

December 13, 2001

Ms. Blanca Bayó, Director Division of the Commission Clerk & Administrative Services Florida Public Service Commission 2540 Shumard Oak Blvd. Tallahassee, FL 32399-0850 via Overnight Mail

Re: Docket No. 990649A-TP – Investigation into Pricing of Unbundled Network Elements

Dear Ms. Bayó,

Please find enclosed for filing in the above docket an original and seven (7) copies of revised Prefiled Rebuttal Testimony and Exhibit of Michael P. Gallagher.

This revised testimony replaces that previously filed in this docket on December 7, 2001, and is submitted consistent with Chairman Jacob's Order on Motion to Allow Surrebuttal Testimony and Motion for Extension of Time (Order No. PSC-01-2399-PCO-TP, issued December 11, 2001). Also enclosed is a diskette containing a Word file of the prefiled testimony.

If you have any questions regarding the enclosed, please call me at 407-835-0460.

Sincerely, low Matthew Feil

Florida Digital Network General Counsel

LOCAL

1 2 3 4	<b>BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION</b>
5 6 7 8 9 10	In re: Investigation into Pricing of ) Docket No. 990649A Unbundled Network Elements )
11	
12	
13	<b>REBUTTAL TESTIMONY OF MICHAEL GALLAGHER</b>
14	
15	
16	
17	ON BEHALF OF
18	Florida Digital Network, Inc.
19	
20	
21	
22	December 14, 2001
23	
24	
25	
26	
27 28	
	· ·

.

1	Q.	Please state your name and business address for the record.
2	A.	My name is Michael Gallagher. My current business address is 390 N.
3		Orange Avenue, Suite 2000, Orlando, Florida 32801.
4	Q.	By whom are you employed and what is your position?
5	A.	I am employed by Florida Digital Network, Inc. ("FDN"). I am FDN's
6		founder and serve as the company's President and Chief Executive Officer.
7	Q.	What are your responsibilities as CEO of FDN?
8	A.	As CEO of FDN, I am ultimately responsible to the shareholders for all
9		aspects of FDN's operations and performance. I am involved in the day-to-
10		day business dealings of the company and the decision-making on everything
11		from marketing and sales strategies, product development, network
12		architecture and deployment, financing, human resources, customer care,
13		regulatory changes, etc.
14	Q.	Please describe your education and your work experience in the
15		telecommunications sector.
16	A.	I received a B.S. Degree in Mathematics with a minor in Physics from
17		Rollins College. Prior to co-founding FDN in 1998, I served as Regional
18		Vice President for Brooks Fiber Communications where I had overall
19		responsibility for operations, engineering, finance and sales in the State of
20		Texas. Brooks Fiber Communications merged into WorldCom on January
21		31, 1998. Prior to holding the VP position at Brooks, I was President of
22		Metro Access Networks (MAN), a second-generation Texas CLEC founded
23		in 1993. At MAN, I developed all business strategies, designed network
		- · ·

1		architecture, secured contracts with the company's original customer base,
2		and had overall responsibility for operations and performance. MAN merged
3		into Brooks Fiber in March 1997. Prior to MAN, I worked for Intermedia
4		Communications and Williams Telecommunications Group (WilTel) as sales
5		representative, securing contracts with large commercial customers.
6	Q.	Have you previously testified before this Commission?
7	А.	Yes, I have testified in Docket No. 010098-TP (FDN's arbitration of an
8		interconnection agreement with BellSouth) and in Docket No. 960786-TL
9		(BellSouth's § 271 case).
10	Q.	Please describe Florida Digital Network.
11	А.	FDN is a Florida-focused, full-service, facilities-based provider of local,
12		interexchange, and advanced telecommunications services. FDN offers voice
13		services, dial-up and dedicated data services, and, through an affiliate,
14		Internet and other enhanced services. FDN was founded in 1998 with the
15		mission of offering bundled service packages (local, long distance and
16		Internet) to small- and medium-sized businesses. FDN launched operations
17		in Orlando, Fort Lauderdale and Jacksonville in 1999, and in West Palm
18		Beach, Miami and the Tampa Bay area in the first quarter of 2000. FDN
19		provides service to these markets with its own Class 5 Nortel DMS-500
20		central office switches, which it connects to end-users through collocated
21		facilities at more than 100 BellSouth wire centers, and through the purchase
22		of unbundled network elements (UNEs) from ILECs such as BellSouth.
23		Based upon information provided by BellSouth, FDN is the largest procurer

1		of UNE voice-grade loops from BellSouth in Florida. FDN does not at this
2		time provide service using the UNE platform or resold services.
3	Q.	What is the purpose of your rebuttal testimony in this proceeding?
4	А.	As to Issue No. 1, my rebuttal testimony first addresses FDN's concerns with
5		BellSouth's UNE rates and rate structure. FDN believes that the
6		Commission must set lower UNE rates and must structure those rates such
7		that competition can progress in more than just limited geographic areas.
8		As to Issue No. 5, I will demonstrate that BellSouth, through its cost
9		study filed September 24, 2001 (and revised on October 8, 2001), and
10		through its direct testimony filed on November 8, 2001, fails to offer a
11		reasonable, workable solution to address the present inability of competitive
12		carriers to offer xDSL services where BellSouth has deployed Digital Loop
13		Carriers ("DLCs"). Many of the bases for my rebuttal testimony in this area
14		are closely related to, and are addressed more extensively in, the direct
15		testimony I submitted to the Commission in Docket No. 010098-TP, in which
16		FDN is seeking an arbitration award that would require BellSouth to offer
17		xDSL loops with unbundled packet switching. Rather than repeating all of
18		those arguments here, I have attached a copy of pertinent excerpts of my
19		direct testimony from the arbitration as Exhibit (MPG-1), and I will refer
20		to that exhibit it in this testimony as my "Arbitration Testimony."
21		The Commission must carefully consider the technical and pricing
22		matters at issue in this docket if it is to require BellSouth to offer new UNEs
23		that would enable competitive carriers to provide xDSL services where

- •

1	BellSouth has deployed Digital Loop Carriers (DLCs). As set forth in my
2	Arbitration Testimony, BellSouth's DLC-dominated network architecture in
3	Florida deprives ALECs of the opportunity to provide xDSL-based services
4	to end-users and, therefore, the Commission should establish an end-to-end
5	xDSL UNE loop, including digital subscriber line access multiplexer
6	(DSLAM) functionality and transport, that would permit FDN to provide
7	xDSL-based services.
8	If the Commission grants FDN's request in Docket No. 010098 or if
9	the Commission approves a new UNE or UNEs of a similar nature in any
10	other proceeding, reasonable TELRIC-based prices for such new UNE or
11	UNEs will need to be established in this docket.
12	Q. Do you believe the Commission should modify BellSouth's loop rates
13	and rate structure?
13 14	and rate structure? A. Yes. BellSouth's UNE rates in Florida are simply too high to foster
13 14 15	and rate structure? A. Yes. BellSouth's UNE rates in Florida are simply too high to foster competition, and in this regard, I wanted to call the Commission's attention
13 14 15 16	<ul><li>and rate structure?</li><li>A. Yes. BellSouth's UNE rates in Florida are simply too high to foster</li><li>competition, and in this regard, I wanted to call the Commission's attention</li><li>to rate levels in relation to rate zones.</li></ul>
13 14 15 16 17	<ul> <li>and rate structure?</li> <li>A. Yes. BellSouth's UNE rates in Florida are simply too high to foster</li> <li>competition, and in this regard, I wanted to call the Commission's attention</li> <li>to rate levels in relation to rate zones.</li> <li>One can look at the price of a two-wire UNE loop in Zone 1 under</li> </ul>
13 14 15 16 17 18	and rate structure?A. Yes. BellSouth's UNE rates in Florida are simply too high to fostercompetition, and in this regard, I wanted to call the Commission's attentionto rate levels in relation to rate zones.One can look at the price of a two-wire UNE loop in Zone 1 underinterim stipulated rates and under final reconsideration rates and observe that,
13 14 15 16 17 18 19	and rate structure?A. Yes. BellSouth's UNE rates in Florida are simply too high to fostercompetition, and in this regard, I wanted to call the Commission's attentionto rate levels in relation to rate zones.One can look at the price of a two-wire UNE loop in Zone 1 underinterim stipulated rates and under final reconsideration rates and observe that,on the surface, the rate decreased from \$13.75 to \$12.79. However, the fact
<ol> <li>13</li> <li>14</li> <li>15</li> <li>16</li> <li>17</li> <li>18</li> <li>19</li> <li>20</li> </ol>	and rate structure?A. Yes. BellSouth's UNE rates in Florida are simply too high to fostercompetition, and in this regard, I wanted to call the Commission's attentionto rate levels in relation to rate zones.One can look at the price of a two-wire UNE loop in Zone 1 underinterim stipulated rates and under final reconsideration rates and observe that,on the surface, the rate decreased from \$13.75 to \$12.79. However, the factof the matter is there was no net UNE cost decrease to ALECs like FDN.
<ol> <li>13</li> <li>14</li> <li>15</li> <li>16</li> <li>17</li> <li>18</li> <li>19</li> <li>20</li> <li>21</li> </ol>	and rate structure? A. Yes. BellSouth's UNE rates in Florida are simply too high to foster competition, and in this regard, I wanted to call the Commission's attention to rate levels in relation to rate zones. One can look at the price of a two-wire UNE loop in Zone 1 under interim stipulated rates and under final reconsideration rates and observe that, on the surface, the rate decreased from \$13.75 to \$12.79. However, the fact of the matter is there was no net UNE cost decrease to ALECs like FDN. Forty BellSouth wire centers, many in densely populated areas, were
<ol> <li>13</li> <li>14</li> <li>15</li> <li>16</li> <li>17</li> <li>18</li> <li>19</li> <li>20</li> <li>21</li> <li>22</li> </ol>	and rate structure? A. Yes. BellSouth's UNE rates in Florida are simply too high to foster competition, and in this regard, I wanted to call the Commission's attention to rate levels in relation to rate zones. One can look at the price of a two-wire UNE loop in Zone 1 under interim stipulated rates and under final reconsideration rates and observe that, on the surface, the rate decreased from \$13.75 to \$12.79. However, the fact of the matter is there was no net UNE cost decrease to ALECs like FDN. Forty BellSouth wire centers, many in densely populated areas, were shifted from a Zone 1 to a Zone 2 classification as part of the Commission's

1	under the interim stipulation, only 37% of its loops are in Zone 1 under the
2	final and reconsideration orders. The number of Zone 1 wire centers
3	decreased so dramatically that FDN's preexisting 59 Zone 1 central office
4	collocations became 33 Zone 1 central office collocations, without FDN
5	having made any facilities changes. In the Orlando area, for example, 58%
6	of FDN's Orlando area loops were Zone 1 under the interim regime; but now
7	only 24% are. The Magnolia and Pine Hills wire centers in Orlando were in
8	Zone 1 under the interim stipulation; but now Pine Hills is in Zone 2 even
9	though it neighbors and abuts Magnolia (still in Zone 1) and has a similar
10	total line count.
11	With the Commission's final and reconsideration decisions, rates for
12	all loops in the 40 former Zone 1 (now Zone 2) wire centers went from
13	\$13.75 to \$17.27, an increase of \$3.52 per loop. Hence, on an overall basis,
14	from interim rates to final reconsideration rates, FDN's total UNE costs will
15	increase, not decrease. I expect that the same will likely be true for other
16	ALECs in Florida.
17	The approved costs will drive the rate levels. In the rate design
18	process, the manner and the degree of shifting costs for recovery through one
19	component rate rather than another (such as from recurring to nonrecurring)
20	or through one rate grouping rather than another (among rate bands or rate
21	zones) have ramifications that must be considered just as the rate levels
22	themselves must be considered they all impact whether the end result is

- •

fair, just and reasonable and they all impact the users' ability to acquire the
 service.

3		FDN believes that the Commission may not have adequately
4		considered all of the impacts resulting from the dramatic rate structure
5		change that occurred when designating so many interim Zone 1 wire centers
6		as Zone 2 wire centers. One of the Commission's rate setting goals in this
7		and other UNE pricing proceedings should be to facilitate competition.
8		While the UNE rates in Zone 1 may be lower than before, the number of
9		Zone 1 wire centers is so extremely limited that the Commission may
10		promote competition only in a few, small geographic pockets. Moreover, the
11		Zone 2 rates are at a level such that it is extremely difficult for CLECs to
12		compete in Zone 2. FDN's own plans to expand into new Zone 2 markets are
13		on hold as a result.
14		The Commission must lower all UNE rates and must structure rates in
15		pricing zones such that competition is not limited to a minute portion of the
16		state.
17	Q.	Moving next to Issue No. 5, why do you maintain that BellSouth's DLCs
18		preclude ALECs from offering DSL service?
19	A.	DSL transmissions must be multiplexed into packetized data bits before the
20		data streams can be aggregated on high-volume transmission facilities bound
21		for the Internet. In the classic DSL model, this multiplexing is done by a
22		DSLAM located in the central office. However, where DLCs are deployed as
23		a break in the transmission path, this DSLAM function must be performed at

6

~ .

1		the remote terminal. Therefore, the carrier must locate at the remote terminal
2		a DSLAM or, in the case of Next Generation Digital Loop Carriers
3		("NGDLCs"), DSL-capable line cards that perform DSLAM functionality. In
4		my Arbitration Testimony, I explained why ALECs, unlike BellSouth, cannot
5		viably collocate DSLAMs or line cards at remote terminals. Therefore,
6		BellSouth today is the only carrier in Florida able to offer DSL service where
7		its DLCs are deployed.
8	Q.	Why is it important for the Commission to ensure that ALECs are able
9		to provide xDSL service where BellSouth has deployed DLCs?
10	A.	DSL is the only widely available technology that enables a consumer to
11		achieve high-speed data service over their existing copper telephone lines.
12		However, the development of competitive DSL services in BellSouth's
13		region in Florida is thwarted by the fact that approximately 90% of
14		BellSouth's Florida access lines now pass through DLCs. Therefore, the
15		BellSouth region in Florida is effectively closed to DSL competition. As I
16		explained in my Arbitration Testimony, FDN's inability to offer DSL
17		services also undermines its viability in the voice services market, as
18		customers increasingly are demanding bundled service offerings. The
19		competitive disadvantages already suffered by ALECs will be magnified
20		significantly if BellSouth obtains interLATA authority in Florida and thereby
21		becomes the only carrier that can offer one-stop shopping of local,
22		interexchange and DSL services on a ubiquitous basis.

- •

Q. What are the components of a "hybrid copper/fiber xDSL-capable
 loop?"

3 Α. There are three components in any hybrid copper/fiber loop. The first two 4 components are subloops: (1) the copper subloop between a remote terminal 5 and a customer ("distribution"), and (2) the fiber subloop between a remote 6 terminal and a central office ("feeder"). The third component is the DLC that 7 connects the two subloops, together with any supporting equipment necessary 8 to perform whatever switching functions may be required based upon the 9 nature of the transmission. For circuit-switched voice traffic, this third 10 component includes voice-grade DLC line cards that are used to pass the 11 transmission from the distribution to the feeder. To be "xDSL-capable," 12 however, the DLC component must either include DSL-capable line cards or, 13 if such cards are not supported by the DLC system, a DSLAM. The DSL line 14 card or DSLAM performs packet switching functionality at the remote 15 terminal so that it is possible to transmit the DSL-based services between the 16 distribution pairs and the feeders.

Q. Does the term "hybrid copper/fiber x-DSL capable loop" appropriately
capture the definition of the new UNE that is needed to enable ALECs to
offer xDSL services in BellSouth's Florida territory?

A. No. The "hybrid copper/fiber" terminology would not completely serve the
Commission's purpose. In addition to BellSouth's millions of fiber-fed DLC
loops, approximately 1.2 million of BellSouth's access lines in Florida pass
through DLCs that use copper feeders, and could be described as "hybrid

1		copper/copper" loops. For purposes of DSL services, these aggregated
2		copper feeders are no different from fiber feeders; the DSL traffic still must
3		be multiplexed at the remote terminal. The Commission should, therefore,
4		use a terminology that includes unbundled packet switching and that is not
5		dependent upon a particular type of infrastructure.
6	Q.	Why is unbundled packet switching a necessary component of an xDSL-
7		capable DLC loop?
8	А.	DSL transmissions must be converted into packetized data bits at the DLC.
9		Therefore, for a DLC loop to be xDSL-capable, packet switching must be
10		performed by a DSL line card or DSLAM at the remote terminal. To provide
11		xDSL service, ALECs must be able to purchase this functionality on an
12		unbundled basis as part of any loop that passes through a DLC.
13	Q.	Would any purpose be served by the creation of a new hybrid UNE loop
14		that did not include unbundled packet switching?
15	А.	No. Consideration of a "new" hybrid UNE loop without unbundled packet
16		switching would serve no purpose, since BellSouth is already required by
17		federal rules to provide unbundled access to feeder and distribution subloops,
18		and the Commission is already establishing rates and terms for these subloop
19		elements in this docket.
20	Q.	How has BellSouth defined "hybrid copper/fiber xDSL-capable loop" in
21		its testimony and its cost study?
22	Α.	BellSouth's proposal unbundles only one of the three necessary components
23		of a hybrid copper/fiber xDSL-capable loops. Its proposal includes the
		•

1		distribution subloop in the manner that I have described in my testimony
2		above. However, BellSouth would require ALECs to purchase their own
3		dedicated network feeder and packet switching facilities, rather than offering
4		unbundled packet switching and feeder transport as part of a single wholesale
5		"loop." Because BellSouth would require ALECs to purchase an entire 16-
6		port DSLAM, rather than a port on a common DSLAM, the ALEC is forced
7		to purchase capacity sufficient for 16 customers, rather than one at a time.
8		Similarly, BellSouth would require an ALEC to purchase the full capacity of
9		a DS1 feeder, which can also support approximately 16 customers.
10		BellSouth's offer is the opposite of unbundling, as it would force ALECs to
11		purchase capacity for approximately 16 customers at a time, even if an ALEC
12		wants to serve only a single customer in a given remote terminal serving area.
13	Q.	Can BellSouth's proposed offering be properly described as a "loop?"
14	A.	No. A loop is a transmission path between the central office and the loop
15		demarcation point at the customer premises, and includes all features,
16		functions, and capabilities of the transmission facilities. BellSouth's
17		proposal, by contrast, would require an ALEC to purchase entire network
18		facilities that are designed to serve numerous end-users, rather than the
19		option of purchasing a single line. When FDN purchases voice grade UNE
20		loops, it buys only the transmission path between its customer and the central
21		office, at a rate based upon the long-run incremental cost to BellSouth of
22		providing the single line. Similarly, to provide DSL services to individual

.

1		customers, FDN seeks to purchase xDSL-capable loops; BellSouth would,
2		instead, make it purchase a network.
3	Q.	Can BellSouth's proposed offering be properly described as offering
4		unbundled packet switching?
5	A.	No. Unbundled packet switching should mean that an ALEC could purchase
6		the switching that it needs, not that the ILEC would offer to sell the ALEC its
7		own switch. For example, when BellSouth provides unbundled switching for
8		voice services, either as a stand-alone UNE or as part of the UNE Platform, it
9		cannot simply offer to sell to each ALEC its own dedicated Class 5 switch;
10		instead, the switching is sold based on incremental usage of BellSouth's
11		switching facilities.
12	Q.	Would it be consistent with TELRIC for BellSouth to require ALECs to
13		purchase DSLAM and fiber infrastructure in bulk, rather than on a line-
13 14		purchase DSLAM and fiber infrastructure in bulk, rather than on a line- at-a-time basis?
13 14 15	А.	<ul><li>purchase DSLAM and fiber infrastructure in bulk, rather than on a line- at-a-time basis?</li><li>No. As I understand it, TELRIC is based upon the incremental cost of</li></ul>
13 14 15 16	A.	purchase DSLAM and fiber infrastructure in bulk, rather than on a line-at-a-time basis?No. As I understand it, TELRIC is based upon the incremental cost ofproviding the additional service. BellSouth's proposal would exceed
13 14 15 16 17	A.	purchase DSLAM and fiber infrastructure in bulk, rather than on a line-at-a-time basis?No. As I understand it, TELRIC is based upon the incremental cost ofproviding the additional service. BellSouth's proposal would exceedTELRIC standards by forcing ALECs to purchase greater capacity than is
13 14 15 16 17 18	A.	purchase DSLAM and fiber infrastructure in bulk, rather than on a line-at-a-time basis?No. As I understand it, TELRIC is based upon the incremental cost ofproviding the additional service. BellSouth's proposal would exceedTELRIC standards by forcing ALECs to purchase greater capacity than isneeded to provision service to its customers, thereby precluding ALECs of
13 14 15 16 17 18 19	A.	purchase DSLAM and fiber infrastructure in bulk, rather than on a line-at-a-time basis?No. As I understand it, TELRIC is based upon the incremental cost ofproviding the additional service. BellSouth's proposal would exceedTELRIC standards by forcing ALECs to purchase greater capacity than isneeded to provision service to its customers, thereby precluding ALECs ofthe benefit of the economies of scale of the BellSouth network. Through its
13 14 15 16 17 18 19 20	A.	purchase DSLAM and fiber infrastructure in bulk, rather than on a line-at-a-time basis?No. As I understand it, TELRIC is based upon the incremental cost ofproviding the additional service. BellSouth's proposal would exceedTELRIC standards by forcing ALECs to purchase greater capacity than isneeded to provision service to its customers, thereby precluding ALECs ofthe benefit of the economies of scale of the BellSouth network. Through itsunnecessary requirement that ALECs purchase their own DSLAMs and DS1
<ol> <li>13</li> <li>14</li> <li>15</li> <li>16</li> <li>17</li> <li>18</li> <li>19</li> <li>20</li> <li>21</li> </ol>	A.	purchase DSLAM and fiber infrastructure in bulk, rather than on a line-at-a-time basis?No. As I understand it, TELRIC is based upon the incremental cost ofproviding the additional service. BellSouth's proposal would exceedTELRIC standards by forcing ALECs to purchase greater capacity than isneeded to provision service to its customers, thereby precluding ALECs ofthe benefit of the economies of scale of the BellSouth network. Through itsunnecessary requirement that ALECs purchase their own DSLAMs and DS1feeders even to serve a single customer, BellSouth's proposal would deny
<ol> <li>13</li> <li>14</li> <li>15</li> <li>16</li> <li>17</li> <li>18</li> <li>19</li> <li>20</li> <li>21</li> <li>22</li> </ol>	A.	purchase DSLAM and fiber infrastructure in bulk, rather than on a line-at-a-time basis?No. As I understand it, TELRIC is based upon the incremental cost ofproviding the additional service. BellSouth's proposal would exceedTELRIC standards by forcing ALECs to purchase greater capacity than isneeded to provision service to its customers, thereby precluding ALECs ofthe benefit of the economies of scale of the BellSouth network. Through itsunnecessary requirement that ALECs purchase their own DSLAMs and DS1feeders even to serve a single customer, BellSouth's proposal would denyALECs the ability to share in BellSouth's economies of scale and would
<ol> <li>13</li> <li>14</li> <li>15</li> <li>16</li> <li>17</li> <li>18</li> <li>19</li> <li>20</li> <li>21</li> <li>22</li> <li>23</li> </ol>	A.	purchase DSLAM and fiber infrastructure in bulk, rather than on a line-at-a-time basis?No. As I understand it, TELRIC is based upon the incremental cost ofproviding the additional service. BellSouth's proposal would exceedTELRIC standards by forcing ALECs to purchase greater capacity than isneeded to provision service to its customers, thereby precluding ALECs ofthe benefit of the economies of scale of the BellSouth network. Through itsfeeders even to serve a single customer, BellSouth's proposal would denyALECs the ability to share in BellSouth's economies of scale and wouldthereby ensure that ALECs would have a significantly higher average unit

1	1	cost for a particular facility than would BellSouth, which has a significantly
2	2	larger output and customer base over which to spread its fixed cost.
2	3	Economies of scale lower the incumbent's per-customer costs of providing
2	1	service. ALECs must have access to the same technologies and economies of
2	5	scale and scope that are available to ILECs. To compete effectively with the
6	5	ILEC for the same customers, ALECs must be able to attain similar
7	7	economies of scale. By denying ALECs the benefits of economies of scale
8	3	and forcing them to purchase excess capacity, BellSouth's proposal
(	)	controverts basic TELRIC principles.
- 10	) Q.	Where it has deployed DLCs, does BellSouth require ALECs purchasing
1 1	1	voice-grade loops to purchase their own dedicated DLC line cards and
12	2	DS1 feeders?
13	3 A.	No. Regardless of whether BellSouth's voice grade loops pass through DLCs
14	4	or not, it sells an end-to-end loop at the single standard UNE loop rate
15	5	calculated by the Commission. These rates represent the average long-run
10	5	incremental cost of providing individual voice-grade loops.
17	7 Q.	Is BellSouth's proposed rate structure for hybrid loops fair, just and
18	8	reasonable?
19	9 A.	No. If the Commission required BellSouth to offer "hybrid copper-fiber
20	0	xDSL-capable loops," but only in the manner and at the rates proposed by
2	1	BellSouth, FDN would remain completely unable to offer xDSL service
22	2	where BellSouth has deployed DLCs. First, the rates proposed by BellSouth
23	3	are clearly and completely non-viable. Second, even if the rates were
		•

1		reduced dramatically, FDN would remain impaired because BellSouth's
2		proposed hybrid service would, at best, be available only after substantial
3		delays and/or special construction charges or, at worst, not at all.
4		In my Arbitration Testimony, I demonstrated that it is impossible for
5		FDN to incur the costs of placing its own <i>dedicated</i> DSLAMs and DS1
6		feeders in every one of BellSouth's 12,000 RT serving areas where it hopes
7		to provide service. Further, as FDN proved in the arbitration (through late-
8		filed exhibit 13), even if FDN collocated an 8-port DSLAM, the cash flow on
9		such a project would be negative before depreciation and return on
10		investment. This is why FDN has advocated unbundled access to
11		BellSouth's facilities. BellSouth has proposed adoption of the very cost
12		structure that I demonstrated could not be viable, in which every ALEC
13		would be required to place redundant dedicated facilities at every
14		neighborhood remote terminal. The rates proposed by BellSouth in this
15		proceeding are so clearly and completely non-viable for competitors that they
16		illustrate why BellSouth's proposal is economically unrealistic, and that
17		ALECs will remain impaired unless they are able to obtain unbundled access
18		to a UNE platform that includes packet switching and the feeder and
19		distribution subloops.
20	Q.	Please explain your assessment that BellSouth's proposed rates are
21		"clearly and completely non-viable."
22	А.	BellSouth's proposed rates are far too high to enable FDN to use the hybrid
23		loop offering to profitably provide xDSL service to Florida consumers.
		- ·

1		BellSouth's proposed rates are even significantly higher per customer than
2		BellSouth's retail rate for DSL-based high-speed Internet services in some
3		cases, by hundreds of dollars per month per customer. FDN would obviously
4		be unable to offer xDSL services if it had to pay BellSouth more for just one
5		of the many underlying components of this service than the total amount it
б		could charge for its own retail service in the competitive market. In many
7		cases, FDN would be paying to BellSouth an average of \$100-300 per line or
8		more and, in some cases, even in excess of \$1240 for a line, while BellSouth
9		is offering its own retail service for less than \$50.
10	Q.	Please describe BellSouth's retail charges for its xDSL-based services.
11	А.	Through its ISP, BellSouth sells its DSL-based FastAccess Internet Service to
12		residential customers for \$49.95, or for \$45 if purchased bundled with certain
13		other BellSouth services. These prices include Internet access and content
14		service, email accounts, 10MB for personalized web pages, a newsgroup
15		account and other typical features offered by ISPs. In addition, BellSouth's
16		rates should reasonably be expected to include its recovery of the costs of
17		providing retail service, such as advertising, customer service, and billing.
18	Q.	What portion of BellSouth's \$45-50 retail charge for DSL-based services
19		is attributable to its wholesale costs of providing DSL transport and
20		packet switching through DLC loops?
21	A.	Of the \$45-50 retail charge, approximately \$21 could be attributed to Internet
22		and enhanced services, as BellSouth sells these separately for \$20.95 per
23		month. Another couple of dollars per month are attributable to the costs of

1		providing transport from the central office to an Internet connection point.
2		Using the Commission's resale discount rates as a proxy, approximately 16-
3		22% of the remaining costs are attributable to retail costs such as advertising,
4		customer service and billing. Therefore, the portion of its \$45-50 retail charge
5		attributable to the DLC loop and DSLAM packet switching should be in the
6		approximate range of \$16-22. Further, BellSouth's rates for the DLC loop
7		with packet switching should be measurably less than \$33 per month, which
8		is the rate in BellSouth's FCC tariff for DSL transport sold to ISPs to provide
9		service to BellSouth's voice customers ("wholesale ISP rate"). This
10		wholesale ISP service is more expensive to provide than DLC loops alone
11		because it includes connectivity from the central office to a single connection
12		point in each LATA. Therefore, the Commission should view with great
13		skepticism any BellSouth rate for DLC loops that exceeds \$25.
14	Q.	How did you determine that the rates offered in BellSouth's proposed
15		cost study exceed BellSouth's retail and wholesale ISP rates for xDSL
16		loops?
17	А.	Using the rates proposed by BellSouth, I calculated the monthly recurring
18		charges that would be assessed to FDN in Zones 1 and 3 at each remote
19		terminal at which it ordered hybrid loops. The BellSouth proposal includes
20		three groups of charges. The first assesses monthly recurring charges for a
21		16-port DSLAM, which FDN would incur upon initiating service to its first
22		customer in each RT serving area and again every 16 customers thereafter.
23		The second charge is for each dedicated DS1 provided to FDN, which I have

.

1		estimated to be sufficient for up to 16 DSL lines. The third type of charge,
2		the per line activation recurring charge, appears to represent the charge for
3		the distribution subloop, and is applied based upon the number of active
4		customers turned up by FDN. To calculate the real world meaning of these
5		proposed charges to FDN, I added together the total charges that would apply
6		based upon a range of possible customer combinations, and then determined
7		the average charge per customer that would apply.
8	Q.	What did you determine from your calculations?
9	A.	In short, providing viable service using BellSouth's proposed rates is
10		economically impossible, even before considering FDN's own costs of ISP
11		services and retail support. My calculations demonstrate that BellSouth's
12		proposed charges would, in every circumstance, exceed not only BellSouth's
13		wholesale ISP rate, but also its residential retail rate for xDSL-based services.
14		Even in Zone 1, the least expensive zone, BellSouth's charges for the
15		provision of service to a single customer would be almost \$700 per month.
16		On top of this \$700 charge, FDN would incur the costs of providing Internet
17		services, transport from the central office to the Internet, and the costs of
18		providing retail service. While the cost per customer would decrease
19		somewhat as FDN obtained more customers to fill up the 16 ports on the
20		DSLAM that BellSouth had dedicated to FDN, even if an ALEC happened to
21		need exactly 16 lines in every remote-terminal serving area where it had
22		customers wishing to purchase DSL, BellSouth's per customer charges would
23		still be \$52.68 in Zone 1 up to \$109.44 in Zone 3. Moreover, if the ALEC

1		obtained a 17 <sup>th</sup>	customer, its	s per custome	er costs would in	crease dramat	ically
2		again because i	again because it would need to purchase an additional DSLAM and DS1				
3		feeder. Therefo	ore, no matte	er what numb	er of customers	FDN had, and	no
4		matter how effi	ciently FDN	could provid	le service, it wo	uld lose mone	y under
5		BellSouth's pro	posed rates.				
6	Q.	Please state th	e remainder	r of your cal	culations.		
7	А.	I calculated the	following a	verage charge	es per customer	using BellSou	th's
8		proposed rates:					
9							
10							
11		Figure 1:	<u>Zone 1 Ave</u>	rage Monthl	<u>y Recurring Cl</u>	narges Per	
12			Subscriber	<u>Under BellS</u>	outh's Proposa	<u>1</u>	
13							
		Number of Customers in ZONE 1 RT Serving	DSLAM Monthly Charges	DS1 Monthly Charges	Distribution Subloop Monthly Charges	Total Monthly Recurring Charges	Average Monthly Cost Per Subscriber
		1	\$ 524.37	\$ 149.48	\$ 10.56	\$ 684.41	\$ 684.41

\$ 149.48

\$ 149.48

\$149.48

\$ 149.48

\$ 149.48

\$ 298.96

\$ 298.96

\$21.12

\$ 42.24

S 84.48

\$ 127.72

\$ 168.96

\$ 179.52

\$ 337.92

14

2

4

8

12

16

17

32

\$ 524.37

S 524.37

\$ 524.37

S 524.37

S 524.37

S 1048.74

S 1048.74

15

16

17

\$ 347.49

\$179.02

\$ 94.79

\$ 66.71

\$ 52.68

\$ 89.84

\$ 52.68

.

\$ 694.97

\$ 716.09

\$ 758.33

\$ 800.57

\$ 842.81

\$ 1527.22

\$1685.62

#### Figure 2: Zone 3 Average Monthly Recurring Charges Per

#### Subscriber Under BellSouth's Proposal

2	
3	

1

Number of Customers in ZONE 3 RT Serving Area	DSLAM Monthly Charges	DS1 Monthly Charges	Distribution Subloop Monthly Charges	Total Monthly Recurring Charges	Average Monthly Cost Per Subscriber
1	\$ 794.60	\$ 419.71	\$ 33.55	\$ 1247.86	\$ 1247.86
2	\$ 794.60	\$ 419.71	\$ 67.10	\$ 1281.41	\$ 640.71
4	S 794.60	\$ 419.71	\$ 134.20	S 1348.51	\$ 337.13
8	\$ 794.60	\$ 419.71	\$ 268.40	S 1482.71	\$ 185.34
12	S 794.60	\$ 419.71	\$ 402.60	S 1616.91	\$ 134.74
16	S 794.60	\$ 419.71	\$ 536.80	\$ 1751.11	\$ 109.44
17	\$ 1589.20	\$ 839.42	\$ 570.35	S 2998.97	\$ 176.41
32	S 1589.20	\$ 839.42	\$ 1073.60	\$ 3502.22	\$ 109.44

- 4
- 5

# 6 Q. If the rates for UNEs are based upon TELRIC, why are you comparing 7 BellSouth's proposed rates with its retail rates?

My comparison between BellSouth's retail rates and its proposed hybrid 8 Α. loop/network rates demonstrates several key points. First, it illustrates 9 clearly that BellSouth's proposed scheme of separate DSLAMs and feeders 10 for each ALEC at each of BellSouth's 12,000 remote terminals would not be 11 a cost effective or viable means of ensuring competition for xDSL services. 12 Second, it demonstrates that CLECs would remain impaired if BellSouth's 13 proposed rate structure were adopted. Therefore, a detailed TELRIC analysis 14 of BellSouth's current hybrid loop study would not appear to be warranted; 15 instead, the Commission should reject the study and require BellSouth to file 16 a new cost study that offers xDSL loops, including unbundled packet 17

1		switching and transport between the customer and the central office, on a per
2		loop basis.
3	Q.	If, hypothetically, ALECs collocated their own DSLAMs at BellSouth's
4		remote terminals and secured their own dedicated transport to the
5		central office, either through BellSouth's hybrid loop offering or on their
6		own, how many xDSL customers could they realistically hope to
7		subscribe?
8	A.	While the results would vary by ALEC and market, an ALEC could not
9		reasonably expect (in its early years of operations) to obtain a "take rate" of
10		more than a small, single-digit percentage of the total possible market for
11		DSL service. Most of BellSouth's 12,000 remote terminals serve a small
12		number of customers, some as few as a hundred lines. Therefore, as
13		demonstrated in my calculations above, the rates proposed by BellSouth

would be so prohibitively expensive as to never make economic sense given
the few customers that any given ALEC might serve from an individual
remote location.

Q. Would the use of shared DSL facilities by each carrier be more efficient
than the use of separate, dedicated facilities?

19 A. Yes. The aggregation of all ILEC and ALEC traffic through shared

20 DSLAMs would be the best way to ensure efficiency not only for ALECs,

- but also for BellSouth. If each carrier used its own facilities, there would be
- a much less efficient allocation of DSL ports. For example, if BellSouth had
- 23 seven DSL customers at an RT, and three ALECs had four, two, and two

19

1		customers, respectively, it would be much more efficient for the four carriers
2		together to use 15 ports on one 16-port DSLAM than to use less than 25% of
3		the total capacity of four separate DSLAMs. The higher utilization rate
4		resulting from shared use will enable all carriers to reduce their per customer
5		costs and thereby lower their retail prices. Even more significantly, pooling
6		the DSL needs of all carriers could generate sufficient demand to enable the
7		use of higher-capacity facilities, such as 96-port DSLAMs or DS3 feeders,
8		which are more efficient and cost-effective if utilized sufficiently. These
9		higher-capacity facilities are more efficient and would yield lower per
10		subscriber costs. Shared facilities would reduce costs for both ALECs and
11		BellSouth, and would increase the deployment of broadband to Florida
12		consumers and businesses.
13	Q.	Could the establishment of an unbundled xDSL loop in the manner that
13 14	Q.	Could the establishment of an unbundled xDSL loop in the manner that you have proposed inhibit BellSouth's ability to offer broadband services
13 14 15	Q.	Could the establishment of an unbundled xDSL loop in the manner that you have proposed inhibit BellSouth's ability to offer broadband services in Florida?
13 14 15 16	<b>Q.</b> A.	Could the establishment of an unbundled xDSL loop in the manner that you have proposed inhibit BellSouth's ability to offer broadband services in Florida? No. While diversity of facilities in some cases promotes innovation and
13 14 15 16 17	<b>Q.</b> A.	Could the establishment of an unbundled xDSL loop in the manner that you have proposed inhibit BellSouth's ability to offer broadband services in Florida? No. While diversity of facilities in some cases promotes innovation and diverse service offerings, the space and infrastructure resources at most
13 14 15 16 17 18	<b>Q.</b> A.	Could the establishment of an unbundled xDSL loop in the manner that you have proposed inhibit BellSouth's ability to offer broadband services in Florida? No. While diversity of facilities in some cases promotes innovation and diverse service offerings, the space and infrastructure resources at most remote terminals is insufficient to support it. Aggregation of ALEC and
13 14 15 16 17 18 19	<b>Q.</b> A.	Could the establishment of an unbundled xDSL loop in the manner that you have proposed inhibit BellSouth's ability to offer broadband services in Florida? No. While diversity of facilities in some cases promotes innovation and diverse service offerings, the space and infrastructure resources at most remote terminals is insufficient to support it. Aggregation of ALEC and BellSouth traffic onto the same DSLAMs and feeders will lead to the most
13 14 15 16 17 18 19 20	<b>Q.</b> A.	Could the establishment of an unbundled xDSL loop in the manner that you have proposed inhibit BellSouth's ability to offer broadband services in Florida? No. While diversity of facilities in some cases promotes innovation and diverse service offerings, the space and infrastructure resources at most remote terminals is insufficient to support it. Aggregation of ALEC and BellSouth traffic onto the same DSLAMs and feeders will lead to the most efficient use of these limited resources, thereby reducing costs to consumers
<ol> <li>13</li> <li>14</li> <li>15</li> <li>16</li> <li>17</li> <li>18</li> <li>19</li> <li>20</li> <li>21</li> </ol>	<b>Q.</b> A.	Could the establishment of an unbundled xDSL loop in the manner that you have proposed inhibit BellSouth's ability to offer broadband services in Florida? No. While diversity of facilities in some cases promotes innovation and diverse service offerings, the space and infrastructure resources at most remote terminals is insufficient to support it. Aggregation of ALEC and BellSouth traffic onto the same DSLAMs and feeders will lead to the most efficient use of these limited resources, thereby reducing costs to consumers and making it more likely that carriers will be able to justify having DSL
<ol> <li>13</li> <li>14</li> <li>15</li> <li>16</li> <li>17</li> <li>18</li> <li>19</li> <li>20</li> <li>21</li> <li>22</li> </ol>	<b>Q.</b> A.	Could the establishment of an unbundled xDSL loop in the manner that you have proposed inhibit BellSouth's ability to offer broadband services in Florida? No. While diversity of facilities in some cases promotes innovation and diverse service offerings, the space and infrastructure resources at most remote terminals is insufficient to support it. Aggregation of ALEC and BellSouth traffic onto the same DSLAMs and feeders will lead to the most efficient use of these limited resources, thereby reducing costs to consumers and making it more likely that carriers will be able to justify having DSL capability in a greater number of areas. In addition, the development of
<ol> <li>13</li> <li>14</li> <li>15</li> <li>16</li> <li>17</li> <li>18</li> <li>19</li> <li>20</li> <li>21</li> <li>22</li> <li>23</li> </ol>	<b>Q.</b> A.	Could the establishment of an unbundled xDSL loop in the manner that you have proposed inhibit BellSouth's ability to offer broadband services in Florida? No. While diversity of facilities in some cases promotes innovation and diverse service offerings, the space and infrastructure resources at most remote terminals is insufficient to support it. Aggregation of ALEC and BellSouth traffic onto the same DSLAMs and feeders will lead to the most efficient use of these limited resources, thereby reducing costs to consumers and making it more likely that carriers will be able to justify having DSL capability in a greater number of areas. In addition, the development of competitive service offerings will lead to lower prices and a higher overall

1		penetration rate for DSL subscription. Falling costs and prices should lead to
2		an increase in subscribership that would in some remote terminal areas justify
3		the installation of higher capacity facilities, such as 96-port DSLAMs and
4		DS3 feeders, the benefits of which I have discussed above. Therefore, the
5		availability of unbundled xDSL loops with packet switching will encourage,
6		not stifle, broadband deployment in Florida.
7	Q.	Are there any other reasons that the use of shared DSL facilities at
8		remote terminals would promote DSL competition?
9	А.	Yes. If each carrier has separate DSL facilities at the remote terminal,
10		consumers would not be able to enjoy the benefits of line sharing (voice and
11		ADSL services from separate carriers on the same line) unless all voice and
12		data CLECs placed facilities at the remote terminal and established cross-
13		connections to BellSouth and with each other. The installation of cross-
14		connection facilities will be difficult in the inaccessible and cramped
15		conditions of most remote terminals, and will further drain limited remote
16		terminal space and resources. The rates and terms for the provisioning of
17		these cross-connect facilities could be expensive and cumbersome. In a
18		separate facilities architecture, the distribution pair from the customer
19		carrying both voice and data traffic would terminate at the data carrier's
20		DSLAM, which would only be connected to that carrier's dedicated feeder
21		facilities. Cross-connects would, therefore, need to be established to transmit
22		the voice traffic to the voice carrier's facilities. However, carriers not
23		offering DSL would likely not have facilities collocated at the remote
		-

1		terminal to receive voice traffic in this manner. Their additional demand for
2		remote terminal space and infrastructure will only further exacerbate the
3		resource scarcity I have described and, in many cases, it will not be possible
4		to accommodate. Therefore, Florida consumers could often be denied the
5		ability to select different carriers to provide voice and data services on the
6		same telephone line.
7	Q.	Would a shared facilities model make it easier for a customer to select
8		different carriers to provide voice and data services on the same
9		telephone line?
10	А.	Yes. Under a shared facilities model, the common remote terminal DSLAM
11		would be connected to the common feeder facilities bound for the central
12		office. Therefore, the voice traffic could be routed over this common feeder
13		and then transmitted to the central office, where it could be received by the
14		voice carrier in the same manner that it receives traffic from other BellSouth
15		UNE loops. Carriers providing only voice services would not be required to
16		locate facilities at the remote terminal, and additional cross-connect facilities
17		at the remote terminal would not be needed.
18	Q.	Would a shared facilities model promote competition in other ways?
19	A.	Yes. As another example, in a shared facilities architecture, it would be
20		much easier to permit customers to switch DSL providers with minimal
21		disruption and cost. First, if all carriers were using the same DSLAM, it
22		would be far less likely that the customer would be required to make
23		significant changes to its modems and software. Second, the technical work
		-

1		to complete a carrier change request could be completed by a simple
2		conversion at the central office. By contrast, under BellSouth's proposed
3		plan, the customer's distribution pair would be wired to a particular carrier's
4		facilities at the remote terminal, and the conversion would need to be
5		performed there. Cutovers performed at one of BellSouth's approximately
6		200 central offices would require only a few minutes of work. However, if
7		cutovers must be performed at BellSouth's remote terminals, it is more likely
8		that the conversion could be delayed due to the difficulty in traveling to and
9		obtaining access to the correct facility. It is not even clear that BellSouth
10		would be willing to perform such cutovers, or whether it would simply
11		require the customer to cancel their existing service and then order a new
12		connection. The more difficult it is for consumers to take advantage of
13		competitive choices, the less likely it is that the benefits of competition will
14		develop.
15	Q.	Mr. Kephart of BellSouth testifies that the DSLAM portion of the DLC
16		loop offering is exempt from unbundling requirements under the four-
17		part test established in the UNE Remand Order. Do you agree?
18	A.	No. As I demonstrated in my Arbitration Testimony, the Florida
19		Commission can and should order BellSouth to offer unbundled xDSL loops
20		with unbundled packet switching because, without such relief, ALECs'
21		ability to offer xDSL services in Florida would be impaired. A CLEC is
22		impaired, among other reasons, when no alternative exists that would offer a
23		realistic opportunity to provide a competitive service. In my Arbitration
		-

1		Testimony, I demonstrated that ubiquitous collocation of DSLAMs at remote
2		terminals is technically and economically infeasible for FDN, and that no
3		viable alternatives from BellSouth, self-provisioning or third parties are
4		available that would enable FDN to offer xDSL services where BellSouth has
5		deployed DLCs. As evidence of this reality, no ALEC had collocated, or
6		even requested to collocate, at a BellSouth remote terminal in the entire State
7		of Florida. My Arbitration Testimony further illustrates that FDN's inability
8		to offer xDSL services also impairs its ability to offer voice
9		telecommunications services, as consumers increasingly are demanding
10		bundled telecommunications services that meet all of their service
11		requirements.
12	Q.	In your Arbitration Testimony, you asserted that ubiquitous ALEC
13		collocation of DSLAMs at remote terminal would be technically and
14		economically infeasible. BellSouth's proposal in this docket, if adopted,
15		would offer CLECs the opportunity to purchase the use of a collocated
16		DSLAM at its remote terminals. Does BellSouth's hybrid loop proposal
17		change your conclusion in your Arbitration Testimony that ALECs
18		would be impaired without access to unbundled xDSL loops with packet
19		switching?
20	A.	No. First, as I demonstrated above, the unreasonably high rates proposed by
21		BellSouth would completely preclude their use by a competitor. Second,
22		even if the Commission lowered the rates, in many or even most cases,
23		BellSouth's proposed service would often be available, if at all, only with

1		substantial complications and/or delays that an ALEC could not afford to
2		incur. If BellSouth rejected an order for the proposed hybrid loop service on
3		the basis that facilities were unavailable, the ALEC would remain impaired in
4		its ability to offer xDSL services for the reasons set forth in my Arbitration
5		Testimony. Therefore, BellSouth's proposal is an illusion that would do
6		nothing to relieve the impairment faced by ALECs in the Florida DSL
7		market.
8	Q.	Why do you believe that the hybrid loop proposed by BellSouth would
9		often be unavailable?
10	А.	The vast majority of BellSouth's 12,000 remote terminals are likely too small
11		and lack sufficient power resources and connectivity to support additional
12		DSL facilities for each and every ALEC wishing to provide xDSL services.
13		Additional DSLAMs could require expansions of remote terminal space
14		capacity, power generation, and climate control facilities, that may be
15		impossible or prohibitively expensive. In addition, BellSouth's proposal
16		would require each ALEC to obtain a separate, dedicated transport facility
17		back to the central office, which could prematurely exhaust the limited
18		supply of feeder facilities that are available to ALECs. My Arbitration
19		Testimony explains that dark fiber will often not be available to ALECs at
20		remote terminals, and that it is not economically feasible for an ALEC to
21		obtain rights-of-way and construct new fiber facilities between BellSouth's
22		remote terminals and central offices. Furthermore, many of BellSouth's
23		12,000 remote terminals are unobtrusive cabinet boxes that are located,

.

1	among other locations, in residential neighborhoods. The public interest
2	would not be served by unnecessary and inefficient expansions of these
3	facilities.

## 4 Q. Why would ALECs face additional delays in procuring xDSL-capable 5 loops if BellSouth's proposal is adopted?

Under BellSouth's proposed requirement that each ALEC purchase its own 6 Α. DSLAM and DS1 feeder at every remote terminal, ALECs would face delays 7 of months or longer in attempting to initiate service to its first customer in an 8 9 RT serving area while new DSLAM and DS1 facilities were installed and connected and any infrastructure upgrades needed to support these facilities 10 were completed. By contrast, if unbundled xDSL loops were offered on a 11 line-at-a-time basis, wherever BellSouth has DSL facilities, ALECs could 12 obtain unbundled xDSL loops to provide service to a customer with the same 13 speed that BellSouth could provide service to that customer. Without the 14 15 ability to offer service at the same speed as BellSouth, it would be difficult for ALECs to win the DSL business of customers located in RT serving areas 16 where they had not already established their own DSL facilities. 17 Should BellSouth be required to offer xDSL loops with unbundled 18 **O**.

# packet switching on a stand-alone basis and in combination with voicegrade UNE loops?

A. Yes. As I demonstrated in my Arbitration Testimony, to compete, ALECs
must be able to utilize the full features and capabilities of the loop, including
the ability to provide both circuit-switched voice service and ADSL data

1		service on the same distribution pair, just as BellSouth provides for its own
2		customers. Without this ability, ALECs will unnecessarily be forced to incur
3		greater costs in order to provide voice and data service over separate loops
4		and may, in some cases, be precluded from providing both services if an
5		additional loop is not available. This combination offering is provisioned by
6		employing line sharing on the distribution subloop, and the voice and data
7		traffic are separated by the DSLAM or DSL line card at the DLC and sent to
8		the central office on separate feeder transmissions. BellSouth provisions its
9		own service in this manner. The Commission should require BellSouth to
10		offer the same capability to Florida ALECs.
11	Q.	Based upon your testimony, how should the Commission define the new
12		UNE needed to enable ALECs to offer xDSL services in Florida?
13	A.	The new UNE should be defined as an xDSL loop, from the customer NID to
14		the central office, with unbundled packet switching. The Commission should
15		require BellSouth to offer unbundled packet switching as part of any loop
16		that, to be xDSL-capable, would require packet switching on the customer
17		side of the central office. The Commission should not limit its terminology
18		to hybrid copper/fiber loops, since the UNE is also needed where BellSouth
19		has deployed copper-fed DLCs.
20	Q.	Would it be technically feasible for BellSouth to offer xDSL loops with
21		unbundled packet switching in the manner that you have proposed?
22	A.	Yes. BellSouth already provides such loops to itself for its own use. Mr.
23		Kephart admits in his testimony that the hybrid loop offering outlined in his

1		testimony is technically feasible. The only significant difference from a
2		technical perspective between his proposal and FDN's is that, in FDN's
3		proposal, the DSL transmissions are aggregated on shared DSL multiplexing
4		facilities and feeder transport to the central office. This arrangement is also
5		technically feasible for BellSouth to provide.
6	Q.	You have testified that BellSouth's requirement that ALECs purchase
7		dedicated DSLAMs and DS1 feeders violates TELRIC principles and
8		that the Commission should reject, rather than adjust, BellSouth's cost
9		study. Putting that contention aside, did BellSouth calculate the
10		individual rate elements for hybrid loops consistent with TELRIC?

11	A.	No. Even a preliminary review of BellSouth's hybrid copper/fiber loop cost
12		study demonstrates that the proposed rates are not TELRIC-compliant. For
13		example, the proposed rates for the DS1 component of the hybrid loop
14		(element A.20.1 of the cost study) is much higher than the rate that BellSouth
15		proposes for an equivalent DS1 subloop for other services. The disparity
16		between these rates appears to be based upon BellSouth's use of different
17		network design models in developing its cost studies for these two elements
18		which, in reality, are the same. BellSouth witness Caldwell's testimony
19		indicates that the standard DS1 cost study evaluated all DS1 loops, while the
20		hybrid loop study only evaluated DS1s between remote terminals and central
21		offices. The resulting charges would be much higher for the Hybrid
22		Copper/Fiber DS1, as set forth in Figure 3 below:

.

1		Figure 3:	Comparison of Proposed 1	DS1 Rates
2		<u>A.9.2 Unbur</u>	ndled sub-loop DS 1 feeder	A.20.1 Hybrid Copper/Fiber
3		<u>DS1</u>		
4		Zone 1	\$46.27	\$149.48
5		Zone 2	\$62.45	\$173.40
6		Zone 3	\$120.65	\$419.71
7	Q.	How do Bel	lSouth's proposed DS1 rates	violate TELRIC principles?
8	А.	BellSouth's	study fails to utilize a single u	nified network design in the
9		determinatio	n of its unbundled DS1 subloc	op rates. FCC Rule 51.505(b)(1)
10		requires that	the total element long-run inc	remental cost of a UNE should be
11		measured ba	sed upon the "lowest cost netw	vork configuration." This
12		Commissior	has also recognized that a sin	gle unified network design is most
13		appropriate.	The use of different engineeri	ng assumptions violates TELRIC
14		principles be	ecause BellSouth has not used	the lowest cost network
15		assumption	across the board. Use of a sing	gle unified network assumption that
16		takes into ac	count demand for all types of	loops, including stand-alone loops,
17		loop/port co	mbinations, and xDSL-capable	e loops, would better reflect the
18		economies o	of scale and scope in the ILEC	network.
19	Q.	Are there o	ther examples of non-TELR	IC-compliant rates in BellSouth's
20		proposal?		
21	А.	Yes. BellSo	outh's cost study includes a cha	arge for an unnecessary and
22		inefficient n	etwork design in the central of	ffice. Even though BellSouth
23		would force	each ALEC to pay the cost of	its own dedicated DS1 from each
				- •

1		remote terminal, BellSouth would not permit the ALEC to terminate the DS1
2		at its own collocation cage. Instead, BellSouth proposes that each DS1
3		terminate into a DSL hub bay, and then BellSouth would charge an additional
4		"administrative DS1" charge for transport from this bay to the ALEC cage.
5		For this short and unnecessary component, BellSouth would impose the same
6		excessive charge that it imposes for the DS1 between the remote terminal and
7		the central office. Aside from the fact that this proposed rate for a DS1 is
8		excessive, as I discussed above, this extraneous element is inefficient and
9		counterproductive and should be eliminated.
10	Q.	Based upon your testimony in this docket, what do you believe would be
11		the appropriate rate structure for BellSouth's provision of xDSL loops
12		with unbundled packet switching?
13	А.	The rate structure for xDSL UNE loops should include two basic product
14		types: data-only and voice-and-data. Each should be offered on a line-at-a-
15		time basis, with a single loop rate for each zone. The rates should represent
16		the sum of adding unbundled packet switching to different types of already
17		existing UNE loops. The only new calculation necessary to compose the
18		TELRIC-compliant rates for the two types of xDSL loops is a TELRIC-based
19		charge for packet switching on a per line basis. For data-only xDSL loops,
20		this surcharge would be added to the applicable rate for a line shared loop.
21		For combined voice and data xDSL loops, the packet switching surcharge

- •

1 Q. How would BellSouth be compensated for shared use of DSLAM 2 facilities? 3 Α. BellSouth could be compensated in the same way it is currently compensated 4 for shared use of its other facilities. Costs could be developed per DSLAM 5 or line card port, and BellSouth could seek approval to recover the costs of 6 unused capacity through use of an appropriate fill factor. This pricing will 7 more accurately reflect BellSouth's incremental cost of providing the UNE to 8 ALECs. 9 Q. What is your recommendation to the Commission? 10 Α. The Commission should reject BellSouth's hybrid loop cost study and require 11 BellSouth to file a new study that offers xDSL loops, with and without voice capability, including unbundled packet switching and transport between the 12 13 customer and the central office, on a per loop basis. 14 Does this conclude your rebuttal testimony? Q. 15 Yes. А.

## BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Investigation into Pricing of ) Unbundled Network Elements ) Docket No. 990649A

λ.

- .

#### EXHIBIT MPG-1

### FILED WITH THE REBUTTAL TESTIMONY OF MICHAEL P. GALLAGHER

#### FILED ON BEHALF OF

#### FLORIDA DIGITAL NETWORK, INC.

Docket No. 990649A Exhibit (MPG-1) Page 1 of 44



June 7, 2001

via Overnight Delivery

Ms. Blanca Bayó, Director Division of Records & Reporting Florida Public Service Commission 2540 Shumard Oak Blvd. Tallahassee, FL 32399-0850

> Re: Docket No. 010098-TP -- Petition by Florida Digital Network, Inc. for arbitration of certain terms and conditions of proposed interconnection and resale agreement with BellSouth Telecommunications, Inc. under the Telecommunications Act of 1996.

Dear Ms. Bayó,

Please find enclosed for filing in the captioned docket an original and seven (7) copies of the Direct Testimony and Exhibits of Mr. Michael P. Gallagher to be filed in the captioned proceeding and an accompanying Certificate of Service. Also enclosed is a copy of the text of the testimony on diskette.

If you have any questions regarding this Notice or the Petition, please call me at 407-835-0460.

Sincerely,

Matthew Feil Florida Digital Network General Counsel

James Meza, III (BellSouth) (by e-mail, Overnight Delivery) Felicia Banks (FPSC) (by e-mail, Overnight Delivery) C: Mike Sloan (Swidler) (by e-mail, Overnight Delivery)

INTERNET

LOCAL

DISTANCE LONG

390 N1 Orange Avenue Suite 2000 & 200 Orlando, Florida 32801 rando 7 835 0309 www.floridadigital.net

#### BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Petition of Florida Digital Network, } Inc., for Arbitration of Certain Terms and } Conditions of Proposed Interconnection and } Resale Agreement with BellSouth Telecommunications, Inc. Under the Telecommunications Act of 1996

Docket No.010098-TP

#### CERTIFICATE OF SERVICE

I hereby certify that a true and complete copy of the prefiled direct testimony and exhibits of Michael P. Gallagher filed in the captioned docket was served on the following by overnight delivery this 7<sup>th</sup> day of May, 2001.

Mr. James Meza, III C/o Ms. Nancy H. Sims, Dir., Reg. Relations 150 South Monroe Street, Suite 400 Tallahassee, FL 32301-1556

Ms. Felicia Banks Florida Public Service Comm'n 2540 Shumard Oak Blvd. Tallahassee, FL 32399-0850

Matthew Feil Florida Digital Network 390 North Orange Avenue Suite 2000 Orlando, FL 32801 (407) 835-0460
:•

## BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Petition of Florida Digital Network, } Inc., for Arbitration of Certain Terms and } Conditions of Proposed Interconnection and } Resale Agreement with BellSouth Telecommunications, Inc. Under the Telecommunications Act of 1996

N

Docket No.01009S-TP

#### DIRECT TESTIMONY AND EXHIBITS OF MICHAEL P. GALLAGHER

### FILED ON BEHALF OF

## FLORIDA DIGITAL NETWORK, INC.

June 8, 2001

1	Q. Please state your name and address.
2	A. My name is Michael P. Gallagher. My business address is 390 North
3	Orange Avenue, Suite 390, Orlando, Florida, 32801.
4	Q. Who do you work for?
5	A. I am Chief Executive Officer of Florida Digital Network, Inc. ("FDN").
6	Q. What are your responsibilities as CEO of FDN?
7	A. As CEO of FDN, I am ultimately responsible to the shareholders for all
8	aspects of FDN's operations and performance. On a management level,
9	FDN's President & Chief Operating Officer, Chief Financial Officer and
10	General Counsel report directly to me; FDN's Engineering & Operations,
11	Customer Service, and Sales Vice Presidents report to the President & COO,
12	who is also in charge of FDN's Marketing and IS functions. I am involved in
13	the day-to-day business dealings of the company and the decision-making on
14	everything from marketing and sales strategies, product development,
15	network architecture and deployment, financing, human resources, customer
16	care, regulatory changes, etc.
17	Q. Please describe your education and your work experience in the
18	telecommunications sector.
19	A. I received a B.S. Degree in Mathematics with a minor in Physics from
20	Rollins College.
21	Prior to co-founding FDN in 1998, I served as Regional Vice
22	President for Brooks Fiber Communications where I had overall
23	responsibility for operations, engineering, finance and sales in the State of
	•

1

•

1	Texas. Brooks Fiber Communications merged into WorldCom on January
2	31, 1998. Prior to holding the VP position at Brooks, I was president of
3	Metro Access Networks (MAN), a second-generation CLEC in Texas
4	founded in 1993. At MAN, I developed all business strategies, designed
5	network architecture, secured contracts with the company's original customer
6	base, and had overall responsibility for operations and performance. MAN
7	merged into Brooks Fiber in March 1997. Prior to MAN, I worked for
8	Intermedia Communications and Williams Telecommunications Group
9	(WilTel) as sales representative securing contracts with large commercial
10	customers.
11	Q. Have you previously testified in a regulatory proceeding before a
12	state utility commission, the FCC or a hearing officer?
13	A. No.
14	Q. What is the purpose of your testimony in this proceeding?
15	A. I will address the interconnection agreement issues FDN could not
16	resolve with BellSouth and which FDN raised in its Arbitration Petition.
17	Q. Please briefly describe FDN's operations.
18	A. FDN is a facilities-based Florida CLEC. FDN is also an IXC, a data
19	services provider (both dial-up and dedicated), and, through an affiliate, FDN
20	offers ISP and other Internet services. FDN was founded in 1998 with the
21	
21	mission of offering packaged services (local, long distance and Internet) to

2

•

1	small- and medium-sized businesses. FDN launched operations in Orlando in
2	April 1999 and expanded to Fort Lauderdale in May 1999 and to Jacksonville
3	in June 1999. A second round of expansion in West Palm Beach, Miami and
4	the Tampa Bay area was completed in the first quarter of 2000.

5 FDN owns and operates Class 5 Nortel DMS-500 central office switches in Orlando, Tampa, Jacksonville, and Ft. Lauderdale. FDN's б 7 switches are connected by fiber optic cable owned and operated by FDN to nearby incumbent local exchange carrier (or "ILEC") tandem switches. FDN 8 9 leases collocation cages or has virtual collocation space in over 100 ILEC wire centers. Remote switching equipment is installed at these collocation 10 11 sites and from these sites FDN accesses ILEC UNE loops. Connectivity from the collocation sites to the central ILEC tandem switch is via T-1 circuits 12 leased from the ILEC. FDN relies upon its rights under the federal 13 14 Telecommunications Act of 1996 (the "Act") to obtain "last mile" access to 15 Florida consumers through the purchase of unbundled network elements 16 (UNEs) from ILECs such as BellSouth.

FDN uses BellSouth's TAG gateway for electronic ordering. Using
systems and software FDN developed on its own, FDN transmits virtually all
of its local service requests ("LSRs") to Bell electronically with minimal
manual intervention. The vast majority of FDN's LSRs to BellSouth are for
2 wire voice grade UNE loops. Based on information from BellSouth, FDN
believes that FDN is by far the largest procurer of UNE voice-grade loops in
Florida and that FDN has installed more UNE loops than all other CLECs in

Florida combined. Through relief sought in this proceeding, FDN intends to
 expand its use of BellSouth UNEs for the provision of competitive local
 voice and data services to both business and residential users in the State of

- 4 Florida.
- 5 <u>ISSUE 1</u>.

I.

6

### INTRODUCTION

What is the purpose of FDN's high-speed data proposal? О. 7 FDN seeks the ability to offer its customers a combination of circuit-Α. 8 switched voice services, such as local dial tone, and packet-switched high-9 speed data services, such as Digital Subscriber Line (DSL) services. FDN is 10 able to provide DSL to some end-users in Florida by collocating its own DSL 11 multiplexers (DSLAMs) in BellSouth's central offices. However, FDN is 12 precluded from providing high-speed data service where BellSouth has 13 deployed Digital Loop Carrier (DLC) facilities. Except in the territory served 14 by SBC Communications, Inc., CLECs are generally precluded from offering 15 DSL service where DLCs are deployed. The severity of this limitation on 16 competition is felt nowhere more than Florida, as more than 60% of all 17 BellSouth access lines in Florida pass through DLCs according to BellSouth. 18 In FDN's experience in its initial Florida markets, FDN believes the 19 percentage of DLCs approaches 70%. BellSouth does not offer any resale or 20 UNE products that would enable CLECs to provide high-speed data service to consumers who are served by DLC loops where the CLEC is the voice 21 22 provider. The purpose of my testimony is to offer the factual basis required 23

for the Florida Commission to order BellSouth to offer UNE and resale 1 products, in accordance with applicable law, that will be essential for FDN to 2 offer high-speed data services on an ubiquitous basis in Florida over the same 3 customer loops that it uses to provide its voice services. This issue is of 4 5 paramount importance for FDN to be able to launch a facilities-based competitive local voice option for residential subscribers. Florida is almost 6 completely without facilities based local voice competition for residential 7 subscribers at this time. 8

Q. What is DSL?

9

DSL is a technology initially developed to enable high-speed data 10 Α. transmission over traditional copper loop facilities. DSL modems placed on 11 each end of a copper loop transmit information at rates far exceeding those 12 typically achieved by traditional "dial-up" modems, allowing consumers to 13 utilize the growing number of bandwidth intensive applications and to 14 To provide a viable DSL 15 maximize efficiencies and productivity. transmission service, the loop between the customer and the DSLAM must 16 typically be shorter than 18,000 feet, free of bridged tap, load coils and 17 repeaters, and free from interference caused by nearby fiber-based 18 telecommunications. 19

20 Q. Is FDN able to offer high-speed data services in conjunction with 21 its voice service on a ubiquitous basis in Florida?

A. No. FDN is collocated in more than half of BellSouth's central
offices in the state of Florida, and is able to offer voice services to 100% of

- the consumers served by these offices. However, FDN is unable to provide
   DSL service to approximately 70% of these end-users because of the
   presence of BellSouth DLCs.
- 4 Q. What are DLCs?

The DLC performs an analog to digital conversion that aggregates 5 Α. 6 telecommunications from the individual customer subloops to a shared transmission facility bound for the central office. Deployment of DLCs and 7 8 successor technologies will ultimately save billions of dollars annually in maintenance and switching costs. In the past, and still today throughout most 9 10 of the country, the vast majority of last mile loops consist of "home run" 11 copper facilities between the customer and the central office. However, in 12 the past quarter-century, as Florida's population grew explosively, BellSouth 13 deployed a tremendous number of DLCs at remote terminals (RTs) in its 14 distribution network. Attached hereto as Exhibit \_\_ (MPG-1) is a diagram 15 comparing traditional copper network architecture with DLC deployment.

Q. Why do BellSouth's DLCs preclude FDN from offering DSLservice?

A. DSL cannot be transmitted through a DLC unless it is first multiplexed for digital transmission to the central office. Therefore, the carrier must locate at the remote terminal a DSLAM, or, in the case of Next Generation Digital Loop Carriers ("NGDLCs"), DSL-capable line cards that perform DSLAM functionality. For reasons I will explain below, unlike BellSouth, FDN and other CLECs cannot collocate DSLAMs or line cards at

1	remote terminals. Therefore, BellSouth today is the only carrier in Florida
2	able to offer DSL service where its DLCs are deployed.
3	Q. Why can CLECs provide high-speed data service over DLC loops
4	in the territory served by SBC?
5	A. SBC offers a wholesale UNE-priced broadband loop product that
6	includes transmission from the customer to the remote terminal, DSLAM
7	functionality at the RT, and transmission to the central office, where CLECs
8	pick up the traffic from SBC's packet switch. Verizon is developing a
9	similar product. As I will explain in more detail below, FDN seeks a similar
10	UNE from BellSouth, tailored to the technical specifications of BellSouth's
11	Florida network.
12	Q. Can FDN sustain long-term viability if it is limited to providing
13	DSL only on non-DLC loops?
14	A. It would be very difficult as demand for DSL increases. In most

Florida central offices, more so than in most of the rest of the nation, FDN 15 will not be able to succeed in the voice or data market if it is limited to 16 providing DSL service only to end-users who can be served from the central 17 office. As I stated previously, more than 60% of BellSouth's Florida access 18 lines pass through DLCs and cannot be served from the central office. Of the 19 remaining 30-40% of the end-user base, many cannot receive central office 20 based DSL due to excessive loop lengths, the presence of bridged taps, load 21 coils or repeaters, or other factors. With such a high percentage of the DSL 22 market closed to central-office-only strategies, CLECs will not be able to 23

compete. Furthermore, if BellSouth is the only carrier that can provide DSL 1 2 to a substantial percentage of consumers, it can leverage its market power to suppress competition for voice services, as I have indicated above. 3 Therefore, an exclusive central office strategy will not only fail in the DSL 4 market, but it could also fail in the voice services market as well. My point is 5 well illustrated by the failure of many exclusive central-office based CLEC 6 strategies, even where the rate of DLCs is much lower than Florida. Of the 7 three major national DSL CLECs, NorthPoint has already dissolved in 8 bankruptcy and Covad and Rhythms are in serious financial peril and could 9 be bankrupt during the course of this year. 10

Q. Why it is important for FDN to be able to offer both voice and
data services?

A large and growing number of residential and business customers are 13 Α. seeking carriers that can satisfy all of their telecommunications needs, 14 including voice and high-speed data services. These customers want to be 15 able to obtain these services through a single point of contact and on a single 16 bill. If FDN is unable to offer high-speed data services, it will not only lose 17 opportunities in the data market, but it will also be unable to remain 18 competitive in the voice local exchange and interexchange markets in 19 Florida. 20

Q. Is FDN's objective to provide high-speed data service in Florida
urgent?

Absolutely. It is well established that early entry and early name 1 Α. 2 recognition are crucial to success in markets for new technologies and new services. BellSouth understands this as well, as it is aggressively deploying 3 DSL in Florida today even as it denies competitors the resale and UNE DSL 4 products that CLECs need to compete. With each day that passes, FDN falls 5 further behind BellSouth in the high-speed data market, and the probability of 6 losing its existing and prospective voice customers grows. In Florida alone, 7 BellSouth by the end of April 2001 had 133,015 high-speed data subscribers 8 9 in the State of Florida, 43,291 of which were added in the first quarter 2001. Florida customers represent nearly one-half of BellSouth's DSL lines region-10 wide, and approximately one-half of its first quarter growth. Therefore, 11 FDN's efforts to obtain the resale and UNE products for a bundled DSL and 12 voice offering are extremely urgent and are of utmost importance to FDN's 13 short-term and long-term viability in the state. 14

Q. Does FDN's inability to offer voice and high-speed data on the same telephone line impair its ability to offer local exchange voice services in Florida?

A. Yes. First, as I mentioned, FDN's inability to offer high-speed data to most customers impairs its ability to sell voice services to customers looking for a bundled service offering from a single carrier. Second, FDN is impaired in its ability to sell local exchange voice services by BellSouth's unnecessary and anticompetitive practice of leveraging its control of the DSL market in Florida to injure competitors in the voice market. To illustrate, if a

1	prospective FDN customer today is obtaining both voice and data services
2	from BellSouth, they are not able to migrate their local exchange voice
3	service to FDN's facilities-based voice service without having BellSouth
4	disconnect their data service, even though BellSouth easily has the capability
5	to continue to provide data service on the line. Because FDN is unable in
6	most cases to offer DSL service to the customer on the same telephone line,
7	the customer is likely to lose interest in obtaining voice telephone services
8	from FDN, even when FDN is able to offer superior pricing and service.
9	BellSouth's ability to manipulate its market power to injure competitors will
10	only increase as competitive DSL providers continue to disappear.
11	Q. How does the lack of competitive DSL providers affect Florida
12	consumers?
13	A. In markets where only one or only a few providers are available, these
14	providers have fewer incentives to provide quality service or competitive
15	rates to their customers. As BellSouth has solidified its growing control over
16	the DSL market in Florida, it recently raised its retail DSL prices in the state
17	and discontinued some of its competitive promotions. If competitors are
18	denied meaningful access to BellSouth's last mile connections to end-users,
19	price increases could be expected to continue.
20	Q. In this arbitration, is FDN requesting the same relief sought by

21 MCI WorldCom in Docket No. 000649-TP that BellSouth be required to 22 provide xDSL service to FDN customers?

10

•

- .

2

1	A. No. FDN is not in this arbitration seeking to require BellSouth to
2	provide retail xDSL or ISP services to consumers who are also FDN
3	customers. Instead, FDN proposes to purchase wholesale access to
4	BellSouth's unbundled network elements pursuant to Section 251 of the Act.
5	BellSouth would not be required to have end-user relationships, such as
6	billing or customer service, with FDN's customers. Nor would BellSouth be
7	required to connect the customers from the central office to an ISP's point of
8	presence, or to provide Internet service itself; instead, as with other UNEs,
9	FDN would access the loop via its collocated facilities in BellSouth's central
10	offices. Therefore, the decision in the MCI WorldCom arbitration in Docket
11	No. 000649-TP regarding BellSouth's obligation to provide xDSL service is
12	not relevant in this arbitration.

13

# 14 H. BELLSOUTH SHOULD BE REQUIRED TO OFFER 15 UNBUNDLED BROADBAND LOOPS AS A UNE

Q. To enable FDN to provide bundled voice and high-speed data service products where DLCs are deployed, does FDN require access to facilities that are different from the UNEs offered in other BellSouth Florida interconnection agreements?

A. Yes. At the time that the current national list of UNEs was established in the FCC's *UNE Remand Order* in 1999, the FCC formalized as UNEs only the network elements needed for local exchange and DSL service in an ILEC network in which the predominant last mile connections are home

run copper loops. BellSouth's existing network in Florida is very different
from the FCC's conceived model, with more far more fiber and DLCs. Due
to the differences between BellSouth's DLC-dominated Florida network and
other ILECs' copper-based distribution systems, it is necessary to establish
additional UNEs and/or apply the FCC's standard to unbundle packet
switching in order to ensure that CLECs can provide ubiquitous xDSL
service in Florida using UNEs.

Q. Can the Florida Commission establish new UNEs?

8

9 Α. Yes. Section 251(d)(3) of the Act explicitly authorizes state commissions to establish additional unbundling obligations. When the FCC 10 established the basic list of UNEs that must be unbundled by all ILECs, the 11 FCC emphasized that "section 251(d)(3) grants state commissions the 12 authority to impose additional obligations upon incumbent LECs beyond 13 those imposed by the national list." The Line Sharing Order, which sought 14 15 to promote unbundled CLEC access to DSL, further encouraged state 16 commissions "to impose additional, pro-competitive requirements consistent with the national framework established in this order."<sup>2</sup> 17

Q. What new UNEs are necessary to enable FDN to offer high-speed
data services in BellSouth's territory in Florida?

A. Where BellSouth has deployed Digital Loop Carrier facilities, FDN
 requires access to unbundled DSL-capable transmission facilities between the

<sup>1</sup> Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, CC Docket No. 96-98, Third Report and Order, 15 FCC Rcd. 3696, § 154 (1999) ("UNE Remand Order").

<sup>2</sup> Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket No. 98-147, Third Report and Order, 14 FCC Red. 20912, at § 159 (1999) ("Line Sharing Order").

1	customer's Network Interface Device and the BellSouth distribution frame in
2	its central offices, including all attached electronics that perform DSL
3	multiplexing and splitting functionalities. I will describe these facilities as
4	"broadband loops." FDN seeks the ability to obtain both whole loops for a
5	combined voice and data service and the high-frequency portion thereof for
6	data-only service.
7	Q. How does this facility differ from the DSL-capable loop that is
8	classified as a UNE under the UNE Remand Order?
9	A. Under my description, broadband loops include the packet switching
10	and splitter functionalities that are performed by BellSouth's equipment
11	located at a remote terminal. The traditional UNE loop does not include the
12	DSLAM.
13	Q. Why would the network elements necessary to provide high-speed
14	data service over DLC loops be different from the definition of a non-
15	DLC loop?
16	A. As I stated above, FDN is not able to offer xDSL service over DLC
17	loops using only the existing UNEs. In the UNE Remand Order, the FCC
18	determined that CLECs could place their own DSLAMs in ILEC central
19	offices on the same terms and conditions that the ILEC located its own
20	DSLAM, and that they were therefore not impaired by a lack of unbundled
21	access to ILEC DSLAMs in the central office. As I will explain in more
22	detail below, CLECs are not able to self-provision or otherwise obtain
22 23	detail below, CLECs are not able to self-provision or otherwise obtain DSLAM functionality at ILEC remote terminals on an equivalent basis.

13

`

1	Even in rare cases where such provisioning may be technically feasible, the
2	option is financially impossible for FDN and other CLECs. Therefore, as I
3	will explain below, CLECs would be impaired if DSLAM functionality is not
4	included as part of the broadband loop UNE.
5	Q. Is there a regulatory precedent for requiring incumbents to
6	provide a platform of UNEs that comprise DSL transmission over loops
7	with fiber feeder at prices based on forward-looking, economic cost?
8	A. Yes. In a proceeding relating to the SBC-Ameritech merger, the FCC
9	required SBC to offer to CLECs a "Broadband Offering," which the FCC
10	described as a "combination of network elements provided as a wholesale
11	arrangement." <sup>3</sup> The Broadband Offering must be offered, alone and in
12	combination with a voice offering, at rates, terms, and conditions that are
13	just, reasonable, and nondiscriminatory and priced in accordance with the
14	TELRIC methodology applicable to unbundled network elements. <sup>4</sup> SBC's
15	Broadband Service, which is available in SBC's thirteen-state region today, is
16	functionally equivalent to the broadband loop requested by FDN in this
17	arbitration. Therefore, FDN is seeking from BellSouth what SBC already
18	offers to CLECs in its thirteen-state region.

19 Q. Have any regulators classified broadband loops as a UNE?

•

<sup>3</sup> Ameritech Corp., Transferor and SBC Communications, Inc., Transferee, For Consent to Transfer Control of Corporations Holding Commission Licenses and Lines Pursuant to Sections 214 and 310(d) of the Communications Act and Parts 5, 22, 24, 25, 63, 90, 95, and 101 of the Commission's Rules, CC Docket No. 98-141, ASD File No. 99-49, Second Memorandum Opinion and Order, FCC 00-336 (rel. September 8, 2000) ("Project Pronto Order"), at § 30.

<sup>4</sup> Project Pronto Order at § 6 (footnote omitted).

1	A. Yes. The FCC described the offering as a combination of network
2	elements and required that it be priced according to the TELRIC cost
3	methodology used to price UNEs. <sup>5</sup> The Illinois Commerce Commission
4	recently created the broadband loop with packet switching functionality as a
5	new UNE. <sup>6</sup> Numerous other state commissions are now considering the issue.
6	Although the issue is also pending in an FCC proceeding, the FCC has
7	indicated that it expects that issues related to access to DLC loops will be
8	addressed in state arbitration proceedings.
9	Q. Have any ILECs other than SBC made plans to offer a similar
10	combination of network elements to provide wholesale DSL capability?
11	A. Yes. Verizon has developed a draft proposal for a product that is
11 12	A. Yes. Verizon has developed a draft proposal for a product that is functionally equivalent of SBC's Broadband Offering and the broadband
11 12 13	A. Yes. Verizon has developed a draft proposal for a product that is functionally equivalent of SBC's Broadband Offering and the broadband UNE loop proposed by FDN in this case, called its Packet Access at Remote
11 12 13 14	A. Yes. Verizon has developed a draft proposal for a product that is functionally equivalent of SBC's Broadband Offering and the broadband UNE loop proposed by FDN in this case, called its Packet Access at Remote Terminal Service (PARTS).
11 12 13 14 15	<ul> <li>A. Yes. Verizon has developed a draft proposal for a product that is functionally equivalent of SBC's Broadband Offering and the broadband UNE loop proposed by FDN in this case, called its Packet Access at Remote Terminal Service (PARTS).</li> <li>Q. Is CLEC access to DLC-served customers less urgent in BellSouth</li> </ul>

<sup>5</sup> The FCC did not formally classify the offering as a UNE because it has reserved that issue to a pending generic case that will be applicable to all ILECs. See Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket 98-147, CC Docket 96-98, Order on Reconsideration and Second Further Notice of Proposed Rulemaking in CC Docket No. 98-147 and Fifth Further Notice of Proposed Rulemaking in CC Docket 96-98, FCC 00-297, at § \$1-83, 103-12, 119-28 (rel. Aug. 10, 2000).

<sup>6</sup> See Arbitration Decision on Rehearing. In the Matter of Petition for Arbitration Pursuant to Section 252(b) of the Telecommunications Act of 1996 to Establish an Amendment for Line Sharing to the Interconnection Agreement with Illinois Bell Telephone Company d/b/a Ameritech Illinois, and for an Expedited Arbitration Award on Certain Core Issues, et al., Illinois Commerce Commission, Docket Nos. 00-0312 and 00-0313 (Illinois Commerce Commission, Feb. 15, 2001) ("Illinois Pronto Arbitration Order"); see also In the Matter of Illinois Bell Company Proposed Implementation of High Frequency Portion of Loop (HFPL)/Line Sharing Services, Illinois Commerce Commission, Docket No. 00-0393, Order (Ill. Commerce Commission Mar. 14, 2001.

1 Α. Absolutely not. In fact, this issue is more urgent in Florida because of BellSouth's massive deployment of DLCs in the state. SBC offered its 2 3 broadband service in conjunction with its rollout of DSL-capable DLC loops, and Verizon has stated that it has not yet provided DSL over DLC loops. By 4 contrast, BellSouth has already provisioned a tremendous number of DSL 5 6 lines over DLC loops in Florida. In the absence of a broadband loop UNE, a higher percentage of Florida end-users are deprived of competitive choice of 7 DSL and voice providers than would be occurring in SBC and Verizon 8 9 territory. 10 О. What standard must the Florida Commission employ in deciding

11 whether to create any new UNEs?

12 Α. FCC Rule 51.317 prescribes the legal standard to be used by state commissions when creating new UNEs.7 When prospective UNEs implicate 13 14 specified proprietary rights of the ILECs, a state must find that access to that 15 element is "necessary." When no proprietary rights are implicated, the state 16 need only find that CLECs would be "impaired" without access to the 17 element. Under FCC rules, a network element is considered to be proprietary only if the ILEC demonstrates that it has invested resources to develop 18 19 proprietary information or functionalities that are protected by patent, copyright or trade secret law.<sup>8</sup> The discrete elements such as line sharing, 20 21 packet switching, and fiber functionality that comprise the unbundled access 22 that are sought here have been previously deemed non-proprietary by the

7 47 C.F.R. § 51.317.

8 See 47 C.F.R. § 51.317(a).

FCC.<sup>9</sup> Therefore, in this arbitration, none of FDN's proposals would
 implicate BellSouth's proprietary rights. For these reasons, the Florida
 Commission should use the "impair" standard to determine whether any new
 UNEs should be created.

5 Q. How is the "impair" standard used by state commissions to create 6 new UNEs?

7 Α. When evaluating whether to unbundle a network element under the 8 "impair" standard, federal regulations require unbundling if lack of access to 9 the network element impairs a carrier's ability to provide the services it seeks to offer. "A requesting carrier's ability to provide service is 'impaired' if, 10 11 taking into consideration the availability of alternative elements outside the 12 ILEC's network, including self-provisioning by a requesting carrier or 13 acquiring an alternative from a third-party supplier, lack of access to that 14 element materially diminishes a requesting carrier's ability to provide the services it seeks to offer."<sup>10</sup> The FCC rules establish that the "totality of 15 16 circumstances" must be considered to determine whether an alternative to the 17 ILEC's network is available in such a manner that a requesting carrier can *realistically* be expected to actually provide services using the alternative.<sup>11</sup> 18 19 When determining whether to require additional unbundling, FCC Rule 20 51.317(b) requires that the Commission consider the cost, timeliness, quality, 21 ubiquity, and impact on network operations that may be associated with any

<sup>9</sup> See UNE Remand Order at § 180 & 305; Line Sharing Order at § 28.
10 47 C.F.R. § 51.317(b).

<sup>11</sup> UNE Remand Order at § 62.

1	alternatives to unbundling. In addition, other factors such as promotion of
2	the rapid introduction of competition; facilities-based competition,
3	investment, and innovation; or certainty to requesting carriers regarding the
4	availability of the element may also be considered by the Commission. <sup>12</sup>
5	Q. If broadband loops were not available as a UNE, are there any
6	viable alternatives available to FDN to provide high-speed data service
7	where BellSouth has deployed DLCs?
8	A. No. If viable alternatives were available, FDN would be selling DSL
9	today to customers served by DLC loops in Florida.
10	Q. What options do you believe that BellSouth may assert as
11	justifications for withholding UNE designation of broadband loops?
12	A. I am aware that ILECs have alleged that at least three alternatives are
13	available to CLECs CLEC collocation of DSLAMs at the remote terminal,
14	the use of all-copper loops, and construction of their own distribution
15	network. None of these options offer viable options for FDN or other
16	CLECs. If left only with these options, FDN would be not only impaired but
17	prevented from being able to offer DSL service to a growing majority of
18	Florida consumers, and, as a result, would be impaired in its ability to offer
19	voice local exchange services as well.
20	Q. Could FDN provide ubiquitous DSL service to end-users served
21	by DLCs by collocating DSLAMs at BellSouth's remote terminals?
22	A. No. The cost of providing ubiquitous service throughout the state of
23	Florida by collocating DSLAMs at remote terminals would be staggeringly

<sup>12</sup> See 47 C.F.R. § 51.317(c).

•

expensive, and well beyond the capability of FDN or other CLECs. FDN 1 invested millions of dollars and much of its human and technical resources to 2 collocate equipment in 100 of BellSouth's 196 central offices in the state of 3 Florida. By contrast, BellSouth has more than 12,000 remote terminals in the 4 state of Florida. Collocation on this scale is financially impossible for FDN 5 and would be tantamount to duplication of a significant portion of б BellSouth's monopoly-built last mile distribution network. In any case, 7 collocation even at single remote terminals is precluded by numerous other 8 factors. As evidence of this reality, according to BellSouth's discovery 9 responses in this case, no CLEC has collocated, or even requested to 10 collocate, at a BellSouth remote terminal in the entire state of Florida. 11

12 Q. What factors preclude CLEC collocation at individual remote13 terminals?

First, in most cases, even if BellSouth permitted FDN to collocate a 14 Α. DSLAM inside the remote terminal, no fiber feeder will be available to 15 transport the telecommunications back to FDN's collocation site in the 16 central office. BellSouth has repeatedly maintained that dark fiber will in 17 most cases not be available to CLECs at these locations. In most or all cases, 18 no dark fiber would be available from any third parties, as third parties would 19 have had little reason to invest in fiber between two locations controlled and 20 highly regulated by BellSouth. Therefore, in most cases, FDN could only use 21 a remotely-collocated DSLAM if it were to construct its own fiber-optic 22

19

ς.

- transport between the remote terminal and FDN's facilities, such as those it
   has collocated at BellSouth's central office.
- Q. Could FDN construct its own fiber-optic transmission between
   BellSouth's remote terminals and central offices for the purpose of
   providing DSL service through remotely-collocated DSLAMs?
- Such an endeavor would be prohibitively costly and time-6 Α. No. 7 consuming. The FCC noted that "the costs associated with self-provisioning or purchasing alternative elements from third-party suppliers are relevant to 8 [a] determination of whether the element is a practical and economical 9 alternative to the incumbent LEC's unbundled network element."<sup>13</sup> The cost 10 of constructing new fiber facilities would be incredibly expensive, and 11 Such completely unaffordable, to FDN or to a third-party supplier. 12 construction would require FDN to incur tremendous costs to secure rights-13 of-way, dig up the path of the fiber, and install equipment. These costs 14 would not justify the comparatively limited revenues that could be realized 15 from high-speed data services to the limited number of end-users served by a 16 single remote terminal. 17
- Q. How would these costs compare to the costs borne by BellSouthfor its DSL connectivity?
- A. BellSouth has already years ago secured rights-of-way and incurred most of the costs of placing fiber. Unlike FDN, BellSouth would not be required to place new fiber in order to carry new traffic. When BellSouth informs CLECs that no dark fiber is available, that does not mean that no

<sup>13</sup> UNE Remand Order at § 72.

1	fiber is available for BellSouth's use. ILECs typically reserve a substantial
2	amount of fiber capacity between their remote terminals and central offices.
3	Therefore, BellSouth would not have needed to place new fiber facilities to
4	add DSLAMs and DSL to its remote terminals. Furthermore, even if its
5	bandwidth were exhausted between an RT and central office, BellSouth can
6	upgrade its bandwidth by changing the electronics on the ends of its lit fiber
7	to secure additional bandwidth for its DSL. This option, which BellSouth
8	will not provide to CLECs, is tremendously cheaper than installation of new
9	fiber.
10	Q. Even if dark fiber was available, would FDN be able to collocate
11	DSLAMs at BellSouth's DLCs?
12	A. No. In many cases, collocation may not be physically possible, and in
13	all or nearly all cases, it would be prohibitively expensive and time
14	consuming for FDN.
15	Q. Why would CLEC DSLAM collocation at BellSouth remote
16	terminals be physically impossible in some circumstances?
17	A. The vast majority of BellSouth's 12,000-plus remote terminals in
18	Florida are cabinets, which are much smaller than other typical RT structures,
19	such as huts or controlled environmental vaults. Many DLCs therefore are
20	housed in structures that are too small to support additional collocation of
21	DSLAMs and necessary supporting infrastructure by several CLECs, or
22	perhaps even by a single CLEC. DSLAMs require power and climate control
23	infrastructure that likely is often not available at a remote terminal. Addition

.

•

- of this additional infrastructure would require even more space, which may
   not be available.
- Q. Why would collocation of a DSLAM at BellSouth remote
  terminals be prohibitively expensive and time-consuming for FDN?

DSLAM power and temperature control requirements exceed the 5 Α. standards of many remote terminals. CLECs would incur tremendous 6 expense and delays in arranging for sufficient power capacity and 7 infrastructure. In addition, as I noted above, if space within the RT were 8 unavailable, FDN would be required to build an external structure to house its 9 facilities, which would require substantial time and expense, including, but 10 not limited to, securing acquisition of new land and/or establishment of new 11 rights-of-way and all other approvals from local authorities necessary to 12 construct FDN's own remote terminals. Remote terminals are often located in 13 residential neighborhoods and are subject to increasing scrutiny. 14 Neighborhoods now quiet about the presence of a single remote terminal may 15 well object to plans by numerous CLECs each to place their own remote 16 terminals. FDN, which does not have long-standing relationships with local 17 authorities, could experience significant delays or expenses in securing such 18 permission, if not outright rejection. On top of these expenses, BellSouth 19 might seek to charge FDN for cross-connection facilities to its remote 20 terminal. Taken together, ubiquitous collocation of DSLAMs at BellSouth 21 remote terminals would cost FDN millions of dollars and would require years 22 of difficult, if not impossible, efforts. 23 .

## Q. Could FDN cost-justify these high DSLAM collocation expenses at a remote terminal for the purpose of offering DSL?

No. DSLAMs are very often too expensive to justify at a remote 3 Α. terminal due to the smaller number of customers that are served by an RT. 4 Also, the FCC has determined that, in applying the cost factor of the 5 impairment test, the state commission should consider the economies of scale 6 enjoyed by incumbents as a result of their ubiquitous networks.<sup>14</sup> Unlike at a 7 central office, the level of concentration present at a remote terminal is often 8 as low as a hundred or a few hundred lines in total. At least in their early 9 years of operations, CLECs cannot realistically hope to obtain a "take rate" of 10 more than a small, single digit percentage of the total possible market for 11 DSL service. BellSouth is able to garner a higher take rate, at least initially, 12 because of its greater name recognition and established relationships with 13 existing customers. Therefore, the cost of establishing a DSLAM collocation 14 arrangement and fiber connectivity at each remote terminal may be so 15 prohibitive as to never make economic sense given the few customers that 16 any given CLEC might serve from an individual remote location. Indeed, if 17 collocation of a stand-alone DSLAM at the remote terminal were the only 18 available "option", DSL competition in markets served by DLCs might never 19 develop. 20

Q. Would CLECs be able to collocate DSLAMs at BellSouth remote
terminals on the same terms and conditions afforded by BellSouth to its
own DSL operations?

<sup>14</sup> UNE Remand Order at § 84.

No. First, as I mentioned before, BellSouth has indicated that it will 1 Α. not provide the lit fiber to CLECs that BellSouth's DSL utilizes for transport 2 to the central office. Second, CLECs will be severely disadvantaged 3 wherever BellSouth deploys Next Generation Digital Loop Carrier 4 ("NGDLC") systems, because BellSouth will be able to use digital line cards 5 rather than DSLAMs at the remote terminal. These line cards, which perform 6 the role of the DSLAM in NGDLC architecture, are small pieces of electronic 7 equipment that that are plugged directly into the channel bank assembly of 8 the Digital Loop Carrier.<sup>15</sup> Line cards are significantly smaller and cheaper 9 and are more effective even than the smallest commercial DSLAM. I 10 understand from BellSouth's statements in other proceedings that it has 11 opposed collocation by CLECs of line cards at BellSouth NGDLCs. 12 Therefore, BellSouth would deny the ability of CLECs to place DSLAM 13 functionality at the remote terminal on the same terms and conditions that it 14 affords to its own operations. 15

Q. You testified that it would be prohibitively time-consuming for FDN to collocate stand-alone DSLAMs and connect to lit fiber at BellSouth remote terminals. At what point does the resulting delay to FDN's deployment constitute an impairment of FDN's ability to provide high-speed data service?

A. Even if FDN had sufficient funding to collocate remote DSLAMs and
 construct or obtain lit fiber to the central office, the process in my estimation
 would require well more than one year before FDN could start to provide

15 See, e.g., Pronto Order at § 16.

1 service, and perhaps much longer. Construction of new external remote facilities or placement of new fiber could require time-consuming public 2 approval processes. Furthermore, it is my understanding that in one of the 3 few instances where a CLEC attempted to collocate a DSLAM at an ILEC 4 remote terminal, cross-connection and construction issues remained 5 unresolved more than one year after the initial collocation request was made. 6 The FCC has held that "delays caused by the unavailability of unbundled 7 network elements that exceed six months to one year may, taken together 8 with other factors, materially diminish the ability of competitive LECs to 9 provide the services that they seek to offer."16 FDN and the investors on 10 which it relies place a valuable premium on speed to market, which is critical 11 in the telecommunications market, especially for new advanced services. 12 The FCC observed the importance of speed to market, noting that "incumbent 13 LECs can take advantage of delays caused by the unavailability of unbundled 14 network elements by using their unique access to most customers to gain a 15 foothold in new markets, and, in markets where services may be offered 16 pursuant to long term-contracts (e.g., DSL and other advanced data services), 17 to 'lock-up' customers in advance of competitive entry."<sup>17</sup> Moreover, delays 18 in the introduction of competitive services caused by the unavailability of 19 unbundled elements would give BellSouth valuable time to entrench itself 20 with existing customers.<sup>18</sup> If forced to endure delays of additional months or 21

<sup>16</sup> UNE Remand Order at § 89.

<sup>17</sup> UNE Remand Order at ¶91.

<sup>18</sup> See UNE Remand Order at § 93.

years to build new remote structures, collocate DSLAMs, obtain crossconnections and deploy lit fiber, all while BellSouth adds thousands of new
DSL customers in Florida every month, FDN will suffer serious competitive
injuries. Delays increase the risk that FDN will fall irreparably behind
BellSouth in the high-speed data market, and further enable BellSouth to use
its growing control of the Florida DSL market to injure FDN's position in the
voice services market.

Q. Would it be possible for FDN to offer DSL on a ubiquitous basis
over home run copper loops that do not pass through the BellSouth's
DLCs?

11 Α. No. In the first instance, many DLCs are deployed at locations where 12 copper loops are longer than 18,000 feet, and are therefore too long to carry 13 DSL signals. Even where home run copper loops are DSL-capable, the 14 quality of the DSL transmissions would be inferior to DLC loops and 15 therefore would not be competitive in the consumer market. The FCC 16 concluded that "the quality of alternative network elements available to the competitive LEC is relevant to a determination of whether a requesting 17 carrier's ability to provide service is impaired" and that "a material 18 degradation in service quality associated with using an alternative element 19 20 will materially diminish a competitor's ability to effectively provide service."<sup>19</sup> Second, in many BellSouth serving areas, no copper facilities 21 remain available for DSL. 22

<sup>19</sup> UNE Remand Order at § 96.

Q. Could FDN self-provision DSL transport to end-users who are
 served by BellSouth DLC facilities?

No. FDN cannot replicate BellSouth's facilities in order to sell DSL. 3 Α. Even if FDN had at its disposal the billions of dollars that ILECs are 4 spending on the deployment of DLC loop facilities, it would cost FDN 5 6 billions on top of that amount to produce a functionally equivalent last mile distribution network to carry FDN's own telecommunications. BellSouth's 7 DLC facilities utilize BellSouth's existing copper distribution network, 8 existing rights-of-way, and existing remote terminal facilities. Furthermore, 9 construction of a new distribution network would require several years at a 10 minimum. Therefore, this is clearly not a realistic option for FDN. Further, I 11 believe that competitive voice service to residential users would be 12 accelerated, as competitors to Bellsouth would have access to both parts of 13 the competitive "bundle" of voice and data. 14

Q. Can FDN obtain DSL transport to end-users served by BellSouth
DLCs from a third-party provider?

A. No. I am not aware of any third-party provider that could and would provide the last mile distribution facilities necessary for high-speed data services to FDN or other CLECs on a ubiquitous basis throughout BellSouth territory, or even in a small fraction of that territory. Any third party would face the same obstacles that prevent FDN from constructing its own last mile distribution network. Given FDN's interest in obtaining such access, I

believe to a near certainty that I would be aware if a viable, ubiquitous third party provider were available in Florida.

Would the availability of a broadband UNE promote the rapid 3 О. introduction of competition for high-speed data services in Florida? 4 Yes. I agree with the FCC's finding in the Project Pronto Order that 5 Α. the availability of a broadband offering would promote the rapid introduction 6 of competition.<sup>20</sup> FDN would plan to obtain this service as soon as possible 7 and would be able to offer DSL soon thereafter. The availability of a 8 broadband UNE loop would have a far more immediate and profound effect 9 on DSL competition in Florida than it had in SBC's region due to the higher 10 percentage of BellSouth DLCs deployed in the state. 11

Q. Would the broadband UNE loop that you have proposed includepacket switching functionality?

14 A. Yes.

Q. Has the FCC established a test used to determine whether packetswitching must be unbundled?

A. Except for the "impair" standard I described above, the FCC has not issued a generally applicable test to determine whether packet switching should be unbundled. However, in the 1999 UNE Remand Order, the FCC created a four-part test setting forth one set of circumstances where packet switching clearly must be unbundled. ILECs have argued that a state commission may order unbundling of packet switching only when this test is satisfied; however, nothing in the Order suggests that packet switching may

<sup>20</sup> Project Pronto Order at 👫 23, 30.

not be unbundled in other circumstances. Once a state commission finds that 1 2 a CLEC would be impaired without access to unbundled packet switching, it can and should order such unbundling without literal application of the UNE 3 Remand test. 4 5 Could you please state the packet switching unbundling standard Q. 6 from the UNE Remand Order? The test set forth in the UNE Remand Order requires ILECs to 7 Α. unbundle packet switching when (1) the ILEC has installed DLC systems; (2) 8 9 there are no spare copper loops that are capable of supporting the xDSL services the CLEC seeks to offer; (3) requesting CLECs are not allowed or 10 able to collocate DSLAMs at ILEC remote terminals on the same terms and 11 conditions that apply to the ILEC's own DSLAM; and (4) the ILEC has 12 deployed packet switching for its own use.<sup>21</sup> 13 Are these four conditions met for the purposes of this arbitration? 14 Ο. Yes. BellSouth has indisputably installed DLC systems, and likely Α.

15 has the highest percentage of DLCs deployed of any large ILEC in the 16 country. Second, in the vast majority of cases where BellSouth has deployed 17 DLCs, there are no xDSL-capable copper loops available that FDN can use to 18 provide high-speed data service. FDN and other CLECs have requested such 19 loops through BellSouth's ordering system and received notice that no copper 20 loop is available. My response to the third part of the test varies based on 21 whether BellSouth has deployed NGDLC systems. Where NGDLCs are 22 deployed, BellSouth's DSLAM functionality is performed through line cards 23

21 UNE Remand Order, at § 313; 47 C.F.R. 51.319(c)(3).

1 plugged into the channel bank of the NGDLC. BellSouth will not allow 2 CLECs to collocate their own line cards at the NGDLC. Where traditional DLCs are deployed, although BellSouth nominally allows CLECs to 3 4 collocate stand-alone DSLAMs at the remote terminal, such collocation is 5 subject to untenable terms and conditions, for the reasons I explained above. 6 These reasons include, but are not limited to, the fact that BellSouth refuses 7 to allow CLECs to connect the DSLAMs to the lit fiber that is used to carry BellSouth's high-speed data service to the central office. Because dark fiber 8 9 is often not available, a CLEC DSLAM would be stranded at the remote 10 terminal. Therefore, whether BellSouth deploys DLCs or NGDLCs, CLECs 11 are denied collocation of DSLAM functionality on the same terms and 12 conditions applicable to BellSouth's DSLAM functionality. Finally, it should 13 be beyond dispute that BellSouth has deployed packet switching functionality 14 for its own DSL services. Therefore, the FCC's four-part test is satisfied, and 15 BellSouth must be ordered to offer unbundled packet switching where it has 16 deployed DLCs.

Q. Should unbundled packet switching be made available generally
or only where the Commission conducts a remote terminal by remote
terminal unbundling analysis?

A. Because these conditions are satisfied in the vast majority, if not all, of BellSouth's DLC deployments, a general unbundling requirement is warranted. Otherwise, BellSouth will be able to effectively prevent CLECs from obtaining service in a timely and affordable manner by delaying entry

over protracted and expensive litigation addressing each one of BellSouth's
 hundreds or thousands of DLC sites.

- Q. Have any state commissions found that ILECs are required to unbundle packet switching at DLCs generally using the FCC's four-part standard?
- Yes. The Illinois Commerce Commission found that the test had been Α. 6 satisfied in ordering Ameritech to unbundle broadband loops.<sup>22</sup> In addition, 7 the New York Public Service Commission declined to make this 8 determination only because Verizon was not yet currently deploying packet 9 switching for its own use or for the use of an affiliate. The New York 10 Commission held that, were Verizon to deploy packet switching for its own 11 use or to its affiliate, it would have to offer it to all competitors.<sup>23</sup> The facts 12 of the New York case were materially different than here because of the far 13 more advanced stage of BellSouth's DSL deployment over DLCs and 14 ongoing utilization of packet switching for DLC loops in Florida. Had the 15 Florida facts been before the New York Commission, a general unbundling 16 of packet switching clearly would have been warranted. 17
- Q. Is the Florida Commission required to apply a four-part test established in the FCC's UNE Remand Order for unbundling of packet switching if before it can designate broadband loops as UNEs?

<sup>22</sup> Illinois Pronto Arbitration Order at 31.

<sup>23</sup> Proceeding on the Motion of the Commission to Examine Issues Concerning the Provision of Digital Subscriber Line Services, Case 00-C-0127, Opinion and Order Concerning Verizon's Wholesale Provision of DSL Capabilities Opinion No. 00-12 (N.Y. P.S.C. October 31, 2000).

1 Α. No. As I stated previously, the Florida Commission can and should order unbundling of packet switching if it finds that CLECs would be 2 impaired without such access, pursuant to the terms of FCC Rule 51.317. 3 The four-part test from the UNE Remand Order is only one of many routes 4 5 that the Commission could take to find such impairment. Above all, the Commission should consider that the fundamental purpose of the FCC test is 6 clearly to enable CLECs to offer high-speed data service where the ILEC has 7 deployed Digital Loop Carriers. If FDN had such access, it would be 8 providing high-speed data over these loops today. BellSouth's contrived 9 arguments that the UNE Remand Order precludes the unbundling of packet 10 switching fails when viewed in the context of the purpose of the FCC's order 11 12 and the reality today that CLECs lack meaningful access to DLC loops. Therefore, the BellSouth should be required to unbundle packet-switched 13 14 broadband loops in Florida.

15 III. BELLSOUTH IS REQUIRED BY SECTION 251(C)(4) OF THE
16 FEDERAL ACT TO OFFER ITS HIGH-SPEED DATA SERVICE FOR
17 RESALE

Q. Should BellSouth be required to offer wholesale high-speed data
 service to FDN for resale pursuant to Section 251(c)(4) of the
 Telecommunications Act of 1996?

A. Yes. BellSouth and its affiliates are required to offer, on a discounted
 wholesale basis, all of their retail telecommunications services, including
 xDSL and other high-speed data services, pursuant to the resale obligations

applicable to incumbent local exchange carriers under Section 251(c)(4) of
the Federal Act. While resale is not FDN's preferred means of access, and,
under FCC Orders, is not a substitute for UNE access,<sup>24</sup> the Act does require
BellSouth to offer it, and BellSouth should be required to provide FDN such
access in this case.

Q. Does BellSouth offer for resale its high-speed data services today
under the terms of Section 251(c)(4)?

8 Α. No. BellSouth's only wholesale high-speed data service in Florida is 9 its voluntary, market-rate offer to Internet Service Providers (ISPs). 10 BellSouth offers this service only for telephone lines on which BellSouth is 11 the local exchange carrier. Therefore, this service is not a long-term option 12 for FDN, which seeks to combine high-speed data services on the same line 13 as its facilities-based local exchange service. Furthermore, since BellSouth considers the service to be voluntary, there is no guarantee that it will 14 continue to be made available at rates, terms and conditions that would allow 15 16 a competitor to compete with BellSouth's retail service.

Q. If a resold DSL product were available pursuant to Section
251(c)(4), could BellSouth refuse to resell DSL to CLECs for use on lines
where it is not the local exchange carrier?

A. No. An ILEC cannot impose unreasonable or discriminatory
 limitations on resale services provided under Section 251(c)(4).

Q. What retail products does BellSouth offer to provide high-speeddata service?

<sup>24</sup> See UNE Remand Order at § 67.

1	A. To the best of my knowledge, BellSouth's consumer high-speed data
2	service is sold as BellSouth Fast Access Internet Service. FDN seeks to be
3	able to resell the telecommunications portion of this service, which,
4	depending on BellSouth's deployment, could be provided either over DSL,
5	fiber-fed DLC, or all-fiber loops. I will refer to the telecommunications
6	portion of this service as BellSouth's retail DSL service, but for the purposes
7	of this testimony I intend to include with this term any technology BellSouth
8	uses to provide consumer high-speed data services. BellSouth offers other
9	higher-capacity high-speed data services, such as T-1 service, but these
10	services are not a subject of this arbitration.
11	Q. On what basis has BellSouth refused to offer resold DSL service
12	under Section 251(c)(4)?
13	A. BellSouth claims that its DSL services are exempt from the resale
14	obligations of Section 251(c)(4) of the Telecommunications Act, which
15	applies to retail telecommunications services. As I understand its position,
16	BellSouth maintains that its local exchange carrier entity does not sell retail
17	DSL, but instead sells DSL only to Internet Service Providers (ISPs). This
18	position is based upon the FCC's 1999 decision that sales of DSL to ISPs are
19	wholesale services that are exempt from resale obligations under Section
20	251(c)(4). <sup>25</sup> However, the BellSouth group of companies, taken together, is
21	the largest retail DSL provider in Florida. BellSouth does sell retail DSL
22	through an ISP that it owns and controls. BellSouth's ISP obtains DSL from

<sup>25</sup> Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket 98-147, Second Report and Order, FCC 99-330 (rel. November 9, 1999) ("UNE Remand Order").

.

BellSouth's local exchange company. 1 BellSouth promotes and sells its telephone and DSL services using the same advertisements, customer service 2 and sales agents, and Internet sites, including www.BellSouth.com. 3 Revenues from DSL sales and telecommunications services are reported 4 together and accrue for the benefit of the same BellSouth shareholders. If 5 BellSouth were permitted to avoid its Section 251 obligations by selling all of 6 7 its telecommunications service on a wholesale basis to other affiliates, it would render the unbundling and resale obligations of the Federal Act 8 meaningless. Therefore, retail sales of telecommunications services by any 9 BellSouth affiliate should be attributed to the local exchange carrier operation 10 11 for the purposes of Section 251.

Q. Have any courts interpreted an ILEC's resale obligations where
retail services are sold by an affiliate of the ILEC rather than by the
ILEC itself?

Yes. In ASCENT v. FCC,<sup>26</sup> decided in January 2001, the United 15 Α. 16 States Court of Appeals for the District of Columbia held that retail sales of 17 advanced telecommunications services by ILEC affiliates are subject to the 18 resale obligations of the Act. The court found that an ILEC may not "sideslip § 251(c)'s requirements by simply offering telecommunications services 19 20 through a wholly owned affiliate." Although the case involved a regulation pertaining only to SBC, the logic of the decision applies equally to BellSouth. 21 22 Therefore, the FCC's ISP exemption cannot be read to exempt BellSouth

<sup>26</sup> Association of Communications Enterprises v. FCC, 235 F.3d 662, (D.C. Cir. January 9, 2001)("ASCENT").
from its obligation to resell the retail telecommunications service that is
 provided by any BellSouth affiliate.

Q. Have any states taken steps to require an ILEC to make available
for resale the retail DSL products of separate ISP affiliates?

5 Yes. On May 7, 2001, the Connecticut Department of Utility Control Α. 6 (DPUC) issued a draft decision that would require the state's largest incumbent, Southern New England Telephone Company (SNET), to resell 7 any telecommunications service, including DSL, that is sold by its ISP 8 9 affiliate and any other affiliates. The draft decision rejected arguments by 10 SNET that are virtually identical to those offered by BellSouth. As the DPUC 11 noted, "[t]he ASCENT Decision clearly holds that 'an ILEC [may not be permitted] to avoid § 251(c) obligations as applied to advanced services by 12 13 setting up a wholly owned affiliate to offer those services.' [SNET's] 14 repeated claim that this holding has no application to the services it offers 15 ignores that decision's plain language."27

16 Q. Is FDN asking that BellSouth be required to resell both the 17 telecommunications and enhanced services that are sold together by 18 BellSouth's ISP?

A. No. Section 251 applies only to telecommunications services, and that is all that FDN is seeking to resell. However, BellSouth cannot refuse to separate its telecommunications service from its enhanced services for the purpose of denying resale. FCC bundling rules require BellSouth to offer its

<sup>27</sup> Petition of DSLnet Communications, LLC Regarding Section 251(c) Obligations of the Southern New England Telephone Company, Docket 01-01-17, Draft Decision at 9 (Conn. D.P.U.C. May 7, 2001) (internal citations omitted).

telecommunications services separately from any enhanced services, even if
 it only sells them as a bundled product.<sup>28</sup>

If BellSouth only offers a bundled DSL and ISP product to the 3 О. 4 public, how should the resale rate under Section 251(c)(4) be calculated? 5 Α. BellSouth's current bundled ADSL/Internet Service rate, according to its Internet web site, is \$49.95, which includes DSL transport and unlimited 6 7 access Internet service. When unlimited Internet service is ordered separately 8 from BellSouth, the cost is \$20.95. Therefore, in the absence of any Commission-approved cost study allocating costs between the DSL and 9 Internet service, the DSL transport service should be attributed to have a 10 retail rate of  $\frac{29.00}{529.95}$ . The existing resale discount rates established by the 11 Florida Commission would be applied to the  $\frac{29.0^{\circ}}{529.95}$  rate. BellSouth would 12 13 be free to avail itself of any procedures available under this Commission's rules and prior decisions to seek modifications to the discount rates or to seek 14 the establishment of a specific rate applicable to DSL. 15

16 IV. FDN'S REQUEST IS NOT INCONSISTENT WITH PRIOR
17 COMMISSION DECISIONS

Q. Prior arbitration decisions in Florida have rejected arguments
that BellSouth should be required to provide splitters to CLECs. Is
FDN's request inconsistent with those decisions?

<sup>28</sup> Policy and Rules Concerning the Interstate, Interexchange Marketplace, CC Docket 96-61; 1998 Biennial Regulatory Review – Review of Customer Premises Equipment and Enhanced Services. Unbundling Rules in the Interexchange, Exchange Access and Local Exchange Markets, CC Docket 98-183, Report and Order, FCC 01-98 (rel. March 30, 2001), at ¶ 39.

No. FDN recognizes that the Commission has previously decided not 1 A. 2 to require BellSouth to offer unbundled splitters to CLECs in the central office. The fact that FDN's proposed broadband UNE loop includes splitter 3 functionality at the remote terminal is not inconsistent with these prior 4 findings. In the central office environment, there is no dispute that CLECs 5 are able to collocate equipment, and in these prior cases, CLECs sought 6 unbundled splitters for reasons other than complete infeasibility. At remote 7 terminals, as I have explained previously, CLECs cannot realistically 8 collocate DSLAMs. For the same reasons, CLECs cannot collocate splitters 9 at RTs. In addition, unlike the central office that may have multiple 10 DSLAMs, it would be nonsensical to have multiple splitters all lined up to 11 connect to a single (BellSouth) DSLAM. 12

Furthermore, in NGDLC systems, the splitter is an inseparable part of 13 the same line card equipment that performs DSLAM functionality. Unlike 14 most current central office deployments, where the splitter is a separate item 15 of equipment, inclusion of splitter functionality requires no additional burden 16 I am not aware of any technically feasible means of on BellSouth. 17 performing splitter functionality in NGDLC loops other than by the line card. 18 The fact that the splitter functionality is included does not alter the 19 Commission's overall impairment analysis for broadband loops. 20

Q. Why do you believe that the *Line Sharing Reconsideration Order*did not endorse the ILECs' refusal to sell DSL service?

38

1 Α. The FCC did not find that ILECs may lawfully refuse to provide DSL 2 service on lines on which it is not the retail voice carrier. On the contrary, the FCC determined only that AT&T's request was beyond the scope of a 3 reconsideration order, which, for procedural reasons, was limited to 4 5 consideration of the ILECs' obligation to provide access to line sharing to data CLECs who would provide DSL service. The FCC specifically noted 6 7 that it did not rule on the merits of AT&T's argument, instead noting that any 8 party aggrieved by an ILECs refusal to provide service could file a petition 9 alleging that the ILECs practice constitutes an unreasonable practice in 10 violation of the common carrier obligations to provide service to the public 11 on a nondiscriminatory basis, pursuant to Section 201 of the Communications 12 Act of 1934.

Q. Has FDN considered pursuing a complaint at the FCC based on
 Section 201 to require ILECs to sell DSL service to requesting consumers
 who subscribe to CLEC voice services?

16 Α. Not at this time. As I stated before, FDN is not seeking a requirement that BellSouth provide retail xDSL service to FDN's local exchange 17 customers. Instead, FDN is seeking access only to the resale and UNE 18 19 products that it is entitled to under Section 251(c) of the Telecommunications 20 Act of 1996 so that it may provide its own retail DSL service. However, if FDN later decided to pursue a different strategy, I would consider filing a 21 22 Section 201 complaint at the FCC. BellSouth can offer no reasonable 23 justification for its policy, which clearly appears designed to leverage its

39

market power in the high-speed data market as an anticompetitive tool to 1 injure its competitors in the voice services market. Because competitive 2 providers of DSL have been unable to offer DSL service where DLCs are 3 4 present, there have always been fewer competitive options in BellSouth 5 territory in Florida to the extremely high percentage of such loops. Now, with numerous competitive DSL providers folding or downsizing even in 6 markets where copper loops were more readily available, if FDN does not 7 8 obtain the relief requested in this case, there is a very real possibility that BellSouth will in the foreseeable future be the only remaining DSL provider 9 10 in its incumbent region in Florida. Therefore, BellSouth's ability to exert unreasonable and unlawful anticompetitive pressures on the voice services 11 12 market will continue to increase. For these reasons, BellSouth's refusal to offer xDSL service to Florida consumers who purchase facilities-based voice 13 14 service from CLECs is unreasonable and unlawful. 15 ISSUE 2 -- SETTLED 16 ISSUES 3A & 3B.

Q. Issues Nos. 3A and 3B concern trouble ticket closure and charges.
Please describe FDN's position on Issues Nos. 3A and 3B.

A. FDN experiences a significant number of trouble conditions for loss of
 dial tone or other service problems that FDN believes are attributable to
 BellSouth's service or facilities. Accordingly, FDN has a keen interest in
 BellSouth's disposition of trouble tickets and how FDN might be charged
 for trouble tickets. FDN does not dispute BellSouth's request to charge

40



Docket No. 990649A 'Exhibit\_\_\_\_(MPG-1) Page 44 of 44

## **CERTIFICATE OF SERVICE**

I HEREBY CERTIFY that a copy of the foregoing was furnished to the following parties by U.S. Mail or by overnight mail (if designated with a \*) this  $\Delta day$  of December, 2001.

Beth Keating \* Wayne D. Knight Florida Public Service Comm. Division of Legal Services 2540 Shumard Oak Blvd. Tallahassee, FL 32399-0850

Nancy B. White \* Bennett Ross E. Earl Edenfield BellSouth Telecommunications, Inc. 150 South Monroe Street Suite 400 Tallahassee, FL 32301-1556

Joseph A. McGlothlin Vicki Gordon Kaufman McWhirter, Reeves, McGlothlin, Davidson, Decker, Kaufman, Arnold, & Steen, P.A. 117 South Gadsden Street Tallahassee, FL 32301

Tracy Hatch Norman Horton, Jr Messer, Caparello & Self PO Drawer 1876 215 S. Monroe Street Suite 701 Tallahassee, FL 32302-1876

Donna Canzano McNulty MCI WorldCom 325 John Knox Road Suite 105 Tallahassee, FL 32303 Karen M. Camechis Mark W. Dunbar Pennington, Moore, Wilkinson Bell & Dunbar, P.A. PO Box 10095 Tallahassee, FL 32302

Catharine F. Boone Covad Comunications Co. 10 Glen Lake Parkway Suite 650 Atlanta, GA 30328

Charles J. Rehwinkel Sprint Communications Co., L.P. PO Box 2214 Tallahassee, FL 32302

J. Jeffrey Wahlan Ausley & McMullen PO Box 391 Tallahassee, FL 32316

Michael Sloan Swidler, Berlin, Shereff, & Friedman, LLP 3000 K Street, NW Suite 300 Washington, DC 20007

James Lamoruex AT&T Communications of the Southern States, Inc. 1200 Peachtree Street, Ste. 1200 Atlanta, GA 30302 Michael A. Gross Florida Cable Telecomm. Ass'n 246 East 6<sup>th</sup> Avenue Tallahassee, FL 32303

Michael Hazzard Kelley Drye & Warren, LLP 1200 Nineteenth Street NW Fifth Floor Washington, DC 20036

Rick Melson Carolyn S. Raepple Hopping Green & Sams P.A. 123 South Calhoun Street Tallahassee, FL 32301 (850) 222-7500 John P. Fons Ausley & McMullen PO Box 391 Tallahassee, FL 32302 •

Matthew J. Feil, General Counsel Florida Digital Network, Inc. 390 North Orange Avenue Suite 2000 Orlando, FL 32801 (407) 835-0460