termination, the FCC has allowed interconnecting carriers to determine whether they will interconnect at an ILEC's tandem office and purchase both transport and termination from the ILEC, or whether they will interconnect at the ILEC's end office and purchase only termination services from the ILEC. The FCC has noted that many alternatives exist for the transport service provided by the ILEC, including dedicated lines provided by other carriers and the ILEC's unbundled network elements, making the purchase of only termination services from the ILEC a viable alternative to interconnection at a tandem. The unbundling of transport and termination on an ILEC's network serves to promote competition by permitting entrants to avail themselves of lower-cost alternatives to an ILEC's transport service when such alternatives are available.

Q. Would a distinction between transport and termination on a PCS network serve to promote competition?

A. No. LECs seeking to interconnect their networks to a PCS network have technically feasible points of interconnection available at only one network level -- all calls to a wireless operator's subscriber that originate on another LEC's network are delivered to a Mobile Switching Center ("MSC"). Nodes at other levels of the PCS network, such as Basestation Transceiver Systems (BTSs) located at cell sites, are not capable of independently routing calls to that subscriber and there is currently no technically feasible alternative point of interconnection available to an interconnecting LEC. The FCC's distinction between transport and termination, which was based on the ability of LECs to

select among alternative points of interconnection at different levels of an ILEC's network and to purchase alternatives to ILEC-supplied transport services, does not apply to a PCS network.

Since a PCS network has only a single level with technically feasible points of interconnection, the relevant concept in a PCS network is a single service that provides both transport and termination. In my analysis I will treat transport and termination, or the completion of an interconnected call on a PCS network, as a single, indivisible service that transports interconnected calls from the point of interconnection to the point of termination at a subscriber's handset.

C. Forwarding Looking Economic Costs and TELRIC Generally

Q. What is meant by the term "forward-looking economic cost"?

A. As I noted earlier in my testimony, Congress has declared that a carrier may recover its "additional costs" in reciprocal compensation, and the FCC has defined "additional costs" as traffic sensitive costs. The FCC has further ruled that traffic sensitive costs are to be determined based on forward-looking economic costs rather than actual costs or embedded costs.

The FCC has determined that a single forward-looking economic cost methodology — or the Total Element Long Run Incremental Cost (TELRIC) methodology — should be used for both reciprocal compensation and for the pricing of unbundled network elements (UNEs). See Local Competition Order, ¶1054. Because the FCC discussed its TELRIC methodology at considerable

length in the UNE section of the Local Competition Order, guidance as to how TELRIC should be applied to reciprocal compensation can often be found in the FCC's UNE discussion. In addition, the FCC also has applied its TELRIC methodology to the determination of the forward-looking costs of universal service.

Q. How is a forward-looking economic cost methodology used to determine the cost of a network element?

A. The FCC has defined an ILEC's forward-looking economic cost of a network element to be the long-run cost of the facilities that are directly attributable or incremental to that element, given the ILEC's provision of other elements in a *status quo ante,* or baseline, scenario. The TELRIC methodology estimates the costs of constructing a new local network with wire centers placed at the ILEC's current wire center locations. All inputs are assumed to be variable, and the reconstructed network is assumed to use the most efficient technology currently deployed in the incumbent's networks and to be sized to meet reasonably foreseeable capacity requirements. Investment for each network element is then converted to monthly costs using a forward-looking cost of capital and depreciation schedules based on the assets' economic lives. Ongoing costs of operating and maintaining the assets are added to the capital costs to obtain the forward-looking cost of the element. This forward-looking cost is then increased by a reasonable allocation of forward-looking common costs to obtain the price of the element. (47 C.F.R. § 51.505).

For ILEC networks, the FCC has determined that the stand-alone cost of a narrowband network capable of providing current levels of local exchange services, exchange access services, and leased line services should be determined. The cost of any element is obtained by identifying the network facilities used by the element, and attributing an appropriate share of the costs of these facilities to the element in question. The element cost is expressed on a per-unit basis, where the denominator is the entire volume of the service in question, including both the amounts of the service sold to competitors and the amount that is self-supplied.

Q. How is this methodology applied to transport and termination in an ILEC's network?

A. For transport and termination of local traffic, customary points of interconnection are the trunk-side of an end office switch or the trunk interconnection point for a tandem switch. If the point of interconnection is at an end office, the forward-looking economic cost of termination includes the additional costs of switching that traffic at the end office, transporting it to the subscriber's premises and terminating it at a Network Interface Device located at the customer's premises. If the point of interconnection is at a tandem switch, the additional costs also include forward-looking costs of switching the traffic at the tandem and then transporting the traffic to the end office.

Q. How would the forward-looking cost based approach be applied to a PCS network?

A. The service whose forward-looking economic cost is to be determined is the

termination of calls to PCS subscribers that originate on another network. As described in Mr. Anthony Sabatino's testimony (Tab 7), a large number of network components is used to terminate such calls in an MTA -- the handset, the wireless link to the cell sites in the MTA, the cell sites including the towers (if any), antennas and BTSs, microwave or wireline links from the cell sites to the MSC, the MSCs, and the links connecting the MSCs. In addition, an Intelligent Network platform and the associated SS7 signaling network are required for call origination and termination, and a Home Location Register is necessary to enable the completion of calls to subscribers who have traveled to a site that is not served by their "home" switch. A reasonable starting point for a forward-looking cost study would be to determine which of these components are traffic-sensitive.

The FCC's general rate structure standard can help identify which of these network components are traffic-sensitive. In reviewing this standard and its applicability to PCS networks, I will comment on the approach taken in the Sprint PCS Cost Model (SPCSCM), anticipating some of my later testimony on whether the model is consistent with the FCC's forward-looking methodology.

D. General Rate Structure Rules

Q. What is the FCC's general rate structure standard?

A. The general rate structure standard that the FCC has adopted for the pricing of network elements states that: "The costs of dedicated facilities shall be recovered through flat-rated charges. The costs of shared facilities shall be recovered in a manner that efficiently apportions costs among users. Costs of shared facilities

may be apportioned either through usage-sensitive charges or capacity-based flat-rated charges if the state commission finds that such rates reasonably reflect the costs imposed by the various users." [47 CFR §§ 51.507(b) – (c).]

Q. How can the FCC's general rate structure standard be applied to transport and termination services in a PCS network?

A. To apply the FCC's rate structure standard in a wireless network, one can inquire whether each component of a PCS network is shared by several users or whether it is dedicated to a single user. If a network element is dedicated to a particular customer, its cost is by definition not a traffic-sensitive network cost and not recoverable under the FCC rules.

If, however, the network element is a shared resource, the next step is to consider whether each component's costs are *traffic-sensitive*. Handsets are resources dedicated to individual users and their costs are not traffic-sensitive network costs. All of the other components are shared among users of the wireless network. Using the FCC's forward-looking economic cost methodology, the costs of those elements are traffic-sensitive.

Q. Why is the FCC's distinction between shared and dedicated resources relevant to the determination of rates for transport and termination?

A. The FCC's distinction between dedicated and shared resources is important in determining whether an increase in interconnected traffic increases the total (forward-looking) costs of supplying service. A subscriber can make greater use

of a dedicated resource – for example, increased calling over a wireless handset or increased calling on an incumbent's local loop – without causing the network supplier to incur additional costs for that dedicated resource. Shared resources that are placed in a common pool and drawn on for the duration of a call, or during call set-up and call tear-down, have very different cost characteristics. For example, in the long run added minutes of calling handled by a network switch or transported over a trunk require that the capacity of that resource be increased in order to maintain service quality for other users. Thus, the costs incurred by the network supplier for a shared resource that is placed in a common pool and drawn on for the duration of a call increase when the volume of calling increases.

Consistent with this approach, one can examine the effect on an operator's network of increased usage, holding the number of lines or wireless handsets constant. The network elements whose capacities must be augmented in order to maintain the required grade of service are judged to be traffic sensitive elements, and their costs are included in the additional costs of terminating a call that originates on the network of another carrier.

III. Application of FCC Rules to PCS Networks

A. PCS Networks Generally

Q. What network components are required to process a local call that is originated on a PCS network?

A. As noted in Mr. Sabatino's testimony, and as illustrated in his Exhibit AS-1,

network components used to set up and maintain a local call include a wireless handset, spectrum, the cell site, backhaul links from the cell site to a Mobile Switching Center (MSC), and the MSC itself. A cell site includes antenna(s), supporting towers if needed, and electronic equipment that is referred to as a BTS. A MSC contains a mobile switch, often referred to as a MTX. In the Nortel architecture used in Florida, the MSC primarily consists of two physically separate components: the MTX and a Base Station Controller (BSC). In the Lucent architecture, also used in the Sprint PCS network, these two components are combined in a single switching system. For simplicity I will use "MSC" to refer to the combination of a Base Station Controller and an MTX. Other components used to complete a call on a PCS network include an Intelligent Network platform with an associated signaling network, a Home Location Register, and equipment to authenticate handsets and users.

A PCS call originates on a subscriber's handset. The handset converts the voice signal to a digital form in accordance with one of several standards and transmits the signal using available spectrum to a nearby cell site. At the cell site, the signal is received by an antenna, which is typically placed on a supporting tower or a roof top. The signal is then processed by electronic equipment contained in a BTS located at the cell site and converted into a different form that is suitable for transmission to a MSC. The converted signal is transported to the MSC over a microwave or wireline backhaul link. A call is processed by two components working in conjunction at an MSC in Florida – the MTX and the BSC.

The BSC performs a number of key functions that include traffic concentration, voice coding, supervision of call hand-off from one BTS to another as the subscriber travels through a carrier's service area, administration of BTS resources, network management, and operations and maintenance. The MTX manages call set up and tear down with the assistance of the BSC. The MSC, in conjunction with an Intelligent Network platform and its associated signaling network, performs call set-up and switching functions. In addition, the MSC has several other capabilities related to authentication, location registration and billing. The MSC may be connected to other MSCs over intermachine trunks, to an Intelligent Network platform over a signaling network based on the SS7 standard, and to switches operated by wireline LECs and other carriers over interconnection links. While a call is in process, spectrum and capacity in a BTS, capacity in backhaul links to MSCs, and capacity in MSC(s) are dedicated to the call. When the call is terminated, the resources are released and can be used to support another call. Resources in the Intelligent Network platform and the associated signaling network are dedicated to a call attempt during call set-up and to a disconnect during call tear-down, and are unavailable at these times to serve other calls.

It bears emphasis that call processing in PCS networks is extraordinarily complex. For purposes of this testimony, I have attempted to simplify the call processing process as much as possible.

Q. How are local calls that terminate on a PCS subscriber's handset processed?

A. A terminating local call is processed in the reverse order. The call arrives over an interconnection trunk at the MSC that is "home" to the subscriber's directory number. If the subscriber is currently registered with a MTX in the MSC (i.e., if the subscriber is currently at a location served by that MSC), the MTX routes the call to a BSC serving the called subscriber at his current location. The BCS converts the call to a format for transmission to a BTS, and initiates the call set-up procedure. The BTS assigns the resources necessary to establish the required connection between the PCS network and the subscriber's handset. Otherwise, if the MTA is served by multiple MTXs, location registers are consulted. If the subscriber is within the MTA but not in the territory served by his home MTX, the call will be routed from the home MTX on an inter-machine trunk to the MSC that serves the subscriber's current location. A second MTX at this MSC routes the call to a BSC, and the standard call set-up procedure is then followed. For these calls, multiple switching occurs within the PCS network. During call set-up and call tear-down, resources of the Intelligent Network platform and the associated signaling network are used. The network components used to terminate calls to a wireless subscriber are the same as those used to originate a call.

B. The Traffic Sensitive Components of a PCS Network

Q. What costs may Sprint PCS recover in its rates for reciprocal compensation?

A. As noted above, Section 252(d)(2)(A) of the Act authorizes a carrier like Sprint PCS to recover "a reasonable approximation of the additional costs of terminating

such calls." The FCC has defined "additional costs" to include traffic sensitive costs, but not non-traffic-sensitive costs. Sprint PCS may therefore recover the traffic sensitive costs of the network components it uses in terminating a call.

Q. Are the costs of an MSC traffic-sensitive?

A. Yes. As Mr. Sabatino describes in his testimony, the MSC is a voice switch which plays a role in call set-up, call routing, switching, generating call detail records, and performing additional functions needed for mobile service, including the location registration of subscribers. The MSC is a shared network component and, unlike an ILEC end office switch, has no line cards or other resources dedicated to any subscriber. The central processor and switching matrix of the MSC and the trunk ports connecting the MSC to other components of the PCS network are shared, traffic-sensitive investments. In order to maintain an acceptable grade of service, the capacity of the MSC must be augmented as traffic increases. As with wireline networks operated by ILECs, more than a single switch is required to obtain sufficient capacity to process all the calls in many densely populated metropolitan areas. Since MSCs do not have line-side connections, the decision to install a second (or subsequent) MSC is driven entirely by the volume of traffic, and not by the number of subscribers. In contrast, in cost proxy models of wireline networks a second switch may be required if the number of lines served exceeds an engineering threshold, even if the processor capacity of the first switch is not fully utilized. Given the shared and traffic-sensitive nature of MSC(s), a forward-looking economic cost-based methodology should include MSC costs in the additional costs of call termination.

The Sprint PCS Cost Model (SPCSCM) treats MSC costs as traffic-sensitive.

Q. Are the costs of an intelligent network platform and the associated signaling network traffic-sensitive?

A. Yes. Considerable network intelligence is needed to operate a PCS network. For example, a Home Local Register (HLR) keeps track of a mobile customer's location whenever the handset is powered on. Much of Sprint PCS' network intelligence is stored on external computers, sometimes known as Service Control Points (SCPs). These SCPs are connected to MSCs via a signaling network.

The intelligent network platform and signaling system used by PCS networks are similar to those used by ILECs in their networks. The packet switches and signaling links that constitute a signaling network are shared resources that have limited capacity to process and transport the messages generated during call set up. At higher calling volume in peak periods, additional capacity will be required to ensure that the proportion of completed calls does not fall below acceptable thresholds. Similarly, SCP computers, the hardware on which the intelligent network platform is based, have limited capacity that must be augmented as calling volumes increase. Therefore, the costs of the intelligent network platform and the associated signaling network are traffic-sensitive.

Q. Are the costs of BSCs traffic sensitive?

A. Yes. A Base Station Controller (BSC), which works with a MTX to process calls, is responsible for monitoring the BTSs that subtend it and allocating BTS

resources to calls. It is also responsible for managing call hand-offs from one cell site to another when a mobile subscriber changes location during a call, and provides the necessary voice coding or "vocoding" that permits the efficient and high speed transmission of voice in a wireless network.

None of the capacity of a BSC is dedicated to a subscriber. While a subscriber is making a call, a portion of the BSC's capacity (both processor capacity and trunk interface capacity) is consumed by that call and is unavailable to serve other calls. These BSC resources are released when the call is disconnected. BSC resources are shared and their costs are driven by the volume of traffic: an increase in the volume of peak traffic holding the number of wireless handsets constant will generally require that BSC capacity be increased. Also, when increases in traffic lead to cell-splitting, the number of BTSs increases. Given technical limits on the number of BTSs that a BSC can control, cell-splitting could lead to an increase in the number of BSCs required. For both these reasons, the costs of BSCs are traffic-sensitive.

Q. Are the costs of backhaul links traffic sensitive?

A. Yes. As Mr. Sabatino explains in his testimony, the backhaul links connecting BTSs to MSCs, are typically microwave links or T-1 lines that carry both voice paths and channels for signaling and control. Bandwidth on these links is a shared resource that is kept in a pool and assigned to calls on an as-needed basis. When traffic volumes increase (holding the number of wireless handsets constant), additional link capacity is required to maintain a constant grade of

service. The least-cost option for obtaining backhaul links is most likely to be private line services offered by the incumbent LEC or competitive LECs. For purchased backhaul links, current tariffs typically have higher rates for higher capacity links. Therefore, the costs of all backhaul links in a PCS network, whether self-provided or leased, that are incurred by a PCS network operator are traffic sensitive.

The Sprint PCS cost model uses the ILEC's tariffed rates for private line services to estimate the costs associated with backhaul links, and treats these costs as traffic-sensitive.

Q. Are the costs of cell sites traffic-sensitive?

A. Yes. A cell site provides call set-up functions, call management, and a wireless interface to all handsets within a specific radio coverage to a geographic area or cell. It includes antennas, supporting towers where necessary, and a BTS. All three components of the cell site are needed to maintain a wireless connection to a user's handset.

Antennas are necessary to transmit wireless signals from a cell site to a subscriber handset, and to receive wireless signals from wireless handsets in the cell site. The antennas and associated equipment are often placed on a *tower* dedicated to the cell, or on a rooftop. Towers or rooftop sites help ensure adequate signal strength between handsets across the cell and the antenna at the cell site. The height of the tower, the size of the antenna and the rental for the cell site are

driven in large part by the topography of the cell and by local conditions.

BTSs contain the electronics necessary to convert the signal received from the antenna into a format suitable for transport to a MSC, and to perform translations in the reverse direction. The BTS also amplifies signals for broadcast over the air interface, communicates call set-up information with the handset, supervises power control over the handset, provides timing information, and manages handoffs from one sector to another sector within the same cell site.

The ability of a BTS to carry traffic is limited by the capacity of its processor unit, which is used to translate formats, amplify signals and supervise call set up. When the volume of calls increases sufficiently, the installed capacity of the BTS is exhausted, and the number of calls that are blocked or dropped increases. The quality of service can be maintained by increasing the capacity of the BTS.

Q. How can the traffic-carrying capacity of a cell site be increased?

A. PCS network operators can augment capacity in two primary ways – by adding radio carriers or by adding cell sites. When the initial calling volume is still relatively low, the electronic equipment at the cell site may initially be configured to use only a portion of the available radio spectrum. In this case, capacity can be expanded by adding, at some cost, electronic equipment that permits new "radio carriers" (frequencies that were previously unused) to be brought into service. The Sprint PCS Cost Model (SPCSCM) allows for an initial installation using one carrier, and permits the addition(s) of modules for using a second and a third

carrier. Since calling volume triggers the level of investment in BTSs, the costs of BTSs are traffic-sensitive.

As noted in Mr. Sabatino's testimony, a second method of expanding capacity is cell splitting. When the total minutes of (peak-period) use exceed the capacity of a cell site, relief can be obtained by adding an additional cell site at an adjacent location. The new site can manage a portion of the traffic in the area served by the original cell site, thus "splitting" the original cell. When all available spectrum is exhausted and carriers cannot be added, cell splitting may be the only means of expanding capacity. In other cases, it may sometimes be more economical to split a cell than it is to add additional carriers or frequencies to the network. At some point, however, cell density cannot be increased without causing interference, and carriers must be added.

Cell splitting provides an independent and alternative justification for the conclusion that all costs associated with cell sites are traffic-sensitive. A forward-looking engineering design that minimizes the cost of a wireless cell-based network adapts the size of a cell, and therefore the number of cell sites, to the expected peak-period usage in a cell.

In the long run, when all inputs are variable, wireless providers will typically use a combination of more spectrum (if suitable spectrum is available) and increased cell splitting to meet increased demand. In this long run context, with a given number of wireless hand sets, increases in traffic will result in a need for more

cell sites. All costs associated with cell sites are appropriately treated as traffic-sensitive costs to be included in computing the additional cost of terminating interconnected calls.

Q. Why are the costs of structures associated with cell sites considered traffic sensitive?

A. The costs of the structures required to house BTSs are akin to the costs of the land and buildings required to house an incumbent's wire centers. The FCC has determined that these costs can be recovered by incumbents as part of the unbundled local switching element, and the proxy cost model adopted by the FCC to compute the forward-looking cost of unbundled network elements includes the costs of land and buildings in its estimate of the cost of local switching. [In the Matter of Federal-State Joint Board on Universal Service, Tenth Report and Order, CC Docket No. 96-45, at 417.] The traffic-sensitive cost of local switching includes costs associated with land and buildings required to house the local switch. Therefore, the SPCSCM's inclusion of towers in the cost of BTSs is consistent with the FCC's treatment of land and buildings for incumbents' networks.

Multiple wireless service providers can, in principle, share the towers used to support antennas at a cell site. A cost model of a wireless network could assign a portion of the costs of towers to other wireless providers based on the opportunity to lease such shared structures in the local market. The SPCSCM accounts for structure-sharing by deducting the revenue earned by leasing tower space to other

wireless providers from the full cost of deploying towers in cell sites.

Q. Are the costs of spectrum used for communications between a handset and a nearby cell site traffic-sensitive?

A. Yes. The spectrum channel used to support voice communications on the link between subscriber handsets and cell sites is a traffic sensitive shared resource. It is assigned to a subscriber from the pool of available channels only for the duration of a call and is then released for use by another call. While a variety of access technologies may be used to allocate this spectrum, none dedicates capacity to any one subscriber on a full-time basis.

The spectrum used for handset-to-BTS communication most closely resembles common transport in a wireline network, in that both place resources in a limited pool that can be allocated to any user's call on an as-needed basis. The spectrum channel that links a handset to a cell site is unlike a wireline loop, which provides a dedicated, full-time voice communications path between a user and the end-office switch. The spectrum is also unlike a dedicated transport service that reserves capacity for a particular user even when the user is not communicating. Although, the BTS communicates periodically with the handset over a control channel, no bandwidth is dedicated to any individual handset for voice communications.

With a fixed quantity of spectrum, an increase in peak-hour wireless traffic (holding the number of wireless handsets fixed) can lead to increased blocking

and an increase in drop-off calls as users move from a cell site with adequate capacity to one that is congested. In the short run, if other inputs such as the number of cell sites were held constant, more spectrum would be needed to maintain a constant quality of service when the offered traffic exceeds the capacity of the available spectrum. The costs of using spectrum resources are therefore traffic-sensitive in the short run.

In the long run, when other inputs can be varied, wireless providers have incentives to meet increased demand by selecting the least-cost combination of additional inputs. Techniques for cell splitting permit a PCS provider to substitute spectrum for other inputs, including the number of cell sites. Increased demand can be served by increasing the amount of spectrum, increasing the number of cell sites, or both. In general, PCS network capacity may be efficiently augmented by increased use of both spectrum *and* its substitutes as demand increases. Therefore, spectrum costs are traffic-sensitive and should be included in the additional costs of transport and termination service.

Q. Are the costs of wireless handsets traffic-sensitive?

A. In a wireless network, a handset -- including its battery and its circuit board -- is dedicated to one end user, and its cost is non-traffic sensitive. It follows that the costs of wireless handsets are not additional costs associated with terminating calls.

This analysis parallels the FCC's analysis of wireline networks. A circuit board

and battery in a wireless handset performs most of the functions provided by a line card in a traditional end office switch. For a wireline network the FCC has included the cost of a line card in the flat-rated charge for the unbundled switching network element, but has ruled that it is not an "additional cost" of terminating a call because each line card is dedicated to a single customer, and the cost of line cards is non-traffic sensitive.

Q. Would you please summarize your conclusions regarding the traffic sensitivity of the components of a PCS network?

A. Based on the testimony of Mr. Sabatino and on my own, independent analysis, I conclude that the wireless handset is a dedicated resource whose costs are not traffic-sensitive. When assessed in terms of the FCC's forward-looking economic cost methodology, other network components (including spectrum, cell sites, backhaul links, MSCs, the intelligent network platform, location registry and the signaling network) are shared resources whose costs are traffic-sensitive.

IV. The Sprint PCS Cost Model

Q. You have described general principles for determining the additional costs of transport and termination. What are the first steps to implement the principles you have just discussed in a cost model of a PCS network?

A. The additional cost of the traffic-sensitive network components can be computed by comparing a *baseline* network (or status quo ante) with an efficiently designed network that can serve a given *increment* of output. Given the economies of

scope and scale that often characterize telecommunications networks, the incremental cost of supplying a narrowly defined service on a base network that is already capable of providing several other services is likely to be lower than the incremental cost of the same narrowly defined service supplied on a skeleton base network with very limited capabilities. In general, the larger the base network, the lower the incremental cost of a given service.

Q. What are the FCC's guidelines with respect to a baseline scenario and an increment in output?

A. For the purposes of computing universal service funding requirements, the FCC has determined that incumbent LECs should assume a *scorched node* baseline, with the locations of wire centers given but no infrastructure in place. A network capable of supporting the demands of residence and business customers for supported services is the increment that is added to the scorched node baseline. [In the Matter of Federal-State Joint Board on Universal Service, Report and Order, CC Docket No. 96-45, Released May 8, 1997, at 250.]

For a network element, the FCC has defined the Total Element Long Run Incremental Cost (TELRIC) as "the forward-looking cost over the long run of the total quantity of the facilities and functions that are directly attributable or reasonably identifiable as incremental to such element, taking as given the incumbent LEC's provision of other elements." [47 C.F.R. § 51.505 (b).] Total network element costs are then converted to a per-unit cost by dividing by a reasonable projection of the total units of the element used by the ILEC plus the

total units provided to requesting telecommunications carriers. The unit cost of each element is defined without reference to the services provided by the network elements included in the TELRIC cost study.

Q. How does the Sprint PCS cost model implement a baseline and an output increment?

A. Consistent with the guidelines established by the FCC, the SPCSCM begins with a scorched-node baseline in which the location of its MSCs and BTSs are taken as fixed, but *no* infrastructure is deployed and no services are produced. The Sprint PCS network was deployed recently and one would expect that its architecture is not materially different from the architecture that would be deployed if a scorched earth approach were used to determine the optimal number of nodes and their locations. The increment is the projected volume of basic voice service within an MTA, the area relevant for local interconnection.

The SPCSCM ensures that the *total* quantity of each network component used to provide a transport and termination service is included when costs are computed. That is, the quantity of each component includes the amount used to terminate interconnected calls and also the amount used to originate and terminate all other calls. As with cost proxy models of wireline networks, in the SPCSCM interconnected calls benefit from economies of scale in proportion to their share of all calls carried by the network. Using the total volume of calls results in an estimate of the additional costs for transport and termination that tends to be lower than would be the case if only interconnected calls were used.

Q. What assumptions were made with respect to the total volume of calls in the Sprint PCS cost model?

A. For incumbent LECs, the FCC has determined that a forward-looking cost methodology should model a local network that will efficiently satisfy "reasonably foreseeable capacity requirements." ["... the forward-looking pricing methodology for interconnection and unbundled network elements should be based on costs that assume that wire centers will be placed at the incumbent LEC's current wire center locations, but that the reconstructed local network will employ the most efficient technology for reasonably foreseeable capacity requirements." Local Competition Order, 11 FCC Rcd at 15848-49 ¶ 685.] In the context of mature wireline networks, current demand together with a "fill factor" may provide reasonable estimates of capacity requirements.

For new and rapidly growing networks such as the Sprint PCS network, "reasonably foreseeable capacity requirements" over the life of the network assets are likely to be far greater than current demand. Indeed, networks sized to meet only current demands will not be adequate to meet demands in the very near future. The unit cost of such networks is likely to be high, since the designed networks will not benefit from significant economies of scale that are likely to be realized in the near future. A network that minimizes the discounted cost of serving a growing demand profile over a reasonable time horizon will have a lower unit cost than either a network designed to meet current demand alone, or a network that is expanded continuously to keep pace with growing demand.

The SPCSCM addresses the FCC's requirement that the modeled network meet reasonably foreseeable capacity requirements by using a three-year study period: 1999-2002. Given the high growth of demand, rapid change in wireless technologies (such as the expected introduction of third-generation technology in three years) and the unpredictable growth of new wireless applications enabled by new technologies, the levels of demand and the forward-looking technologies and assets required to meet demand are not likely to be "reasonably foreseeable" beyond 2002. Demand is forecast for each year in the three-year study period and the SPCSCM seeks to minimize the costs of meeting demand over that period by deploying assets in accordance with the best current engineering practice.

Q. Is the SPCSCM consistent with the requirement of a forward-looking approach that the designed network be efficient and minimize costs?

A. The SPCSM assumes that the "base year" quantities of assets in a forward-looking design are equal to those in Sprint PCS's currently deployed network. Network deployment was initiated in late 1996. Thereafter the network has been continually expanded with the technologies that were initially deployed and I understand that these technologies continue to represent the state of the art. Because Sprint PCS is not a regulated company subject to cost-based regulation, but a new entrant competing for market share with well-established cellular providers and other aggressive new entrants, it has not had incentives to select inefficient technologies or inefficient deployment patterns. Given its incentives and given how little time has elapsed since Sprint PCS's initial deployment, the SPCSM assumption that the base year quantities of network assets are equal to

those in Sprint's currently deployed network is consistent with the forward-looking approach. As the prices of network assets have fallen between 1996 and 2000, the SPCSM evaluates the replacement cost of the base network at current prices. This treatment of investments is consistent with a forward-looking approach to costs.

In contrast to the Sprint PCS network, a current ILEC network may be markedly different from an efficient, forward-looking network using the best currently available technology, for two reasons. First, wireline ILECs' current networks have grown incrementally over several decades and have inherited a legacy of older assets, technologies, and systems that are not efficient when compared to currently available alternatives. Second, many ILECs continue to own and operate assets that were acquired when they were subject to some form of cost-plus regulation. Since this form of regulation is known to create incentives to over-invest, the embedded investment in ILEC networks would be inefficient even when compared to efficient levels at the time the investments were made. *A fortiori,* these investments would be inefficient when compared to the best currently available technology.

In sum, the SPCSCM's approach to determining base year investments in network infrastructure is consistent with a forward-looking cost methodology.

Q. How are the required investments converted to forward-looking costs?

A. Like proxy cost models of incumbents' networks, the SPCSCM converts

investments to annual costs using Annual Cost Factors (ACFs) derived from assumed values for the cost of capital, economic lives for each asset, applicable tax rates, and loading factors to account for the expenses of operating and maintaining the assets. The assumed values of these input parameters are based on the business experience of Sprint PCS. The SPCSCM then accounts for forward-looking common costs using a proportional mark-up factor.

The SPCSCM's conceptual approach to computing monthly costs of each asset is consistent with the FCC's forward-looking cost methodology.

Q. How are the costs over the three years of the study period combined to yield an additional cost of transport and termination?

A. The SPCSCM uses the concept of a *levelized price* to combine the costs incurred over the three year study period. The levelized price is defined to be the constant price per unit of the output that recovers all costs over the study period.

The levelized price can be shown to be equal to the discounted costs divided by the *discounted* minutes of use. It has two attractive features. First, it just recovers efficiently incurred economic costs. Second, it shares future cost savings from economies of scale equally across all minutes of use in the study period, including minutes of use early in the period when scale economies have not yet been realized. As a result, the unit cost of transport and termination on PCS networks computed by the SPCSCM is lower than the unit cost based on first year costs alone. The SPCSCM computes a conservative estimate of transport and

termination costs and is consistent with a forward-looking approach to costs.

V. Spectrum Issues

Q. Has the FCC determined how spectrum costs should be treated in a forward-looking methodology?

A. No, a precedent on the appropriate treatment of these costs in a forward-looking cost study is not available from earlier Commission proceedings, as wireline incumbents and traditional cellular providers have not incurred such costs in the provision of basic services.

Q. Can current market prices be used to estimate spectrum costs?

A. That would be difficult, although current market prices can provide a useful starting point for estimating the forward-looking cost of an asset. Subsequent to the initial public auction of spectrum licenses for PCS, licenses have not been widely traded in an active marketplace, and the terms of the few recent transactions are not public. There appear to be large transactions costs in transferring spectrum rights. Consequently, the development of forward-looking spectrum costs from current market prices of licenses is likely to be difficult.

Spectrum licenses for cellular service were awarded in 1982 by lotteries in which several licenses were won by speculators who later sold them to cellular service providers. There appears to be some agreement that the post-lottery market for cellular licenses was not efficient. According to one expert, "the need to buy

licenses from the auction winners ... may also have contributed to the geographic fragmentation of the cellular industry, delaying the introduction of mobile telephone services that would work wherever the consumer traveled in the United States." [Chapter 1, "Auctioning the Radio Spectrum," from *Auction Theory for Privatization*, by Paul Milgrom, Cambridge University Press, forthcoming.] Another observer commented: "It took a decade of negotiations and private auctions for the eventual service providers to acquire desirable packages of licenses from lottery winners." [Peter Cramton, "The Efficiency of FCC Spectrum auctions", Journal of Law and Economics, 41, 727-736, October 1998. Page 2.]

In contrast to cellular spectrum licenses, PCS spectrum licenses were initially sold at public auctions. There is little information available on post-auction transactions involving spectrum allocated for PCS: "In the first two years there has been little resale. GTE is the one exception. Shortly after the MTA auction ended, GTE sold its MTA winnings for about what it paid for the licenses." [Cramton, Page 5.]

Given the apparently high transactions costs of purchasing a spectrum license following the lottery of cellular licenses, and the lack of a substantial volume of transactions following the PCS auctions, an evaluation of the forward-looking economic cost of a spectrum license based on ongoing market transactions for spectrum would be problematic.

Q. Can spectrum costs for PCS licenses be based on the prices established at

auction?

A. The winning bids in the FCC's auctions are a useful *starting point* for estimating the spectrum costs of a PCS provider. There is considerable evidence that prices established in the PCS spectrum auctions, which gave bidders the opportunity to bid simultaneously for licenses across many geographic areas, were efficient. [See Cramton, op cit, and Milgrom, op cit.]

The licenses obtained at auction vary in several dimensions including bandwidth, geographic and population coverage, and the degree to which the spectrum is encumbered by incumbents. For example, in the broadband PCS auctions that were concluded in 1995, Sprint PCS won several licenses for either 10 MHz or 30 MHz of spectrum. Frequency bands awarded to Sprint PCS were occupied by incumbents who could be relocated to other bands (or to non-wireless facilities) only at Sprint PCS's expense. For PCS operators, including Sprint PCS, spectrum was an encumbered investment, in contrast to the unencumbered spectrum cellular carriers had earlier obtained at no charge.

The terms of the PCS auction have determined, to a considerable degree, the current terms on which suitable spectrum can be obtained and used. For example, GTE's sale of a PCS license was at a price approximating its winning bid. (Cramton, op. cit.)

In some densely populated markets where Sprint has 10 Mhz licenses, it currently uses all of its licensed spectrum and is seeking to acquire more spectrum to serve

increases in demand. If additional spectrum becomes available, the least-cost design of the network may be based on the use of more than 10 MHz of spectrum. However, in the absence of a well-organized post-auction market for spectrum, spectrum license transactions are rare and idiosyncratic. A PCS operator cannot safely assume that its need for additional spectrum can be satisfied by purchases. Indeed, in markets where Sprint experiences high demand for PCS services, it is likely that other licensees will also face high demand, and no suitable spectrum will be available. Increases in demand may have to be met through incumbent relocation and/or cell splitting, and the theoretical long-run, low-cost solution using more spectrum may be infeasible. In these markets, an engineering cost model based on 10 MHz of spectrum may be appropriate for computing the forward-looking costs of transport and termination.

In some sparsely populated markets, 30 MHz of spectrum may be more than sufficient to meet projected demand even in the long term. Even in these cases, the price paid for a 30 MHz license at auction represents an appropriate starting point for estimating the forward-looking cost of spectrum. In the PCS auctions for the A and B bands, 99 licenses, each for 30 MHz blocks of spectrum, were sold. The winning bids reflected the large differences in the populations and demographic characteristics of the MTA markets, which ranged from 26.4 million people in the New York MTA to 47,000 in American Samoa, as bidders recognized that less revenue would be earned in less populous MTAs, and adjusted their bids accordingly. [Milgrom, op cit, page 37.] A winning bid incorporates the expectation that some fraction of the licensed spectrum may not

have any use-value or resale value to the winner. Thus, even when a forward-looking network *design* calls for less than 30 MHz of spectrum, the appropriate starting point for estimating the forward-looking *cost* is the final auction price for the entire 30 MHz band. The same logic would apply to 10 MHz licenses.

An auction bid might include a premium above the spectrum's use-value in a PCS network if the bidder expected to sell some unused spectrum in the future. However, such sales will occur only when another provider or consumer has use for spectrum that the licensee's customers and potential customers do not demand. As a practical matter, these opportunities to sell a portion of licensed spectrum are uncommon and have high transaction costs, and can best be dealt with on a case-by-case basis.

Q. How should a forward-looking cost study treat the costs of relocating incumbents who occupy some frequency bands in the spectrum obtained by PCS providers?

A. At the time spectrum was allocated for PCS, the frequencies were partially occupied by incumbent licensees — mostly utilities, railroads, petroleum companies and local governments — who operated some 4,500 point-to-point microwave links in these bands. All MTAs were not equally encumbered, although in "some areas with high concentrations of incumbents, the interference constraints could prevent a PCS licensee from offering a competitive service." [Peter Cramton, Evan Kwerel and John Williams, "Efficient Relocation of Spectrum Incumbents," Journal of Law and Economics, 41, 647-675, October

1998. Page 661] Legislation and Commission rules established a framework to govern negotiations between incumbents and entrants to relocate the incumbents. By 1998, approximately half of the incumbent links had been moved to alternate bands or wireline facilities, or had been terminated pursuant to the negotiation framework.

Commission rules permitted incumbents to keep their links and required the PCS entrant to compensate an incumbent for the costs of relocation to a comparable alternative. A bargaining theory analysis of the effect of the Commission's incumbent relocation rules on the costs of relocation incurred by entrants suggests that incumbents can successfully obtain payments in excess of the actual costs of relocation. Because public disclosure of a high incumbent relocation payment by one PCS licensee would likely lead to demands for higher payments from other incumbents, PCS licensees are likely to insist that any high relocation payments they may make not be disclosed. Consequently, estimates of relocation payments based on publicly available information can be biased downwards.

Estimates of relocation costs that are based solely on engineering studies are likely to underestimate the costs of clearing encumbered spectrum. Even when such estimates are augmented with publicly available information on relocation payments, the resulting estimates may still underestimate the full costs paid by at least some PCS licensees. A wireless cost model would properly include actual relocation payments made to incumbents as part of the cost of spectrum.

Q. What is the forward-looking economic life of a spectrum license?

A. In computing the costs of any asset, including spectrum, the Commission's rules for a forward-looking cost methodology require that the economic life of the asset be used to account for economic depreciation of the asset. [47CFR Ch. 1 § 51.505 (b)(2)] Spectrum does not physically depreciate and for practical purposes has an infinite (or indefinite) physical life. However, the license authorizing a carrier to use the spectrum has a limited duration, typically ten years. At the end of the license period, it is expected that the license will be renewed for a subsequent period. The economic life of the asset to the carrier will generally be greater than the initial license but less than the infinite physical life. If the market expected that PCS licenses would be renewed once without any material changes in the license terms and conditions, the market value of the licensed spectrum would be based on the discounted residual cash flow that could be earned from the sale of services produced with the spectrum over twenty years, and the economic life would be twenty years.

In the absence of an active secondary market or information on the expectations of potential purchasers of spectrum licenses, two approaches appear to have some merit. First, the life of the asset can be assumed to be equal to the life prescribed in the tax code. Second, the economic life of the asset can be based on generally accepted accounting principles, which call for amortizing intangible assets over a period not to exceed 40 years. [Generally Accepted Accounting Principles, *AIN-APB17, Intangible Assets: Unofficial Accounting Interpretations of AB Opinion No. 17.*]

Q. You have described the major cost factors that are evaluated by the Sprint PCS Cost Model. In your opinion, is that model consistent with the forward-looking cost methodology required by the FCC to establish asymmetric reciprocal compensation rates?

A. The SPCSCM has been implemented in several linked Excel Workbooks, with some documentation of assumptions and procedures contained as comments appended to specific cells. I have had an opportunity to review workbooks that contain important model inputs and the workbook where final calculations have been performed. Based on an analysis of these workbooks, and a discussion with the model's authors, it is my opinion that the SPCSCM methodology is consistent with the FCC's methodology for computing forward-looking economic cost as described in my testimony.

VI. Conclusion

Q. How do the costs of transport and termination on a PCS network compare with the costs on an ILEC's network?

A. Given the SPCSCM's assumed model inputs, the forward-looking cost of transport and termination calculated for a PCS network is considerably higher than the forward-looking cost of transport and termination on an incumbent LEC's network, justifying the use of asymmetric reciprocal compensation rates.

Q. Does this conclude your testimony?

A. Yes.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY

OF

MICHAEL R. HUNSUCKER

Q. Please state your name and business address.

A. My name is Michael R. Hunsucker. I am employed by Sprint/United Management Company as Director-Regulatory Policy. My business address is 6360 Sprint Parkway, Overland Park, Kansas, 66251.

Q. Please describe your educational background and work experience.

A. I received a Bachelor of Arts degree in Economics and Business Administration from King College in 1979.

I began my career with Sprint in 1979 as Staff Forecaster for Sprint/United Telephone – Southeast Group in Bristol, Tennessee and was responsible for the preparation and analysis of access line and minute of use forecasts. While at Southeast Group, I held various positions through 1985 primarily responsible for the preparation and analysis of financial operations budgets, capital budgets and Part 69 cost allocation studies. In 1985, I assumed the position of Manager – Cost Allocation Procedures for Sprint/United Management Company and was responsible for the preparation and analysis of Part 69 allocations including systems support to the 17 states in which Sprint/United operated. In 1987, I

transferred back to Sprint/United Telephone – Southeast Group and assumed the position of Separations Supervisor with responsibilities to direct all activities associated with the jurisdictional allocations of costs as prescribed by the FCC under Parts 36 and 69. In 1988 and 1991 respectively, I assumed the positions of Manager – Access and Toll Services and General Manager – Access Services and Jurisdictional Costs responsible for directing all regulatory activities associated with interstate and intrastate access and toll services and the development of Part 36/69 cost studies including the provision of expert testimony as required.

In my current position as Director – Regulatory Policy for Sprint/United Management Company, I am responsible for the development of state and federal regulatory and legislative policy for Sprint's Local Telecommunications Division. Additionally, I am responsible for the coordination of regulatory/legislative policies with other Sprint business units.

Q. Have you testified previously before state regulatory commissions?

A. Yes, I have testified before state regulatory commissions in South Carolina, Florida, Illinois, Pennsylvania, North Carolina and Nebraska.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony on behalf of Sprint Spectrum L.P., d/b/a Sprint PCS ("Sprint PCS") is to present the policy issues surrounding Sprint PCS' recovery of

"additional costs" incurred to terminate local traffic originating on BellSouth's network.

Q. Please provide an overview of the structure of your testimony.

A. In my testimony, I will provide a high level, non-lawyer's overview of Sprint PCS' goals in this proceeding including an overview of the Federal Telecommunications Act (FTA), the FCC's rules, and the impact of such rules on Sprint PCS' ability to recover its "additional costs" of terminating local traffic. I will also provide support for Sprint PCS' position relative to prior Florida Public Service Commission (FPSC) decisions. Last, I will also provide support as to why Sprint PCS' position is consistent with the FTA and FCC rules and why it provides benefits to end users customers.

Q. What is Sprint PCS' main goal in this proceeding?

A. Sprint PCS is seeking to recover the additional costs that it incurs in terminating traffic that originates on BellSouth's network. For example, if BellSouth's end user customer originates a call to a Sprint PCS customer, the call originates on the BellSouth network, traverses through interconnection facilities to the Sprint PCS network and terminates to the Sprint PCS customer's telephone. Sprint PCS is due compensation from BellSouth for terminating the call on its network. The FTA provides that Sprint PCS is entitled to recover its "additional costs" of terminating this traffic. Sprint PCS has filed a cost study in this proceeding that provides justification for the level of costs that it incurs and is seeking to establish

a compensation rate based on Sprint PCS specific costs. The fundamental disagreement between Sprint and BellSouth is over the level of these costs and subsequent charges.

Q. You refer to the Federal Telecommunications Act. What is the Federal Telecommunications Act (FTA)?

A. The FTA was signed into law on February 6, 1996, and provides the framework for the development of rules by the FCC and state commissions necessary to promote competition in the local marketplace. As the FCC recognized in its First Report and Order in Docket 96-98, "Three principal goals established by the telephony provision of the 1996 Act are: (1) opening the local exchange and exchange access markets to competitive entry; (2) promoting increased competition in telecommunications markets that are already open to competition, including the long distance services markets; and (3) reforming our system of universal service so that universal service is preserved and advanced as the local exchange and exchange access market move from monopoly to competition." Local Competition Order, 11 FCC Rcd 15499, 15505 ¶ 3 (1996).

Q. What specific section of the FTA provides guidelines relative to reciprocal compensation?

A. Specifically, Section 251(b)(5) provides that all local exchange carriers have "The duty to establish reciprocal compensation arrangements for the transport and termination of telecommunications."

Q. Does the FTA provide any guidance on the appropriate pricing methodology for reciprocal compensation?

A. Yes. Section 252(d)(2) is entitled "Charges For Transport and Termination of Traffic." Specifically, Section 252(d)(2)(A) states that – "a State commission shall not consider the terms and conditions for reciprocal compensation to be just and reasonable unless – (i) such terms and conditions provide for the mutual and reciprocal recovery by each carrier of costs associated with the transport and termination on each carrier's network facilities of the other carrier; and (ii) such terms and conditions determine such costs on the basis of a reasonable approximation of the additional costs of terminating such calls."

The key phrase in this Section is "additional costs". The FTA provides that each carrier is entitled to recover its respective additional costs of terminating traffic that originates on another carrier's network. Nowhere does the FTA provide any statutory guidelines on what constitutes "additional costs". The definition of "additional costs" is therefore left to the Federal Communications Commission (FCC).

Q. Has the FCC developed rules relating to transport and termination of traffic?

A. Yes. The FCC promulgated rules in Docket 96-98 relating to reciprocal compensation for transport and termination of local telecommunications traffic. There are two specific rules that are pertinent to this proceeding as it relates to the

rate that Sprint PCS may charge BellSouth for terminating traffic on the Sprint PCS network. Rule 51.701 provides for the scope of the transport and termination pricing rules and Rule 51.711 provides guidelines associated with symmetrical and/or asymmetrical reciprocal compensation. See 47 C.F.R. §51.701 and 51.711.

Q. Please explain the difference between mutual compensation, symmetrical compensation, and asymmetrical compensation.

A. Mutual compensation is compensation between two carriers where each carrier receives compensation for terminating calls from the other carrier. It simply refers to a mechanism of compensation and has nothing to do with the level of charges assessed by either carrier.

Symmetrical compensation, on the other hand, addresses the level of charges between the carriers. Symmetrical compensation is a mechanism that provides for the same level of charges to be utilized by both carriers when compensating each other for terminating traffic originated on the other carrier's network. See 47 C.F.R. ¶ 51.711(a).

Asymmetrical compensation also addresses the level of charges between carriers. However, asymmetrical compensation is a mechanism that provides for different levels of compensation based upon each carrier's unique, additional costs of terminating the other carriers' traffic on its network.

BellSouth and Sprint PCS have both agreed to the concept of mutual compensation but have disagreed over application of asymmetrical rates by Sprint PCS, in particular, the "additional costs" that Sprint PCS incurs to terminate BellSouth's local traffic.

Q. Does the FCC address asymmetrical compensation in their rules?

A. Yes. Rule 51.711(b) states that "A state commission may establish asymmetrical rates for transport and termination of local telecommunications traffic only if the carrier other than the incumbent LEC (or smaller of two incumbent LECs) proves to the state commission on the basis of a cost study using the forward-looking economic cost based pricing methodology described in 51.505 and 51.511 of this part, that the forward-looking economic costs for a network efficiently configured and operated by the carrier other than the incumbent LEC (or smaller of two incumbent LECs), exceed the costs incurred by the incumbent LEC (or the larger incumbent LEC), and, consequently, that such a higher rate is justified." In addition, the FCC directed states to depart from symmetrical rates if a carrier can justify different compensation rates based upon a factual record including a cost study. Local Competition Order, ¶1089.

Q. What is the practical impact of this rule as it relates to this proceeding?

A. This rule is the very foundation of Sprint PCS' argument in this proceeding. It is very clear from the rule that if Sprint PCS can prove to the Florida Public Service Commission (FPSC) that its cost study is consistent with the FCC's pricing rules,

then PCS is entitled to recover its "additional costs" from BellSouth for terminating traffic that originates on BellSouth's network. Sprint PCS is providing expert testimony in this proceeding, in the testimonies of Mr. Farrar, Mr. Quackenbush, Mr. Mitchell and Mr. Sabatino, that fully substantiates the "additional costs" that Sprint PCS incurs.

Q. How does the FCC define "additional costs"?

A. The FCC defines "additional costs" as it relates to incumbent LECs in the First Report and Order in Docket 96-98. In the text of the Order, at paragraph 1057, the FCC states that, "We find that, once a call has been delivered to the incumbent LEC end office serving the called party, the "additional cost" to the LEC of terminating a call that originates on a competing carrier's network primarily consists of the traffic-sensitive component of local switching." Because the costs of local loops and line ports associated with local switches "do not vary in proportion to the number of calls terminated over these facilities," the FCC concluded that "such non-traffic sensitive costs should not be considered 'additional' costs when a LEC terminates a call that originated on the network of a competing carrier." Local Competition Order, 11 FCC Rcd at 16024-25 ¶ 1057.

The FCC reaffirmed its conclusion in its first reconsideration order: "[T]he "additional cost" . . . of terminating a call that originates on another network includes only the usage-sensitive cost . . . but not the non-traffic sensitive costs. . .. Such non-traffic-sensitive costs, by definition, do not vary in proportion to the

number of calls terminating over the LEC's facilities and, thus, are not 'additional costs.'" Local Competition Reconsideration Order, 11 FCC Rcd 13042, 13045 ¶ 6 (1996).

Sprint believes that the FPSC should employ the same definition of "additional costs" as it relates to the costs incurred by carriers other than the incumbent LEC. Obviously, parity is a fundamental concept embodied throughout the FTA and adoption of the same definition of "additional costs" falls squarely within the parity concept. Certainly, it would be anti-competitive to allow one carrier to recover one set of defined cost elements (i.e., traffic sensitive costs) while requiring another carrier to recover only a subset of the other carrier's cost elements. The FCC has provided a definition of "additional costs" on the basis of whether the costs are traffic sensitive or not. The testimonies of Mr. Bridger Mitchell and Mr. Tony Sabatino on behalf of Sprint PCS provide an analysis of the traffic sensitive components of the PCS network.

Q. Has the Florida Commission ever reviewed the wireless architecture and issued any orders related to the appropriate elements of a wireless network that are included in transport and termination rates?

A. Yes, Sprint's ILEC in Florida arbitrated the issue of "equivalent facilities" with Wireless One in Docket No. 971194-TP. The basic issue in that proceeding was whether Wireless One was entitled to charge Sprint ILEC for tandem switching, transport and end office switching functionality (on a symmetrical basis) for

terminating Sprint ILEC originated calls. Wireless One argued that the Mobile Switching Center (MSC) is a tandem switch and that cell sites are equivalent to end office switches in the wireline network. Sprint ILEC argued that Wireless One did not switch the call twice and that therefore the Wireless One network did not perform both tandem and end office switching functionality. Sprint ILEC argued that only the end office switching rate should be charged when Sprint terminated traffic on the Wireless One network.

Q. What was the Commission's decision in the Wireless One proceeding?

A. This Commission construed the definition of "equivalent facilities" broadly and determined that Sprint ILEC and Wireless One both transport, switch and terminate telecommunications traffic and that the two systems are functionally equivalent even though they utilize different technologies. The Commission also stated that "the cell sites, although not providing a switching function, do provide essential functions associated with transport and 'delivery of a call to the called party's premises', as set forth in FCC rule 47 C.F.R.§51.701(d). Wireless One's network facilities are, therefore, equivalent facilities for purposes of reciprocal compensation."

Q. How does the Wireless One decision relate to Sprint PCS' Arbitration Petition and the recovery of its costs for transport and termination?

A. Although wireless carriers do not switch calls twice within their network (except on calls that travel between MSCs), this Commission recognized that the

functionality provided by the MSC and cell site is, in fact, the equivalent of the LEC tandem/end office structure.

The issue of equivalent facilities does not need to be re-litigated in this proceeding. In fact, there is no need for this argument under the FCC's rule related to asymmetrical compensation. The focus of the FPSC's inquiry in the instant arbitration should be on the "additional costs" Sprint PCS incurs in terminating traffic, not whether one or more of its PCS network elements are "equivalent" to BellSouth network elements.

Sprint PCS is before this Commission with a cost study that conforms to the FCC prescribed methodology and, if this Commission agrees with the cost analysis, then Sprint PCS should be allowed to recover its "additional costs" of transport and termination consistent with its cost study. Again, the relative impact of the FPSC's decision is to treat the cell site as equivalent to a wireline end office and thus recognizes that the costs of transport and termination in a wireless network extends from the MSC all the way through to, and including, the cell site. These are the costs that Sprint PCS has included in its cost study and that support its proposed rate for reciprocal compensation.

Q. Did this Commission recognize the difficulty in comparing wireline and wireless networks?

A. Yes, this Commission stated that "the rate elements that will be applied may not match exactly with every particular function performed, or the cost associated with that function." This Commission articulated in its decision its belief that this approach provided two fundamental advantages; 1) alternative local carriers with different network technologies will not be unduly disadvantaged with respect to methods of cost recovery simply because their networks are not identical to those of the incumbents and 2) it provides less incentive for carriers to attempt to gain a competitive advantage by means of the regulatory system with respect to revenues and compensation. Clearly, these advantages extend equally to allowing a carrier to recover its "additional costs" of transport and termination as allowed both statutorily in the FTA and by the FCC's rules.

Q. Has this Commission ever approved agreements with asymmetrical rates?

A. Yes, Sprint PCS is aware of at least one instance in which this Commission has approved an interconnection agreement containing asymmetrical rates. Sprint's ILEC has an interconnection agreement with BellSouth on file that provides for asymmetrical rates for reciprocal compensation. The rate that applies to BellSouth terminated traffic is $0.0020 per MOU while Sprint ILEC charges a rate (end office plus transport) of $0.00438, or 119% higher. Perhaps more important is BellSouth's recognition that costs do, in fact, vary by carrier and its acceptance of the asymmetrical rates within the agreement. This rate differential is also the case in other states that have conducted generic proceedings related to unbundled network element and reciprocal compensation pricing. For example, in

North Carolina, the state commission approved rates, based on company-specific costs for Sprint's ILECs at levels which are approximately 95% to 110% higher than BellSouth's rates. (Note: The North Carolina Utilities Commission approved separate rates for Sprint/United and Sprint/Centel properties.)

Q. What rate is Sprint PCS proposing for its asymmetrical reciprocal compensation?

A. Using the cost methodology authorized by the FCC for determining the additional cost of interconnection, transport and termination of local traffic, and based upon Sprint PCS cost study filed herein, Sprint PCS is recommending a rate of $0.066 per minute as its asymmetrical reciprocal compensation rate.

Q. Please explain the benefits to end user customers when Sprint PCS recovers its "additional costs" of transport and termination as mandated by law.

A. The benefits to consumers by the proliferation of competition in the market place is one of the most critical goals of the FTA, the FCC's rules and Sprint PCS' proposal in this proceeding. Competition will create incentives for carriers to be innovative, low-cost providers, which in turn will provide end user customers with competitive alternatives at lower prices.

One of the greatest potential sources of competition with the landline network will be the growing wireless network. So long as wireless endusers are required to pay

the additional costs of terminating traffic from landline customers, however, this competition cannot flourish.

Under the current symmetrical arrangements, BellSouth is made whole by wireless carriers when a wireless end-user uses the landline network. When a BellSouth customer uses the wireless network, however, BellSouth expects the wireless enduser to bear the additional costs of terminating that call. If Sprint PCS is not allowed to recover its costs of terminating calls from BellSouth's end user customers, then it must recover these costs from the Sprint PCS end user customer.

This forces Sprint PCS to artificially inflate the rates that it charges its end user customers to recover the costs placed on its network by the origination of traffic by BellSouth's end user customers. To effectively realize the benefits of cost causation pricing principles, each carrier must recover the "additional costs" of transport and termination from the originating carrier, not its end user customers. In fact, the FCC recognized this in its Second Annual CMRS Competition Report where it stated that direct competition between fixed and mobile service providers will not occur until each carrier recovers its "actual costs of interconnection." It will not be possible for Sprint PCS to compete with BellSouth so long as Sprint PCS end user customers, unlike BellSouth's customers, are required to pay for the costs of receiving calls. This concept is clearly embodied in the FTA and the FCC's rules.

Q. Why should BellSouth bear an additional expense when terminating traffic to a wireless enduser customer?

A. This additional expense can be construed as compensation for an additional benefit. The universal access provided by wireless networks benefits BellSouth by permitting it to terminate calls which would otherwise go unanswered. It is not unreasonable that BellSouth should pay for this added benefit. Additionally, when BellSouth creates a cost by seeking to use the wireless network, the wireless company should be compensated its additional costs.

Q. Does this conclude your testimony?

A. Yes, it does.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY

OF

ANTHONY SABATINO

Q. Please state your name, occupation and business address.

A. My name is Anthony Sabatino. I am currently employed as National Radio Frequency (RF) Engineering Director for Sprint Spectrum L.P. d/b/a Sprint PCS. My business address is 11880 College Blvd., Overland Park, Kansas.

Q. What is your educational background?

A. I hold a Bachelor of Science Degree with a major in electrical and computer engineering from the University of Kansas and a Master of Science Degree in Electrical Engineering from the University of LaSalle.

Q. Please describe your professional experience.

A. I have twenty-one years of experience in engineering and management with expertise in telecommunications, RF Engineering, system designs and project development. I was a member of the initial Sprint PCS corporate launch team and was the lead RF engineer during the startup phase of Sprint PCS' business. I continue to be the primary RF engineer for the operational phase of the Sprint PCS business. I developed the Sprint PCS national RF engineering standards and directed all RF engineering related design procedures and launch criteria. My key

areas of responsibility include microwave relocation, engineering standards, capacity planning, RF propagation modeling, contract specifications, FCC/FAA compliance, interference analysis and frequency planning. I have personally conducted several local market designs and performed local market optimizations.

Q. What is the purpose of your testimony?

A. My testimony will describe the operation of the Sprint PCS network and the components necessary to terminate a call to a Sprint PCS end-user customer. I will further explain why each element contained in the Cost Study is traffic sensitive and a shared resource. Finally, my testimony will support the cost and quantity numbers contained in the input module of the Cost Study with the exception of the Demand Worksheet, Annual Charge Factor Worksheet and the Collocation Worksheet, which will be addressed by Mr. Farrar and Mr. Quackenbush.

Q. How do you determine whether an element of the network is traffic sensitive?

A. In order to determine whether an element of the PCS network is traffic sensitive, I determine whether an additional unit of the element will be necessary to complete a call where the number of subscribers remains constant and the total minutes of use increase.

Q. How do you determine whether an element of the network is a shared resource?

A. If the element is used by more than one subscriber, either simultaneously or sequentially, and is not dedicated to a single subscriber, it is a shared resource.

Q. Please explain the path of a landline BellSouth-originated call terminating on the Sprint PCS network.

A. Sprint PCS generally interconnects to the Public Switched Telephone Network ("PSTN") through a 2A connection with BellSouth's tandem in each LATA. In some circumstances, a 2B connection may be established directly to an end-office. Traffic originating from a BellSouth customer is handed to Sprint PCS at the tandem and carried over dedicated trunks to the Mobile Switching Center ("MSC"). Traditional cellular providers have also referred to the MSC as the Mobile Telephone Switching Office ("MTSO"). The MSC (in a Nortel Network) consists of two primary components, the Mobile Telephone Exchange ("MTX") and the Base Station Controller ("BSC"). The call is then routed over Backhaul Facilities (dedicated shared lines connecting the MSC and the cell site) to the Base Station Transceiver Subsystem ("BTS"). The BTS converts the voice data to a format appropriate for transmission, assigns a voice path to the call and sends the call, via the antenna and structure, over Sprint PCS' licensed spectrum to the end-user handset. Exhibit AS-1 is a simplified diagram of the path of a call terminating on the Sprint PCS network:

Q. What is the Mobile Switching Center?

A. The Mobile Switching Center ("MSC") or Mobile Telephone Switching Office

("MTSO") is the primary point of interconnection for the PSTN and performs much of the initial call set up functions. Because landline networks are not capable of tracking the cell site currently providing service to a wireless subscriber, a single point of switching must be maintained at the MSC. Nortel is the primary vendor supplying MSCs in Sprint PCS' Florida market. In Nortel networks, the MSC is divided into two separate units known as the MTX and the BSC. The MTX performs the initial call set up, signaling functions, and primary call processing functions. The BSC assists the MTX in call processing, communicates with the cell sites, converts the signal to the appropriate digital configuration (see vocoding discussion below), establishes a call path to the cell site serving the end user mobile customer and manages handoffs between cell sites. Other vendors, such as Lucent, do not separate these units but join them in a single component. Because Sprint PCS uses Nortel technology in Florida, however, the cost study shows the MTX and BSC as separate components.

Q. Please explain the functions performed by the MTX

A. The MTX performs call processing, some mobility management, collection of billing data, storage of subscriber information, and collection of system performance data. Each of these functions is described in greater detail below:

Call Processing: Call processing consists of switching, digit translation, call control and signaling including the processing and transmission of SS7 signaling with the PSTN. The MTX contains the primary computing module which

provides the high level intelligence for the network.

Mobility Management: The mobility management performed by the MTX consists of mobile call set-up and tear down, call routing and inter-MSC handoffs (a hard handoff).

Billing Data: The MSC generates the necessary Customer Detail Records ("CDRs") which permit billing data capture and processing, both to end-user customers and interconnecting carriers.

Storage of Subscriber Information: Upon receiving a call from the PSTN for termination to a Sprint PCS end-user customer, the MSC must first determine whether the end-user is currently being served by a cell site connected to that MSC. It does this by checking the Visitor Location Register ("VLR") which contains a listing of all end-users currently registered with that MSC. If the end-user receiving a call is not located within the VLR, the MSC contacts the Home Location Register ("HLR"), a free standing national platform, over the SS7 network. The HLR maintains a database of the current location of each user and provides the information necessary to transfer the call to the MSC covering the territory where the end-user is located. The HLR is not necessary for call origination but is required for call termination.

System Performance Data: Data concerning operational measurements, alarms for

service disruptions and other system performance information is generated by the MTX.

Q. What are the components that make up the MTX and allow it to perform the functions you have described?

A. The elements of the MTX are listed as line items 9 through 35 of the Cost Study submitted by Mr. Farrar. A more detailed description of each line item is contained in Exhibit AS-2 to my testimony.

Q. Are the components that make up the MTX traffic sensitive?

A. Yes. Increasing the number of minutes passing through an MTX, while assuming a fixed number of subscribers, requires that the components of the MTX be increased to provide additional capacity. Ultimately, if the increased minutes of use reach a sufficient volume, an entirely new MTX will be needed in order to meet capacity demands.

Q. Has Sprint PCS ever been required to install a new MTX because of increased minutes of use?

A. Yes. The Miami market has been expanded to three MTXs in order to handle current minute of use requirements.

Q. Please explain the functions performed by the BSC.

A. The Base Station Controller ("BSC") performs additional call processing, voice

coding, soft handoff functions, backhaul interface and some power control. These functions are described in greater detail below:

Call Processing: The BSC assists the MTX in processing an inbound call. It establishes resources and the necessary connections to reach the cell site serving the end-user.

Voice Coding: One of the unique elements of a wireless network that expands capacity and creates a more robust signal is the use of voice coding or "vocoding." Vocoders take advantage of the natural silences and narrow frequency range of human speech to compress the amount of data needed to represent voice conversation. The vocoders contain a codebook which stores a collection of arbitrary wave form segments. These wave form segments have been likened to a type of vocal clip art. Rather than transmitting all of the bits of information necessary to express these wave forms, the vocoder transmits a code that represents the wave form. The vocoder on the receiving end of the call can then "decompress" the signal by reproducing the representative wave form based on the information supplied.

Soft Handoff: Soft handoffs allow a call to be transferred from one cell site to the next without any disruption of the actual transmission of the call. In older analog systems, calls moving from one cell site to another were required to change transmission frequencies. This created "hard handoffs" that left holes in

conversations and increased the likelihood that a call would be lost. Sprint PCS uses a digital air interface protocol known as Code Division Multiple Access or CDMA. One of the advantages of CDMA technology is the ability of more than one base station to handle traffic during the same call. This can be done because all base stations operate on the same frequency. The Sprint PCS network takes advantage of this technology to perform "soft handoffs" which allow a new connection to be made with a base station before the old connection is dropped. The Base Station Controller manages the resource allocation for these handoffs.

Backhaul Interface: The physical T1 connections between the cell site and the MSC occur at the BSC. These physical connections are routed through a Distribution/Consolidation Cabinet or "DSCO" within the BSC. The DSCO has the ability to move a call path from one base station (or more precisely, a T1 connection to a base station) to another T1 connection without disrupting the conversation.

Power Control: CDMA technology relies upon control of the strength of the signals exchanged between the base stations and the end user handsets. Although the BTS units maintain the primary power control function, certain aspects of power control are supervised by the BSC.

Q. What are the components of the BSC that allow it to perform the functions described above?

A. The components of the BSC are listed in lines 37 through 47 of the Cost Study prepared by Mr. Farrar. A more detailed description of each line item is contained in Exhibit AS-2 to my testimony.

Q. Are the components of the BSC traffic sensitive?

A. Yes. The number of minutes a BSC can handle is limited by the capacity of the vocoders and the DSCO. As additional base stations are added to meet usage demand, additional BSCs must be added to the network.

Q. Has Sprint PCS been required to install additional BSCs to accommodate increased minutes of use?

A. Yes. Multiple BSCs have been added to the Florida network to provide additional capacity.

Q. What is a backhaul facility?

A. Backhaul is the term for the connectivity between the MSC and the cell sites. The primary means to establish this connectivity is through a T1 line. In certain locations, microwave links are used instead of T1 lines.

Q. Are backhaul facilities traffic sensitive?

A. Yes. The total number of minutes that can be carried by a T1 line is limited. As additional spectrum is used to address traffic volumes, the number of T1 lines must be increased. One T1 line is required for the first two Carriers (frequencies)

and a second T1 line is required to manage a third carrier.

Q. What is a cell site?

A. A cell site consists of three primary components, the Base Station Transceiver Subsystem ("BTS") or electronics, the structure (i.e. the tower or other platform) and the antenna.

Q. What is a Base Station Transceiver Subsystem or BTS?

A. The BTS is the processing equipment located at the cell site that performs call set up, softer handoffs, RF conversion and power amplification. The BTS consists of three major components, the Digital Shelf ("DS"), the Radio Frequency Unit ("RFU") and the Power Unit. The functions of the BTS are described in greater detail below:

Call set up: The BTS receives an unchannelized signal from the BSC over the T1 link. This unchannelized signal is converted to individual voice paths. The Digital Frame assigns the voice call to a CDMA code channel and informs the handset what channel to use in processing the call.

RF conversion and Power Amplification: After the DS performs the CDMA channel modulation the signal is upconverted to a 4.95 MHz IF signal and handed to the RFU. The RFU converts the IF signal to the RF band being used by the cell site, amplifies and filters the signal and transmits the signal to the antenna.

Softer Handoffs: The typical BTS serves three distinct geographic areas or sectors. As a caller moves from one sector to another sector served by the same BTS, the processor in the Digital Shelf handles the handoff and resource assignment for the transfer. The BSC must handle resource assignments for calls that move between two BTS.

Q. Is the BTS traffic sensitive?

A. The BTS is extremely traffic sensitive. A single sector of a BTS can generally process only 14 calls at one time before call quality begins to degrade and calls begin to be dropped. As minutes of use increase, the ability of the BTS to handle these minutes must be increased.

Q. How is capacity increased at the BTS?

A. There are two primary methods of increasing the capacity of the BTS and wireless networks generally: One, add an additional BTS by splitting the coverage area of a cell site. Two, add additional frequency ranges, also known as Carriers, to the existing BTS locations.

Q. How do you determine whether to add a Carrier or split a cell?

A. Multiple factors must be weighed each time a BTS exceeds its current capacity. Cell splitting requires the lease or purchase of additional land on which to house the BTS. The process of locating a willing land owner, clearing zoning requirements, meeting legal challenges and constructing the necessary facilities

can take up to two years. If capacity is needed immediately, this will strongly weigh against cell splitting. In addition, cells can only be split a certain number of times before they can be made no smaller without creating interference. The addition of carriers, however, requires that the electronics of the BTS be expanded, not only at the site that is blocking, but at all surrounding sites so that they can operate on the same frequency or carrier and manage soft handoffs.

Q. Has Sprint PCS been required to add carriers or split cells to manage increased minutes of use in the Florida market?

A. Yes. Sprint PCS has been required to perform extensive cell splitting, as well as the addition of carriers, to meet the minute of use demand in the Florida market. The vast majority of Sprint PCS' cell sites in Florida have been installed to handle increased demand.

Q. What are the components of the BTS?

A. The components of the BTS are listed in lines 101 through 115 of the Cost Study prepared by Mr. Farrar. A more detailed description of each line item is contained in Exhibit AS-2 to my testimony.

Q. Why does the model contain five different tower types and five different antenna types?

A. Sprint PCS uses different platforms on which to place its antennas and different types of antenna depending upon the topography, existing structures and

economics. Where possible, for example, Sprint PCS will collocate on another carrier's structure. Thus each type of structure will have a different cost. Lines 91 through 100 of the Cost Study represent the various types of structures and antennas used at a cell site.

Q. How can a tower and/or antenna be traffic sensitive?

A. When the capacity of a BTS is exhausted, additional towers must be constructed to support additional BTS units. Each BTS unit requires a tower to support its attendant antenna. Accordingly, the total number of towers required to serve a geographic area is driven by the minutes of use passing across the system. Thus, even if the number of subscribers remains constant, increased minutes of use require the addition of towers to provide service.

Q. Why is Spectrum included in the Cost Study?

A. Unlike the local loop of a landline carrier, spectrum is both a shared resource and traffic sensitive. Spectrum is used by a specific individual only while in a call. Once the call is terminated, that spectrum is released for use by another. Moreover, when the capacity of one carrier is exhausted, additional spectrum is required to handle additional minutes of use. Thus, Sprint PCS has been required to add carriers (i.e. frequencies or spectrum) in order to handle the minutes of use passing over the system. The model contains the actual cost of the spectrum purchased at auction by Sprint PCS.

Q. What is microwave relocation and why is this a cost included in the model?

A. When the FCC auctioned the licenses for use of spectrum, the license was subject to the rights of existing users. In addition to paying the FCC for the use of the spectrum, Sprint PCS was required to purchase spectrum to which incumbent users could be transferred. Thus, the cost of spectrum includes the cost of clearing that spectrum of incumbent users.

Q. Do you maintain that every part of the Sprint PCS network is traffic sensitive?

A. No. The handset is not a traffic sensitive element of the network and our sunk cost of providing handsets is not included in the Cost Model. Unlike the landline network, the handset in a wireless network performs most of the functions of a line card. Although not all of the BORSCHT define functions performed by a line card are relevant in a wireless network, the wireless handset does perform a majority of these functions. The handset serves as the interface between the traffic sensitive and non-traffic sensitive aspects of the network. The voice mail system is also not included in this model.

Q. What are the Transmission elements identified in lines 117 through 135 of the Cost Study model?

A. The Transmission elements are the various transmission facilities needed to exchange traffic between the various components of the wireless network. All of these elements are shared resources and traffic sensitive

Q. What is the source of the material costs information contained in the Cost Study?

A. The material costs contained in the Cost Study are based upon our most recent vendor contracts and represents the best prices available for the equipment contained in network. Sprint PCS uses a competitive bidding process and its substantial national volume buying to achieve the lowest possible costs for network infrastructure. The material costs contained in the model does not reflect the actual embedded cost of the Sprint PCS network. In fact, the cost of BTSs has dropped dramatically over the past year and the model substantially understates the actual cost paid by Sprint PCS for its current infrastructure.

Q. Does the Cost Model use the best currently available technology?

A. Yes. The model reflects the best currently available technology for the provision of wireless service. For example, the BTS units originally installed were limited in their ability to expand to additional carriers. Current technology, however, does allow carrier expansion without the addition of an entirely new BTS. The model assumes the use of these expandable BTS units throughout the network even though legacy units are still in place in a large portion of the network.

Q. Does the Model reflect an efficiently configured and operated wireless network?

A. Yes. Sprint PCS competes against multiple vendors of wireless services and, accordingly, must build and operate its network in the most efficient manner

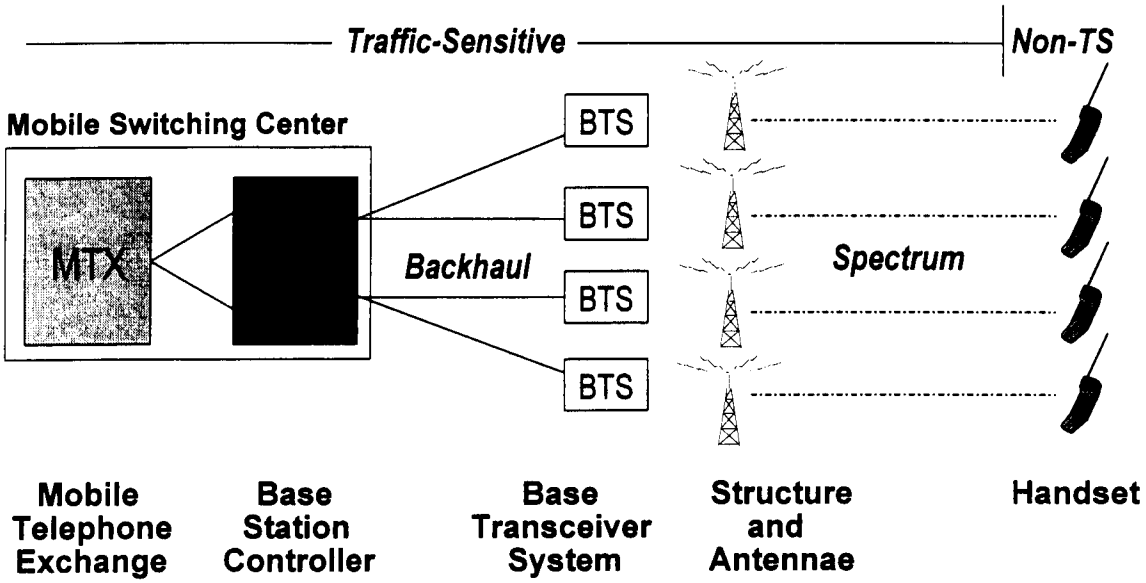
possible. The cost model reflects the tight engineering and capital controls used by Sprint PCS to ensure that the network is being configured and operated efficiently.

Q. Does this conclude your testimony?

A. Yes.

SPRINT PCS
EXHIBIT AS-1

PCS Network Architecture



Sprint PCS Cost Study
Line Item Description

Description	Definition	What it is used for
(MSC) Mobile Switching Center		
MS-4 Port Cards (FRONT)		used with the DS-30 PB / DS-30 STP PB for speech and message signalling to the MS.
DS-30 PB		A 10-bit 32-channel 2.048-Mbit/s speech-signaling and message-signaling link as used in the DMS-100 Family switches.
DS-30 STP PB		Required at the MS for support of the LMS shelves in the LPP.
ENET Shelves	Enhanced Network	A matrixed timeswitch that provides non-blocking single-stage switching
Crosspoint Cards		Performs the nonblocking switching function for the ENET; accepts 16-K pulse code modulation input channels which are received from the vertical bus; the correspond switches the channels to any of 16-K PCM output channels on the horizontal bus.; required for slotting of fiber paddle boards.
DS512 Quad PB		ENET card providing 4 fiber ports per card to support DTC connections
LPP	Link Peripheral Processor	One LPP is used for signaling applications(LIU7, NIU, EIU)
Enhanced CAU	Enhanced CDMA Application Unit	CAU allocates and deallocates SBS call processing Resources (i.e., voice channels) for CDMA calls
Enhanced CIU	Enhanced CDMA Interface Unit	CIU routes packets containing signaling and maintenance messages between BSC and MTX
RMU	Resource Management Unit	RMU allocates and deallocates SBS call processing resources (I.e., voice channels) for CDMA calls
MCTM	Meridian Cabinet Trunk Module	Provides the digital trunking interface to the PSTN (voice, channelized T1s), BSC, or other switches

Sprint PCS Cost Study
Line Item Description

Description	Definition	What it is used for
DTC	Digital Trunk Controller	A peripheral module (PM) that uses digital trunk circuits to connect DS30 links from the network.
MCAM-3 (power, service, and I/O)	Meridian Cabinet Auxiliary Module	Houses shelves for Integrated Service Modules (ISMs), a Dual Input/Output (DIO) module, and a Power Distribution Panel (PDP).
SMC	Storage Media Card	The SMC along with the IOM Controller card provide a variety of I/O functions including RS-232C serial connections, X.25 connections, V.35 asynchronous connections, DDU controlls, DAT controls; optional unit that can hold up to 2 modular, plug-in DDU and/or DAT
DAT (225 mb)	Digital Audio Tape	1.3 Gbytes 3.5" SCSI 4 mm DAT drive
DDU (1.0G)	Disk Drive Unit	provides storage, reading, and recording capabilities
ATM		Expands on the current capability of the BSC with the addition of interconnectivity between BSCs; ATM standards based switch in the BSC lineup to carry ISSHO/IBSHO traffic
XA CORE	Extended Architecture Core	Enhancement to the CM to support additional memory, higher call processing and faster I/O capability
(BSC) #1 Base Station Controller		
BCNI	Base Station Communications Network Interface	Provide BCN interfaces; interface for SBS, BTS, CIU and overhead connections. The BCN card is slotted in the DISCO shelf of the CIS frame. Each BCNI card provides 8 ports, some of which are wired for SBS support and hardwired for overhead. Overhead includes TFU, BSM and test ports.
BIU	Backhaul Interface Unit	Performs protocol conversion between the EIA-422 BCN link and the unchannelized T1 link.

Sprint PCS Cost Study
Line Item Description

Description	Definition	What it is used for
DISCO	Distribution and Consolidation Shelves	Provide Voice, Data, and Packet Routing
CDSU	Combination of Channel Service Unit/Data Service Unit	The ACE and CIM cards function as the channel service and data service units for the BSC. These cards reside on the CDSU shelf in the BIU cabinet. The CDSU provides physical termination for T1 lines and BCN ports. The ACE and CIM cards serve one primary function. They perform protocol conversion between the physical layer of the T1 framing format and the BCN RS-422 type format.
SBS Shelves with SEL cards	Selector Base Subsystem	Performs RF management function such as voice coding, soft handoff selection, and some power control
SBS shelves with ESEL cards	Selector Base Subsystem	Performs RF management function such as voice coding, soft handoff selection, and some power control
EVRC Software	Enhanced Variable Rate Codec	Enhanced Variable Rate Codec defined in IS-127; enhanced 8 kbps vocoder that offers the capacity of IS-96A 8 kbps vocoder and voice quality equivalent to the 13 kbps vocoder; requires software, hardware (ESEL) and EVRC capable mobiles; the software is sold via a SOC by purchasing EVRC channels to fit carrier needs
BSM	Base Station Manager	performs network management functions
(BSC) #2 Base Station Controller		
BCNI	Base Station Communications Network Interface	Provide BCN interfaces; interface for SBS, BTS, CIU and overhead connections. The BCN card is slotted in the DISCO shelf of the CIS frame. Each BCNI card provides 8 ports, some of which are wired for SBS support and hardwired for overhead. Overhead includes TFU, BSM and test ports.

Sprint PCS Cost Study
Line Item Description

Description	Definition	What it is used for
DISCO	Distribution and Consolidation Shelves	Provide Voice, Data, and Packet Routing
BIU	Backhaul Interface Unit	Performs protocol conversion between the EIA-422 BCN link and the unchannelized T1 link.
CDSU	Combination of Channel Service Unit/Data Service Unit	The ACE and CIM cards function as the channel service and data service units for the BSC. These cards reside on the CDSU shelf in the BIU cabinet. The CDSU provides physical termination for T1 lines and BCN ports. The ACE and CIM cards serve one primary function. They perform protocol conversion between the physical layer of the T1 framing format and the BCN RS-422 type format.
SBS Shelves with SEL cards	Selector Base Subsystem	Performs RF management function such as voice coding, soft handoff selection, and some power control
SBS shelves with ESEL cards	Selector Base Subsystem	Performs RF management function such as voice coding, soft handoff selection, and some power control
EVRC Software	Enhanced Variable Rate Codec	Enhanced Variable Rate Codec defined in IS-127; enhanced 8 kbps vocoder that offers the capacity of IS-96A 8 kbps vocoder and voice quality equivalent to the 13 kbps vocoder; requires software, hardware (ESEL) and EVRC capable mobiles; the software is sold via a SOC by purchasing EVRC channels to fit carrier needs
BSM	Base Station Manager	performs network management functions
Transmission		
Digital Cross-Connect Sys./DS1 Cards	Dacs DS-1 cross connect cards	Used to transport DS-1 traffic to the wireless switch, and receive traffic from the wireless switch
Digital Cross-Connect Sys./DS1 Shelf	Dacs DS-1 cross connect shelf	Used to house the DS-1 port cards
Digital Cross-Connect Sys./DS1 Bay	Dacs DS-1 cross connect bay	Used to house the DS-1 shelves

Sprint PCS Cost Study
Line Item Description

Description	Definition	What it is used for
Digital Cross-Connect Sys./DS3 Cards	Dacs DS-3 cross connect cards	DS-3 cards transmit and receive traffic from the sonet ring and mux/demux it into 28 DS-1's
Digital Cross-Connect Sys./DS3 Shelf	Dacs DS-3 cross connect shelf	Used to house the DS-3 cards
Digital Cross-Connect Sys./DS3 Bay	Dacs DS-3 cross connect bay	Used to house the DS-3 shelves
Digital Cross-Connect Sys./Admin Bay		Used to send commands to the system regarding cross-connects. The Admin bay controls the system.
DSX-1 Relay Racks (Bays)	DS-1 cross connect panel	This is required for DS-1 termination and monitoring.
DSX-3 Cards		This is required for DS-3 termination and monitoring
DSX-3 Shelves		Used to house DSX-3 modules
Echo Cards		Used to cancel echo that results from converting from 4-wire to 2-wire via a hybrid circuit.
Echo Shelves		Used to house echo cards
Echo Relay Racks (Bays)		Used to house echo shelves
Channel Banks		Used for SS-7 signaling and internal court order surveillance.
Cable Rack		Overhead cable racking is for carrying power and dat cables.
National Platforms		
HLR/ SCP		Location information database

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY

OF

JOHN D. QUACKENBUSH

Q. Please state your name, occupation and business address.

A. My name is John D. Quackenbush. I am currently employed as the Manager, Capital Markets in the Treasury Department of Sprint Corporation. My business address is 2330 Shawnee Mission Parkway, Westwood, Kansas 66205.

Q. Please state your work experience, educational background, and professional qualifications.

A. I began employment with Sprint Corporation in the Local Telecommunications Division in May 1986. In February 1995, I began my present duties in the Treasury Department. My present duties include raising capital in the public and private markets, liability management including debt refinancing analysis, debt payment and compliance, inter-company debt management, rating agency relationships, and the preparation of cost of capital studies and testimony. Additionally, I currently serve as the Treasurer of Central Telephone Company, United Telephone Company of Ohio, and SprintPAC, the federal political action committee that provides Sprint employees a forum to support candidates for the U.S. Congress.

I have previously testified on behalf of Sprint companies before state regulatory commissions in the states of Florida, South Carolina, Kansas, Tennessee, New Jersey, Oregon, Missouri, Nevada, North Carolina, and Texas.

I was employed by the Illinois Commerce Commission from January 1982 through May 1986. During my commission employment, I held the titles of Financial Analyst, Senior Financial Analyst, Chief Financial Analyst, and Supervisor of the Rate of Return Section. I testified before the Illinois Commerce Commission in approximately thirty proceedings on topics including cost of capital, rate of return, capital structure, interim rate relief, phase-in plans, in-service criteria for electric generating units, diversification, holding company formation, mergers, and affiliated interest transactions. I also served as Governor James R. Thompson's representative on the National Governors Association Task Force on Nuclear Power Plant Financing.

I received the designation of Chartered Financial Analyst (CFA) in September 1993. Investment professionals earn the right to use the CFA designation by passing a series of three comprehensive, rigorous examinations over a minimum of three years. The CFA examination process challenges participants to remain current with today's rapidly changing investment environment. The CFA Body of Knowledge includes ethical and professional standards, investment tools, valuation, and portfolio management.

In December 1981, I received a Master of Business Administration degree with a concentration in Finance from Michigan State University. In May 1980, I graduated from Calvin College in Grand Rapids, Michigan with a Bachelor of Arts degree in Business Economics.

I serve on the Board of Directors of the Society of Utility & Regulatory Financial Analysts. Additionally, I am a member of the Association for Investment Management and Research, the Financial Management Association, the Eastern Finance Association, the Southern Finance Association, the Southwestern Finance Association, the Midwest Finance Association, and the Kansas City Society of Financial Analysts.

Q. Are you the same John D. Quackenbush that filed testimony on behalf of Sprint – Florida, Inc. in Docket No. 990649-TP on May 1, 2000?

A. Yes, I am.

Q. What is the purpose of your testimony?

A. I recommend that the Commission utilize a cost of capital for Sprint PCS of 14.91% for the purpose of determining reciprocal compensation rates in this proceeding. After reviewing the testimony of BellSouth witness Dr. Randall S. Billingsley in Docket No. 990649-TP, I conclude that the cost of capital for Sprint PCS is at least 14.91%. Therefore, it is appropriate for Company witness Farrar to use 14.91% as the Sprint PCS cost of capital in the Annual Charge Factor

Module of the Sprint PCS Cost Model for the purpose of determining reciprocal compensation rates in this proceeding.

Q. Please summarize Dr. Billingsley's testimony in Docket No. 990649-TP.

A. Based on his extensive cost of capital analysis, Dr. Billingsley concludes on page 33 of his testimony that "[m]y overall cost of capital estimate for BST [BellSouth Telecommunications] is in the range of 14.61% to 14.91%...." Dr. Billingsley arrived at his conclusion using sound financial concepts, a market value capital structure, forward-looking market-based financial approaches of estimating the cost of equity, and an accurate assessment of competition in the ILEC industry generally and in Florida specifically.

Q. What financial concepts do you rely on in evaluating Dr. Billingsley's testimony?

A. My evaluation is based on fundamental financial concepts that demonstrate that the appropriate cost of capital for both a competitive PCS wireless carrier and an incumbent local exchange company (ILEC) is the weighted average cost rate of investor-supplied capital. If the cost of capital in a forward-looking cost study is set equal to the company's weighted average cost of capital, investors will be afforded an opportunity to earn the minimum return that they require. The weighted average cost of capital is the sum of the costs of the components of investor-supplied capital, weighted by each component's relative proportion. The investor-supplied capital structure components include debt and equity.

Investors supply capital with the expectation of receiving a return on their investment. Investors require a return on a potential investment based on the risk of that investment in relation to the risk of other potential investments. Investors make and continue only those investments that are expected to provide returns that meet or exceed their required returns. In order to attract capital, a firm must provide investors with a return equal to or exceeding their required return. If a wireless carrier (or an ILEC) makes investments that are not expected to achieve at least its cost of capital, investors will be unwilling to provide capital and will look elsewhere for alternative investments.

Q. Are these financial concepts consistent with the FCC interconnection order?

A. Yes, the FCC interconnection order (First Report and Order in CC Docket Nos. 96-98 and 96-195 released August 8, 1996) is consistent with these financial concepts. When addressing forward-looking cost studies, the FCC interconnection order states:

> The concept of normal profit is embodied in forward-looking costs because the forward-looking cost of capital, i.e. the cost of obtaining debt and equity financing, is one of the forward-looking costs of providing the network elements. This forward-looking cost is equal to a normal profit. (Paragraph 700).

Q. How do the cost rates and ratios of the capital structure components in a forward-looking cost study differ from the cost rates and ratios typically

developed in the past for conventional ILEC cost of service ratemaking?

A. Not surprisingly, forward-looking cost rates and ratios are required in developing a forward-looking cost of capital. The cost of common equity is conceptually similar because conventional ratemaking has generally focused on the forward-looking cost of common equity. The primary conceptual differences are in the cost of debt and the capital structure ratios. The forward-looking cost of debt is conceptually different from the embedded cost of debt typically developed in the past for conventional cost of service ratemaking. The forward-looking debt cost rate is the rate at which new debt can be issued under prevailing market conditions, whereas the embedded cost of debt is the rate at which existing debt was issued under past market conditions. Likewise, forward-looking capital structure ratios are based on market values, not the book values used in the past for conventional cost of service ratemaking.

Q. Why do you propose to apply these financial concepts to Sprint PCS by reference to a recent cost of capital study performed by BST's cost of capital expert, Dr. Randy Billingsley?

A. Dr. Billingsley performed a market-based forward-looking cost of capital analysis for BST. To avoid instigating a protracted cost of capital discussion in this proceeding, Sprint PCS is willing to use a cost of capital estimate within the range of BST's cost of capital expert. My analysis indicates that Sprint PCS is riskier than BST, and therefore would require a cost of capital greater than BST. My proposal to use the high end of BST's cost of capital range will mitigate the need

to engage in an extensive analysis of Sprint PCS cost of capital.

Q. Why do you agree with Dr. Billingsley's use of the market value capital structure?

A. The use of market value weights in determining the cost of capital is justified on both conceptual and practical grounds. The market value capital structure approach is conceptually appropriate and consistent with establishing a forward-looking cost of capital. When addressing forward-looking cost studies, the FCC interconnection order (First Report and Order in CC Docket Nos. 96-98 and 96-195 released August 8, 1996) states:

> [T]he forward-looking costs of capital (debt and equity) needed to support investments required to produce a given element shall be included in the forward-looking direct cost of that element. (Paragraph 691).

A forward-looking cost study that uses forward-looking competitive market assumptions in the expense and investment components also requires forward-looking competitive market assumptions in the cost of capital component. The use of accounting-based book values is less consistent with the goals of a forward-looking cost study.

Basic, intermediate, and advanced finance textbooks address the cost of capital issue by defining capital structure weights as market value weights. These same textbooks address capital structure challenges from a market value perspective.

Academic theories of optimal capital structure apply to market value, rather than book value, capital structures. The fundamental financial concepts of using the cost of capital in decision making and capital budgeting to maximize shareholder value and invest only in projects that provide returns equal to or in excess of the cost of capital, are predicated on using market value capital structure weights. Dr. Michael C. Ehrhardt, on page 75 of The Search for Value: Measuring the Company's Cost of Capital (Boston, Massachusetts: Harvard School Business Press, 1994), states "using book values instead of market values can lead to substantial errors in estimating the weights."

Market values are dynamically determined in the financial marketplace by investors, while book values are determined by historical accounting practices. One-time accounting events that do not change market values can significantly alter book values. Examples of one-time accounting events include restructuring charges, the adoption of SFAS 106 for Other Post-Employment Benefits, and the discontinuance of regulatory accounting under SFAS 71. Additionally, the point in time at which a company issued common stock in the past does not impact forward-looking market values, but may significantly impact backward-looking book values. Over time, market values vary from book values as stock prices change. If a new event or announcement significantly enhances or detracts from shareholder value, that change is immediately translated into a market value change, while there is likely to be no immediate change in book value. Practically, differences between market and book values are typical rather than the

exception.

Competitive firms in competitive industries, including the wireless industry, rely on market value weights, as finance textbooks widely demonstrate to be appropriate. Conventional cost of service ratemaking was one past forum in which book value weights were widely accepted. One goal under conventional ratemaking was to identify the book value capital on the balance sheet that supported the book value rate base. However, the goal of a forward-looking cost study is vastly different, as indicated by the FCC interconnection order. It would be inappropriate to use book value weights in this proceeding simply because they were used for ILECs under conventional ratemaking.

Q. Why do you agree with Dr. Billingsley's use of the discounted cash flow and risk premium approaches to estimate the cost of equity?

A. The cost of common equity is based on investors' required return on common equity. The required return on common equity must be estimated with market-based forward-looking financial models. The discounted cash flow (DCF) and the risk premium models used by Dr. Billingsley are market-based forward-looking models.

Q. Given Dr. Billingsley's conclusion that a cost of capital in the range of 14.61% to 14.91% is appropriate for an ILEC such as BST, what justifies the use of the 14.91% upper end of the range for Sprint PCS?

A. Sprint PCS is a riskier investment than an ILEC such as BST. Thus, an investor would require a higher return for investing in Sprint PCS compared to BST. As a result, Sprint PCS would have a higher cost of capital than BST.

Q. Please describe the relative risks of wireless carriers and ILECs.

A. Digital wireless carriers are in an earlier stage of the industry life cycle and operate in a more competitive environment than ILECs. As a result, digital wireless carriers are generally more risky than ILECs.

In the industry life cycle, ILECs are mature companies, while wireless carriers are early-stage growth companies. Mature companies typically experience positive earnings and cash flow, high customer penetration, relatively slow growth, and relatively low risk. On the other hand, early stage growth companies typically experience minimal or negative earnings and cash flow, low customer penetration, relatively high growth, and relatively high risk.

Although competition and technological change dominate the current telecommunications environment for both wireless carriers and ILECs, wireless carriers have been embroiled in intense competitive battles that are just now developing for ILECs. Sprint PCS clearly is heavily involved in wireless industry competition. For instance, there are at least sixteen different wireless providers operating in Florida. Digital wireless carriers such as Sprint PCS are relatively recent entrants in the wireless arena. At the time of digital wireless carrier entry,

two entrenched analog cellular carriers already dominated each market. Sprint PCS competes in Florida with entrenched analog carriers AT&T and BellSouth in Miami/Fort Lauderdale, Jacksonville, West Palm Beach, and Orlando; AT&T and GTE (soon to combine with Bell Atlantic into Verizon Communications) in Tampa; and US Cellular and Alltel in Tallahassee and Gainesville. Other digital wireless carriers in these markets include Omnipoint and Aerial Communications (both recently acquired by Voicestream Wireless), Nextel, PrimeCo PCS (now part of Verizon Wireless), and Powertel. Additionally, BellSouth and Alltel have a digital presence in these markets. It is clear that Sprint PCS is fully immersed in the competitive environment that ILECs are still moving towards.

Q. What quantitative standards of comparison demonstrate that Sprint PCS is a riskier investment than an ILEC such as BST?

A. Financial ratios, debt ratings, and betas all indicate that Sprint PCS is a riskier company in which to invest than an ILEC such as BST.

Q. Please compare Sprint PCS financial ratios to BST and other ILEC financial ratios.

A. Financial theory indicates that the cost of common equity is a function of risk. No precise formula exists to directly measure risk. Market-based risk measures are conceptually superior to accounting-based risk measures. However, because there is a lack of available market-based risk measures for Sprint PCS given its short trading history, I began with some accounting-based risk measures. I identified

four risk measures consisting of the book value equity ratio, the cash flow-to-capital ratio, the pre-tax fixed charge coverage ratio, and the revenues-to-net plant ratio. I also considered a market-based financial ratio that is available for Sprint PCS, the market value equity ratio.

Q. How do the risk measures indicate relative risk levels?

A. The equity ratio provides a direct indication of financial risk by measuring the degree of financial leverage. This ratio demonstrates the percentage of total capital supplied by common stockholders rather than preferred stockholders and debt holders. All else equal, the higher the equity ratio, the lower the risk to the stockholder.

The cash flow-to-capital ratio provides an indication of both business and financial risk by measuring the adequacy of cash flow to the providers of capital. This ratio demonstrates the quality of reported earnings levels. All else equal, the higher the cash flow-to-capital ratio, the lower the risk to the stockholder.

The pre-tax fixed charge coverage ratio provides an indication of both business and financial risk by measuring the number of times that fixed charges, including interest and preferred dividends, are earned. This ratio demonstrates the adequacy of earnings levels. All else equal, the higher the fixed charge coverage ratio, the lower the risk to the stockholder.

The revenues-to-net plant ratio provides an indication of business risk by

measuring the ability to generate revenues from fixed assets. This ratio demonstrates the net plant turnover and the degree to which resources are employed to generate revenues. All else equal, the higher the revenues-to-net plant ratio, the lower the risk to the stockholder.

Q. How do the Sprint PCS accounting-based risk measures compare to those of BST and other ILECs?

A. The Sprint PCS risk measures indicate greater risk for every risk measure. The accounting-based risk measures are shown on Exhibits JDQ-1 through JDQ-4. The book value equity ratios are determined as of December 31, 1997, 1998, and 1999. The other three risk measures are shown for 1997, 1998, and 1999.

As shown on Exhibit JDQ-1, the Sprint PCS book value equity ratio has decreased over time from 31.6% to 22.2%, significantly lower than the BST and ILEC ratios that all exceed 48%. As shown on Exhibit JDQ-2, the Sprint PCS cash flow-to-capital ratio is negative for all years and significantly less than the BST and ILEC ratios that all exceed 38%. As shown on Exhibit JDQ-3, the Sprint PCS pre-tax fixed charge coverage ratio is negative for all years and significantly less than the BST and ILEC ratios that all exceed 7.0 times. As shown on Exhibit JDQ-4, the Sprint PCS revenues-to-net plant ratio has ranged from 9.9% to 43.8% and is significantly lower than the BST and other ILEC ratios that all exceed 65%. The revenues-to-net-plant comparison is even more dramatic if the Sprint PCS ratios are revised downward to the range of 5.5% to 31.1% in order to incorporate the significant investment in PCS licenses as a long-term

asset.

Q. Please compare Sprint PCS's market value equity ratio to the BST and other ILEC market value equity ratios.

A. As shown on Exhibit JDQ-5, the Sprint PCS market value equity ratio as of March 31, 2000 is 83.73%. There are no pure play market-traded ILECs available for comparison. However, Dr. Billingsley and I recently calculated market value equity ratios for BST and Sprint – Florida, respectively, in Docket No. 990649-TP, as summarized on Exhibit JDQ-5. Sprint PCS has a lower market value equity ratio than both BST and Sprint – Florida.

Q. Please compare the debt ratings of digital wireless carriers to the debt ratings of BST and other ILECs.

A. Standard & Poor's (S&P) is a rating agency that assesses both the business risk and financial risk inherent in debt securities. Business risk is the risk associated with the variability of operating income due to the fundamental nature of the firm's business, including sales volatility and operating expense uncertainty. In contrast, financial risk is the risk associated with the variability of earnings available to common stockholders due to the introduction of capital components other than common equity, such as debt and preferred stock, into the capital structure. As shown on Exhibit JDQ-6, S&P provides public debt ratings for several digital wireless carriers. In general, the lower the debt rating, the higher the return demanded by debt investors, and higher debt costs have additional

implications for a higher cost of equity. These digital wireless carriers have S&P debt ratings in the junk bond categories of "B+" through "B-." On the other hand, BST enjoys a premium debt rating of "AAA," while other ILECs tend to be rated within the "AA-" to "A+" range, well within investment grade. It is clear that S&P considers digital wireless carriers to be riskier than BST and other ILECs.

Q. Please describe the market-based risk measure of beta.

A. Beta is widely recognized by the financial community as an objective market-based measure of risk in a portfolio context. A beta of 1.0 indicates a risk level equal to the market average risk level. A beta greater than 1.0 indicates a risk level greater than the market average risk level. Similarly, a beta less than 1.0 indicates a risk level lower than the market average risk level. In general, the higher the beta, the higher the cost of equity.

Q. Please compare digital wireless betas to the betas of BST and other ILECs.

A. Dr. Billingsley and I recently estimated betas for BST and Sprint – Florida, respectively, in Docket No. 990649-TP. I compared Dr. Billingsley's beta estimate of 0.73 for BST and my beta estimate of 0.93 for Sprint – Florida to Value Line beta estimates for digital wireless carriers published in The Value Line Investment Survey Summary and Index. The Value Line betas are computed with sixty months of weekly returns, and with the New York Stock Exchange Composite Index as the market index. Value Line does not publish a beta for Sprint PCS given its limited trading history. As shown on Exhibit JDQ-7, the

betas for market-traded digital wireless carriers range from 1.20 to 1.70. I included betas from March 3, 2000 in order to include market information for Aerial Communications and Omnipoint, two digital wireless carriers that were recently acquired, and thus are no longer market-traded. Clearly, digital wireless carriers have higher betas and higher required returns than ILECs.

Q. Please summarize you view of the quantitative standards of comparison.

A. After reviewing the differences between the Sprint PCS, BST, and other ILEC accounting-based and market-based risk measures and the relative magnitude of the differences, I conclude that Sprint PCS is significantly more risky than BST and the other ILECs.

Q. In summary, what is your recommendation concerning the cost of capital for Sprint PCS in this proceeding?

A. I begin with the 14.61% to 14.91% cost of capital range developed by BST witness Dr. Billingsley in Docket No. 990649-TP. Because Sprint PCS is more risky than an ILEC such as BST, the cost of capital for Sprint PCS is at least as high as the high end of Dr. Billingsley's range. Therefore, I recommend that the forward-looking cost of capital of 14.91% be used in developing the reciprocal compensation rates of Sprint PCS in this proceeding.

Q. Does this conclude your testimony?

A. Yes, it does.

Book Value Equity Ratios
Comparison of Sprint PCS, BST, and USTA ILECs

Company	12/31/97	12/31/98	12/31/99
Sprint PCS Group	31.6%	31.2%	22.2%
BellSouth Telecommunications [1]	51.6%	52.1%	48.2%
USTA ILECs	57.9%	56.9%	n/a

Sources: External financial reports and United States Telephone Association
1999 and 1998 Statistics of the Local Exchange Carriers

[1] Because BST data is from external financial reports, it is based on GAAP accounting and will not match regulatory accounting data.

n/a: not available

Cash Flow to Capital Ratios
Comparison of Sprint PCS, BST, and USTA ILECs

Company	1997	1998	1999
Sprint PCS Group	(20.0%)	(17.2%)	(12.7%)
BellSouth Telecommunications [1]	46.2%	47.8%	47.4%
USTA ILECs	38.1%	39.9%	n/a

Sources: External financial reports and United States Telephone Association
1999 and 1998 Statistics of the Local Exchange Carriers

[1] Because BST data is from external financial reports, it is based on GAAP accounting and will not match regulatory accounting data.

n/a: not available

Pre-Tax Fixed Charge Coverage Ratios
Comparison of Sprint PCS, BST, and USTA ILECs

Company	1997	1998	1999
Sprint PCS Group	(11.92)	(5.39)	(4.54)
BellSouth Telecommunications [1]	7.98	8.39	8.85
USTA ILECs	7.07	7.49	n/a

Sources: External financial reports and United States Telephone Association
1999 and 1998 Statistics of the Local Exchange Carriers

[1] Because BST data is from external financial reports, it is based on GAAP accounting and will not match regulatory accounting data.

n/a: not available

Revenues to Net Plant Ratios
Comparison of Sprint PCS, BST, and USTA ILECs

Company	1997	1998	1999
Sprint PCS Group	9.9%	23.1%	43.8%
Sprint PCS Group (including licenses)	5.5%	14.6%	31.1%
BellSouth Telecommunications [1]	82.0%	87.8%	89.8%
USTA ILECs	65.1%	65.4%	n/a

Sources: External financial reports and United States Telephone Association
1999 and 1998 Statistics of the Local Exchange Carriers

[1] Because BST data is from external financial reports, it is based on GAAP accounting and will not match regulatory accounting data.

n/a: not available

Market Value Equity Ratios
Comparison of Sprint PCS, BST, and USTA ILECs

Company	Ratios
Sprint PCS Group [1]	83.73%
BellSouth Telecommunications [2]	90.17%
Sprint-Florida [3]	89.64%

[1] As of March 31, 2000

[2] Calculated by Dr. Randall S. Billingsley, Docket No. 990649-TP

[3] Calculated by John D. Quackenbush, Docket No. 990649-TP

Standard and Poor's Debt Ratings
Comparison of Digital Wireless Companies, BST, and other ILECs
As of May 31, 2000

Company	Debt Rating
Digital Wireless Carriers	
NEXTEL COMMUNICATIONS	B+
NEXTEL PARTNERS	B-
POWERTEL	B
TRITON PCS	B
VOICESTREAM WIRELESS	B
BELLSOUTH TELECOMMUNICATIONS	AAA
OTHER ILECs	
BELL ATLANTIC/DC	AA-
BELL ATLANTIC/DE	AA-
BELL ATLANTIC/MD	AA-
BELL ATLANTIC/NJ	AA-
BELL ATLANTIC/PA	AA-
BELL ATLANTIC/VA	AA-
BELL ATLANTIC/WV	AA-
GTE CALIFORNIA	AA-
GTE FLORIDA	A+
GTE HAWAIIAN TELEPHONE	A+
GTE NORTH	AA-
GTE NORTHWEST	AA-
GTE SOUTH	AA-
GTE SOUTHWEST	AA-
ILLINOIS BELL TELEPHONE	AA-
INDIANA BELL TELEPHONE	AA-
MICHIGAN BELL TELEPHONE	AA-
NEW YORK TELEPHONE	A+
OHIO BELL TELEPHONE	AA-
SOUTHWESTERN BELL TELEPHONE	AA-
WISCONSIN BELL	AA-

Source: Compustat Research Insight

Betas
Comparison of Digital Wireless Carriers, BST, and Sprint-Florida

Company	Value Line Beta 3/3/00	Value Line Beta 6/9/00	Estimated Betas
Digital Wireless Carriers [1]			
NEXTEL COMMUNICATIONS	1.65	1.55	n/a
POWERTEL	1.35	1.20	n/a
AERIAL COMMUNICATIONS	1.25	acquired	n/a
OMNIPOINT	1.70	acquired	n/a
BELLSOUTH TELECOMMUNICATIONS [2]	n/a	n/a	0.73
SPRINT-FLORIDA	n/a	n/a	0.93

[1] The Value Line Investment Survey Summary and Index, March 3, 2000 and June 9, 2000.

[2] Estimated by Dr. Randall S. Billingsley, Docket No. 990649-TP

[3] Estimated by John D. Quackenbush, Docket No. 990649-TP

n/a: not available

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY

OF

DEREK A. CANFIELD

Q. Please state your name and business address.

A. My name is Derek A. Canfield. I am employed by Sprint Spectrum L.P. d/b/a Sprint PCS as Manager of Access Verification. My business address is 901 E. 104th Street, Kansas City, Missouri 64131.

Q. Please describe your educational background and work experience.

A. I received a Bachelor of Arts degree from Bethany College in 1994 and a Master of Business Administration from Wichita State University in 1996. I joined Sprint PCS as a Financial Analyst in 1996 and was promoted to Senior Analyst in 1997. In 1998 I was made Supervisor of Access Billing (Revenue) and in 1999 was promoted to Manager of Access Verification. I have been the Sprint PCS representative to the Ordering and Billing Forum for the past three years and am familiar with industry standards governing access billing.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony is to explain Sprint PCS' objections to BellSouth's Records Exchange language contained in the proposed interconnection agreement between Sprint PCS and BellSouth and to support the alternative language

proposed by Sprint PCS.

Q. Why does the interconnection agreement require records exchange language?

A. The interconnection agreement contemplates that the parties will exchange traffic that does not originate and terminate within the same MTA. Specifically, the agreement anticipates that Sprint PCS and BellSouth will engage in the joint provision of switched access services to various interexchange carriers ("IXCs"). Message exchange provides a terminating billing company the ability to identify the respective IXC via a Carrier Identification Code ("CIC"). This CIC code permits the terminating carrier to bill an IXC for the cost of terminating the IXC's traffic. Because the network signal does not carry the CIC in the transmission of the call, the tandem connection to the IXC is the only source for this information. Accordingly, where traffic is exchanged with an IXC through a tandem, a procedure for the exchange of these records must be established.

Q. Are there industry standards associated with the exchange of these types of records?

A. Yes. The Ordering and Billing Forum (OBF) established through the Alliance for Telecommunications Industry Solutions (ATIS) sets industry standards and guidelines for ordering and billing, including those standards to be applied to records exchange. The OBF has issued industry standards for the exchange of records associated with jointly provided switched access service. These industry

standards are generally set forth in the Multiple Exchange Carrier Access Billing (MECAB) Document and related OBF guidelines.

Q. Are these standards and guidelines applicable to wireless carriers?

A. Yes. OBF Issue 1852 dealt with the application of MECAB standards to wireless carriers. This issue was taken to final closure at OBF 67 and brought the wireless segment of the industry in line with the wireline segment in the exchange of billing information for IXC calls.

Q. Is BellSouth's proposed language in conformance with these industry standards?

A. No. The language proposed by BellSouth would mix records for local intra-MTA traffic and traffic exchanged with IXCs. By mixing local records with access records, BellSouth creates a serious administrative burden on Sprint PCS and unnecessarily complicates the billing of IXCs. In past OBF meetings, BellSouth has proposed that local records be mixed with access records by using an "Alternative Billing Entity Code" (ABEC). The industry has rejected BellSouth's attempts to create an ABEC. BellSouth should not be permitted to force carriers through interconnection negotiations to accept a records exchange process that is otherwise unacceptable to the industry.

Q. Do you have any other concerns with the language proposed by BellSouth?

A. Yes. Section VII.A of BellSouth's proposed language states that "call records for

traffic originated and/or terminated by a non-Records Exchange network will not be delivered to the originating and/or terminating network." Because IXCs are not involved in records exchange, this language suggests that IXC records will not be delivered, thus defeating the purpose of the language.

BellSouth's language also calls for "a default Billing Interconnection Percentage (BIP) of 95% BellSouth and 5% Carrier." The BIP is used to represent the ownership interest in the meetpoint route used to terminate IXC traffic. Given that the majority of IXC traffic will be exchanged over two-way interconnection trunk groups, the 95/5 ratio does not fairly represent the ownership interests of these facilities. A better representation would be the mobile-to-land traffic factor between the parties of 70% Sprint PCS and 30% BellSouth.

Finally, the language proposed by BellSouth refers to applicable charges associated with traffic included in this records exchange process. Sprint PCS has been unable to identify what these charges might be or how they are consistent with the compensation provisions contained in other portions of the agreement.

Q. Is BellSouth capable of providing access records without including local traffic?

A. Yes. Sprint PCS and BellSouth have been involved in records exchange for the past year. The records provided have been not been jurisdictionally mixed and BellSouth has demonstrated no reason why these records cannot continue to be

provided in this manner.

Q. Why do you believe the language proposed by Sprint PCS is appropriate?

A. The language proposed by Sprint PCS meets the necessary criteria to facilitate an effective message exchange process between the two carriers. The Sprint PCS language adopts the applicable industry guidelines as developed and published by ATIS (including the MECAB document): it specifies the message exchange requirements and processes; it provides for the negotiation and implementation of appropriate BIPs; and it identifies the meetpoint billing option to be implemented (Multiple Bill/Single Tariff). This language is consistent with industry guidelines and the procedures currently in place between the companies.

Q. Does this conclude your testimony?

A. Yes, it does.