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September 24, 1997

Ms. Blanca S. Bayo, Director

## HAND DELIVERY

Division of Records and Reporting
Florida Public Service Commission
2540 Shumard Oak Boulevard
Betty Easley Conference Center
Room 110
Tallahassee, Florida 32399-0850

## Re: Docket No. 971058-TL

Dear Ms. Bayo:
Enclosed herewith for filing in the above-referenced docket on behalf of Teleport Communications Group Inc. ("TCG") are the original and fifteen copies of the prefiled direct testimony of David M. Hirsch.
ARK
Please acknowledge receipt of these documents by stamping the extra copy of this letter
AFA $\longrightarrow$-fled" and returning the same to me.
APP
Thank you for your assistance with this filing


CTR $\qquad$
ERG


Sincerely,


OPC K KAH/rl
9 C I Enclosures
Wis $\qquad$
OH
All Parties of Record

Ms. Blanca S Bayo, Director
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September 24, 1997

## CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the prefiled direct testimony of David M Hirsch was furnished to the following on this 24th day of September, 1997

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## ORIGmati

PREFILED DIRECT TESTIMONY OF

DAVID M. HIRSCH

ON BEHALF OF
TELEPORT COMMUNICATIONS GROUP INC. DOCKET NO. 971058-TL

DOCUMENT N:MRER-DATE
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FPSC-RECORDS/REPORTING
Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.
A. My name is David M. Hirsch My business address is Teleport Communications Group Inc ("TCG"), 113321 st Street, NW. Suite 400 . Washington, DC 20036
Q. WHAT IS YOUR CURRENT POSITION AT TCG?
A. I am Manager of Regulatory Affairs for the Eastern Region.
Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.
A. 1 graduated cum laude with a B A degree in Economics and Political Science from Temple University in Philadelphia
Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?
A. The primary purpose of my testimony is to support the implementation of a geographic split for relieving the 305 area code 1 wish also to discuss NPA overlays, including the one supported by BellSouth Telecommunications, Inc. ("BST") for relieving its telephone central office codes ("NXX") in the 305 NPAs. Such overlays are contrary to consumers' best interests and seriously harm potential new competitors

## Q. WHAT IS TCG'S INTEREST IN THIS PROCEEDING?

A. TCG affiliate, TCG South Florida, has been authorized to provide local exchange services throughout Florida The ability of TCG to obtain appropriate numbering resources is critical to its ability to compete in the local exchange market.
Q. PLEASE DESCRIBE BST'S NPA OVERLAY PLAN AS YOU UNDERSTAND ITS CURRENT STATUS.
A. Under the overlay plan proposed by BST the present 305 geographical area would remain the same, but boundaries for the new area code would overlay
the 305 Numbering Plan Area ("NPA") Upon exhausting the 305 NPA, new growth codes for wireless and wireline would be assigned NXX codes in the overlay area code

I believe that the Florida Public Service Commission ("PSC") should consider the potential implications NPA relief plans have on the development of local exchange competition. Under BST's overlay proposal, future wireline competitors would find that all of their new customers are forced to use the new area codes. I believe such a situation would certainly have a serious adverse impact on the development of local exchange competition because customers new to the area or those in actu fadational telephone lines would most likely prefer a telephone number from the familiar 305 NPA. As a result, these customers may shop for a carrier (like BST) that had telephone numbers in the familiar 305 NPA. Carriers without 305 telephone numbers may be precluded from a customer's selection pool simply because it did not have numbers in the highly coveted and familiar 305 NPA
Q. WHY IS BST'S PROPOSAL OF PARTICULAR CONCERN TO POTENTLAL COMPETITORS LIKE TCG?
A. Overlay NPA plans only recently have been proposed by the Local Exchange Carriers ("LECs"). Prior to the potential threat of local competition, traditional NPA splits were the only proposals put forth to remedy telephone number resource issues. NPA splits were routinely used when the telephone industry was simply assigning numbers among fellow monopolies.

With the advent of competition, NPA overlays are being proposed by many LECs. These overlays have definite anticompetitive implications.

Overlays typically place a disproportionate burden of "solving" number shortages on the new entrants to the industry.

I believe the implementation of an overlay NPA code also will be particularly confusing for both consumers and businesses that are used to the idea that telephone numbers tell you something about the called party's location. For instance, a consumer might believe that one store is farther away simply because it is in a different area code

In addition to the impacts on consumers described above, the increase in demand for additional lines at customer locations presents other complications. For example, let us assume that a business customer currently uses fifty numbers which were assigned by BST in the 305 area code. This same customer later needs an additional twenty lines, after an overlay has been implemented. If the customer wishes to order those lines from a competitor, it will operate its original lines using the 305 area code and the twenty additional lines using the new area code. Customers would be reluctant to operate in this manner since their single 'رusiness office will have twe separate area codes. Instead, the customer is much more likely to order the additional twenty lines from BST regardless of the fact that a competitor's service may be superior. This problem would apply equally in a residential setting. A current BST customer who wants to buy a second line from a competitor would have to tolerate two different NPAs in the same household

## Q. WHY DO YOU SAY THAT ONLY COMPETITORS' CUSTOMERS

 WILL BE IN THE NEW AREA CODE?A. After the proposed overlay begins, BST may still have many "warehoused" numbers in the 305 area code, and thus it is questionable whether BST will have to assign its customers to the new arca code in the near future

In addition, BST will continue to have 305 telephone numbers that become available when customers move out of the area. And those numbers that are produced by such "churn" only will be avalable for BST's new customers
Q. BUT WON'T THE NEW OVERLAY AREA CODE EVENTUALLY GAIN WIDE USE?
A. Over time the new overlay NPA will gain wider use, however, that process will be a very slow one because of the marketing disadvantages that result from an overlay area code
Q. WHAT ARE THE MARKETING ADVANTAGES FOR BST THAT RESULT FROM ITS OVERLAY PLAN?
A. Customers who currently have telef hone numbers in the 305 area code (as the case might be without permanent number portability) or new customers in that same geographic area will be extraordinarily reluctant to give them up and take numbers in a new overlay NPA in order to do business with a competitor. All of their customers and neighbors, and their own business competitors, will still have the benefit of the familiar NPA and the identification of those numbers with a specific geographic area. The overlay plan thus will create two unequal classes of customers

One class will consist of the customers of TCG and other competitors to the LEC. Under an overlay NPA plan, these customers will be relegated to a new, unfamiliar and, because it will only be given to newly assigned
telephone numbers, inferior NPA ${ }^{\prime}$ An existing or new business that must rely on customers calling it would be understandably reluctant to take a chance that all its callers will recognize its new area code as a known or even "another" local area code which can be reached by a local call. instead of a toll call. This will discourage customers from purchasing service from competitors

The second, and favored, class of customers is the customers of the ILEC (BST) which dispenses the NXXs The effect of an NPA overlay is therefore to stigmatize those customers served out of the overlay NPA and the competitors such as TCG which serve them

BST will be greatly advantaged by the fact that the significant inconvenience and confusion relating to the new area code will be largely borne by the customers and potential customers of BST's competitors Moreover, BST's competitors will be forced to expend resources to overcome these substantial disadvantiges. Only in an NPA code split, where all customers in an area receive a new NPA, would a change in NPA by a customer not create such confusion, and not act as a deterrent to the choice of a competitor's services

## Q. DO YOU BELIEVE THAT CUSTOMERS PREFER A GEOGRAPHIC

 SPLIT TO AN OVERLAY?A. All the surveys of which I am aware favor a geographic split For example. in Connecticut before the 203 area code split, a study of Connecticut consumers conducted on behalf of Southern New England Telephone

By contrast, with a geographic split all users in the geographic boundary have the same area code, therefore, neither code is competitively superior or inferior to the other

Company found consumers ac. ually favor a geographic split over an overlay even if they are the consumers placed in the new code Most recently, another study conducted in Connecticut, after the 203/860 split, found Connecticut consumers still favor a geographic split
Q. WILL CUSTOMERS BE DISADVANTAGED IN OTHER WAYS?
A. Yes. Customers often wish to select a competitive carrier for the reliability and diversity of service that result from using an alternative telecommunications provider. This is often referred to as "operationa! security." Operational security is the ability to have an alternative supplier .someone who simply is "not the telephone company" -- provide elements of the customer's telecommunications services Because BST's existing customers will continue to use 305 area code numbers and BST will likely continue to have an inventory of unused 305 numbers sufficient to assign to its customers for a considerable period of time, a customer wishing to purchase redundant services from a competitive carrier would be forced to use a different and unfamiliar area code for its additional lines. Thus, NPA overlays will serve as a disincentive for customers to choose competing carriers to supply different elements of their networks

## Q. HOW CAN THE diSADVANTAGES OF AN NPA OVERLAY PLAN

 BE OVERCOME BY THE NEW COMPETITORS?A. I am unable to identify any marketing, product design, advertising or other approaches that could be used to overcome the stigma that will be attached to being placed in the inferior overlay NPA. Given that BST's 305 area codes already have "brand identity." it would obviously require huge expenditures on advertising to try to develop any comparable brand identity for the new

NPAs. TCG would not be able to devote resources to such an effort, since it needs to establish its own corporate and brand identity to compete in the local marketplace. Funds spent on publicizing the new area code are obviously funds not available to publicize TCG's products. services, and prices.

Even assuming that a brand identity could be built for the new area code, I do not believe that competitors' problems would end Customers are very reluctant to change telephone numbers, and in my opinion that reluctance will be far greater if they not only have to change their seven-digit number, but their NPA as well, in order to take service from a competitor I believe that very few customers, if any, will be willing to shift carriers under such circumstances, all other things being equal. Given that new competitors will be facing an extremely difficult competitive situation, competing with BST's 100 year head start and nearly $100 \%$ local market share, saddling new entrants with even more obstacles to overcome does not appear to be consistent with the creation of more competitive local narkets.

## Q. WHAT IS YOUR RECOMMENDATION FOR A RELIEF PLAN?

A. I support the use of an area code split rather than an overlay as proposed by BST. I believe that NPAs must be administered in an efficient and fair manner so that all communications service providers and their respective customers are treated equally. Numbers are essential to the offering of new switched services, and incumbent LECs, as the keepers (and beneficiaries) of those numbers, must be subject to a high standard of impartiality and fairness toward their potential and current competitors NPAs should not be
administered in a manner that favors or disadvantages any particular industry segment or group of consumers

Viewed against those standards. the BST overlay plan falls far short of the mark. It confuses and harms consumers, saddles competitors with disproportionate burdens, threatens to choke off the development of new services, and discriminates against particular customers and carriers. In an area code split, all customers in a common geographic area take on a new area code. In such a situation, new competitors and BST can both offer their services under the same NPA, and all carriers and customers receive similar treatment.

With respect to overlays, I am aware of only one way in which its anticompetitive effects can be mitigated. That is to require that the overlay NPA only be initiated once true, service provider local number portability with unassigned number porting is available in the area where the overlay is to be applied. This will ensure that the customers of a new competitor can retain their existing telephone numbers (and NPA) when they choose to shift to a new provider. Additionally, it will permit ALECs to port unassigned numbers from carriers with NPA-NXXs from the "original" NPA. No other method will eliminate the inherently anticompetitive and discriminatory effects of BST's overlay plan. Accordingly, should the PSC wish to entertain future use of overlays, I would recommend that it require permanent local number portability with unassigned number porting as a precondition.
Q. HOW WOULD TRUE SERVICE PROVIDER LOCAL NUMBER PORTABILITY MITIGATE THE DISADVANTAGES OF AN OVERLAY NPA?
A. Service provider number portability allows an end user to retain the same telephone number when changing fiom one local service provider to another, for example from an existing LEC to an ALEC, while remaining in the same location. With service provider number portability, new competitors would be at less of a competitive disadvantage as a result of an overlay NPA, since their prospective customers could retain their local phone numbers, including whatever NPA they happen to be assigned to, and switch to a new carrier True service provider number portability also results in conservation of number resources, since the substantial number of unused numbers in existing area codes can be assigned and used by existing LECs, ALECs or new companies. Moreover, as customers shift to new local providers they can retain and use their existing numbers, thus not requiring any additional number resources.

True local number portability uses a data base solution with local data bases used to determine the particular local service provider that is serving a given telephone number. To accomplish this, each carrier's switch wiil be assigned a Local Routing Number ("ЧRN"). In simplistic terms, the LRN is used by carriers for the purpose of identifying where a ported number should be routed and a data base is accessed to provide the information of how to properly route the call. ${ }^{2}$ By contrast, Remote Call Forwarding ("RCF"), which some LECs have promoted as a so-called "interim" number portability solution, requires that two telephone numbers be assigned for each line, thus
${ }^{2}$ To route a call to an end user that has ported her number to a competing carrier, the second to last carrier (or $\mathrm{N}-1$ carrier) will dip into an information database that associates the called party's telephone number with her respective carrier and then route the call. The N-1 carrier's switch will only dip into the database when a telephone number from an NXX has been ported. not advancing number conservation, and provides the new competitor with a technically inferior form of service because RCF does not support many of the vertical features -- for example, Ring Back, Answer Call, Caller ID .- that so many customers request today
Q. DOES THAT MEAN THAT ONCE PERMANENT NUMBER PORTABILITY IS AVAILABLE THAT THE ANTI-COMPETITIVE CONCERNS YOU EXPRESSED ABOVE WILL DISAPPEAR?
A. No. The PSC cannot permit the smoke and mirrors of any carrier's assurances that number portability will resolve the anti-competitive effects of an overlay. Unless the permanent service provider number portability solution guarantees ALECs access to BST's unused numbers and former customer reserved numbers, the anti-competitive outcomes an overlay encourages will endure.

While ALECs, upon winning customers away from ILECs, can transfer (or port) the ILEC's numbers, the status of growth numbers for customers will impose a serious ind potential obstacle to retaining the customer. For example, in Year One imagine TCG wins customer X away from BST and this customer has 500 lines. In year two an overlay is established and customer X needs 50 new lines. TCG can only offer customer X 50 new lines from the new area code. An astute BST marketing representative trying to win back customer X 's business could promise Customer X that BST has numbers available with the old $\mathrm{NPA}-\mathrm{NXX}$ Customer X , wanting to retain the constancy of numbers that he can only get from BST, switches back to BST This very real scenario could be averted if TCG had access to BST's unused numbers. While TCG respects,
encourages and welcomes competition on a level playing field, the scenario contemplated above furnishes BST with an anti-competitive trump card to win back customers By warehousing numbers, either through churn or reservation, BST maintains control of a resource unavailable to TCG Therefore it is imperative that the PSC obligate BST to port unused numbers to TCG customers who have discontinued service with BST

In addition to requiring BST to port unused numbers, when available. the PSC must also permit ALECs to port reserved numbers Reserved numbers are numbers that are put aside for customers for the purpose of growth. Salespeople forecast the number of lines necessary for the customer's anticipated future growth. Through reservation the customer is assured constancy of numbers without fear of a new NXX code assignment as the customer's demand for numbers grows. Therefore, the PSC needs to establish policies that will assure customers and ALECs that anti-competitive practices will not harm a customers' future growth If the PSC does not mandate the porting of unused and reserved numbers, BST can paraiyze its customers with cautionary warnings of future numbering difficulties.
Q. WOULD PERMANENT LOCAL NUMBER PORTABILITY, IF IMPLEMENTED AS DESCRIBED ABOVE, HAVE OTHER BENEFITS?
A. Yes. Fully implemented permanent local number portability will relieve number shortages and thus minimize the need for new NPAs First, it will allow numbers to be "recycled" as customers shift to different providers, rather than requiring that customers give up therr existing number and take a new number from the competitor. More importantly, it will allow utilization
of the many individual telephone numbers that are today assigned to a particular LEC switch but which are not in use Those unused numbers can be reassigned under true local number portability to serve new customers, permitting improved utilization of number resources in existing NPAs Consequently, in order to best utilize number resources, under true local number portability all unused (or unassigned) numbers in the existing NPA should be made available for assignment to carriers upon reasonable request

Unfortunately, there is no guarantee as to when true local number portability will be implemented. While it is true that BST is scheduled to implement permanent local number portability in the Miami area by the end of the 2nd quarter of 1998. TCG has no assurances that this deadline will be met or that implementation difficulties will not arise. Until true local number portability is universally workable and available in the existing 305 NPA , its benefits will not be achieved
Q. ARE THERE STEPS THE PSC COULD TAKE TO MITIGATE THE CONCERNS OF THE CELLULAR INDUSTRY THAT GEOGRAPHIC SPLITS REQUIRE MANY CELLULAR CUSTOMERS TO REPROGRAM THEIR PHONES?
A. Yes. The PSC can adopt a geographic split and permit customers of cellular carriers to retain their current area code, thereby satisfying the anticompetitive concerns of ALECs and eliminating the business expense cellular carriers will incur. By permitting existing cellular customers to retain their existing NPA, cellular carriers can avoid the business expense of reprogramming cellular phones
Q. HAVE ANY OTHER STATE UTILITY COMMISSIONS "GRANDFATHERED" CELLULAR NPA-NXX CODE?
A. Yes. To name a few, Massachusetts, Illinois, Missouri, California, New Jersey have permitted grandfathering. Additionally, in Michigan the industry reached consensus on this issue.

Q: IS A GEOGRAPHIC SPLIT THAT PERMITS EXISTING CELLULAR CUSTOMERS TO RETAIN THEIR EXISTING AREA CCDE A TECHNOLOGY SPECIFIC OVERLAY?

A: No. At area code relief meetings, at which industry participants attempt to select the best form area code relief, many NPA code administrators propose various geographic split alternatives. Often times each geographic split proposal presented is considered from two perspectives. First, the split is examined without grandfathering cellular carriers NXX codes, and second, the geographic split is considered with the grandfathering assumption.

Because under the grandfathering proposal, both area codes, the new and existing, will have wireless carriers and wireline carriers, this should not qualify as a technology specific split

For new code requests the wireless carriers, like the wireline carriers, would have to order codes in the respective NPA. However, this does not place an additional burden on the wireless cartiers because any NXX codes ordered in the new NPA will be for new customers. There are no reprogramming issues with a new customer, therefore there is no additional burden.

Q: WILL THE EXISTING CUSTOMERS OF CELLULAR CARRIERS HAVE TO DIAL 10 DIGITS FOR ALL CALLS IF THE PSC ADOPTS THE PLAN CONTEMPLATED ABOVE?
A. No. When cellular end users and wireline end users call a wireline end user in the same NPA, it is my understanding that can still dial seven digits Only when a wireless end user and wireline end user in the preexisting NPA call someone in the new NPA will ten digit dialing be required For this reason. end users will dial ten digits far less than they would if the PSC adopts an overlay.

Q: SOME PARTIES MAY ARGUE THAT IN THE FUTURE 10 DIGIT DIALING IS INEVITABLE. THUS, THE PSC SHOULD APPROVE AN OVERLAY TODAY RATHER THAN TOMORROW. DO YOU AGREE THAT TEN DIGIT DIALING IS INEVITABLE?
A. No. While some of the parties advocating an overlay may argue that growth in new technologies makes overlays in the future inevitable, they neglect the possibility that new technologies and alteraaiive numbering assignment plans can be developed to delay the exhaust of NPAs These new technologies or numbering assignment plans could help ensure that all numbering resources are fully utilized before a new area code relief plan is contemplated.

Consider this, after the PSC approves an NPA relief plan for 305, Florida will have nine (9) NPAs in the state. Those nine NPAs can serve at least $72,000,000$ access lines. With a state population of nearly 14,500,000, that translates into five (5) phone numbers for every man, woman and child -a family of five would need 25 telephone numbers assigned to it to exhaust all the NPAs in Florida

The consumers of Florida may be far better served by the telecommunications industry if industry participants spent less time advocating the implementation of overlays on top of overlays and more time searching for more effective methods to utilize the existing numbering resources

## Q: YOU ADDRESSED THE ISSUE OF NUMBERING RESOURCES

 STATING FLORIDA WILL HAVE ROUGHLY $72,000,000$ NUMBERS AVAILABLE AFTER THE 305 NPA IS RELIEVED. IF FLORIDA HAS SO MANY TELEPHONE NUMBERS WHY IS IT FACING AN EXHAUST IN TWO NPAS?A: Undeniably, technology has spawned great demand for numbering resources for pagers, faxes and wireless phones. But that is only part of the picture. Current industry practice is such that ALECs must obtain a unique NXX code for each rate center established by BST. Currently, ALEC assigned NXX codes must match BST rate centers and can only cover the same geographic area associated with that rate center. This mans that TCG must obtain a full 10,000 block NXX code for each associated rate center. Even if TCG only forecasts demand of 500 customers out of a given rate center, it must order a full 10,000 block NXX code. This is an inefficient manner in which to assign blocks of telephone numbers which does not benefit the ALEC's

Understanding the rate center regime is critical because it clearly reveals why there are so many area codes facing exhaustion and why there are so many jeopardy code meetings across the country to ration existing NXX codes. If all the ALECs must match rate centers, a ALEC is left no choice but to order the necessary number of NXX s to cover its entire service area within an NPA. IL., for example, there are 100 rate centers in a particular NPA, then
each ALEC must order 100 NXX s to adequately serve that geographic area. If there are four ALECs seeking to match those 100 rate centers, then 400 NXX codes ( $4,000,000$ numbers) must be assigned. To comply with BST's rate center regime, a ALEC must assign a full block of 10,000 numbers regardless of how many customers a ALEC wiii serve out of a rate center This is wasteful because ALECs may only have a fill factor of 1,000 numbers at a given rate center, thereby leaving 9,000 numbers inactive

TCG recognizes that this is inefficient but given BST's rate center regime, it has no alternative but to order NXX s so it can meet the geographic demand of its customers.

Q: THE EXAMPLE YOU GIVE ABOVE ADDRESSES HOW ALECS MUST MATCH RATE CENTERS; YOU DID NOT MENTION WIRELESS CARRIERS OR PAGING COMPANIES. WHY?

A: Unlike ALECs which must serve customers by matching a BST rate center, wireless carriers and paging companies are not necessarily tied to rate centers These companies can serve all customers within a market trading area ("MTA") from a single NXX code. These carriers have a competitive advantage over ALECs in that they can utilize their numbering resources far more efficiently than ALECs which are forced to assign numbers to customers from a rate center matching $N X X$ code.

## Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

