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June 23, 1993

Steve Tribble
Director, Division of Records and Reporting
Florida Public Service Commission
Fletcher Building
101 East Gaines Street
Tallahassee, Florida 32399-0850

Re: Docket No. 921074-TP

Dear Mr. Tribble:

Enclosed for filing in the above docket is an original and 16 copies of the Direct Testimony of Paul Kouroupas on behalf of Teleport Communications Group.

Please date stamp the extra copy and return it in the enclosed self-addressed, stamped envelope.

Please call me at 718-983-2939 if you have any questions.

Thank you.

Sincerely,

Jodie L. Donovan
Regulatory Counsel

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# DIRECT TESTIMONY
# OF
# PAUL KOUROUPAS
# TELEPORT COMMUNICATIONS GROUP

**DOCKET NO. 921074-TP**

**JUNE 24, 1993**

TELEPORT COMMUNICATIONS GROUP

DIRECT TESTIMONY OF PAUL KOUROUPAS

DOCKET NO. 921074-TP

1. Q. Please state your name and business address.

A. My name is Paul Kouroupas and my business address is One Teleport Drive, Suite 301, Staten Island, New York 10311.

2. Q. What is your current position with Teleport Communications Group Inc. (TCG)?

A. I am Manager of Regulatory Affairs.

3. Q. Please describe your qualifications.

A. In 1988, I graduated from Temple University cum laude with a bachelor of arts degree in communications. In 1992, I graduated from the Catholic University of America Columbus School of Law with a Juris Doctorate degree. I also received a certificate from the Communications Law Institute of Catholic University, in recognition of my completion of a curriculum specializing in telecommunications regulation. While attending Catholic University, I worked as an intern in the General Counsel's office

of the National Telecommunications and Information Administration from September 1990 to December 1990. In addition, I worked as an intern in the office of Commissioner Andrew C. Barrett of the Federal Communications Commission from June 1991 until April 1992. Since June 1992, I have been employed by TCG.

4. Q. What are your present responsibilities at Teleport Communications Group?

A. In my position at TCG, I am responsible for development and implementation of regulatory rules regarding interconnection.

5. Q. What is the purpose of your direct testimony in this proceeding?

A. I wish to address the issues identified by the Commission set forth in Appendix "A" of the Commission's Order No. PSC-93-0811-PCO-TP.

6. Q. Have you read the petition filed by Intermedia Communications of Florida for an order permitting AAV provision of services thorough collocation arrangements

in local exchange company (LEC) central offices?

A. Yes, and I am familiar with the broader issues regarding private line and special access interconnection which are raised by this petition.

7. Q. Is expanded interconnection for special access and private line in the public interest?

A. Yes. Central office interconnection will provide significant benefits to consumers in Florida. In order to prepare for the competition they will face from collocated competitors, LECs will upgrade and improve their transmission infrastructure. All telephone company subscribers will then benefit from improved service, better quality and lower costs for the basic services transmitted over these upgraded networks. By acting upon competitive incentives to improve service to their customers, the LECs, themselves, will also benefit from competition.

Additionally, interconnection incents LECs

to reduce their costs and improve their efficiency. Furthermore, interconnection reduces the likelihood that LECs will experience stranded investment. Interconnectors are purchasing and using portions of the LECs' networks -- portions of the network which could be stranded if large customers choose to bypass the LEC network by using alternative transmission facilities such as microwave. Interconnection will allow competitive local carriers to serve unmet consumer demands for diversified telecommunications services and facilities. Interconnection can also alleviate the need for LECs to build expensive, additional capacity at ratepayer risk and expense: the LEC can simply use the facilities of the interconnector.

8. Q. How does the FCC's order on expanded interconnection impact the Commission's ability to impose forms and conditions of expanded interconnection that are different from those imposed by the FCC order?

A. Florida can extend the benefits of expanded interconnection beyond the scope of the FCC order in three crucial ways.

First, Florida should require interconnection at a DS1, DS3 and DS0 level to extend the benefits of collocation to all special access customers. The FCC order required interconnection for DS1 and DS3 only. Such a restriction denies the benefits of collocation to the large number of customers who currently use special access facilities with speeds below a DS1 capacity. The only way for a competitor to serve such customers under a collocation arrangement would be to purchase LEC multiplexing services and individual DS0 end links. This makes the competitor captive to the LEC's multiplexing prices and service quality, while at the same time eliminating any competitive check on the reasonableness of these multiplexing prices.

Second, Florida should institute a "fresh

look" provision designed to allow consumers to exercise their new-found freedom of choice in the special access market without incurring substantial penalties for doing so.

Consumers should be free to terminate their contracts with the local exchange carriers without fear of incurring substantial termination liabilities. Precedents for such action exist at the federal level where the FCC disallowed the imposition of any termination liabilities for customers who switched their 800 service from AT&T to another carrier[1], and for airlines who switched air-to-ground radiotelephone service providers.[2] Of course, the most famous example of such a policy dates back to Divestiture when customers were free to choose the long-distance carrier of their choice without

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[1] See, Competition in the Interstate Interexchange Marketplace, 7 FCC Rcd 2677 (1992).

[2] See, Amendment of the Commission's Rules Relative to Allocation of the 849-851/894-896 Mhz Bands, 6 FCC Rcd 4582 (1991).

penalty.[3] These actions were necessary to effectuate the FCC's pro-competitive policies, and are as necessary in the instant proceeding. Without freedom of choice, there is no competition.

Third, Florida should permit interconnectors to provide the local transport portion of switched carrier access. The local transport portion of switched carrier access service provides transmission facilities between an interexchange carrier ("IXC") point-of-presence ("POP") and a telephone company central office ("CO"). Local transport switched access facilities are dedicated point to point high volume facilities. Although telephone companies offer these services within "switched access" service categories, the economic and technical nature of local transport circuits are much more akin to private line services. Similar to private line services, local transport carrier access is provided

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[3] After a reasonable time, a minimal termination charge no greater than $5.00 was imposed.

between two discrete points, namely the interexchange carrier POP and the telephone company CO. There is no "switching" or call routing involved in local transport.

TCG estimates that local transport service represents approximately 75% of all circuits between an IXC POP and a telephone company central office. IXCs need the quality, reliability and diversity of competitive alternatives for these critical facilities. Moreover, competition for the local transport portion of switched access services dramatically increases the prospects for effective competition in traditional private line services, which is, after all, the purpose of this proceeding.

IXCs typically require both special access and switched access services, and many combine their traffic on one facility for the inherent efficiencies of such an arrangement. TCG estimates that 75% of the circuits between an IXC POP and a

telephone company central office are for switched services. If TCG is able to compete for the provision of the local transport portion of switched access services on the same terms and conditions as the local exchange carriers, TCG will be better able to address the total access needs of IXCs and will be able to develop the same economies of scope and scale that local exchange carriers enjoy.

Under current circumstances, local exchange carriers are permitted to combine access services on one facility and address the total access needs of consumers. Without similar ability, interconnectors cannot effectively compete. The imposition on interconnectors of what is essentially a line-of-business restriction handicaps interconnectors' ability to compete against "un-handicapped" local exchange carrier facilities.

The removal of any artificial "shielding" of the vast majority of central office

access traffic from competitive choice allows the proven benefits of reliable, diverse and competitive central office access services to benefit Florida consumers.

9. Q. Does Chapter 364 of the Florida Statutes allow the Commission to require expanded interconnection?

A. Yes. Section 364.01 grants the Commission "exclusive jurisdiction" over all telecommunications matters and specifically directs the Commission to encourage cost-effective innovation and competition in the telecommunications industry if so doing will benefit the public by making modern and adequate telecommunications services available at reasonable prices. Collocation and interconnection are two essential elements of full and effective competition in local telecommunications markets and they will bring the benefits to the public which I discussed above.

Other sections of Chapter 364 similarly

point to interconnection as a vehicle for promoting effective competition. In the Alternative Access Vendor Docket No. 890183-TL, Order No. 24877, the Commission determined that it was in the public interest and that it had statutory authority, pursuant to Section 364.337, to certificate AAVs to provide special access services. The Commission found in this Order that AAVs have benefits to offer and that by offering their services, the AAVs have spurred the LECs, themselves, to offer new services. By authorizing interconnection for AAVs and other competitors, the Commission will ensure that AAVs can offer service to many more customers who desire the diversity and other benefits that AAVs can offer.

Section 364.16 authorizes the Commission to require connections between two or more telecommunications companies where connections can reasonably be made, efficient service obtained and such connections are necessary. When read in conjunction with the other sections

authorizing the Commission to certify competitive providers and to promote competition in telecommunications services in order to form a modern and efficient network for all, the Commission can interpret this section to permit it to order LECs to allow competitors to interconnect with their networks so that competitors can reach all consumers.

10. Q. Does a physical collocation mandate raise federal and/or state constitutional questions about the taking or confiscation of LEC property?

A. No. The key to the fairness of interconnection to all parties is that the interconnectors compensate the LECs for the use of LEC facilities. Furthermore, the Commission is ordering interconnection for the public purpose of promoting a modern, efficient telecommunications infrastructure. Therefore, a physical collocation mandate does not constitute a taking.

11. Q. Should the Commission require physical

and/or virtual collocation.

A. The Commission should require LECs to offer physical collocation. Physical collocation ensures that interconnectors are provided interconnection on the same terms and conditions as the LECs interconnect their own high capacity networks. A physical requirement would also allow for uniformity between state and federal requirements.

It is important to understand that interconnection with AAV networks via either physical or virtual collocation is essentially the same as the interconnections that take place today throughout the LEC network. The technologies, equipment, and procedures are largely alike.

Under either physical collocation or virtual collocation, a central office interconnection arrangement is composed of three essential elements: (1) interconnection cable; (2) interconnection electronics; and (3) cross-connection facility.

The interconnection cable is an unbroken fiber optic facility which the AAV extends from its network into the LEC central office. The cable enters into and terminates inside the LEC central office, just as the LEC's own fiber optic cable is terminated at the central office.

The interconnection electronics are located within the LEC central office and are the most crucial element of the interconnection arrangement. The interconnection cable is terminated into the interconnection electronics, which are then used to derive individual circuits. This equipment may include optical line terminating multiplexers, DS3:DS1 multiplexers, DS1:DS0 multiplexers, and digital access cross-connect systems. All of this sort of equipment is today used by the LEC in its own network, and is likewise terminated into its own fiber optic facilities. The interconnection electronics are responsible for most of the customer-visible characteristics of a carrier's service: quality, reliability,

speed, cost.

Therefore, under either physical or virtual interconnection, the interconnection equipment must be selected by the interconnector, and the equipment must be remotely monitored, configured and controlled by the interconnector. The interconnection electronics must also be installed, upgraded, maintained, and modified at the sole discretion of the interconnector, and according to its cost and service standards.

The cross-connection facility is usually a copper (electronic) cable provided by the LEC which connects the interconnection equipment to a LEC cross connection frame (or digital access cross connect system in some cases) where the interconnector's circuit is cross connected to the interconnected services: loops, a switch port, multiplexer, etc. For special access, these cables connect the AAV equipment to a channel termination (i.e., a Special Access "loop"), a channel

mileage facility, or a multiplexer. These same interconnections take place today in the LECs' network.

From TCG's experience, the only distinction between "physical" collocation and a workable "virtual" collocation is ownership: in physical collocation the AAV owns the interconnection electronics and is able to enter the LEC central office to perform these provisioning and maintenance functions, whereas in virtual collocation the LEC leases the equipment to the AAV and performs provisioning and maintenance for the AAV under tariff while the AAV monitors and controls the equipment remotely.

The burden on a LEC between having to offer physical and virtual collocation is negligible whereas it is critical for an interconnector to have the option of choosing a physical arrangement. The ability of interconnectors to negotiate a virtual collocation arrangement is hindered when a LEC knows it has no obligation to provide physical

collocation. As monopoly providers, LECs have an overwhelming advantage in establishing interconnection arrangements and in tariffing interconnection terms and conditions.

The availability of physical collocation thus serves as a "marketplace check" on the reasonableness of the LEC's virtual collocation proposals. With physical interconnection as the default interconnection method, LECs must provide reasonable virtual interconnection arrangements or else AAVs will elect physical interconnection. Only the availability of physical interconnection arrangements will compel the LECs to provide truly comparable virtual interconnection arrangements.

Allowing the LEC to decide whether or not to provide physical collocation robs the AAV of its only negotiation leverage, and leaves it unable to compel the LEC to provide quality, cost effective collocation arrangements. The AAV is thus

left subject to the quality of service that the LEC wishes to give it, with no effective alternative. Because the LEC is not only the AAV's crucial supplier, but also -- from the LEC's perspective -- its primary competitor, the AAV is left in an unenviable competitive posture. The AAV's situation is akin to that which Ford Motor Company would face if it were required to use General Motors engines in all of its cars, and could not contract with another company or build its own engines. Just as Ford would be unable to influence the quality and cost of a key element of its product, so too is the AAV left without the ability to control an essential part of its service and costs if it cannot insist on physical collocation.

11. Q. What LECs should be required to provide expanded interconnection?

A. All LECs, including non-Tier I LECs (those with less than $100 million in annual revenues from regulated service) should be included in an intrastate interconnection policy in Florida. Interconnection

permits the dynamic development of the telecommunications infrastructure in the most cost-effective, efficient manner. Consumers benefit from a strengthened infrastructure and an abundance of choice made possible by competition. These benefits should be available to all consumers.

12. Q. Where should expanded interconnection be offered?

A. LECs should offer expanded interconnection in all central offices, state-wide.

13. Q. Who should be allowed to interconnect?

A. LECs should offer expanded interconnection for special access to all parties who want to terminate their own special access transmission facilities at LEC central offices, including AAVs, IXCs and end users.

14. Q. What standards should the Commission require for physical and/or virtual collocation?

A. TCG has pursued interconnection with LECs

for over seven years and has found that the following standard should apply for competitive interconnection:

> The interconnection arrangement must provide TCG with the same capability to connect its high capacity fiber optic network to the LEC's central office facilities and the LEC's ubiquitous low capacity loop network in a manner which is technically, operationally and economically comparable to the way that the LEC connects its own high capacity facilities to the LEC central office facilities and loop network.

Basically, a competitor must be able to use its own equipment and facilities for the central office interconnection to the greatest extent possible and rely on its dominant competitor to the least extent possible. In addition, competitors must be able to select the interconnection electronics at the central office and be able to remotely monitor and control the equipment.

TCG's interconnection standard is as equally applicable to virtual collocation

as it is to physical collocation. Virtual arrangements are acceptable if the characteristics of the non-collocated interconnection are virtually the same as the characteristics of collocated interconnection. This is where Florida must improve on the FCC's policies if it authorizes virtual collocation.

The FCC's standard for virtual collocation is inadequate because it allows the LECs to install, repair and maintain equipment to meet the LEC's standards rather than the interconnector's standards. This allows the LEC to control the essential character of an AAV's services. Unless the Commission allows the AAV to define the service standards for virtual collocation, it will not facilitate true competition. TCG suggests the standard New York implemented for virtual collocation which is that it must be "technically and economically comparable to actual collocation."

15. Q. Should collocators be required to allow LECs and other parties to interconnect with their networks?

A. As monopoly providers of essential bottleneck facilities, LECs need to be required to provide physical collocation to interconnectors. However, non-dominant, competitive carriers need no such requirement. As competition for private line services develops, a competitor would be foolish to reject a collocation request and the associated revenues. The potential interconnector will simply move on to the next provider. For this reason, a requirement that collocators should provide interconnection to the LECs and other parties is unnecessary.

16. Q. What standards should be established for the LECs to allocate space for collocators?

A. TCG agrees with the FCC's method of requiring LECs to provide space for physical collocation on a first come-first served basis. However, we believe that

space will become less of a concern in the future as transmission equipment becomes smaller and available CO space increases. It is also appropriate for carriers to consider interconnection demand for central office space when remodeling or building new central offices just as they would consider future demand for other services.

It is also important that the Commission require LECs to offer virtual collocation if physical collocation space becomes filled to capacity. They should not be permitted to turn away potential interconnectors for this reason.

17. Q. If the Commission permits expanded interconnection, should it grant pricing flexibility to the LECs for special access and private line services?

A. No. If competitors cannot compete for the local transport portion of switched access services, and consumers do not have effective freedom of choice, pricing flexibility for local exchange carriers is

inappropriate and disproportionate to the level of actual competition that will develop as a result of ICI's petition.

The Commission must be careful not to confuse the presence of a competitor with a competitive market. AT&T recently stated that 99.866% of their access services are handled by local exchange carriers.[4] Clearly there is no competition for access services, even though there may be the presence of a competitor.

Local exchange carriers do not require any pricing flexibility to compete with interconnectors when those interconnectors are unable to address 75% of the total access needs of consumers and consumers are penalized for exercising their freedom of choice in those situations where they desire to take service from a competitor.

So long as interconnectors are handicapped with line-of-business restrictions and

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[4] See, Communications Daily, March 25, 1993 at 1.

consumers are denied freedom of choice, local exchange carriers should not be permitted to "lock up" the existing special access and local transport market by lowering their prices for long-term contracts which consumers are unable to escape.

18. Q. What collocation rates, terms and conditions should be tariffed by the LECs?

A. To promote uniformity and facilitate effective interconnections, LECs should tariff the following non-recurring rate elements: cage construction, power cabling and racking and the cable pull. Interconnectors should have the option to complete these tasks themselves.

LECs should tariff the following recurring rate elements: cable space, cross-connect, floor space and electric power.

It is critical that the Commission ensure that LECs indicate in their tariffs that they will abide by the following terms and conditions. Rearrangement charges are

those applied to a customer to reconfigure special services within a central office. It is crucial that these charges be non-discriminatory such that there is no difference in the charges to the customer whether the circuits remain as the LEC's circuits or are transferred from a LEC to an interconnector or from an interconnector to a LEC. Interconnectors must be given channel assignment control which refers to the determination of the assignment of individual channels on a customer circuit. An interconnector must have control over the assignments so they can be made quickly.

Many customers of interconnectors insist that they be allowed to order and bill for end user circuits under a letter of agency authorization. Interconnectors must be permitted to use letters of agency. Escort and eviction terms must be limited to prevent LECs from using these mechanisms as a way to invalidate the usefulness of a central office interconnection arrangement. LECs should

only force an interconnector to relocate within a central office under extreme circumstances and must give reasonable notice to the interconnector.

Reasonable installation time frames should be tariffed. Government compliance should be the responsibility of the LEC. Interconnectors should be allowed to purchase their own insurance. There should be no restrictions placed on interconnectors by LECs regarding the types of equipment that can be installed as long as it can be used to terminate basic transmission facilities. Finally, the Commission should ensure that the LECs' liability language for interconnections is reasonable.

19. Q. Should all special access and private line providers be required to file tariffs?

A. No. The Commission determined in Order No. 24877 that customers using the services of AAVs understand that they are dealing with a competitor to the LECs and can choose to go back to using the LEC for

all their service needs if they are dissatisfied with the AAV. The Commission concluded the filing of tariffs would provide limited benefit. If the Commission does require AAVs to file tariffs, it should adopt streamlined filing procedures (e.g., rate bands and short notice periods).

20. Q. How would ratepayers be financially affected by expanded interconnection.

A. Ratepayers will benefit financially from expanded interconnection. To the extent that expanded interconnection leads to increased competition for access services, ratepayers will benefit from LEC efforts to increase efficiency and lower costs. The LEC should flow through these efficiencies and cost reduction to consumers.

21. Q. Should the Commission grant ICI's petition?

A. Yes. Based on the points I've made about the benefits of expanded interconnection, the Commission should grant ICI's petition

to permit AAV provision of special access and private line services through collocation arrangements in local exchange company central offices.

22. Q. Does this conclude your testimony?

A. Yes.