rely on their rivals for critical components of their offerings."[365] Through facilities-based competition, Rhythms, joined by other DSL providers, have been able to generate a notable share of the advanced services market. That competition should not be foreclosed or relegated to only resale.

Denying nondiscriminatory access to UNEs in the NGDLC loop architecture clearly does not "provide an efficient competitor with a meaningful opportunity to compete."[366] In the case of unbundling the loop network, the Commission has previously acknowledged that "[t]he greatest benefits may be achieved through facilities-based competition, and that the ability of requesting carriers to use unbundled network elements . . . is a necessary precondition to the subsequent deployment of self-provisioned network facilities."[367] Relative to the NGDLC architecture, the Commission has directed ILECs to provide CLECs with nondiscriminatory access to subloops in order to "facilitate rapid development of competition, encourage facilities-based competition, and promote the deployment of advanced services."[368]

In the recent *Project Pronto Order*, the Commission recognized that SBC's Broadband Service offering relegates "competing carriers to effectively resell SBC's ADSL service."[369] Thus, the Commission should use this proceeding to expressly clarify that ILEC resale offerings,

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[365] *Promotion of Competitive Networks in Local Telecommunications Markets,* Notice of Proposed Rulemaking and Notice of Inquiry in WT Docket No. 99-217 and Third Further Notice of Proposed Rulemaking in CC Docket No. 96-98, FCC 99-141, ¶¶ 4, 23 (rel. July 7, 1999)("Moreover, only facilities-based competition can fully unleash competing providers' abilities and incentives to innovate, both technologically and in service development, packaging, and pricing. . . . In order for competitive networks to develop, the incumbent LECs' bottleneck control over interconnection must dissipate."). *See also UNE Remand Order* ¶ 7.

[366] In the Matter of Deployment of Wireless Services Offering Advanced Telecommunications Capability, CC Docket No. 98-147, Memorandum Opinion and Order, and Notice of Proposed Rulemaking, F.C.C. 98-188, (rel. Aug. 7, 1998) ¶ 2.

[367] *UNE Remand Order* ¶ 5.

[368] *UNE Remand Order* ¶ 207; *see also Id.* ¶ 206.

[369] *Project Pronto Order* ¶ 23.

such as the Broadband Service offering, do not fulfill the ILECs obligations to provide interconnection, unbundled UNE or collocation under Section 251(c). To find otherwise would enable ILECs to undermine the statutory and regulatory goal of facilities-based competition and relegate competitors to a purely "resale" role. That is why it is crucial that the Commission order unbundling of the Broadband Loop, for access by facilities carriers in the central office collocation arrangements.

The Commission can and should make this finding. In concluding that the Merger Conditions allow SBC to own certain pieces of advanced services equipment, such as the Optical Concentration Device ("OCD/ATM Switch") and the DLC line cards, the Commission expressly stated that the determination did not "limit[] a competitive LECs ability to obtain an unbundled local loop or subloop, including loops capable of providing xDSL services[,] . . . [n]or does this decision revise or restrict our existing definition of the local loop or the subloop network elements."[370] Furthermore, the Commission noted that its narrow finding "does not eliminate any options currently available to competitive LECs under our rules, including the right to obtain access to the subloop network element, to collocate in remote terminals (when space is available), and to obtain access to unbundled DSLAM capabilities in certain circumstances."[371] With the preface that "[n]othing in this [*Project Pronto*] *Order* supersedes SBC's obligations to comply with all applicable Commission orders and rules, now and in the future,"[372] the issue that the Commission reserved for consideration in this rulemaking is the ability of the CLECs to place their own cards in the NGDLC remote terminals.

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[370] *In re Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations from Ameritech Corporation, Transferor, to SBC Communications, Inc., Transferee*, CC Docket No. 98-141, Second Memorandum and Order, FCC 00-336, ¶ 29 (rel. Sep.8, 2000).

[371] *Project Pronto Order* ¶ 35.

CONCLUSION

For the reasons set forth herein, the Commission should rule that equipment is "necessary" so long as it is "directly related to" interconnection and access to unbundled elements and an inability to collocate such equipment would interfere with a CLEC's ability to compete effectively and efficiently. The Commission should also implement rules that expressly provide for collocation of multiuse equipment, DLC line cards. The Commission should also conclude that Carrier-to-carrier cross-connects on ILEC premises are necessary to effectuate the goals of the Act. The Commission should establish the regulatory structure to allow competitors to collocate all "necessary" equipment at the remote terminals, as well as to collocate all equipment "necessary" for line sharing. Finally, to facilitate efficient implementation of these policies, the Commission should set national maximum collocation provisioning intervals to provide national consistency and uniformity.

To assure that the networks evolve to the benefit of the public and consistent with the statutory and regulatory policy of promoting competition, the Commission must take this opportunity to expand and reiterate ILEC obligations as they relate to changes in network architecture. The Commission must reiterate ILECs' duties to fulfill these unbundling obligations even when NGDLC is deployed. Specifically, the Commission should:

- require ILECs to consider and accommodate competition when designing their networks and to coordinate with CLECs in the planning, design and implementation of the network.
- reiterate that the unbundling obligations apply as the network evolves.
- emphasize that ILECs must make all loops, regardless of the technology used in the loop, available to CLECs, including OSS and other features, functions and capabilities of loops served over NGDLC.

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[372] *Project Pronto Order* ¶ 9.

- reiterate that CLECs are entitled to nondiscriminatory access to subloops in an NGDLC architecture, including the copper distribution, copper feeder and fiber feeder at any technically feasible point in the network.
- require ILECs to give CLECs access to spare copper.
- reemphasize the requirement that ILECs unbundle the DSLAM on fiber fed loops when CLEC are precluded from placing their DSLAM or line card in the RT.
- require ILECs to make available an unbundled broadband loop to facilities-based CLECs collocated in the central office.
- conclude that ILEC resale of Broadband Service Offerings, such as SBC's service offering, do not satisfy the ILECs' unbundling obligations in an NGDLC network.

Respectfully submitted,

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Dated: October 12, 2000

BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, DC 20554

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

JOINT DECLARATION OF
MARTIN GARRITY, DAVID REILLY, TOM STUMBAUGH
AND ROB WILLIAMS ON BEHALF OF
RHYTHMS NETCONNECTIONS INC. AND RHYTHMS LINKS INC.

BACKGROUND

1. My name is Martin Garrity and I am employed at Rhythms Links, Inc. ("Rhythms") as the Vice President of Network Implementation. My business address is 7337 S Revere Parkway, Englewood, CO 80112. I am responsible for the deployment of all network facilities for Rhythms. Specifically, I oversee the planning, scheduling and implementation of the Equip, Furnish and Installation (EF&I) of all Rhythms collocations. Additionally, I am responsible for the provisioning of all backbone and customer egress capacity at rates of T-1 or greater. Finally, I am responsible for all elements of carrier cost management, including auditing, dispute and dispute management. I have seventeen years of telecommunications and operations experience. Prior to August 1998 when I joined Rhythms, my experience include:

- Aug. 1997 – Apr. 1998: Senior Delivery Manager, British Telecommunications (on assignment from MCI), London, England

- Mar. 1996 – Aug. 1997: Product Engineering Manager, Multimedia Services Engineering, , MCI, Richardson, TX
- Mar. 1994– Aug. 1997: Program Manager, Multimedia Services Engineering, MCI, Richardson, TX
- Jun. 1993– Mar. 1994: Project Manager, Institute of Telecommunications Sciences, Department of Commerce , MCI, Boulder, CO
- Sept 1991 – Jun. 1993: Master of Telecommunications, University of Colorado, Boulder, CO
- May 1983 – Sept 1992: Officer, Signal Corps, United States Army

2. My name is Tom Stumbaugh and I am employed by Rhythms as the Director of Access Engineering. My business address is 7337 South Revere Parkway, Suite 100, Englewood, Colorado 80112. I am responsible for the access technologies, including Digital Subscriber Line ("DSL") services, for Rhythms' network. I am also responsible for all the technology that is deployed in the Rhythms' collocation arrangements at the incumbents' premises. I have over 20 years of experience in networking, telecommunications, and systems software. I have been working for Rhythms since October 13th, 1997. My qualifications and prior experiences include:

- Aug. 1996 to Oct. 1997: Manager Systems Engineering, Applied Innovation, Dublin, Ohio
- July 1982 to Aug. 1996: Senior Network Engineer, CompuServe Incorporated, Dublin, Ohio
- Dec. 1981 to July 1982: Software Engineer, IBM, Santa Teresa, CA
- June 1980 to Dec. 1981: Software Engineer, CompuServe Incorporated, UpperArlington, Ohio

3. My name is Rob Williams and I am employed by Rhythms as the Director of Regulatory Affairs and Deployment, Eastern Region. My business address is 8605 Westwood Center Drive, Suite 300 Vienna, Virginia 22182. I am responsible for negotiation, management, and execution of interconnection agreements and associated issues between Rhythms and incumbent local exchange companies in the Eastern Region of the United States. I am also

responsible for all physical collocation issues between Rhythms and ILECs, including filing collocation applications, scheduling collocation, exchanges of information, billing and turn-over of collocation from ILECs to Rhythms. Further, I am responsible for methods and procedures for ordering, provisioning, delivery, and maintenance of unbundled network element loops between Rhythms and ILECs. I have seventeen years of business and operations experience, mostly telecommunications, working as an Officer in the United States Navy, as well as for regulated telephone companies. On August 23, 1999, I began working for Rhythms. My qualifications and prior business experiences include:

- Jan. 1999 – Aug. 1999: Senior Manager, Data Network Implementation, Global One, Reston, VA
- Dec. 1996 – Dec. 1998: Senior Manager, Local Network Implementation, MCI, Reston, VA
- Dec. 1995 – Dec. 1996: Manager, Global Project Implementation, MCI, Reston, VA
- Feb. 1994 – Dec. 1995: Project Manager, Global Project Implementation, MCI, Reston, VA
- June 1991 – Feb. 1994: Project Manager, Pfizer Inc., Parsippany, NJ
- Dec. 1983 – June 1991: Officer, United States Navy

4. My name is David Reilly and I am employed by Rhythms as a Network Engineer. My business address is 7337 South Revere Parkway, Englewood, CO 80112. I am responsible for layer 1 design rules and loop qualification used by Rhythms for deploying DSL services. I am also responsible for representing Rhythms at T1E1.4 and NRIC 5 FG 3. I have fifteen years of engineering experience, mostly wireless telecommunication systems that bypass the local loop plant. On February 08, 1999, I began working for Rhythms. My qualifications and prior business experiences include:

- 1998: Director of Technology, UltimateCom Wireless ISP, Denver, CO
- 1996 – 1998: Senior System Engineer, Motorola Multimedia Group, Englewood, CO

•	1993 – 1996:	Engineering Manager, California Microwave, Bloomingdale, IL
•	1990 – 1993:	System Engineer, TeleSciences Transmission Systems, Bloomingdale, IL
•	1988 – 1990:	System Engineer, Motorola Inc., Englewood, CO
•	1984 – 1988:	Communications Engineer, Western Area Power Administration, Huron, SD
•	1988:	BSEE, South Dakota School of Mines & Technology, Rapid City, SD

PURPOSE AND SUMMARY

5. The Commission's determinations on the issues raised in the Notices of Proposed Rulemakings in these dockets will in large measure determine the viability of competitive alternatives for broadband services, such as Digital Subscriber Line ("DSL"), in the next generation of the ILEC-controlled local access wireline network. To meet the demands of American consumers of telecommunications products, the "network" must evolve. This evolution provides the perfect point in time, from both a regulating and technological perspective, for a paradigm-shift from closed proprietary network architecture to a standards-based open architecture that will results in more efficient and widespread use of network to the benefits of consumers around the nation.

6. Rhythms delivers residential and business customers with access to a national, high bandwidth digital IP network that utilizes local loops from the network of the incumbent local exchange carriers ("ILECs") for the "last mile" to the end user. Since 1997, Rhythms has deployed competitive DSL services in 58 markets or 95 metropolitan serving areas throughout the United States by collocating equipment at the premises of every ILEC and purchasing unbundled loops served from those premises. The Notices of Proposed Rulemakings ("Rulemakings") currently before the Commission directly affect whether Rhythms and other

providers of local services will continue to have the ability to develop and interconnect their own facilities-based networks with their own unique capabilities to the ILEC networks.

7. This Declaration not only recounts the experiences Rhythms has had with the different ILECs, it explains how these experiences have negatively impacted Rhythms business efforts. This Declaration also attempts to illustrate Rhythms' needs as they relate to the issues raised in the Rulemakings and provide the factual data underlying the positions in our Comments.

8. Specifically, the Declaration will address from a operational and technical perspective the general issues applicable to all physical collocation: the equipment necessary for Rhythms' physical collocation, the amount of space required for Rhythms' collocation, the appropriate tiers of collocation provisioning intervals, and Rhythms' collocation for line sharing. The Declaration will also evaluates the interconnecion and unbundling issues implicated by the deployment of Next Generation Digital Loop Carriers in the network architecture, particularly the technically feasible possibilities for competitive local exchange carriers ("CLECs") to access the next generation digtial loop carrier ("NGDLC") loops at the remote terminals in order to continue providing competitive DSL services.

NECESSARY EQUIPMENT FOR PHYSICAL COLLOCATION

9. The Commission has asked CLECs to provide information on the type of equipment that carriers must place in central offices in order to assemble efficient networks capable of providing competitive services to consumers. Rhythms regularly places Digital Subscriber Line Access Multiplexers ("DSLAMs") and other equipment used to transmit and receive the DSL signals over the local loops serving the end users that must be obtained from the ILECs, as well as interconnect with other carriers to transport the signals from the DSLAM back to Rhythms'

point of presence ("POP") in the market. Rhythms deploys the same equipment in the central offices where Rhythms has been forced to virtually collocate, as those offices where physical collocation has been available.

10. Every piece of equipment provides an integral function to a competitor's network. To interconnect with the public telephone network, most competitors lease some portion or portions of their competitive networks from the ILECs on an unbundled basis. Each piece used collectively forms a network to carry the competitor's communications. Consistent with the economics present in the marketplace, efficient competitors would benefit from the elimination of disposable or unnecessary equipment from their network. One way this is accomplished is through the production of equipment capable of performing more than one function.

11. As a result, in recent years, equipment suppliers have designed and produced for commercial use a wide portfolio of multi-task devices that perform a number of critical tasks. Because certain equipment may have functions, which do not directly involve interconnection or provide access to unbundled network elements ("UNEs"), does not mean that this equipment becomes any less integral to the competitor's network. For example, the Terminal Server/Ethernet HUB/Alarm monitor used to communicate with the functions of the network management systems of the installed equipment, the Metallic Loop Tester ("MLT") used to test and trouble shoot the physical copper pairs, the ATM multiplexor used to aggregate ATM traffic from all the DSL equipment to the uplink to Rhythms' POP. Said another way, availability of the local loop is useless to consumers unless competitors can connect the loops to the most efficient, competitive network possible. This is true because competitors connected to inefficient networks are unable to survive in a competitive environment.

12. Rhythms expects that by the end of 2000 it will have 2000 collocation arrangements in service spread across every major ILEC nationwide. Rhythms physically collocates in order to interconnect its network with the ILECs' network and gain access to unbundled local loops. The general nature of equipment that Rhythms places in the central offices has not changed significantly in the several years which Rhythms has been collocating. However, the equipment has become more efficient over time as the market has developed. For instance, recent generations of DSLAMs—while frequently requiring the same amount of rack space, as their earlier predecessors generally handle up to four times as many customers. This enables Rhythms to serve more customers from the same amount of rack space. Similarly, while Rhythms has always deployed several brands of DSLAMS in the central office, the specific types of DSLAMs Rhythms places in new collocation arrangements may differ from the equipment placed in older collocation arrangements. As technology expands the list of products and services that can be provided over DSL, Rhythms might augment its collocation arrangements to include DSLAMs with functionalities optimized for those products. For example, the DSLAM brand and model best-suited to provide high speed ADSL data services might not be the same DSLAM make and model optimized for voice over DSL ("VoDSL") products.

13. Rhythms deploys in its standard collocation configuration equipment used for (1) testing and monitoring the lines served through the particular collocation space, (2) muxing the signals of a particular DSL technology into ATM data packets, and (3) concentrating the signals from all of the DSLAMs into a single DS3 transmission. Rhythms has little visibility into the exact equipment collocated by ILEC advanced services affiliates, but believes that the equipment placed in Rhythms' collocation arrangement comports with generally accepted practices.

14. Sometimes the exact type of equipment placed by Rhythms differs between ILEC regions, because the individual ILECs have different requirements on what equipment can, or cannot, be placed in their central offices. For instance, Verizon refused to permit Rhythms to collocate the piece of equipment standardly used in other ILECs' premises to perform remote access to monitor the lines providing DSL service to existing customers. Rhythms, instead, had to request that its vendors redesign the collocation configuration. Based on the available technology and its business needs at the time, Rhythms replaced the one piece of monitoring equipment with two separate pieces of equipment to perform the task, the monitoring equipment and a detached modem. This edict requires more space, and imposes higher costs to collocate, as well as delays Rhythms' entry into the service area. In virtually every respect, Verizon's refusal resulted in Rhythms deployment of less efficient and less effective equipment than Rhythms deploys in the other ILEC central offices.

15. Over time, the equipment Rhythms places in the physical collocation arrangement has evolved to take advantage of efficiencies and design innovations introduced by the manufacturers of the equipment. Rhythms is constantly working directly with manufacturers to develop equipment that provides more capacity without increasing the size or the cost of interconnecting with the ILECs' networks or accessing UNEs. In order to interconnect with the ILECs' networks via physical collocation, Rhythms must not only pay for the amount of space it uses at the ILEC premises, but is also charged construction to make the space "ready" for Rhythms collocation. The combined costs provide great incentive to keep the size and the cost of the equipment has low as possible. At the same time, the number of Rhythms customers have increased, which means that more DSL must be provisioned through the same configuration of equipment. The goal, of course, is to figure out a way to serve as many customers through

particular location without requiring additional buildout of collocation space in the configuration. Achieving this goal calls for equipment that can serve either more customers without increasing in size or the same amount of customers but reduced in size. Equipment refinements and innovations create more efficient use of the central office space, which will continue to be a precious commodity as competition grows in the marketplace.

16. In the future, Rhythms expects this practice of working with equipment venders to increase equipment efficiency to continue. Rhythms regularly asks manufacturers to increase the density and functionality of the equipment collocated to provide DSL services. Most recently, Rhythms has investigated the possibility of manufacturers combining the splitter and DSLAM functionality into a single unit. Rhythms has also contemplated redesigning its collocation arrangement into one DSLAM or incorporating the concentrating functionality onto the DSLAM, drastically condensing the amount of collocation space required to serve the same number of end users.

17. The efficiencies and design innovations introduced by manufacturers often entail producing equipment that provides more than one function. The trend toward efficiency in equipment manufacturing has been to allow a carrier to purchase one component that provides several functions, as opposed to purchasing one component that provides only a single function. Using multi-functional equipment not only decreases the amount of space necessary to place such equipment, but also reduces the cost of the equipment. Consequently, to the extent it exists, the single-function equipment currently on the market consists of older models, which regularly cost more to repair and maintain than newer equipment. In a completely market-driven environment, a rational service provider would routinely take advantage of technological improvements in the areas of density and functionality to upgrade and augment its network.

Restrictions on the type, model or functionality of equipment that CLECs may place in their collocation sites will likely result in less efficient, and possibly inferior, network deployments.

18. Restrictions on the carriers' utilization of their equipment particularly on an ILEC-by-ILEC basis, further discourage Rhythms from purchasing state-of-the-art equipment that has multiple capabilities, such as switching functions. This hesitation by service providers to seek efficient, yet multi-use equipment, in turn, dampens any incentive for the manufacturers to design and produce next generation equipment with integrated functions. At the end of the food chain, it is ultimately consumers who are harmed the most from regulations or ILEC-imposed rules that in any way put a cloud on equipment development and deployment.

19. Recently, it appears as though ILECs have begun to realize the efficiencies of allowing CLECs to collocate multi-use equipment. On September 19th, Qwest announced that it will allow "collocation of high-speed packet data switches in Qwest central offices."[1] Additionally, SBC has recognized CLECs' ability to collocate their ATM switches in their collocation areas at the ILEC premises.[2] The positions of Qwest and SBC make it abundantly clear that there are no technological reasons for allowing this type of equipment to be barred from being collocated in central offices.

ABILITY OF CARRIERS TO CROSS CONNECT WITH OTHER CARRIERS INSIDE THE ILEC PREMISES

20. The Commission has also requested that commentors provide information on the need for carriers to cross connect with other carriers inside the ILECs' central office. As explained earlier, competitors often utilize portions of the ILEC network to complete their own competitive networks in the most efficient manner possible. As a result of the introduction of competition in

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[1] *Qwest Communications Announces Landmark Initiative to Open Local Communications Market,* <http://www.quest.com/ home.html> (Sept. 19, 2000).

[2] Technical Reference Notice for Broadband Service Phase 1, Draft Issue 0.2 (Aug. 11, 2000) at 17.

the marketplace for certain facilities, particularly dedicated local transport, competitors also now have the choice to purchase those facilities from other competitive carriers. Although competitors now utilize facilities from other CLECs, the ILECs remain the sole provider of some network elements, such as the local loops. Thus, CLECs routinely find themselves in the position of having to interconnect to both the ILEC and other CLECs in order to assemble the most efficient network.

21. When employing the facilities of other competitive carriers, Rhythms must connect its network with the network of the competitive carrier. In particular, Rhythms relies on other competitive carriers to provide fiber transport between Rhythms' collocation arrangements and Rhythms' ISP partners. As with all business decisions, Rhythms decides to use facilities from carriers other than the ILECs depending on such factors as availability and costs. For example, Rhythms often uses facilities from WorldCom to carry its traffic to the Rhythms' point of presence in a market, instead of using the ILECs' facilities. Generally speaking, the simplest, easiest and least expensive means for connecting with another CLEC's network is, where available, to cross connects at the central office.

22. If unable to cross-connect with other carriers directly within the central office, Rhythms will be forced to undertake the inefficient and costly routing of its customers' traffic over needless duplicative and expensive facilities. In other words, in order to link-up with its CLEC partners Rhythms would be required to either purchase DS3 transport services from the CLECs or special access arrangements from the ILECs. Either connection requires Rhythms to purchase additional cabling from its collocation space to the ILECs' main distribution frame ("MDF") as well as possibly pay monthly recurring charges for the transport facility itself and incur the delay in obtaining the connection from ILECs. The most efficient means of cross

connecting with other carriers is to do so directly, with only a relatively small cross connect fee to pay, regardless of whether those carriers are competitors or incumbents.

23. Directly connecting with another competitive carriers' network within the central office eliminates the need to run additional cabling. In most central offices, the ILECs have required all competitive carriers' to place equipment in the same area. This collocation area of the central office is often in a different area of the central office than the ILECs' MDF. Thus, running cable directly from its collocation space to the collocation space of the other carrier requires much less cabling than forcing carriers to run a connection from its collocation space to another area of the central office where the MDF is located, and then back to the same area of the central office where the other carrier is collocated, possibly right next to Rhythms collocated equipment.

24. Of course, allowing carriers to connect directly with each other inside the central office may also reduce the cost of cross connections. Currently, in order to connect with the network of another carrier, Rhythms must pass off traffic to the other carrier somewhere indirectly via an ILEC distribution frame. To do this, the ILEC generally charges a standard installation charge and a monthly cross connection charge, then both carriers must pay a monthly port charge. If allowed to cross connect directly to another CLEC, however, there should be no cost for provisioning as the CLECs do not touch a single ILEC frame.

25. Additionally, the potential for service interruption also decreases if carriers can connect directly with one another in the central office. It is intuitive that the amount of facilities and length of the connection is directly proportionate with the possible problems arising with those facilities. The more cables and connections required for a particular line, the longer the copper portion of the loop and the more likely outages will occur. For example, as DSL

technologies are distance sensitive, an additional cabling required to when interconnecting to another CLEC via the MDF increases the length of the copper portion of the loop, and limits the characteristics of the products servable over that facility.

26. Requiring carriers to cross connect with other carriers outside of the central office requires the additional purchase of entrance facilities, conduit space and extra cross connections from the ILECs. Indirect cross connects between competitors outside the central office only serve to add revenue to the ILECs, there is no technological or network architecture reason for the process.

27. Moreover, indirect connections outside the central office would be cost-prohibitive. The price of the components required to complete an indirect cross connection with another CLEC outside the central office vary from ILEC to ILEC, but are consistently costly. To provide some indication, for entrance facilities in Texas, SBC has proposed a $1263.54 non-recurring charge and a $395.57 monthly recurring rate.[3] In California, to obtain cross connection through unbundled DS-3 transport a CLEC must pay approximately $670 in nonrecurring and $90 in monthly charges.[4] Alternatively, SBC has informally agreed to allow carriers to cross connect cage-to-cage, but at a rate of $1000 per month for "use of space".

28. Qwest, formerly US West, has recently agreed to allow carriers to cross connect with one another in the Qwest central offices for the purpose of mutually exchanging local traffic, despite the D.C. Circuit's decision. Qwest has acknowledged that now their "wholesale

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[3] Southwestern Bell Telephone Company's Proposed Digital Link Service Tariff, Section 8.

[4] Pacific Bell Schedule Cal. P.U.C. Tariff No. 175-T, Section 7.5.

customers will have faster, easier access to our network, which will create greater competition and more choices for consumers." [5]

29. With the option of deploying line splitting and voice over DSL, Rhythms' need to cross-connect with other carriers inside the central office heightens. Both line splitting and voice over DSL would most likely result in increased connections between Rhythms and other carriers' networks. (Line splitting is where a data CLEC receives both the voice and the data from a line and splits off the voice portion of the loop and passes it along to a competitive voice provider.) Requiring indirect cross connections outside the central office would allow the ILECs to discourage competitive development of new services by CLECs, merely by adding operational delay and costs to the deployment process.

30. Indeed, Rhythms already connects with some competitive carriers inside the buildings of other competitive carriers for the purpose of transmitting data traffic. As competition allows, Rhythms uses competitive carriers to transport its data traffic back to the Rhythms' POP. In order for this transport to occur, sometimes a carrier might take Rhythms' traffic into a non-ILEC building and cross connect the traffic with the network of another carrier for the purposes of dropping the traffic at an end user served by the other carrier. This is accomplished effectively and efficiently at market rates.

31. Rhythms also has year of experience with cross connecting to other carriers' networks, the ILECs. Today cross connects are provisioned in various ways, depending on the ILEC. Qwest runs the cabling from their equipment at the MDF to the intermediate distribution frame ("IDF") where Rhythms then accepts a customer loop and runs the cable from the IDF back to its collocation arrangement. Verizon in the legacy Bell Atlantic-South states performs

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[5] *Qwest Communications Announces Landmark Initiative to Open Local Communications Market.*

cross connects for Rhythms by dropping the cabling at the IDF, as well. In the legacy Bell Atlantic-North region, Verizon runs the connection directly to Rhythms' collocation arrangements. SBC's SWBT ILEC also performs the cross connect by dropping the cable off directly at Rhythms' equipment for cageless arrangements, but for caged collocation SWBT insists on using the IDF as the drop-off point. Verizon in the legacy GTE region runs the cross connections once purchased by Rhythms. BellSouth and Ameritech do not require the use of an IDF in cross connecting with Rhythms' equipment, but Rhythms actually runs the cabling. In the Pacific Bell region, SBC also runs the cabling directly to Rhythms, however SBC does the cabling.

32. From Rhythms' perspective, the most efficient way is for the ILEC to run the cross connect cabling directly to Rhythms' collocated equipment, as is done in Verizon's Bell Atlantic-North region and SBC's PacificBell region, plus SBC's SWBT region for cageless collocation. Thus, there is no technical reason why Rhythms should not be allowed to cross-connect its collocation equipment with other carriers' collocated equipment in the ILEC premises. Even though it is not Rhythms' preference, the fact that Rhythms provides the cabling for its collocation spaces in the BellSouth and Ameritech regions is proof that the option should be available for CLECs to actually construct the cross connect with other carriers.

33. The most efficient use of collocation space within a central office involves assigning, wherever possible, contiguous collocaiton space to CLECs. When a CLEC, such as Rhythms, reaches full capacity with the equipment initially placed in its collocation space, it must augment that equipment with additional capacity. In Rhythms' case, collocated equipment augments often include additional DSLAMs, but may not need to include additional concentration or test

equipment. In order to best take advantage of existing deployment of concentration equipment, the new DSLAMs should be place in or near the initial collocation space.

34. A rule that does not allow CLECs to place the additional collocation equipment in an arrangement contiguous with existing collocation space discourages efficient use of space within the central office. First, it provides CLECs with the incentive to hoard space in cages to avoid the exorbitant cost of linking non-contiguous collocation spaces. Second, the cabling required for non-contiguous collocation arrangements takes up additional racking space and incurs additional cabling costs.

AMOUNT OF SPACE REQUIRED FOR RHYTHMS COLLOCATION

35. The Commission requested that carriers suggest what space requirements, if any, would be appropriate for physical collocation at the ILEC premises. In order to efficiently utilize the limited space available at the ILEC premises, the CLECs should not be held to arbitrary minimum space requirements, discriminatory space assignment policies or needless separate central office entrances.

36. Rhythms has taken advantage of the ILECs' obligation to allow the placement of cageless collocation arrangements in central offices, which requires less space than caged collocation. Rhythms utilizes cageless collocation arrangements when placing equipment in new central offices, but still has equipment placed in 10' x 10' cages in numerous central offices. For this reason, the space requirements for each collocation arrangement differs from central office to central office.

37. There is not technical reason for the imposition of minimum space requirements by the ILECs. Rhythms should be allowed to purchase the exact amount of space necessary to fit their current and future needs for providing their services. Forcing carriers to purchase more space then their needs require results in wasted space inside the central office. The ILECs

created minimum space requirements as a measuring increment for determining the preparation charge for collocation space. As such, the exact increment is arbitrary. The charge can be arrived at with infinite alternative increments, such as per rack, per foot or per card.

38. Prior to the *Advanced Services Order*, most of the ILECs refused to allow CLECs to have cageless collocation arrangements at the central offices. Additionally, space inside many central offices key to Rhythms' deployment plans was exhausted for caged collocation. For this reason, Rhythms was forced to order virtual collocation arrangements. Since ILECs are now required to allow cageless collocation, Rhythms has requested that its virtual collocation arrangements be transitioned over to cageless collocation, as the arrangements for virtual collocation and cageless collocation are identical. The ILECs uniformly resisted this transition pointing to issues with minimum space requirements, equipment segregation and security concerns. Though some ILECs have now allowed the transition, Rhythms still has virtual collocation in several key central offices.

39. Comparing physical collocation arrangements with virtual collocation arrangements is difficult, because competitive carriers are not allowed in the area of the central office reserved for virtual collocation in most ILEC regions. Therefore, Rhythms makes some inferences based on the information available. For instance, SBC plans to place two different carriers on the same ADSL card in their NGDLCs in the remote terminal locations.[6] Assuming ILECs will commingle virtually collocated equipment, there are no additional technical concerns when the same equipment is physically collocated. Obviously, this alone dismisses any concerns expressed that commingling equipment of DSL providers is technically infeasible.

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[6] *SBC Pronto/CLEC Collaborative Issues Log*, Item 8.35 (Sept. 7, 2000).

40. The ILECs also have no basis for any security concerns with the concept of commingled equipment. Competitive carriers depend on the same network as the ILECs do, and thus have no impetus to harm it. In fact, Rhythms knows of no situtation since the passage of the 1996 Act where any ILEC has ever even accused a CLEC of a material, intentional security breach. The ILECs' existing security requirements re approval of vendors, badges, and cameras more than address their concerns regarding the potential for non-ILEC personnel to harm the ILEC or other CLEC equipment. Commingling the equipment in racks does not increase the risk of security problems. The construction of different types of partitions does not provide any more protection than its alternatives, enough to justify reducing the space available for physical collocation in the ILEC central offices. The badges, security cameras, and even lockable equipment cabinets are, thus, less restrictive, more reasonable alternatives that take up no collocation space and are already in place in most central offices. Requiring separate entrances to the central offices for CLECs to use is also another unnecessary requirement that the ILECs have regularly imposed. Where CLECs enter the building provides no technical or security purpose.

41. With the ability to line share, Rhythms now also places splitters in many of its collocation arrangements in order to offer consumers DSL services over lines shared with voice providers. The placement of these splitters minimally increases the amount of collocation space Rhythms utilizes in a central office.

PROVISIONING INTERVALS

42. Though Rhythms has been obtaining collocation space from the ILECs for almost three years, Rhythms has not experienced any improvement in the ILECs' ability to meet or exceed collocation provisioning intervals without regulator intervention. Where the states have

interceded and imposed shorter intervals, ILECs have met those intervals. Those ILECs, however, still refuse to make those same, obviously feasible, intervals available in other states in its region.

43. The amount of time to prepare collocation space in the central office for a competitor is disproportionate with the time required to actually place all of the collocation equipment in that space. For instance, it takes about one week for Rhythms to actually install all of its collocation equipment and get it fully operational, where it can normally take six to nine months for the ILECs to prepare the space for cageless arrangements, and to prepare and build a 10' by 10' cage in traditional physical collocation. Adjacent arrangements require no preparation of space, as the arrangement is outside the ILECs' central offices.

44. The only instance where delivered collocation space cannot be fully operational within a week or so timeframe is where the ILECs refuse to provision transport services simultaneously as it prepares the collocation space so that the transport is available at collocation turnover. Qwest has just announced that it will offer CLECs "the option of pre-ordering unbundled dedicated interoffice transport prior to completion of the CLECs collocation space in Qwest central offices."[7] This is a change that, if implemented nationally, would significantly decrease the time it takes competitors to deploy DSL services.

45. As stated above, CLECs routinely have a need to augment the initially deployed collocation equipment. Many times no work is required from the ILEC in order to place the additional equipment in the collocation space or make modifications to the existing collocation equipment. Additionally, CLECs perform work that modifies the existing collocation arrangements that do not increase the power or heat dissipation levels. In these instances, there

is no technical or operational reason that CLEC should have to wait 90 days, as currently required, to place or adjust the equipment. Again, clear rules setting out the right of CLECs to augment their own collocation arrangements on their own schedule will speed the deployment of new services, such as line sharing.

46. Even where ILEC involvement is required, ILECs often are willing to commit only to installation intervals lengthy enough to cover the most complex process. For instance, unlike certain complex installations that may, in fact, require more than 30 days, such as installations of power equipment, installation of splitters and cross connect/tie cables is a simple task, that ILECs routinely perform for themselves in days, not weeks. Installation of multiple cross connect/tie cables and splitters can be done efficiently and quickly at any particular central office, making a 30 day or less installation interval quite achievable, and very reasonable.

47. Based on experience, it is clear that ILECs can accomplish installations of simple cross connect/tie cables and splitters within 30 days. Entire collocation arrangements are far more complex than cross connect/tie cable and splitter line sharing installations. Building an entire collocation arrangement, even cageless, requires space preparation, cabling and installation of racks. Such installation requires much more planning and effort than a simple cross connect/tie cable and splitter installation. Therefore, there is no doubt that ILECs can install all cross connect/tie cables and splitters required for CLEC line sharing arrangements within 30 days of a CLEC request. There is no technical or operational reason why even shorter cross connect/tie cable intervals, such as 15 days, cannot be routinely and reasonably met in these central offices

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[7] *Qwest Communications Announces Landmark Initiative to Open Local Communications Market.*

48. In addition, many ILEC central offices already have collocation arrangements built for competitive carriers, which include cross connect/tie cable racks with sufficient capacity to handle several additional cross connect/tie cables. In these central offices, cross connect/tie cable placement would therefore entail simply laying one or more new cables on an existing rack.

COLLOCATION FOR LINE SHARING

49. When deploying line-shared DSL services in a central office, Rhythms must deploy a splitter in addition to the standard collocation equipment described above. This also applies for line splitting. The placement of this splitter would require CLECs to augment their existing collocation arrangements. Currently, several ILECs refuse to allow this type of augmentation by Rhythms to its existing arrangements without waiting the entire collocation provisioning interval, even though such augmentation does not require the ILECs to perform any additional work to the collocation space prior to placement of the splitter needed for line-sharing or line-splitting.

50. Rhythms plans to deploy the same type of splitter for line splitting situations, as it does for line sharing arrangements, however as explained above, in case of line splitting, Rhythms will need to cross connect with the carrier providing the voice service on the split line. Currently, Rhythms has deployed cross connections with another competitive voice carrier in one ILEC region to test the ability of the carriers to conduct line splitting.

51. As mentioned above, deploying line sharing or line splitting in a central office also increases the need for contiguous collocation space, as the splitters Rhythms has chosen to deploy, like the DSLAMs, support a capacity lesser than the concentrators and monitoring equipment. Therefore, the installation of additional DSLAMs usually requires the installation of an additional splitter, unless Rhythms uses an integrated DSLAM/splitter.