DOCKET FILE COPY ORIGINAL

RECEIVED

NOV 14 2000

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matters of	)	
	)	
Deployment of Wireline Services Offering Advanced Telecommunications Capability	)	CC Docket No. 98-147
	)	
and	)	
	)	
Implementation of the Local Competition Provisions of the Telecommunications Act of 1996	)	CC Docket No. 96-98

REPLY COMMENTS OF ALCATEL USA, INC.

ALCATEL USA, INC.
James J. Gunther, Jr.
Regulatory Affairs Manager
Government Relations Office
1909 K Street, N.W., Suite 800
Washington, D.C. 20006
202-715-3700

Of counsel:

Robert J. Miller
Gardere Wynne Sewell LLP
1601 Elm Street
Dallas, TX 75201
214-999-4219

No. of Copies rec'd 0+4
List ABCDE

November 14, 2000

EXECUTIVE SUMMARY

A strong, unequivocal message has been sent in comments filed concerning the above captioned proceeding. Classifying plug-in line cards as unbundled network elements ("UNEs") would disrupt network operations, stifle product development, decrease competitive opportunities, and violate statutory collocation requirements and related public policy. Simply put, treating line cards as UNEs would be totally contrary to the public interest.

As a leading manufacturer of line cards and other equipment essential to universal deployment of Internet and other emerging broadband technologies, Alcatel USA, Inc. ("Alcatel") is well-positioned to detail the impact that such a decision could have on network operations and product development. In these Reply Comments, Alcatel shows why such fears are justified and must be considered as the Commission develops its policies for promoting local loop competition.

The unrebutted record of evidence in this proceeding demonstrates that making line cards subject to mandated interoperability requirements risks the following:

- **Disruption of network operations** – Installation of line cards manufactured by multiple vendors threatens network integrity, especially in the Next Generation Digital Line Carrier ("NGDLC") systems that will constitute the platform for growth of competitive local services. Variations in system technical specifications cannot be accommodated if cards with varying characteristics are introduced by a competitive local exchange carrier ("CLEC") into a central office ("CO"), remote terminal ("RT") or building terminal ("BT") operated by an incumbent local exchange carrier ("ILEC"). Furthermore, if a third party's line card causes system failure, service would be disrupted and necessary repairs would be delayed. System security would be compromised because different operators' line cards would be vulnerable to dislocation or disconnection when adjacent facilities are installed, tested or repaired. Unnecessary costs would be incurred by ILECs to administer and monitor the multiple line cards used. System warranties would be voided if non-authorized line cards are introduced.
- **Product development would be stifled and competitive opportunities would be reduced** – Required access to line cards embedded in an ILEC's CO or RT usurps the associated proprietary rights held by the manufacturers of such cards. Without the ongoing protection afforded by these rights, research and development investment would be reduced significantly or eliminated completely. Future

growth of advanced services and development of competitive local loop technologies would be stunted.

- **Statutory policy will be undermined** – Under Section 251(c)(6) of the Communications Act of 1934, as amended (the "Act"), ILECs have a statutory duty to provide collocation necessary for CLECs to interconnect with UNEs. However, CLECs do not need the right to use their own line cards or to access software controlling the ILEC's line cards for collocation to be realized on a universal, non-discriminatory basis. Instead, open network interfaces should be mandated at an ILEC's CO, RT or BT facilities. Indeed, feasible options exist that allow CLEC access or interconnection to the derived services (or virtual facilities) supported by NGDLC systems.

Arguments made by CLECs and others in this proceeding, that line cards must be classified as UNEs, are unavailing and unsubstantiated. Most telling is the absolute lack of any documented evidence supporting these claims. Rather, these proponents of making line cards subject to collocation requirements merely take on the role of "Chicken Little," decrying the lack of equal access to ILEC facilities.

Absent any proof that collocation access would be denied if line cards remain classified as non-UNEs, these allegations must be rejected. The record of this proceeding clearly shows that CLECs would not be disadvantaged because a full menu of collocation options exists that do not require making line cards UNEs. Based upon this unrefuted evidence, the Commission is compelled to stay the course by ruling that line cards are not subject to collocation requirements.

TABLE OF CONTENTS

I. Introduction *1*

II. NGDLC Line Card Collocation Not Feasible *4*

III. NGDLC Development Results from Rational Market Analysis *9*

IV. Proprietary Information Must Be Protected *10*

V. Miscellaneous Issues *13*

1. **Space Reservation** **13**
2. **NGDLC Within 16 Kft** **14**
3. **Cross-connects at Remote Terminals** **15**
4. **Access to OSS** **15**

VI. Conclusion *16*

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matters of	)	
	)	
Deployment of Wireline Services Offering Advanced Telecommunications Capability	)	CC Docket No. 98-147
	)	
and	)	
	)	
Implementation of the Local Competition Provisions of the Telecommunications Act of 1996	)	CC Docket No. 96-98

REPLY COMMENTS

I. Introduction

Pursuant to Section 1.415 of the Commission's Rules,[1] Alcatel USA, Inc. ("Alcatel") hereby replies to certain of the comments submitted in response to the *Second Further Notice of Proposed Rulemaking* in the above-captioned proceedings.[2] In this proceeding, the Commission raised several issues relevant to ensuring that competitive local exchange carriers ("competitive LEC" or "CLEC") have full, non-discriminatory rights to collocate in the incumbent local exchange carrier's ("incumbent LEC" or "ILEC") central office ("CO"), remote terminal ("RT"), or building terminal ("BT").

One of these issues involves whether a plug-in line card should be classified as an unbundled network element ("UNE") subject to such collocation requirements. As demonstrated herein, classifying a line card as a UNE would not be in the public interest. Network operations would be disrupted. Product development would be stifled. Local service competition would be decreased.

Alcatel is well-qualified to assist the Commission in addressing this collocation issue. It is the world's leading supplier of *x*DSL equipment. With this cutting edge

[1] 47 C.F.R. § 1.415.

[2] *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Dkt. No. 98-147, Second Further Notice of Proposed Rulemaking, FCC 00-297 (rel. August 10, 2000). A list of parties, whose comments are addressed herein, is set forth in Appendix A.

product line, Alcatel supports the advanced service equipment needs of ILECs, CLECs, and consumers.

In its comments, Alcatel described the optical and electrical multiplexing equipment it supplies for collocation in the ILEC's CO, RT and BT.[3] Alcatel also described its Litespan® "next generation" digital loop carrier ("NGDLC") equipment widely used by incumbent LECs for loop feeder deployment and by CLECs for collocation and network overlay deployment.[4] While these systems have proprietary software and hardware components, they also support standards-based network, facility and service interfaces.[5]

In particular, Alcatel detailed the use of foreign or non-authorized line cards (or "plug-ins") in Litespan® systems.[6] It described the full array of technical and operational problems caused by installation of line cards not manufactured or licensed by Alcatel in its systems.

Furthermore, as is the case with other internal system components, it is not possible to directly access or interconnect with these line cards. Access is only possible through the derived (or "virtual") facilities and service lines supported by the systems. Given these critical system characteristics, neither physical nor virtual line card collocation is possible. Therefore, a line card should not be treated as a separate UNE subject to full collocation obligations.

In its comments, Alcatel further explained the advantages of installing software components and hardware components, such as line cards, that support advanced services

---

[3] Alcatel at 4-7, 12-13.

[4] Alcatel at 7-11.

[5] Narrowband service interfaces include POTS, COIN, FXS, PBX and ISDN-BRI. Wideband interfaces include T1, DS1 and HDSL. Broadband service and facility interfaces (Litespan®-2012 only) include DS-3, OC-3 and OC-3c. ATM broadband service interfaces (both Litespan®-2000 and -2012) include ANSI standard DMT ADSL. Future service (or "drop" or "facility") interfaces include HDSL2 (initially TDM and later ATM-based), G.lite and G.shdsl. Network interfaces include VF (for non-integrated narrowband access), DS1, OC-3 and, for the ATM traffic, OC-3c.

[6] Alcatel at 16-17.

in Litespan® and other NGDLC systems used by ILECs.[7] In addition to delivering higher speed data transmission services to customers beyond the reach of CO-based systems, such installations allow multiple service providers to cost effectively share a common network infrastructure. With the use of Optical Concentration Devices ("OCDs") and other common network interfaces, CLECs may access advanced service facilities in a non-discriminatory fashion, ensuring service features and quality at least as good as the ILEC provides for itself. These software and hardware component installations do not impede CO or remote access to parallel loop facilities and do not impede the deployment of separate equipment that may be required for non-standard interfaces.

Finally, Alcatel commented on options for interconnection and access at other points of the network, which eliminate the need for line card collocation or even major reconstruction of RT housings.[8] These options include BT locations commonly used for DSLAM and Integrated Access Platform ("IAP") deployments to support proprietary Symmetric Digital Subscriber Line ("SDSL") and other commercial customer offerings. Access is also available at FDIs[9] and RTs, using adjacent enclosures and connecting cables where there is either inadequate space in the existing housing or the housing was not designed for loop electronics.

Despite this overwhelming evidence that line cards should not be classified as UNEs, various commenters nonetheless attempt to convince the Commission that access to line cards is critical to their business plans. Several parties argue that they need the ability to install their own line cards in NGDLC systems.[10] Some parties also claim that the use of NGDLC systems, particularly Alcatel's Litespan®, hampers competition because advanced service features were developed without regard to their own particular

---

[7]Alcatel at 10-13.

[8]Alcatel at 19-21.

[9]The terms "FDI" ("Feeder Distribution Interface") and "SAI" ("Serving Area Interface") are used interchangeably. Alcatel at 7 note 6.

[10]See e.g., Rhythms at 18-24; Network Access at 17-19; WorldCom at 13; Connectiv at 28-29; @Link at 4; DSLNet at 8-15; Mpower at 43-48.

requirements.[11] Other parties argue that they need access to proprietary information regarding the systems in order to develop their business cases and deployment plans.[12]

These arguments have no merit. Line card collocation is neither feasible nor necessary. Most importantly, none of these commenters offer any objective or empirical evidence to support their claims. Moreover, classifying line cards as UNEs is inappropriate because NGDLC features are rationally developed in light of market requirements for standard interfaces, not individual specifications, and the use of standard interfaces preclude the need to access proprietary information.

II. NGDLC Line Card Collocation Not Feasible

The record of this proceeding contains substantial evidence supporting Alcatel's position that line cards are not UNEs subject to collocation. Verizon specifies the numerous problems attendant with treating line cards as UNEs:

> [E]ach vendor needs to be able to differentiate its equipment from that of its competitors by offering unique features and functions, rather than allowing one size to fit all. And ... each plug-in line card must be compatible with the overall design of the system with which it is to be used, including the software.
>
> * * * * *
>
> In addition, from a policy perspective, allowing each carrier to provide line cards would make highly inefficient use of the incumbent's equipment and increase costs for both the competitors and the incumbent's own customers. This is because each individual line card in a remote terminal gives access to multiple circuits. If each carrier supplied its own cards, dedicated to its use, multiple circuits in each remote terminal would need to be dedicated to that carrier and would be unavailable for any other customer. It can be expected that many, if not most, carriers would not have use for all of those circuits in every remote terminal to which it connects. The resulting unused capacity would at best significantly reduce efficient use of the network, thereby increasing costs, and at worst strain the available network capacity. By making inefficient use of the equipment that the incumbent has installed in the remote terminal, such an arrangement would allow fewer customers

[11] See e.g., RCN at 14; WorldCom at 9; @Link at 5-6; Mpower at 33-38.

[12] See e.g., Connectiv at 27; @Link at 6-7; DSLNet at 13-15; Mpower at 46.

> to be served, because there will simply be no room in the remote terminal to install additional equipment to serve those customers.
>
> * * * * *
>
> Moreover, attempting to inventory and provision multiple line cards belonging to multiple carriers in each of tens of thousands of remote terminals will create an Operation Support System nightmare. This is because the incumbent would need to find a way to continuously determine which competitor's line cards are in use in each item of equipment in each remote terminal.[13]

Similarly, SBC declares that:

> [i]f carriers obtain unbundled access to ... line cards ... they could prematurely exhaust system capacity. If a CLEC has unbundled access to a line card, the incumbent would lose its ability to manage the network to maximum use of the shared facility. A CLEC with unbundled access to a line card would be able to exhaust prematurely the system's capacity, thus preventing other CLECs from using the service.[14]

Qwest warns that "it would be premature to require line card collocation on a general basis since implementation issues such as equipment interoperability have not been resolved."[15] BellSouth asserts that, if "a CLEC were to insert an incorrect line card, it could render an entire digital loop carrier system inoperative."[16]

Nortel believes that, "unless the line cards are from the same manufacturer or [are] manufactured by third parties under license, it would not be practical for the Commission to mandate that [CLECs] be able to collocate their own line cards" at the ILEC's facility.[17] Since there are no industry standards governing line card interchangeability, Nortel fears that "it would be virtually impossible to use different manufacturers' line cards in a single

---

[13] Verizon at 9-10 (citations omitted). BellSouth fears that "collocation of CLEC line cards in [its] digital loop carrier systems would create tremendous record-keeping, inventory and asset management concerns when some of the inventory is owned by a CLEC." BellSouth at 19.

[14] SBC at 63.

[15] Qwest at 14 (emphasis added).

[16] BellSouth at 19.

[17] Nortel at 4.

[Digital Loop Carrier]" and that "it would be very difficult, if not impossible, to develop industry standards without thereby stifling technological development."[18]

(a) Line card collocation is not technically feasible.

Alcatel has repeatedly noted that the installation of plug-in line cards not manufactured or licensed by the original manufacturer is technically unfeasible.[19] Reasons for lack of feasibility of foreign line card installation include variations in NGDLC system and line card specifications, such as line card and back plane sizes, system powering, and heat dissipation requirements.

Line cards are simply printed circuit boards. These circuit boards consist of components such as chip sets, resistors and solder points. These components, in conjunction with the system software, allow for provisioning certain service features and functions. The line cards themselves are specially designed to fit into slots, which are hard wired to the system back plane. The circuit board, which is the line card, simply cannot be modified without changing and re-designing the board's components.

Any change in board design must be associated with a change in other hardware and software design. For instance, line cards designed for DSLAM back planes cannot be transported "as is" to embedded NGDLC systems. More specifically, a DSLAM line card designed to support 24 lines would not work in an NGDLC slot designed and hardwired for four cable pairs.

In addition, chipsets supporting different service capabilities have different power and thermal dissipation factors. These different factors affect overall system design and capacity, neither of which can be modified in existing systems.

(b) Direct interconnection with NGDLC line cards is not possible.

Alcatel repeatedly has noted that it is not possible to interconnect directly with NGDLC line cards.[20] Instead, access is provided to the derived lines through the standard

---

[18] Ibid.

[19] See e.g., Alcatel at 19, *ff.* and in the "Open Forum," May 10, 2000.

[20] Alcatel at 16.

service and facility interfaces at the RT[21] and network interfaces in the CO.[22] Circuits are provisioned end-to-end through the NGDLC systems. A NGDLC line card by itself has no service capability.

(c) Line card collocation creates unnecessary security and operational risks.

The NGDLC line card interoperability concept is also flawed because it presents serious security and operational issues. If interoperability is required, line cards from several CLECs could be installed. Allowing multiple CLECs or other operators into the limited space available in RTs increases the potential for inadvertent changes to installed line cards and related equipment. Some of these concerns were addressed in the frequently quoted Illinois commission ruling as reasons why only ILECs should be allowed to install the cards.[23]

(d) Line cards should not be required to support SDSL.

One set of the parties supporting CLEC installation of line cards in NGDLC systems is the "Swidler Group."[24] Apparently, one of the Swidler Group's primary concerns is that line cards used in SBC's *Project Pronto* do not support SDSL.[25]

---

[21]Physically, RT service and facility access is provided through the cable pairs that are hardwired to the channel banks. These are normally extended in derived feeder pairs to FDIs and thence, through distribution pairs, to network interface devices at customer premises.

[22]In the case of Litespan®, the TDM network interfaces in the CO include VF pairs terminated on the MDF in UDLC (TR-057) configurations and DS1 facilities that support integrated, TR-008 and GR-303 interfaces. The latter configuration may be terminated at DSX-1 panels or EDCS systems, or they may be directed connected to one or more local digital switches ("LDS"). ATM-based circuits (*e.g.*, ADSL) are directly routed from the RT (or series of RTs) to an OCD or other ATM device through an optical, OC-3c interface.

[23]ICC 00-312 and 00-313, Consolidated, August 17, 2000, Issue 7, Section D, "Commission Analysis and Conclusion."

[24]Companies represented by Swidler Berlin Shereff Friedman, LLP. These companies include Conectiv Communications; Corecomm, Vitts Networks, and Logix, Inc.; CTSI, Waller Creek Communications, Inc. dba Pontio Communications Corp.; DSLNet Communications, LLC; @Link Networks, Inc., Mpower Communications; and the Joint Comments of Telergy, Inc., Aldelphia Business Solutions, Inc., and Business Telecommunications, Inc., all dated October 12, 2000. Excluded from this group reference are the filings from the same firm covering a narrower scope, including those for Fiber Technologies, LLC; Lightbonding.com, Inc. and PF.Net Communications, Inc.

[25]*See* Conectiv at 28.

This concern is totally unjustified. Alcatel repeatedly has explained that SDSL is a proprietary DSL interface that is not supported in infrastructure systems such as NGDLC. A major reason SDSL is not supported in Alcatel's NGDLC equipment is because it is a non-standard technology and as such, it is not expected to achieve any significant market penetration.

A further reason that Alcatel's NGDLC equipment does not support SDSL is that it is predominantly a business service requirement, whereas NGDLC systems principally serve residential customers. There is only limited market opportunity for symmetrical service in the residential customer market. In any event, for that limited market, and for the business service market, Alcatel is planning to include other standardized flavors of symmetric service in the future.[26]

(e) Alternatives to line card collocation are available.

An additional assertion made by certain commenters in support of line card interoperability is that it is too costly to deploy their own DSLAMs at RT locations.[27] These parties cite low service demand as a basis, yet they insist on RT collocation space.

It is quite common for DSLAMs supporting these services to be installed at BTs where the service demand is considerably smaller. This practice suggests there are conflicting views of the business opportunities for such deployment. Further, it might be possible for competitive service providers to share DSLAMs, which would reduce the individual deployment costs in a fashion similar to sharing derived NGDLC facilities.

AT&T went further by concluding that collocation at remote terminals was virtually impossible and economically unfeasible.[28] While space and interconnection limitations at RTs make derived facility sharing attractive, there still are sufficient opportunities for remote collocation to make case-by-case reviews worthwhile.

---

[26] Alcatel has pledged to support G.shdsl in Litespan® subject the standardization process. Alcatel at 23.

[27] *See* Network Access at 17 and the Swidler Group filings.

[28] *See*, e.g., AT&T at 53 and attached Declaration of Joseph P. Riolo at 18.

In addition, adjacent collocation is a viable option where there is inadequate space in an existing RT enclosure. This option provides more flexibility for CLECs which plan to provide services that require shorter loop lengths than found in the typical serving area. IP Communications, in particular, disagrees with this approach, claiming it costs "approximately $500,000 per adjacent collocation."[29] Experience indicates that this estimate may be over-stated by at least ten-fold for remote DSLAM installations.

Rhythms asserted that existing NGDLC systems could support all versions of DSL, whether standard or proprietary.[30] This claim falls into the category of "anything is possible, theoretically." Rhythms, however, fails to take into account practical considerations. Many development constraints preclude inclusion of "everything but the kitchen sink" in terms of NGDLC line card functionality. Not the least of these constraints is the exponential combination of multiple vendor features and functions that would have to be taken into consideration. However, Alcatel will continue to develop line cards and features that meet industry standards for interfaces and protocols. Nearly all the commenters agreed that there were significant advantages in sharing the derived NGDLC facilities that such cards support.

III. NGDLC Development Results from Rational Market Analysis

Alcatel's product development strategy is rationally based on a combination of market, financial, competitive, regulatory and customer requirement considerations.[31] Additional features for existing systems are developed based on the issuance of new industry standards, Alcatel's own sense of market conditions, customer estimates of potential demand for the features, and considerations regarding development costs and profit potential.

In contrast, IP Communications and Rhythms claimed that Alcatel developed the Litespan® ADSL capabilities based on the needs of one customer without regard to any

[29] IP Communications at 7.

[30] *See* Rhythms at 23.

[31] Alcatel at 13-15.

other party.[32] This claim is patently false and wholly unsupported. Alcatel's Litespan® product development was based on ANSI standards and the ATM capabilities that had been designed into the system back plane over a decade earlier by DSC Communications Corporation ("DSC").

Further, Rhythms asserts that Litespan® developers ceased working with other vendors to develop line cards when the product line was acquired by Alcatel, ostensibly to restrict the development to the requirements of that one customer, namely SBC.[33] In fact, DSC did incorporate Alcatel's ADSL technology and chipsets into its ADSL line card design. Again, this development decision was based on (then) recently issued standards and it involved cooperation with the leading supplier of the technology supporting the standard, which is Alcatel. This form of cooperation did not cease with Alcatel's acquisition of DSC. Alcatel, like other NGDLC vendors, continues to enlist the assistance of other vendors in the development of standards-based line card features for Litespan® under licensing agreements.

Despite such assertions, Alcatel continues to solicit, from potential non-customer users of Litespan® systems owned by ILECs, input regarding their needs and requirements. To the extent the functions and features they seek, which are supported by standards, are technically feasible and appear to be commercially viable, Alcatel will consider them for future product development plans.

IV. Proprietary Information Must Be Protected

In its comments, Alcatel explained that NGDLC systems and their line cards are controlled by proprietary system and element management software.[34] This is Alcatel's copyright protected intellectual property, licensed under a restrictive licensing agreement to the system owner. Alcatel has invested tens of millions of dollars to develop this

[32] See IP Communications at 14 and Rhythms at 23.

[33] *See* Rhythms at 23.

[34] Alcatel at 16.

software. It is inherently unfair for parties to suggest that they have access to such software outside of any normal and customary procurement process.

Furthermore, the software is not open to modification by third parties. It would be impossible for Alcatel, or any other party for that matter, to modify the software in a way that could accommodate the differentiated features of all the other proprietary line cards in the market. Interestingly, none of the comments appears to directly address any of these technical issues. The record only seems to reflect unsubstantiated rhetoric designed to scare the Commission into ignoring manufacturers' substantial R&D investments so that CLECs and other carriers can take unfair advantage of the collocation process.

For example, the Swidler Group, among other commenters, contend that "CLECs are disadvantaged in their ability to request advanced capabilities of next generation architectures because ILECs and their vendors have not fully disclosed the capabilities of the equipment they plan to deploy."[35] This claim gets at the heart of the "intellectual property" issue. However, as set forth below, the costs associated with mandating such disclosure far outweigh any purported benefits.

Alcatel, like other vendors, provides proprietary and confidential product documentation related to its customers. These materials are used to support the installation, provisioning and maintenance of Alcatel manufactured equipment. This documentation also supports current and future network planning. All information is provided to Alcatel's customers under non-disclosure agreements ("NDAs") and other instruments that restrict further distribution or disclosure of protected information. Alcatel's customers may not, without its express consent, pass protected information on to non-customers.

It is absolutely essential that proprietary information must remain confidential for competitive reasons. Opening the door to further distribution, even under NDAs, would greatly jeopardize the security of that information.

In addition, any misuse or misinterpretation of this information could be prejudicial to the parties who attempt to use it. For example, development plans for new features and

[35] *See* Conectiv at 33.

functions are subject to significant change in detail design and scheduling, all of which are covered in direct customer briefings. Actual implementation of equipment enhancements in customer networks depends on customer testing and approval of the features as well as deployment decisions that pertain to their particular network capabilities. Specifically, the inclusion of a feature or capability in a "planning guide," for instance, may not ensure its availability in actual practice.

This problem is exacerbated if a CLEC intends to use functions or features that the ILEC is not currently using or planning to use. In this case, there would be no ILEC test or use experience that could assist CLEC deployment. Furthermore, there could be additional operational and maintenance issues with such use that the proprietary documentation (designed for the direct customer) would not cover.

Another important consideration is that CLECs cannot plan to use specific features and functions of the ILEC systems without regard to the deployment parameters planned for those systems, which are known only to the ILEC. RTs are deployed for specific geographic areas serving a fixed number of customer locations.[36] System and enclosure sizes are designed based on those locations. The use of service features that reduce the delivery capacity of the systems must be carefully monitored and controlled by the system owner to avoid prematurely exhausting the capacity of the system. At risk is the denial of basic service delivery and/or substantial network re-configuration.

An example of this possibility is use of constant bit rate ("CBR").[37] SBC noted that a system supporting 672 ADSL lines with unspecified bit rate ("UBR") would be reduced to approximately 100 with CBR at a 1.5 Mbps service rate.[38] Such reduction in planned capacity would be significant. Likewise, by the very nature of the queuing algorithms, the CBR traffic would restrict the flow of the more popular and widely used UBR traffic. Understanding the implications of the services requires thorough familiarity with the system as well as the documentation.

---

[36] Alcatel at 8-9.

[37] The CBR, as a service feature and not a facility in itself, also cannot be treated as a UNE.

[38] SBC at 70.

Another danger of non-customer use of proprietary documentation is the tendency to assume that the systems easily can be reconfigured to meet capacity changes. For instance, even Alcatel's public documentation notes that the OC-3c interfaces can be chained to serve up to 32 ATM Bank Control Units ("ABCUs") and that such chains can be split with additional OC-3c links when needed. That may sound simple, but a thorough understanding of Alcatel's upgrade procedures, normally accommodated with hands-on training, is required to know if such upgrades actually would be possible in specific situations.[39]

The point is, regardless of the competitive implications, the more detailed the documentation, the more dangerous it is in the hands of non-users. At the very least, the distribution of such essential information needs to be controlled directly by the equipment supplier which can then work with both the actual customers and indirect users to resolve any issues relating to the interpretation and use of the documentation.

For the foregoing reasons, access to proprietary information is not necessary and, in fact, is counter-productive. Instead, public information on Alcatel's web site is sufficient for preliminary planning considerations. It provides product outlines describing the basic features and functions of the equipment. More detailed planning depends on the actual deployment considerations under control of the customers which purchase the equipment.

V. Miscellaneous Issues

In addition to the critical issue of how line cards should be treated for collocation purposes, other issues were raised that are addressed below:

1. Space Reservation

There were many comments regarding how much space to reserve for collocation and/or reservation periods.[40] Alcatel agrees that equipment design parameters need to be considered in space planning exercises.

---

[39] In actual practice, most chains are limited to nine (9) channel banks, since that is the common control limit for acceptable POTS QoS.

[40] See, e.g., AT&T at 71-74; DSLNet at 53-56.

For instance, in Litespan® systems, there is an 80-inch wiring limit from the Common Control Assembly ("CCA") to the last Channel Bank Assembly ("CBA") connected to the CCA, whether in the CO or at a RT location. Where the initial installation does not include the full system capacity, rack space must be reserved for future channel bank installations, regardless of when they may occur.

2. NGDLC Within 16 Kft

Rhythms claims that NGDLC installations (with advance service capabilities) should be prohibited within 16 Kft of the CO to prevent interference between DSL lines originating at the CO and those originating at the RT.[41] This type of prohibition would place an unreasonable economic burden on affected service providers and, in the case of ILECs, would increase basic service costs.

NGDLC systems are normally deployed beyond 12 Kft for economic capacity expansion.[42] Some situations warrant placements even closer to the CO. In addition, including advance services with these installations supports downstream ADSL rates of 1.5 Mbps (or better) with normal line conditions and binder group service mixes. Additionally, Litespan® ADSL cards (ADLUs) have level-setting options that mitigate interference caused by different power sources and levels. In addition, lines serving major business locations often can be groomed to other binder groups to eliminate such interference.[43]

Higher speed DSL lines, like VDSL, require shorter copper distribution paths. Consequently, no limits should be placed on NGDLC or other RT deployments that support advanced services.

---

[41] Rhythms at 89.

[42] Alcatel at 22.

[43] Exceptions may arise where CO-based services terminate in buildings that have other lines served by building terminal DSLAMs. It may not be possible to separate the lines in the inside wiring. This problem will exist regardless of NGDLC installations.

3. Cross-connects at Remote Terminals

Several CLEC commenters said they needed cross connections at remote terminals.[44] As Alcatel notes in its comments, NGDLC systems installed in CSA design applications purposely were designed without cross-connect access.[45]

The installation of full cross-connect features would not be feasible due to the size of the panels that would be required to terminate the wiring from the NGDLC and DSLAM systems as well as the derived feeder pairs. Additionally, it would be impossible to install such panels in existing RTs without disrupting service. Cross-connects must be restricted to existing and future FDIs beyond the RTs, using accessibility options such as engineering controlled splices.

4. Access to OSS

Alcatel provides a proprietary element management system ("EMS") to provision and maintain services on its Litespan® and ASAM systems. Currently, this software only can be used by a single owner with licensed rights.

Alcatel is in the process of reviewing market and customer requirements for multiple access to these operational functions. At the very least, such access may allow "read only" surveillance of individual derived lines.[46] Additional network management functions could be enabled if adequate security can be provided and methods can be developed to avoid interruption of other services with maintenance operations such as intrusive testing. It is possible that multiple service provider access could be supported by EMS software partitioning and/or through higher level, network management system access.

---

[44] *See e.g.*, IP Communications at 16.

[45] Alcatel at 25-27.

[46] As opposed to the use of virtual RTs with dedicated GR-303 interface groups, which only can carry TDM traffic.

At a minimum, substantial further study of these issues is required. Alcatel defers commitment, with respect to how it will proceed with the issue of OSS access, until those studies are completed.

VI. Conclusion

Alcatel again welcomes the opportunity to participate in this proceeding. As a leading supplier of NGDLC systems with advanced service capabilities, Alcatel has a material interest in its outcome.

While Alcatel fully supports remote collocation and facility sharing, it proves conclusively herein that line card interoperability is not the answer because such an approach is technically unfeasible. Mandated interoperability also is unacceptable because NGDLC feature development is best done in response to market drivers, including industry standards, rather than through regulatory mandates. Furthermore, to ensure continuation of innovative product development and to protect network operations, Alcatel must remain in control of its proprietary and confidential information.

Respectfully submitted,

ALCATEL USA, INC.

By: James J. Gunther, Jr.

James J. Gunther, Jr.
Regulatory Affairs Manager
Government Relations Office
1909 K Street, NW
Suite 800
Washington, DC 20006
(202) 715-3709

Of Counsel:

Robert J. Miller
Gardere Wynne Sewell LLP
1601 Elm Street
Dallas, Texas 75201
(214) 999-4219

Appendix A

AT&T Corp ("AT&T")
BellSouth Corporation ("BellSouth")
CTSI, Inc.; Waller Creek Communications, Inc., dba Pontio Communications Corporation ("CTSI Group")
@Link Networks, Inc. ("@Link")
Conectiv Communications, Inc. ("Conectiv")
CoreComm, Inc.; VittsNetworks, Inc.; Logix, Inc. ("CoreComm Group")
DSLNet Communications L.L.C. ("DSLNet")
Focal Communications Corporation ("Focal")
IP Communications Corporation ("IP Communications")
LightBonding.com, Inc. ("LightBonding")
Network Access Solutions Corporation ("Network Access")
Nortel Networks, Inc. ("Nortel")
PF.Net Communications, Inc. ("PF.Net")
Qwest Communications International, Inc. ("Qwest")
RCN Telecom Services, Inc. ("RCN")
Rhythms Netconnections, Inc. ("Rhythms")
SBC Communications Inc. ("SBC")
Telergy, Inc.; Adelphia Business Solutions, Inc.; Business Telecommunications, Inc. ("Telergy")
Verizon Telephone Companies ("Verizon")
WorldCom, Inc. ("WorldCom")

Certificate of Service

This is to certify that one (1) original and four (4) true and accurate copies of the foregoing was hand delivered this 14th day of November, 2000 to the Office of the Secretary. Magalie Roman Salas, Office of the Secretary, Federal Communications Commission, 445 Twelfth Street, SW, Room TW-B204, Washington, DC 20554 and by regular mail to the following parties:

Janice Myles
Common Carrier Bureau
Policy and Program Planning Division
Federal Communications Commission
445 Twelfth Street, SW
Washington, DC 20554

International Transcription Service, Inc.
445 Twelfth Street, SW
CT-B402
Washington, D.C. 20554

Wendy Bluemling
Assistant Vice President
Regulatory and Industry Affairs
DSLnet Communications, LLC
545 Long Wharf Drive, Fifth Floor
New Haven, Connecticut 06511

D. Anthony Mastando
James N. Moskowitz
Kathleen L. Greenan
Andrew D. Lipman
Richard M. Rindler
Harisha J. Bastiampillai
Swidler Berlin Shereff Friedman, LLP
3000 K Street, N.W., Suite 300
Washington, D.C. 20007-5116

Michael K. Kellogg
Rachel E. Barkow
Kellogg, Huber, Hansen, Todd & Evans, P.L.L.C.
1301 K street N.W., Suite 1000 West
Washington, D.C. 2005

Hope Thurrott
Lori A. Fink
Christopher M. Heimann
Roger K. Toppins
Paul K. Mancini
SBC Communications Inc.
1401 I Street, N.W., Suite 1100
Washington, D.C. 20005

Kent F. Heyman
Senior Vice President & General Counsel
Francis D.R. Coleman
Vice President, Regulatory Affairs
Richard E. Heatter
Vice President, Legal Affairs
Mpower Communications corp.
175 Sully's Trail-Suite 300

Michael P. Donahue
Michael W. Fleming
Robert J. Aamoth
Jennifer M. Kashatus
Helen E. Disenhaus
Patrick J. Donovan
Swidler Berlin Shereff Friedman, LLP
3000 K Street, N.W., Suite 300
Washington, D.C. 20007

John G. Lamb, Jr.
Nortel Networks Inc.
2100 Lakeside Blvd.
Richardson, TX 75081-1599

George T. Hawley
Gluon Networks
1301 Redwood Way
Suite 110
Petaluma, CA 94954

Stephen L. Goodman
William F. Maher, Jr.
Halprin, Temple, Goodman & Maher
555 12th Street, N.W., Suite 950, North tower
Washington, D.C. 20004

M. Robert Sutherland
Stephen E. Earnest
1155 Peachtree Street, N.E., Suite 1800
Atlanta, GA 30309

Russell C. Merbeth
Michael Carowitz
Larry Walke
Winstar Communications, Inc.
1615 L Street, N.W., Suite 1260
Washington, D.C. 20036

Mark D. Schneider
Jenner & Block
601 13th Street, NW
12th Floor
Washington, D.C. 20005

Jason D. Oxman
Senior Government Affairs Counsel
Covad Communications Company
600 14th Street, N.W., Suite 750
Washington, D.C. 2005

Thomas M. Koutsky
Vice President-Regulatory Affairs
Covad Communications Company
600 14th Street, N.W. Suite 750
Washington, D.C. 20005

Marsha J. MacBride
Vice President, Government Relations
The Walt Disney Company
1150 17th Street, N.W., Suite 400
Washington, D.C. 20036

S. Blake Ashby
IntraSpan Communications, Inc.
6609 Clemens, 1W
St. Louis, MO 63130

Blair A. Rosenthal
Robert B. McKenna
Suite 700
1020 19th Street, N.W.
Washington, D.C. 20036

Michael J. Ettner
Senior Assistant General Counsel
Personal Property Division
General Services Administration
1800 F Street, N.W., Rm.4002
Washington, D.C. 20405

Lawrence E. Sargent
Linda L. Kent
Keith Townsend
John W. Hunter
Julie E. Rones
1401 H. Street, NW, Suite 600
Washington, D.C. 20005

Lawrence G. Malone
General Counsel
Public Service Commission of the State
Three Empire State Plaza
Albany, New York 12223-1352

Richard S. Whitt
Cristin L. Flynn
World Com, Inc.
1801 Pennsylvania Ave., NW
Washington, D.C. 20006

Michael E. Olsen
William J. Bailey, III
Lori Anne Dolqueist
NorthPoint Communications, Inc.
303 2nd Street
San Francisco, CA 94107

A. Richard Metzger, Jr.
Ruth M. Milkman
Gil M. Strobel
Lawlwer, Metzger & Milkman, LLC
1909 K Street, NW
Suite 820
Washington, D.C. 2000

Leon M. Kestenbaum
Jay Keithley
Richard Juhnke
401 9th Street, NW, Suite 400
Washington, D.C. 20004

Gary Bolton
Vice President of Product Marketing
Catena Atkins Farm Court
Raleigh, N.C. 27606

Theodore M. Weitz
Vice President and General Counsel
185 Monmouth Park Highway
West Long Branch, New Jersey 07764

Constance L. Kirkendall
Regulatory Manager
@Link Networks, Inc.
2220 Campbell Creek Blvd., Suite 110
Richardson, TX 75082

David R. Conn
Deputy General Counsel and Vice Presiden
Policy McLeodUSA Telecommunications S
6400 C St., SW
Cedar Rapids, IA 52406-3177

Cynthia B. Miller, Esq.
Bureau of Intergovernmental Liaison
Florida Public Service Commission
2540 Shummard Oak Blvd.
Tallahassee, Florida 32399-0850

Lawrence W. Katz
Joseph DiBella
1320 North Court House road
Eighth Floor
Arlington, VA 22201

Sylvia Lesse
John Kuykendall
Kraskin. Lesse & Cosson, LLP
2120 L St. N.W., Suite 520
Washington, D.C. 20037

Stuart Polikoff, Director of Government I
Stephen Pastorkovich, Senior Policy Ana
OPASTCO
21 Dupont Circle, NW
Washington, DC 20036

Scott Blake Harris
William M. Wiltshire
Harris. Wiltshire & Grannis LLP
1200 Eighteenth Street, N.W.
Washington, D.C. 20036

Brad E. Mutschelknaus
Jonathan E, Canis
Edward A. Yorkgitis Jr.
Joan Griffin
Ross A. Buntrock
David Kirschner
David Konuch
Kelley Drye & Warren LLP
1200 19th Street, N.W.
Washington, D.C. 20036

Arbors Communications Co.
1100 Wayne Avenue
8th Floor
Silver Spring, MD 20910

The Association for Local Telecommuni
888 17th Street, N.W.
Suite 900
Washington, D.C. 20006

Competitive Telecommunications Assoc.
1900 M Street, N.W. Suite 800
Washington, D.C. 20036

E.Spire Communications, Inc.
133 National Business Parkway
Suite 200
Annapolis Junction, MD 20701

FairPointe Communications Solutions, Inc.
6324 Fairveiw Road
4th floor
Charlotte, NC 28210

Intermedia Communications Inc.
3625 Queen Palm Drive
Tampa, FL 33169

Carol Ann Bischoff
Jonathan Lee
Competitive Telecommunications Assoc.
1900 M Street, N.W.
Suite 800
Washington, D.C. 20036

Howard Siegel
Vice President of Regulatory Policy
IP Communications Corporation
17300 Preston Road, Suite 300
Dallas, TX 75252

William T. Lake
Matthew A. Brill
Wilmer, Cutler & Pickering
2445 M Street, N.W.
Washington, D.C. 20037

Mark P. Trinchero
James S. Blitz
Holly Rachel Smith
Davis Wright Tremaine LLP
1500 K Street, N.W., Suite 450
Washington, D.C. 2005

Rodney L. Joyce
J. Thomas Nolan
Shook, Hardy & Bacon L.L.P.
600 14th Street, N.W., Suite 800
Washington, D.C. 2005-2004

John Citrolo
Vice President External Affairs and Rev
Conectiv Communications, Inc.
P.O. Box 6066
Newark, Delaware 19174

Richard Metzger
Pamela Arluk
Focal Communications Corporation
7799 Leesburg Pike, Suite 850 North
Falls Church, VA 22403

Gale Smith Kalitsi
Focal Communications Corporation
200 n. LaSalle Street, Suite 1100
Chicago, Illinois 60601

The Honorable William E. Kennard
Chairman
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

The Honorable Harold Furchgott-Roth
Commissioner
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Robert B. McKenna
QWEST Corporation
1801 California Street, Suite 5100
Denver, CO 80202

The Honorable Susan Ness
Commissioner
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

The Honorable Gloria Tristani
Commissioner
Federal Communications Commissioner
445 12th Street, S.W.
Washington, D.C. 20554

The Honorable Michael K. Powell
Commissioner
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Colleen A. Wilson, Esq.
Assistant General Counsel
Supra Telecommunications
2620 SW 27th Ave.
Miami, FL 33133

Christy C. Kunin
Blumenfeld & Cohen
Suite 300
1625 Massachusetts Ave., NW
Washington, DC 20036

By: _____
James J. Gunther, Jr.
Regulatory Affairs Manager
Government Relations Office