SWIDLER BERLIN SHEREFF FRIEDMAN, LLP

THE WASHINGTON HARBOUR
3000 K STREET, NW, SUITE 300
WASHINGTON, DC 20007-5116
TELEPHONE (202) 424-7500
FACSIMILE (202) 424-7643
WWW.SWIDLAW.COM

NEW YORK OFFICE
THE CHRYSLER BUILDING
405 LEXINGTON AVENUE
NEW YORK, NY 10174
TEL.(212) 973-0111
FAX (212) 891-9598

HARISHA J. BASTIAMPILLAI
DIRECT DIAL: (202) 424-7869
FAX: (202) 424-7643
HJBASTIAMPILLAI@SWIDLAW.COM

May 28, 2002

BY HAND DELIVERY

Ms. Blanca Bayó, Director
The Commission Clerk and Administrative Services
Room 110, Easley Building
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, Florida 32399-0850

Re: Docket No. 990649B-TP, Investigation into Pricing of Unbundled Network Elements (Sprint/Verizon Track)

Dear Ms. Bayó:

Enclosed for filing on behalf of Florida Digital Network, Inc. is an original and seven copies of the Post-Hearing Brief of Florida Digital Network, Inc. For Sprint Florida Phase of Proceeding in the above-referenced docket. Also enclosed is a diskette with a copy of the Brief in Word format.

Please date stamp and return the enclosed extra copy of this filing. Should you have any questions concerning this filing, please do not hesitate to call us.

Respectfully submitted,

Harisha J Bastiampillai

Eric J. Branfman
Michael C. Sloan
Harisha J. Bastiampillai

Enclosures

cc: Parties of Record

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Investigation into Pricing of Unbundled Network Elements (Sprint/Verizon Track)	)	Docket No. 990649B-TP Filed: May 28, 2002

POST-HEARING BRIEF OF FLORIDA DIGITAL NETWORK, INC. FOR SPRINT FLORIDA PHASE OF PROCEEDING

Matthew Feil
General Counsel
Florida Digital Network, Inc.
390 N. Orange Avenue
Suite 2000
Orlando, Florida 32801

Eric J. Branfman
Michael C. Sloan
Harisha J. Bastiampillai
Swidler Berlin Shereff Friedman, LLP
3000 K Street, Suite 300
Washington, D.C. 20007

May 28, 2002

INTRODUCTION

Florida Digital Network, Inc. ("FDN" or "Florida Digital") hereby submits its combined post-hearing statement of issues and positions and post-hearing brief on issues in regard to Sprint Florida's rates, terms and conditions for unbundled network elements ("UNEs").[1] Following the order of issues as set forth in the Prehearing Order, issued April 25, 2002, FDN states its position on the issue and then presents argument, if any.

ISSUE 1: What factors should the Commission consider in establishing rates and charges for UNEs (including deaveraged UNEs and UNE combinations)?

FDN: FDN joins in Issue 1 of the Post-Hearing Brief of KMC Telecom III, LLC ("KMC Brief").

ISSUE 2: (a) What is the appropriate methodology to deaverage UNEs and what is the appropriate rate structure for deaveraged UNEs?

FDN: *The Commission should adopt Sprint's 20% rate band geographic deaveraging methodology for the UNE loop costs in Sprint's service territory. The Commission must not approve the application of a deaveraging methodology where only a limited number of geographic areas have the lowest UNE prices available and competitive activity is not economically viable for ALECs seeking to serve outside those small areas.*

Sprint advocates that "[a]s a general principle, rates should be deaveraged to the degree necessary to achieve a result wherein the averaged rate does not deviate significantly from the actual forward-looking cost of providing that element anywhere within the defined zone."[2] FDN is in agreement with this general principle and is also in

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1 FDN will be joining in a brief with AT&T and WorldCom in regard to Verizon's UNE rates.

2 Tr. at 24: 14-17 (Hunsucker Direct at 14: 14-17); *see also, Investigation into Pricing of Unbundled Network Elements*, Docket No. 990649-TP, Order No. PSC-01-1181-FOF-TP at 39 (May 25, 2001) ("*BellSouth UNE Order*")(Unless otherwise specified, citations are to the official version of the BellSouth UNE Order).

agreement with the deaveraging methodology that Sprint implements to achieve this principle. Sprint constructs a deaveraged rate schedule such that the average rate in each zone is no more than 20% higher or 20% less than the forward-looking cost of providing that element.[3] Utilizing this approach with Sprint's proposed costs, nine zones are created for 2-wire analog loops.[4] FDN does not agree, however, with the steps Sprint takes after this point.

Sprint states that "consistent with the Commission finding in the BellSouth phase of this proceeding, Sprint proposes that these nine zones be collapsed into three zones based upon the Commission finding of administrative ease and level of variation of Sprint's costs."[5] Sprint proposes to "collapse zones one and two into new zone one, collapse zones three and four into new zone two and collapse zones, five, six, seven, eight and nine into new zone three." This results in 2-wire analog prices of $18.58, $30.26 and $66.91 respectively for zones one to three.[6]

This is not the only action that Sprint takes to modify its approach based on its perception of what the Commission requires. Sprint, while admitting there is significant geographic variation in costs for "unbundled loops, subloops, local ports and local switching usage, common and dedicated transport, and dark fiber" only proposes that loops and related combinations be deaveraged.[7] Sprint contends that is what the Commission mandated.[8]

Also, rather than apply its banding methodology separately to each UNE, Sprint bases the zones for the other UNEs on the wire center breakdown for the 2-wire analog

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3 Tr. at 24: 22-23 to 25: 1-2 (Hunsucker Direct at 14: 22-23; 15: 1-2).
4 Tr. at 51: 1-3 (Hunsucker Supplemental Direct at 5: 1-3).
5 Tr. at 51: 4-7 (Hunsucker Supplemental Direct at 5: 4-7).
6 Tr. at 51: 18-22 (Hunsucker Supplemental Direct at 5: 18-22).

loop. While admitting that application of the 20% methodology may not result in the same wire centers being in Zone 1 for one element as compared to another,[9] Sprint based the zone wire center assignments for all deaveraged elements based on the 2-wire analog loop costs.[10] Once again, Sprint felt this is what the Commission required in the BellSouth proceeding.[11]

The end result of all these deviations from a true application of a 20% methodology is that the zone designations are increasingly detached from the costs of the elements. For instance in Zone 1, Sprint witness Mr. Hunsucker notes that after Zone 2 is collapsed into Zone 1, the range in wire center costs range from 36% lower than the average to 25% higher than the average.[12] What this means is that collapsing results in low cost zones that go significantly beyond the 20% average deviation in cost and that the resulting rates for those wire centers are too high. For instance, in wire centers MTLDFLXADS1 and TLHSFLXADS0, which together contain over 90,000 Sprint lines, the actual 2-wire loop costs are $11.78 and $11.95 respectively, but CLECs will have to pay $18.58 for those loops.[13]

Basing wire center designations for all deaveraged elements on the 2-wire loop costs also distorts the rate structure. For instance, MTLDFLXADS1, TLHSFLXADS0, and TLHSFLXERS0 are all in zone 1 because the 2-wire loop costs are $11.78, $11.95, and $13.05 respectively, a relatively small range of variance.[14] With respect to DS-1

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7 Tr. at 29: 1-13 (Hunsucker Direct at 19: 1-13).

8 Ex. No. 15, MRH-1D (Hunsucker Deposition) at 44: 6-12.

9 For instance, the wire centers in Zone 1 for a DS-0 loop may not be the same wire centers in Zone 1 for a DS-1 loop.

10 Ex. No. 15, MRH-1D (Hunsucker Deposition) at 37: 10-25; 38: 1-2.

11 Ex. No. 15, MRH-1D (Hunsucker Deposition) at 38: 15-19.

12 Ex. No. 15, MRH-1D (Hunsucker Deposition) at 43: 7-9.

13 Ex. No. 1, Revised MRH Exhibit 2 at p.1

14 *Id.*

loops, however, these three wire centers exhibit an extremely wide range of variance: the DS-1 loop costs in those wire centers are $75.92, $95.01 and $980.29 respectively.[15] The misplacement of that wire center in regard to DS-1 loop costs would drive up the average cost in zone 1 for DS-1 loops.

Sprint proposes these modifications in the deaveraging methodology in the name of administrative efficiency.[16] While focusing heavily upon administrative efficiency, Sprint is losing sight of its own original guiding principle, *i.e.*, that the average rate should not deviate significantly from the actual forward looking cost of providing the element. The Commission should ensure that in tilting the scales towards administrative efficiency that it does not impede one of the goals of deaveraging, which is to promote competition by more accurately reflecting the costs of the elements. Sprint concedes that the impact on competition should be a consideration in the application of the deaveraging methodology.[17]

In the BellSouth proceeding, FDN has noted how the deaveraging methodology actually applied impeded rather than promoted competition.[18] The Commission must examine if the zone breakdown of wire centers and the particular UNE rates in those zones will advance competition in Florida. The Commission should either strictly follow the 20% methodology and allow nine zones for 2-wire loops,[19] and determine the appropriate number of zones and zone costs for each deaveraged element, or it should factor in competitive considerations as well. If the Commission will allow Sprint to

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15 *Id.*

16 Ex. No. 15, MRH-1D (Hunsucker Deposition) at 38: 10-14; 42: 14-17.

17 Ex. No. 15, MRH-1D (Hunsucker Deposition) at 41: 16-21; Tr. at 26: 7-9 (Hunsucker Direct at 16: 7-9).

18 Docket No. 990649A-TP, Post Hearing Brief of Florida Digital Network, Inc. at 2-4 (April 11, 2002).

deviate from its methodology for administrative considerations, then it should also consider deviations from the methodology that will ensure that competition will be promoted. For instance, if after the zones are collapsed, there are too few wire centers in zone 1 or the rate in zone 1 is too high to promote competition, then the Commission should require the placement of more wire centers in zone 1 and/or the lowering of the zone 1 rate. In addition, if the Commission requires Sprint to make adjustments to its cost inputs in this proceeding, Sprint should be required to reapply the 20% methodology and redefine wire center designations based on the final costs elicited in this proceeding.[20]

(b) For which of the following UNEs should the Commission set deaveraged rates?

(1) loops (all);
(2) local switching;
(3) interoffice transport (dedicated and shared);
(4) other (including combinations).

FDN: *All loops, subloops, interoffice transport and UNE combinations containing loops, subloops and/or transport demonstrate cost differences between different geographic areas for those UNEs. The Commission should consider separate UNE deaveraging, but at a minimum should deaverage all loops, subloops, and combinations containing loops or subloops.*

As noted above, Sprint concedes that there are significant geographical cost variations for subloops and transport in addition to loops and UNE combinations. Yet Sprint only proposes to deaverage loop and UNE combinations. In the BellSouth proceeding, Sprint initially advocated that other elements with geographic cost variations such as transport should be deaveraged as well.[21] Because Sprint subsequently withdrew

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[19] Sprint concedes the more bands there are the lower the prices in the lower bands. Tr. at 38 (Hunsucker Direct at 28: 23-24).

[20] Sprint admits that changes to the cost methodology may impact the wire center breakdown. Ex. No. 15, MRH-1D (Hunsucker Deposition) at 51: 19-21.

[21] Ex. No. 15, MRH-1D (Hunsucker Deposition) at 44: 6-12; *BellSouth UNE Order* at 40.

that request, the Commission did not require other elements to be deaveraged.[22] Since these transport and subloop elements have significant geographic cost variations, the Commission should at least consider that they be deaveraged..

In addition, while admitting that there is a significant geographic cost variation for dark fiber loops, Sprint does not deaverage these rates.[23] The Commission explicitly required that all loops below DS3 be deaveraged, so Sprint should be required to deaverage dark fiber loops.[24] Alternatively, FDN does not oppose a determination where only UNE loops and UNE subloops would be deaveraged, including any combinations that include those UNE loops or subloops. UNE loops would include 2-wire, 4-wire and DS-1 loops and UNE subloops would include 2-wire and 4-wire feeder, 2-wire and 4-wire distribution, and 2-wire and 4-wire drop.

ISSUE 3: **(a) What are xDSL capable loops?**

(b) Should a cost study for xDSL-capable loops make distinctions based on loop length and/or the particular DSL technology to be deployed?

FDN: *xDSL-capable loops are loops that are capable of providing xDSL services over both copper, fiber and mixed copper/fiber facilities without any modification. FDN's position is that a cost study should not make any distinction based on loop length and/or the particular DSL technology to be deployed.*

See Issue 11.

ISSUE 4: **(a) Which subloop elements, if any, should be unbundled in this proceeding, and how should prices be set?**

(b) How should access to such subloop elements be provided, and how should prices be set?

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22 *Id.; BellSouth UNE Order* at 42.

23 Ex. No. 15, MRH-1D (Hunsucker Deposition) at 49: 8-13.

24 *BellSouth UNE Order* at 42.

FDN: *Per the discussion in Issue 2, subloop rates should be geographically deaveraged. Sprint should be required to provide the same subloop elements that the Commission required BellSouth to provide in Docket No. 990649A-TP.*

See Issue 2.

ISSUE 5: For which signaling networks and call-related databases should rates be set?

FDN: Stipulate to Sprint position.

ISSUE 6: Under what circumstances, if any, is it appropriate to recover non-recurring costs through recurring rates?

FDN: Stipulate to Sprint position.

ISSUE 7: What are the appropriate assumptions and inputs for the following items to be used in the forward-looking recurring UNE cost studies?

(a) network design (including customer location assumptions);

FDN: *The SLCM utilizes a grid approach that does not reflect the most cost-effective method of distributing customers into serving areas. The Commission should require Sprint to use a clustering methodology to determine serving areas. Sprint should model its rates for stand-alone unbundled loops on use of IDLC.*

Loop investment in the Sprint TELRIC UNE Model is determined in a module called the Sprint Loop Cost Model (SLCM), which is based upon the Benchmark Cost Proxy Model (BCPM).[25] The FCC made a number of determinations about the BCPM platform in its evaluation of USF models. In the Fifth Report and Order on USF (FCC 98-279, October 28, 1998, *Platform Order*), the FCC noted the following about the impact of outside plant design on total network investment:

> Outside plant, or loop plant, rather than switching and interoffice transport plant, constitutes the largest portion of total network investment, particularly in rural areas. Engineering assumptions about outside plant significantly affect service quality. The design of outside plant facilities

[25] Ex. No. 11, Sprint-Stip-2-24-26 (Sprint Response to FDN Interrogatory No. 7) While claiming it is a modified version of the BCPM, the aspects of the BCPM that the FCC found problematic in the BCPM remain unmodified in the SLCM.

> depends heavily on the location of customers relative to the wire center. Thus, the most significant portions of network costs will be determined using the model's customer location module, which locates customers, and the outside plant design module, which designs the network efficiently to serve those customers . . . .[26]

The FCC reached the following conclusions about appropriate customer location methodologies when it evaluated the HAI and BCPM models:

> Each model has a method for determining where customers are located. The issues raised are whether to use actual geocode data, to the extent they are available, and what method to use for determining surrogate customer locations where geocode data are not available. **We conclude that HAI's proposal to use actual geocode data, to the extent that they are available, is the preferred approach, and BCPM's proposal that we use road network information to determine customer location where actual data are not available**, provides the most reasonable method for determining customer locations.[27] [emphasis added]

In choosing geocoded data to locate customers, the FCC stated:

> We conclude that a model is most likely to select the least-cost, most-efficient outside plant design if it uses the most accurate data for locating customers within wire centers, and that the most accurate data for locating customers within wire centers are precise latitude and longitude coordinates for those customers' locations. [28]

Sprint's customer location process takes mapped census block data as to households and housing units and overlays the mapped data with a series of "microgrids". All customer density information is calculated at this microgrid level and aggregated.[29]

Significantly, however, Sprint's SLCM fails to use geocoded data for customer locations despite the availability of such information. In fact, Sprint did input geocoded

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[26] *In the Matter of Federal-State Joint Board on Universal Service,* CC Docket Nos. 96-45 and 97-160, Fifth Report & Order, FCC 98-279, ¶ 27 (Oct. 28, 1998) (*"Platform Order"*).

[27] *Platform Order*, ¶ 31. HAI is an alternative cost model that had been proposed by AT&T and MCI.

[28] *Platform Order*, ¶ 33.

[29] Ex. 10, Sprint-Stip-1-280 (Sprint Response to Staff Interrogatory No. 115).

data for DS-3 customers into its SLCM, but not for other customers.[30] Sprint concedes that use of geocoded data would enable it to place the customer geographically down to the microgrid that the address maps to.[31] Sprint contends that the reason it did not geocode data for other services was because it was "less critical" to understand the specific customer site for those services, but the FCC clearly found use of geocoded data to be important and that it should be used if available. The data is clearly available and Sprint should be required to use it. BellSouth in its BSTLM cost model "incorporates all of BellSouth geocoded customer and network data" which includes all customer points.[32]

If as Sprint suggests, there are some areas, such as rural areas, where geocoded data may not be accurate, then Sprint can use road network information.[33] For instance in the BSTLM, BellSouth chose to employ only addresses that had been successfully geocoded to the address level. Customer locations not geocoded to this high level of accuracy were instead surrogated through use of road network information.[34] Sprint likewise should be required to use available geocoded data to the full extent possible. Bell South noted that an overall geocode success rate of 91% was achieved in BellSouth's Florida territory.[35]

Once customers are located, the next issue is how they should be grouped. The FCC noted:

> Once customer locations have been identified, each model must determine how to group and serve those customers in an efficient and technologically reasonable manner. A model will most fully comply with the criteria in the Universal Service Order if it uses customer location information to the

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30 Ex. No. 14, KWD-1D (Dickerson Deposition) at 45: 3-8; *see also,* Ex. 10, Sprint-Stip-1-281 (Sprint Response to Staff Interrogatory No. 116)

31 Ex. No. 14, KWD-1D (Dickerson Deposition) at 45: 7-18.

32 *BellSouth UNE Order* at 130-131.

33 Ex. No. 14, KWD-1D (Dickerson Deposition) at 63: 13-19.

34 *BellSouth UNE Order* at 130-131.

35 *Id.*

full extent possible in determining how to serve multiple customers using a single set of electronics. Moreover, the model should strive to group customers in a manner that will allow efficient service. As discussed below, **we conclude that a clustering approach, as first proposed by HAI in this proceeding, is superior to a grid-based methodology in modeling customer serving areas accurately and efficiently.** In addition, we conclude that the federal high cost mechanism should use the HCPM clustering module.[36] [emphasis added]

In comparing grid-based vs. clustering approaches, the FCC concluded:

> The advantage of the clustering approach to creating serving areas is that it can identify natural groupings of customers. That is, because clustering does not impose arbitrary serving area boundaries, customers that are located near each other, or that it makes sense from a technological perspective to serve together, may be served by the same facilities. There are two main engineering constraints that must be accounted for in any clustering approach to grouping customers in service areas. Clustering algorithms attempt to group customers on the basis of both a distance constraint, so that no customer is farther from a DLC than is permitted by the maximum distance over which the supported services can be provided on copper wire, and on the basis of the maximum number of customers in a serving area, which depends on the maximum number of lines that can be connected to a DLC remote terminal. In contrast, the chief advantage of the gridding approach is its simplicity. Placing a uniform grid over a populated area, and concluding that any customers that fall within a given grid cell will be served together, is simpler to program than an algorithm that identifies natural groupings of customers. **The simplicity of the grid-based approach, however, can generate significant artificial costs. Because a simple grid cannot account for actual groupings of customers, grid boundaries may cut across natural population clusters. Serving areas based on grids may therefore require separate facilities to serve customers that are in close proximity, but that happen to fall in different grids. The worst-case scenario would involve a natural cluster of customers that, given distance and engineering constraints, could be served as a single serving area but that happened to be centered over the intersection of a set of grid lines, as shown below.**

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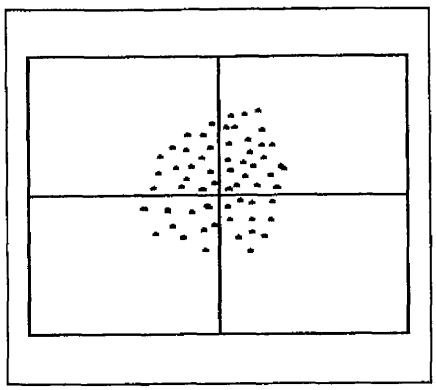
36 *Platform Order*, ¶ 42.



> This would result in the division of the natural population cluster into four serving areas instead of one. As a result, a gridding approach cannot reflect the most cost-effective method of distributing customers into serving areas. In order best to meet the Universal Service Order's criteria, we conclude that the federal mechanism should use a clustering methodology, rather than a grid-based methodology, to determine serving areas.[37] [emphasis added]

Sprint uses a grid approach instead of a clustering approach.[38] While Sprint witness Dickerson contended that it is the particular cost inputs into cost models that are the significant determinants of cost as opposed to clustering vs. gridding approaches,[39] he admitted to being uncertain about whether grid boundaries may cut across natural population clusters.[40] Thus, Sprint in developing its cost model did not consider the very aspect of the grid approach that the FCC found to render the approach problematic. This Commission should mandate that Sprint use a clustering approach. BellSouth used a clustering approach to its cost model,[41] and as the Commission commented in regard to BellSouth's modeling:

> Fundamentally, this issue pertains to the appropriate network design that should be modeled for outside plant, and how best to account for customer locations when modeling such outside plant. As noted earlier, the parties are in general agreement that BellSouth's new loop model, the BSTLM,

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37 *Platform Order*, ¶¶ 45-46.
38 Ex. No. 14, KWD-1D (Dickerson Deposition) at 64: 5-9.
39 Ex. No. 14, KWD-1D (Dickerson Deposition) at 64: 10-19.
40 Ex. No. 14, KWD-1D (Dickerson Deposition) at 65: 3-5.
41 *BellSouth UNE Order* at 133.

has the capability to generate realistic estimates of the amount of outside plant required to provision services.[42]

Clearly two factors that helped the BSTLM best account for customer locations were BellSouth's use of geocoded data and a clustering approach. Sprint should be required to do the same.

Sprint also uses a different network design configuration for stand-alone UNE loops as opposed to loops provided via the UNE-Platform. Sprint models stand-alone loops based on use of universal digital loop carrier.[43] For UNE-P loops and for its own retail loops, Sprint notes that "the DLC inputs are appropriately modified to reflect a lower-cost GR-303 Integrated DLC (IDLC) configuration."[44] As Sprint itself has noted, the IDLC is a much lower cost configuration.[45] Specifically use of IDLC eliminates the need for central office terminals and DS-0 line cards, thus reducing the cost of DLC inputs.[46] Sprint contends that it does not model IDLC for unbundled loops because it is not technically feasible to provide a single unbundled loop path for loops served by DLCs.[47] Sprint does, however, concede that it could provide an ALEC an unbundled DS-1 loop where IDLC is utilized.[48]

The FCC has found, however, that given technological advances, use of DLC does not inhibit the ability to provide an unbundled voice loop nor does it inhibit the ability to provide DSL over loops served by DLC. The FCC noted that:

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42 *BellSouth UNE Order* at 153.

43 Tr. at 79: 17-21 (Dickerson Direct at 19: 17-21); Ex. No. 14, KWD-1D (Dickerson Deposition) at 41: 16-21.

44 Tr. at 79: 21-24 (Dickerson Direct at 19: 21-24); Ex. No. 14, KWD-1D (Dickerson Deposition) at 43: 19-22.

45 Ex. No. 14, KWD-1D (Dickerson Deposition) at 42: 4-5.

46 Tr. at 80: 3-5 (Dickerson Direct at 20: 3-5).

47 Ex. No. 14, KWD-1D (Dickerson Deposition) at 42: 5-8.

48 Ex. No. 14, KWD-1D (Dickerson Deposition) at 42: 19-25.

> [a]n ADSL Digital Line Unit Card (ADLU Card) integrates ADSL and Asynchronous Transfer Mode (ATM) capabilities into the DLC system and can be plugged into a DLC system to provide advanced services. The ADLU card provides functionality similar to a DSLAM, although it also contains voice capabilities and a spectrum splitter functionality.[49]

Thus, use of these line cards will allow ILECs to provide both voice and data functionality on an unbundled basis even if DLC is utilized. In fact it was on the basis of this technology that SBC could commit to offering:

> SBC's incumbent LECs will provide the integrated voice and data configuration by offering carriers the underlying voice loop over its NGDLC systems delivered directly to the Main Distribution Frame (or a higher-speed frame, such as a DSX-1 or DSX-3 cross-connect frame) in their central offices and combining that loop with the Broadband Offering. The Combined Voice and Data Offering will provide carriers the ability to use the voice portion of the loop just as they would any other voice loop, while complementing their offering with the capability to provide the ADSL service made available by SBC's incumbent LECs. Carriers will order SBC's combination offering in the same manner as they order its Broadband Offering.[50]

Sprint states that it envisions deploying a network that will support multiple services and has begun deploying such a network in "very limited locations and quantities."[51] Thus, any issues of technical feasibility should now be moot.

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[49] *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996*, CC Docket No. 98-146, Third Report, Appendix B at ¶ 29 (Feb. 6, 2002).

[50] *In the Matter of 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 Rules*, CC Docket No. 98-141, ASD File No. 99-49, Second Memorandum Opinion and Order, FCC 00-336, ¶ 47 (Sept. 8, 2000)("*Project Pronto Order*").

[51] Ex. 10, Sprint-Stip-1-362-363 (Sprint Response to Staff Interrogatory No. 177). Sprint has stated to the FCC:

> For example, last year Sprint's incumbent Local Division announced an ambitious plan that will convert its entire network from a circuit-switched network to a packet network. This conversion includes the replacement of its older generation digital loop carriers, which are classified as loop plant. The new technology, while similar to SBC's Project Pronto architecture, is different in that voice services will be packetized and switched with ATM switches, as are the data services. The common platform will be used to provide voice, high-speed data, and advanced services.

Next generation DLC and IDLC equipment is not only *available*, it is being required by state commissions. The New Jersey Board of Public Utilities ("NJBPU") recently held that the use of 100% IDLC is an appropriate and realistic forward looking assumption.[52] In its summary decision, the NJBPU stated:

> One of the most critical decisions in this docket deals with the percentage of digital loop carrier (DLC) assumed in the [Verizon cost] model. Verizon assumes that on a forward looking basis, its network will be comprised of 60% DLC and the remaining being 40% end –to-end copper. The Board is, however, concerned that, of the 60% DLC, 83% is universal digital loop carrier (UDLC) and the remaining 17% is integrated digital loop carrier (IDLC). Verizon had argued that a higher percentage of UDLC is required to serve stand-alone unbundled loops. However, in Verizon's existing network, the 17% DLC is comprised of 7% IDLC and 10% UDLC and close to 83% is end-to-end copper. Said another way, of the 17% DLC currently in Verizon's network, 59% is UDLC while the remaining is IDLC. The Board supports Verizon's assumption that designs a forward-looking network that includes a greater percentage of DLC systems. However, Verizon inappropriately includes UDLC in its designs. It is not reasonable that carrier, such as Verizon, would suggest that its percentage of DLC will increase in a forward looking network from 17% to 60% and then only include 10% deployment of a modern, technologically superior DLC system such as IDLC. Therefore, ...the Board FINDS that the use of 100% IDLC is an appropriate and realistic forward-looking assumption.[53]

To further support a 100% IDLC assumption in Sprint's cost model, the Michigan Public Service Commission concluded that the use of IDLC technology "should be assumed for the purpose of determining the cost of bundled and unbundled loops and the

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Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, CC Docket No. 01-338, Comments of Sprint Corporation at 18-19 (April 5, 2002) ("*Sprint UNE Review Comments*").

[52] *In the Matter of the Board's Review of Unbundled Network Elements Rates, Terms and Conditions of Bell Atlantic New Jersey, Inc.*, Docket No. TO00060356, Summary Order of Approval, at 6 (N.J. B.P.U. Dec. 17, 2001) ("*NJBPU 12/17/01 Summary Order*")..

[53] *NJBPU 12/17/01 Summary Order* at 6 (emphasis in original).

unbundled network element (UNE) platform and other combinations."[54] In that case, the Michigan Commission found that MCIWorldCom had "demonstrated that the [IDLC] technology is available and can be used to provide unbundled loops, and, in fact, is used in that manner in Hawaii."[55]

The FCC's regulations, recently upheld by the United States Supreme Court,[56] provide that UNE costs must be "based on the use of the most efficient telecommunications technology *currently available*."[57] These regulations also require that prices for interconnection and access to unbundled elements should be developed from a "forward-looking economic cost methodology *based on the most efficient technology deployed in the incumbent LEC's current wire center locations*."[58] Clearly, as part of Sprint's own technology, IDLC is currently available and has played an increasingly important role throughout the footprint of Sprint's network.[59] Indeed, whether Sprint currently deploys IDLC for unbundled loops is irrelevant. The Supreme Court upheld TELRIC's calculation of "the forward-looking cost by reference to a hypothetical, most efficient element at existing wire centers, not the actual network element being provided."[60] If the Commission continues allows Sprint to assume the use of more expensive technology to be used by its competitors while it can use cheaper

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54 *In the Matter, On the Commission's Own Motion, to Consider the Total Service Long Run Incremental Costs for All Access, Toll, and Local Exchange Service Provided by Ameritech Michigan*, Case No. U-11831 at 3 (Aug. 31, 2000) ("*MI IDLC Decision*").

55 *Id.*

56 *Verizon Communications, Inc., et al., v. FCC*, Docket Nos. 00-511 and consolidated cases, slip op. at 34 (May 13, 2002).

57 47 C.F.R. § 51.505(b)(1).

58 *First Report and Order*, FCC 96-325 at ¶ 685 (emphasis added); see also 47 C.F.R. § 51.505(b)(1).

59 *See* Tr. at 79-80 (Dickerson Direct at 19-20).

60 *Verizon*, slip op. at 29.

technology for its own services, it is unlikely Sprint would ever deploy cheaper technology for its competitors' use.

(b) depreciation;

FDN: Stipulate to Sprint position.

(c) cost of capital;

FDN: *The Commission should reject Sprint's use of a 12.26% cost of capital and should require Sprint to re-run its cost studies using a cost of capital no higher than the 10.24% approved for BellSouth.*

FDN joins in Issue 7(c) of the Brief of Z-Tel Communications, Inc.

(d) tax rates;

FDN: Stipulate to Sprint position.

(e) structure sharing;

FDN: *The Commission should apply the FCC's structure sharing percentages. Understating the structure sharing percentages increases the investment cost in the model since the telephone company bears more than its forward-looking share of the structure costs.*

The FCC determined that the following structure sharing percentages were appropriate for USF determination:

> We adopt the following structure sharing percentages that represent what we find is a reasonable share of structure costs to be incurred by the telephone company. For aerial structure, we assign 50 percent of structure cost in density zones 1-6 and 35 percent of the costs in density zones 7-9 to the telephone company. For underground and buried structure, we assign 100 percent of the cost in density zones 1-2, 85 percent of the cost in density zone 3, 65 percent of the cost in density zones 4-6, and 55 percent of the cost in density zones 7-9 to the telephone company.[61]

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[61] *In The Matters Of Federal-State Joint Board On Universal Service And Forward Looking Mechanism For High Cost Support For Non-Rural LECs,* CC Docket Nos. 96-45 And 97-160, Tenth Report & Order, FCC 99-304, ¶¶ 241, 243 (Nov. 2, 1999)

Understating the structure sharing percentages increases the investment cost in the model since the telephone company bears more than its forward-looking share of the structure costs.

Sprint assumes the following structure sharing percentages:

- 90% assigned to Sprint / only 10% assigned to other utilities for underground feeder and distribution. Sprint says this percentage exceeds its current structure sharing experience. This is not consistent with the FCC's USF determination as noted above.
- 100% assigned to Sprint for buried feeder and distribution because it says sharing will not occur with buried feeder and distribution. When plowing, the trench is closed over during the placement of the cable, thus eliminating the possibility of other entities placing cables in the same trench. This is consistent with the FCC's USF determination only in zones 1-2 as noted above.[62]

The Commission should conform Sprint's structure sharing percentages to those utilized by the FCC.

(f) fill factors;

FDN: *Sprint's fill factors are generally too low and do not reflect a forward-looking, least-cost network built for a reasonable projection of actual demand. The Commission should find the fill factors to be no lower than 85%. Sprint's assumptions as to residential and business lines far exceed current levels of demand.*

The engineering fill factor or capacity utilization assumptions employed by Sprint in its UNE cost models are derived directly from the utilization of the embedded network. TELRIC, by contrast, hypothesizes an efficient provider of telephone services. Because the new provider is not encumbered by Sprint's embedded plant configuration (other than as to wire center location), it can develop an efficient design that will be able to achieve higher utilization levels than Sprint's embedded plant. The FCC held that:

> Per-unit costs shall be derived from total costs using reasonably accurate "fill factors" (estimates of the proportion of a facility that will be "filled"

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62 *See* Tr. at 71: 5-20 (Dickerson Direct at 11: 5-20) for Sprint's structure sharing inputs.

> with network usage); that is, the per-unit costs associated with a particular element must be derived by dividing the total cost associated with the element by a reasonable projection of the actual total usage of the element.[63]

Sprint is not basing its fill factors on a "reasonable projection" of the usage of the element in the future "most efficient" network, but instead is basing it on the actual current usage of its embedded network.

For distribution cable, Sprint uses a fill factor of 100%. This is, however, deceptive, as it based on an assumption of two pairs per household, each of which is wired back to the serving area interface.[64] Thus, if a new street has 40 houses, with two pairs per house, Sprint would need to deploy 80 pairs. Sprint notes that it rounds up to the next highest cable size.[65] Thus, for sake of this example, Sprint would place a 100 pair cable. As this Commission noted in its USF proceeding:

> This has the effect of increasing the number of pairs available for use because this "real world" constraint means that the cable installed will never be less than the number of pairs needed, but is likely to be greater than the number of pairs needed, thus generating additional spare capacity. Therefore, it is not possible to derive the actual fill factor by simply dividing the cable sizing factor by the number of pairs per housing unit. For example, a 100 percent cable sizing factor divided by two pairs per housing unit means that the highest the fill factor can be is 50 percent. It is likely to be something less, such as the 40 to 50 percent fill factor that BellSouth and Sprint calculate from their inputs.[66]

The Commission noted that:

> We again emphasize that this proceeding is to develop the forward-looking economic cost of basic service in Florida, which is defined as flat

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[63] *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, and Interconnection Between Local Exchange Carriers and Commercial Mobile Radio Service Providers*, First Report and Order, CC Docket. No. 96-98, CC Docket No. 95-185, 11 FCC Record 15499, ¶ 682 (1996) (*Local Competition Order*) (subsequent history omitted).

[64] Ex. No. 14, KWD-1D (Dickerson Deposition) at 14: 1-4.

[65] Tr. at 74: 16-20 (Dickerson Direct) at 14: 16-20.

[66] *Determination of the cost of basic telecommunications service,* Docket No. 980696-TP, Order No. PSC-99-0068-FOF-TP, 1999 WL 112536, *77 (Jan. 7, 1999) ("*FL USF Order*").

> rate residence and single-line flat rate business. We agree that spare capacity is essential in the construction of every network, even a hypothetical network. Nevertheless, we disagree that simply because BellSouth's actual distribution fill factor is 41.3 percent, for example, that the effective fill factor in a forward-looking economic cost proxy model should also be 41.3 percent. Furthermore, BellSouth itself is not placing two pairs per housing unit, rather it is placing 1.4 to 1.5 pairs. We also disagree with Sprint's contention that a 15-20 percent second line penetration rate translates today into a two pairs per housing unit assumption.[67]

In Sprint's case, Sprint states that its actual utilization factor for distribution cable runs from lows in the 30s to highs in the 40s.[68] The Commission concluded that:

> We are not persuaded by either BellSouth or Sprint that two pairs per housing unit is appropriate as an input to this model. Certainly, spare capacity is necessary, but the cable sizing factor can be used to ensure adequate spare capacity. Likewise, we do not agree that GTEFL's 2.5 pairs per housing unit represents what an efficient provider would provision. The LECs seem to base their arguments on the projected ongoing increase in additional household telephone lines. We agree that the penetration of second lines has increased and is likely to increase. But it is too early to conclude that a current 15 or 20 percent second line penetration rate means that a forward-looking economic cost model should reflect at least two pairs per housing unit. We note that this proceeding is not to determine the actual cost faced by any of these LECS, but is rather to estimate the forward-looking cost of an efficient provider building a scorched node network all at once, all at the same time. AT&T/MCI witness Wells notes that with AT&T/MCI's proposed inputs, there are approximately 40 spare lines for each group of 60 customers. We are persuaded by AT&T/MCI that for the inputs to the distribution fill factor, an efficient provider building a scorched node network would not use two or 2.5 pairs per housing unit, thus providing approximately 60 spare lines for every 40 lines in service. Therefore, we agree with AT&T/MCI that the number of residential pairs per unit should be 1.5.[69]

The Commission should apply that same reasoning here and determine that the number of residential pairs per unit should be 1.5. By using 2 pairs per household, Sprint will be providing for excess spare capacity. Sprint includes excessive amounts of spare to serve

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67 *Id.* at *78.

68 Ex. No. 14, KWD-1D (Dickerson Deposition) at 73: 20.

69 *FL USF Order*, 1999 WL 112536, *79. .

future customers. Since current customers – the CLECs – are not the cost causers of costs for facilities to serve anticipated future demand, this spare is inappropriate in a TELRIC study. As noted above, BellSouth, the largest ILEC in the state by far, only deploys 1.4 to 1.5 pairs per residence. Sprint is deploying a significant amount of spare capacity and seeking to pass on the cost to ALECs.

Sprint also models six lines per business customer. As the Commission held:

> All three LECs proposed six pairs per business, with AT&T/MCI's counter at three pairs per business location. As stated earlier, witness Wells believes that because "the actual number of lines are modeled for large businesses," the number of pairs per business should be reduced from the LECs' proposed six, to three pairs. We have no evidence on what the average number of lines is per small business location. According to BellSouth, BCPM 3.1 "uses the actual number of business lines if it exceeds the user adjustable line per business location (currently set at 6)." Since the model overrides this user adjustable input if necessary, we do not believe that it is necessary to input six pairs per business. Therefore, we are persuaded that a smaller number of pairs per business location may be safely input into the model. Upon consideration, we shall require that three pairs per business location be used.[70]

The Commission should likewise require that three pairs per business location be used.

Sprint's average fill for copper feeder cables is 50.67%.[71] In contrast, BellSouth used a feeder fill of 74%.[72] While Sprint seeks to justify this difference by claiming that it operates in more rural areas than BellSouth, Sprint's own data does not support this claim.[73] In its *Density Cable Sizing Factor Table*, Sprint uses higher cable fill factors in the lowest density zone (zone 1 or density of zero lines) than it does in the highest density zone (zone 9 or 10001 lines).[74]

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70 *Id.*

71 Tr. at 73: 11-14 (Dickerson Direct at 13: 11-14).

72 *BellSouth UNE Order* at 195.

73 Ex. No. 14, KWD-1D (Dickerson Deposition) at 15: 4-10.

74 *See* Ex. No. 11, Sprint-Stip-2-30 (Sprint Response to FDN Interrogatory Number 11).

The impact of a relief job on utilization rates can be seen from the following example. Assume a Central Office has a major feeder route serving 5,000 lines and that the route is experiencing a growth rate of 3%, or 150 lines, per year. In such a case, a relief job would be planned to complete some time before the last 150 lines were used. For the sake of simplicity, assume that the relief cable would complete one year before critical exhaust,[75] when 150 lines of spare remained or when 4,850 lines were working. The fill at the time of relief would be 97% (4,850 divided by 5,000). Since typically 3 to 5 years growth is provided when relieving a route (3x150=450, or 5x150=750),[76] a minimum of 600 cable pairs or a maximum of 900 cable pairs would be provided due to manufactured cable sizes. Assuming five years of growth prior to reinforcement, the fill in the route would decline, from 97% to 82% (4,850 divided by 5,000+900) – and this would be the lowest level of fill over the 5 year period.[77] The average fill factor will be 89.5%. If reinforcing was assumed to take place after three years, instead of five, the fill factor would decline over time from 97% to 88%, for an average fill factor of 92.5%. A utilization rate of 85% is therefore conservative and provides for growth, churn and breakage.

For fiber facilities, Sprint utilizes a fill factor of 75%.[78] The figure is derived from Sprint's embedded network.[79] Sprint provides no justification for its use of an embedded fiber fill for a forward-looking cost study. Further, while relying on its embedded

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[75] Sprint states that its average lead time for expanding capacity is one year. Ex. 10, Sprint-Stip-1-90 (Sprint Response to Staff Interrogatory No. 35).

[76] *See* Docket No. 990649-TP, Order No. PSC-01-1181-FOF-TP, 2001WL 640804, *109 (Fl. PSC May 25, 2001).

[77] If the relief job were completed when utilization was 99%, utilization after relief would decline to 84%. Moreover, if only three years of spare capacity were provided of a route with 99% fill, utilization would decline to 90%.

[78] Ex. No. 14, KWD-1D (Dickerson Deposition) at 33: 10-12.

[79] Ex. No. 14, KWD-1D (Dickerson Deposition) at 9: 8-10.

utilization experience, Sprint ignores the fact that it has planned uses for the spare fiber in its embedded network. For instance, as noted above, Sprint will be providing services such as voice and DSL over fiber facilities. The spare fiber will also be (or at least can be) used for Sprint's dark fiber offerings.

Sprint cannot legitimately contend that its current fiber utilization rate will remain constant in the forward-looking network, while simultaneously taking steps to offer services that will necessarily increase its current utilization of fiber. Even more important, Sprint's inclusion of the cost of "spare" fiber in its basic loop and transport cost studies and its separate inclusion of all of the same investment and operating cost for that fiber—and the associated structure—in its dark fiber study results in double counting of the same costs.

Because the technology is rapidly evolving, fibers will be completely utilized for a variety of transmission services. The key to these advanced systems lies in using the existing fibers. These transmission systems are emerging in the network today, as Dense Wave Division Multiplexing ("DWDM") is deployed. Sprint also admits that the fiber-based DLC system it is deploying will be easily engineered to achieve a higher level of fill.[80] It is therefore appropriate to assume a utilization of at least 90% for fiber cable on a forward-looking basis.

Sprint proposes a factor of 75% for a dark fiber loop, IOF and channel termination.[81] As noted above, the available dark fiber in Sprint's network is precisely the same fiber that is included as spare in Sprint's loop and interoffice facility cost

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80 Ex. No. 14, KWD-1D (Dickerson Deposition) at 33: 1-3;82: 1-6.

81 Ex. No. 14, KWD-1D (Dickerson Deposition) at 65: 10-14.

calculations.[82] Moreover, Sprint does not consider dark fiber demand in its loop and interoffice facility calculations for cost recovery purposes.[83] Hence, Sprint has already attributed the capacity cost of those facilities, and the structure and placement cost for those facilities, to the cost of loops and interoffice facilities. Sprint's proposed charges for dark fiber are a blatant attempt to double-recover the same capacity costs it included in studies for other UNEs, under the guise of a fill factor or a utilization factor. The Commission should therefore not permit Sprint to include the capacity cost of "spare" fiber in the loop and transport studies and then a second time in the dark fiber cost study. Sprint's asserted justification for its dark fiber utilization factor falls short.[84] The reason is obvious, i.e., a dark fiber utilization rate is an oxymoron.

The Commission should follow the approach taken by the California Public Utilities Commission, which found that MCImetro:

> made a convincing argument that Pacific Bell's analysis results in double counting of investment costs. According to [MCImetro], Pacific's analysis goes astray because Pacific fails to account for the nature of the dark fiber UNE, which is fundamentally different from other UNEs. By definition, dark fiber is spare facilities that Verizon placed based on Pacific's own estimates of its expected demand for its services. Because the TELRIC studies that this Commission adopted for the UNE loop were based on total demand, all the cost for the dark fiber that will be available in Pacific's network on a forward-looking basis is already captured as the "spare capacity" or "fill" loading that is part of the existing loop and transport UNEs. Hence, because forward-looking utilization is already included in all the total network TELRIC cost analysis adopted by the Commission, the cost of spare fibers that Pacific does not currently utilize is, by definition, already included in existing UNE prices. Pacific's dark fiber pricing proposal would double-recover capacity costs already recovered through other UNE prices.[85]

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82 *See* Ex. No. 14, KWD-1D (Dickerson Deposition) at 66: 20-22; 67: 22-24; 69: 10-13.

83 Ex. No. 14, KWD-1D (Dickerson Deposition) at 66: 23-25; 67: 1-2.

84 Ex. No. 14, KWD-1D (Dickerson Deposition) at 67: 7-15.

85 *Application by Pacific Bell Telephone Company (U 1001 C) for Arbitration of an Interconnection Agreement with MCImetro Access Transmission Services, L.L.C. (U 5253 C) Pursuant to Section 252(b) of*

The fill factor designated by the Commission for the loop and IOF facilities will already compensate Sprint for the unused portion of the fibers. Therefore, Sprint's proposed fill factor, as with any fill factor, fails to reflect the unique nature of dark fiber, and it should be modified. If the loop and IOF fill factor is less than 100%, then there should be no capacity cost whatever for dark fiber.

(h) manholes;

FDN: *No position at this time.*

(i) fiber cable (material and placement costs);

FDN: *If the Commission declines to adjust the fill factors for dark fiber, then the Commission must reduce the material and placement costs for fiber cable in the recurring loop and interoffice facility (IOF) cost studies to preclude double recovery for Sprint.*

As noted in Issue 7(g), *supra*, Sprint's dark fiber fill factors are inappropriate and lead to double recovery of Sprint's costs. If the Commission fails to correct the fill factors to reflect this fact, the Commission should order Sprint to reduce its material and placement costs for fiber loop and IOF to reflect the fact that some capacity costs are being recovered in the dark fiber rates.

(j) copper cable (material and placement costs);

FDN: *Sprint's copper cable costs are overstated because Sprint assumes that there will be two distribution pairs per residence both fully wired back to the SAI.*

See Issue 7(g) *supra.*

(k) drops;

FDN: *No position at this time.*

(l) network interface devices;

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the Telecommunications Act of 1996, California Public Utilities Commission Application 01-01-010, Decision 01-09-054 at 17-18 (Sept. 20, 2001).

FDN: *No position at this time.*

(m) digital loop carrier costs;

FDN: *Sprint states that its DLC inputs are appropriately modified to reflect a lower cost GR-303 Integrated DLC (IDLC) configuration. Sprint does not model its stand alone UNE loop model on such a configuration and instead uses a much more expensive UDLC configuration.*

See Issue 7(a) *supra.*

(n) terminal costs;

FDN: *No position at this time.*

(o) switching costs and associated variables;

FDN: *No position at this time.*

(p) traffic data;

FDN: *No position at this time.*

(q) signaling system costs;

FDN: *No position at this time.*

(r) transport system costs and associated variables;

FDN: *No position at this time.*

(s) loadings;

FDN: *No position at this time.*

(t) expenses;

FDN: *No position at this time.*

(u) common costs;

FDN: *No position at this time.*

(v) other.

FDN: *No position at this time.*

ISSUE 8: What are the appropriate assumptions and inputs for the following items to be used in the forward-looking non-recurring UNE cost studies?

(a) network design;

FDN: *NRCs should be based on forward-looking, least-cost network design and processes and exclude the need for expensive labor-intensive manual intervention. Sprint's assumption of use of 100% UDLC for stand alone UNE loops significantly increases the non-recurring costs for such loops by requiring use of manual cross connects.*

Non-recurring costs ("NRCs") are those costs associated with the activities required in the initiation and provisioning of wholesale services, interconnection, or unbundled network elements. NRCs are incurred by CLECs when they order a service from, interconnect with, or purchase UNEs from an ILEC. Because NRCs are non-recurring, by definition, these are one-time, up front costs that must be paid before the CLEC is allowed to receive the UNE or service. As in the case of recurring charges, the FCC's pricing rules allow for the recovery of only those costs incurred in connection with "a reconstructed local network [that] will employ the most efficient technology for the reasonably foreseeable capacity requirements."[86] Under this approach, both recurring and non-recurring charges for access to unbundled network elements must be "developed from a forward looking economic cost methodology based on the most efficient technology deployed in the incumbent LEC's current wire center locations."[87]

In accordance with TELRIC principles, the NRCs for pre-ordering, ordering, provisioning and other non-recurring activities necessary to allow access to UNEs are thus determined based on the work times and labor and material charges necessary in a least cost, forward-looking environment, taking into consideration advances in

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86 *Local Competition Order* at ¶ 685.

87 *Id.*

provisioning, including Operational Support Systems ("OSS"), and all technologically available network efficiencies.

The most fundamental flaw that pervades Sprint's NRC cost model is its failure even to attempt to demonstrate that such costs would actually be incurred in a forward-looking TELRIC network. Sprint based its NRC study upon its existing embedded network, thus disregarding virtually all of the efficiencies otherwise associated with its purported least cost, most technologically efficient network.

For instance, for Sprint to connect one of its own retail customers to this network, it would do so by electronic cross-connects (made by the OSS), which represents a substantial cost saving to Sprint.[88] Conversely, when connecting a CLEC customer, it assumes backward looking manual cross-connections at the MDF, which are labor intensive, costly and unnecessary in the forward-looking network.[89]

The network on which Sprint bases its NRCs contains the same backward-looking use of UDLC technology referenced in Issue 7(a). Sprint notes that:

> With GR-303, the Integrated Digital Loop Carrier ("IDLC") Central Office Terminal (COT) is integrated with the central office switch. This permits connectivity between the switch and COT at the DS-1 in lieu of individual switch line cards and COT line cards connected back to back with analog jumpers. The positive economies for loops sold in combination with switching are related to the differences in labor and material in the IDLC system and the substitution of DS-1 level for line level switch and COT interfaces.[90]

There is no reason, however, to use embedded UDLC in the cost model. Loops can be provisioned digitally and should be if Sprint is assigning facilities utilizing fiber feeder. The development of IDLC significantly improved quality of service and allowed

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88 *See* Ex. No. 13, JRD-1D (Davis Deposition) at 59: 1-3.

89 *See* Ex. No. 13, JRD-1D (Davis Deposition) at 90: 16-20.

for the elimination of costly central office equipment. The New York Public Service Commission recently upheld a recommendation by an ALJ in its UNE cost docket that in one year, UDLC should be eliminated completely from Verizon's cost models unless Verizon shows why such an action should not be taken.[91] The Commission should impose a similar requirement here for Sprint.

(b) OSS design;

FDN: *Sprint admits that its OSS is not fully automated and asserts that it is holding back on full automation due to a lack of demand. Clearly Sprint's cost study is not reflecting use of least cost, forward-looking technology. As a result, there is an excessive amount of manual intervention. Sprint assumes that an excessive amount of orders will not flow through, thus significantly overstating NRCs.*

Sprint has overstated costs by failing to consider and/or fully account for efficiencies resulting from enhanced Operation Support Systems ("OSS"). This failure to consider OSS improvements and to implement process improvements, which would allow for increased mechanization in responding to CLEC orders, resulted in an overstatement of the manual intervention required in handling orders and, therefore, results in an overstatement of the non-recurring costs associated with these orders. Clearly, in today's telecommunications environment, automation can be expected to displace much of the need for telecommunications technicians to handle orders manually. When orders "flow through" the system on an automated basis, significant cost savings can occur. A review of the findings in other jurisdictions reveals the existence of OSS technology platforms that have the potential of providing these cost efficiencies. These systems should be expected to increase system flow-through (decrease the need for

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90 Tr. at 182; 18-25 (Cox Direct at 32: 18-25).

91 *Proceeding on Motion of the Commission to Examine New York Telephone Company's Rates for Unbundled Network Elements*, Case No. 98-C-1357, Order on Unbundled Network Element Rates at 93-95, 140 (N.Y. P.S.C. Jan. 28, 2002) ("*NYPSC 1/28/02 UNE Cost Decision*").

manual intervention) and significantly decrease costs. OSS can only provide efficiency savings when used in conjunction with the associated connection process. In other words, if Sprint has access to these technology platforms, but is not reflecting the efficiencies of this technology in its nonrecurring cost model ("NRCM"), then the NRCM will overstate costs.

Many activities detailed in the cost model indicate excessive fallouts (% occurrences) that are not consistent with state-of-the-art practices, ignore process improvement methods, and therefore overlook forward-looking cost savings potential. This failure to consider these technological advances in the model is a flaw because fundamental forward-looking assumptions are disregarded. The flow through rate associated with each task can have a significant impact on nonrecurring costs. It is extremely important, in the context of nonrecurring cost studies, that historical fallout rates be adjusted to reflect technological efficiencies and process improvements.

Sprint's cost study assumes that 85% of orders flow through without manual intervention to correct errors.[92] Sprint's study also assumes that 90% of orders flow through without any manual work needed to identify the customer.[93] Sprint admits that while some orders may fall out for both problems, some may fall out for only one of the problems.[94] Thus, at a minimum, the fallout rate is 15%, but it can be as much as 25%. Sprint based its fallout percentages on its actual experience.[95]

This fallout percentage far exceeds what other state commissions have found to be acceptable. The Massachusetts Department of Telecommunications and Energy ("MA

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92 Ex. No. 13, JRD-1D (Davis Deposition) at 23: 23-25.
93 Ex. No. 13, JRD-1D (Davis Deposition) at 23: 24-25; 24: 1.
94 Ex. No. 13, JRD-1D (Davis Deposition) at 23: 15-20.
95 Ex. No. 13, JRD-1D (Davis Deposition) at 75: 1-3.

DTE")found that Verizon's NRC model was not a proper TELRIC model, that it did not reflect the most efficient technologies available, and that it fails to take into account the efficiencies that will result from CLECs placing electronic orders for UNE at wholesale.[96] The MA DTE found persuasive the testimony that many of the sources of fallout can be addressed and largely eliminated in integrated OSS. As the MA DTE noted:

> He [Dr. Selwyn] explains that input errors are typically made by the service representative and can be checked for internal consistency at the time of entry and can be corrected on the spot. Facilities assignment errors, he notes, can result from a lack of accurate and synchronized databases, which can be corrected when the problem is detected. Dr. Selwyn states that physical connection and configuration errors will be reduced by the use of digital cross-connect and digital loop carrier systems, systems which we note are consistent with the technology we have assumed, above, is present in the TELRIC network.[97]

Based upon this finding, and the "substantial" evidence provided by CLECs that no more than a 2% fallout rate occurs using forward-looking technologies, Verizon was ordered to reduce fallout rates to 2% in its NRC model.[98] The MA DTE found that this rate was further supported by comparable systems in other industries.[99] The New York Public Service Commission has likewise ordered a 2% fallout rate, finding an "ample record basis" for such a figure.[100] Other commissions, including those in Connecticut and

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96 *Consolidated Petitions of New England Telephone and Telegraph Company d/b/a Bell-Atlantic-Massachusetts, Teleport Communications Group, Inc., Brooks Fiber Communications of Massachusetts, Inc, AT&T Communications of New England, Inc., MCI Telecommunications Company, and Sprint Communications Company, L.P., pursuant to Section 252(b) of the Telecommunications Act of 1996, for arbitration of interconnection agreements between Bell Atlantic-Massachusetts and the aforementioned companies*, D.P.U./D/T.E. 96-73/74, 96-75, 96-80/81, 96-83, 96-94-Phase 4-L, Order at 12 (1999) ("*Phase 4-L Order*").

97 *Id.* at 13.

98 *Id.* at 14.

99 *Id.*

100 *NYPSC 1/28/02 UNE Cost Decision* at 143.

Michigan, have ordered 2% fallout factors to be applied to the entire non-recurring cost estimation process.[101]

Sprint has proposed an excessive fallout rate because it is not using a forward-looking OSS, and has based its proposed fallout rate on the OSS that it is using. Sprint admits that its OSS is only partially developed, and that it is holding off on any further development until it sees more demand.[102] As noted above, TELRIC requires the use of the most forward-looking technology currently available, and Sprint by its own admission is not using the most forward-looking technology. Since Sprint bases its flow through rates on its actual experience, this means that more manual intervention is built into its cost study, resulting in higher costs to ALECs. Sprint readily admits that if upgrades were made to its OSS, "it would reduce the amount of manual intervention or manual work needed for processing the order, orders [sic] and the taking of repair tickets."[103] What is worse, Sprint has not analyzed its OSS to determine areas where there is a high fallout percentage, and where process improvements can be rendered to lower the fallout.[104]

The avoidance of root cause analysis and crafting process flow diagrams is a reflection of the inefficient processes used by Sprint, and the absence of forward-looking concepts being applied in the context of the cost studies. The lack of forward-looking concepts employed in the NRCM is yet another deficiency in the model making the rates generated by the NRCM suspect. Requiring Sprint to base its nonrecurring costs on the

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101 *In the Matter, on the Commission's own motion to consider the total service long run incremental costs for all access, toll, and local exchange services provided by Ameritech Michigan*, Michigan Public Service Commission Case No. U-11831, Opinion and Order at 27 (Nov. 16, 1999) ("*MI TSLRIC Order*").; *Re Southern New England Telephone Company*, Connecticut Department of Public Utility Control Docket No. 97-0410, Order, 1998 WL 324224, *46 (May 20, 1998).

102 Ex. No. 13, JRD-1D (Davis Deposition) at 20: 1-9.

most efficient OSS technology currently available will give Sprint the correct incentive to deploy the technology. TELRIC's use of the most forward-looking technology currently available mimics technology choices that would be made in a competitive market.[105] In a competitive market, Sprint would be forced to deploy the most efficient technology to lower its costs of service. Thus, Sprint's nonrecurring costs should reflect use of such technology.

(c) labor rates;

FDN: *No position at this time.*

(d) required activities;
(e) mix of manual versus electronic activities;
(f) other.

FDN: *Sprint's work times used in support of its NRCs were based on a combination of subject matter expert ("SME") input and observation. The SME input was based on informal input from SMEs and are unreliable, biased, and not based on the use of efficient practices or forward-looking processes. What Sprint characterizes as "time and motion studies" was unstructured observation of technicians completing certain tasks and are also unreliable and not based on the use of forward-looking, efficient practices.*

Sprint estimated work times associated with the tasks included in its Nonrecurring Cost Model ("NRCM") relying chiefly on input from subject matter experts ("SMEs") along with some time observations.

Because Sprint's NRCM is largely dependent upon estimates obtained through the use of informal surveys of SMEs, it is critical that these data inputs can be relied upon to produce costs that are representative of forward-looking non-recurring costs in Florida. In other words, if the manner in which the rates were calculated and, if the inputs used in the calculation of the NRCs are not valid, then the resulting rates will not be valid. In

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103 Ex. No. 13, JRD-1D (Davis Deposition) at 66: 20-22.
104 Ex. No. 13, JRD-1D (Davis Deposition) at 76: 10-15.
105 *Local Competition Order* at ¶ 683.

particular, if the baseline times are inflated and reflect inefficient practices, the NRCs will be significantly overstated. The baseline should be reflective of an efficient provider's costs, and the forward-looking adjustment should be made to reflect additional efficiencies that will result from future technological advances.

For a number of reasons, the informal surveys relied upon by Sprint in calculating its proposed NRCs are of dubious validity and thus call into question the evidentiary basis for those charges. The most problematic aspect of NRCM is the basis that Sprint uses to support its task times and occurrence factors. For the most part, Sprint has relied upon responses that have been completed by Sprint's subject matter experts to provide critical inputs to the NRCM.

Sprint's reliance on SMEs to estimate activity times presents a problem in that it is difficult to quantify the subjective nature of the SMEs' opinions. Because the NRCM results are so closely tied to these SME opinions, the costs generated by the model are not reliable unless the responses are reliable and unbiased. Sprint does not, however, provide support to establish this. In fact, the weight of the evidence demonstrates that the survey results are unreliable and biased.

The Commission in the BellSouth proceeding was troubled by several aspects of BellSouth's nonrecurring cost study. The Commission identified the following concerns:

- "As described previously, in some instances the SMEs had actually performed the work themselves, in others the SMEs had not. Time estimates were typically provided by the SMEs to the cost group verbally but sometimes were provided via e-mail. Apparently SMEs had the option of reviewing their inputs after the inputs had been placed into the cost study. We are troubled by the lack of a paper trail with regards to SME inputs. It makes it extremely difficult for us and the ALECs to analyze BellSouth's cost studies.";[106]

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[106] *BellSouth UNE Order* at 392-393.

- "Were the SMEs given instruction on how to proceed? It is difficult to tell, because different SMEs reported different approaches in determining the work activities and work times.";[107]
- "BellSouth's SMEs did what they were told to do; that is, they developed or reviewed work activities and times based on their knowledge, experience, and observations. However, we believe that there is a higher standard that these cost studies must presumably meet. According to her testimony, BellSouth witness Caldwell apparently agrees, because she asserts that the same network designed for recurring costs should also be used for nonrecurring costs: 'forward-looking, reflect BellSouth's guidelines and practices, should consider potential process improvements, and should be attainable.'";[108]
- "Were the SMEs told that this was to be a forward-looking cost study? If they were, it is not readily apparent from the depositions; the SMEs typically referred to the work as it is done today.";[109]
- "Should BellSouth have performed time and motion studies for nonrecurring activities? We believe the answer is "perhaps," because time and motion studies imply that the activities to be studied are already known and agreed upon and that the parties are comfortable with BellSouth performing the time and motion studies.";[110]
- "Was BellSouth's methodology for determining required work activities and times forward-looking? BellSouth apparently used the work activities and times currently in place based on the information available to the current SME. Neither BellSouth witnesses nor BellSouth SMEs testified to any directive given to the SMEs of how a forward-looking study should be done.";[111]

As demonstrated below, Sprint's NRC study raises most of these same concerns.

Sprint states that it "consulted subject matter experts with representation from each discipline and department and identified the required steps for each UNE NRC."[112] There was no uniformity in the manner in which the SMEs were approached. Some information was taken over the phone, some information was elicited through meetings. As Sprint witness Davis noted, "It could be a variety of ways."[113] There was no uniform

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107 *Id.*
108 *Id.*
109 *Id.*
110 *Id.*
111 *Id.* .
112 Ex. No. 10, Sprint-Stip-1-112, Sprint Response to Staff Interrogatory No. 48.
113 Ex. No. 13, JRD-1D (Davis Deposition) at 82: 8-10.

set of instructions – once again with Sprint noting that "it could happen a variety of ways."[114]

The SMEs first created a list of applicable activities.[115] The activities were based on standard Sprint practices so there was no effort to determine what forward looking, efficient practices would be.[116] The Commission has held that the work activities designated need to be forward-looking, efficient, and consider potential process improvements.[117] For instance, the Commission found, "We are most troubled by BellSouth's apparent use of only current practices in its nonrecurring cost study design, without any specific mention of potential process improvements."[118] There was no independent third-party review of these activities.[119] For some UNE categories in the study, such as high capacity loops and customized routing, only one SME was consulted.[120] For numerous other UNE categories, such as analog loops, digital loops, loop conditioning, subloops, and transport, only two SMEs were consulted.[121] Thus, numerous NRCs would rest on the subjective determinations of one or two SMEs. In fact, the SMEs knew their responses would be used for UNE costing so the opportunity for subjective bias was very high.[122] As with the designation of the work activities, there was no independent third-party review of the work times.[123]

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114 Ex. No. 13, JRD-1D (Davis Deposition) at 83: 1-14.
115 Ex. No. 13, JRD-1D (Davis Deposition) at 78: 10-12.
116 Ex. No. 13, JRD-1D (Davis Deposition) at 79: 7-9.
117 Docket No. 990649-TP, Order No. PSC-01-1181-FOF-TP, 2001WL 640804, *180, *184 (Fl. PSC May 25, 2001).
118 *Id.* at *213.
119 Ex. No. 13, JRD-1D (Davis Deposition) at 79: 15-18.
120 Ex. No. 10, Sprint-Stip-1-113-114 (Sprint Response to Staff Interrogatory No. 49).
121 *Id.*
122 Ex. No. 13, JRD-1D (Davis Deposition) at 82: 11-14.
123 Ex. No. 13, JRD-1D (Davis Deposition) at 86: 8-10.

Sprint also contends that it conducted "time and motion studies" for some work activities.[124] The observations were conducted pursuant to an Average Time Per Work Study conducted by Sprint Local's Customer Service Organization in the fall of 2000.[125] The value of this study is limited. First, there are discrepancies in the times that Sprint could not explain. For instance one task was recorded as starting at 10:16 and ending at 11:27 which would mean a total task time of 71 minutes, but the time recorded was 111 minutes.[126] Sprint states that the times "generally work out" but concedes there are discrepancies.[127] These discrepancies certainly call into question the accuracy with which times were recorded. When queried as to where these additional minutes came from, Sprint witness Davis stated:

> I don't know. The information was collected by whoever the observer was and put into a database.[128]

This is a very telling statement as it shows that the Sprint individual responsible for developing the NRC cost studies had very little exposure and understanding of the time studies on which some vital task times were based.[129]

Moreover, the primary purpose of this study was not to determine forward-looking, efficient work times, but instead was designed to observe a number of things, including safety.[130] Thus, a worker realizing he is being observed for a number of things, may put efficient practices near the bottom of his list of priorities in completing a task. For instance, the worker realizing that his safety practices are being observed may go

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124 Ex. No. 10, Sprint-Stip-1-115-116 (Sprint Response to Staff Interrogatory No. 50).

125 *Id.*

126 Ex. No. 13, JRD-1D (Davis Deposition) at 39-40.

127 Ex. No. 13, JRD-1D (Davis Deposition) at 41: 8-19.

128 Ex. No. 13, JRD-1D (Davis Deposition) at 40: 8-9.

129 These studies were used for, among other things, determining times for travel, NID installation, and completion testing in the analog loop NRC study. Ex. No. 10, Sprint-Stip-1-115-116 (Sprint Response to Staff Interrogatory No. 50).

beyond what is required in regard to safety, and this would inflate work times beyond normal, efficient practices.

For other NRCs, there is a troublesome lack of support. For instance, for manual and electronic service orders, Sprint could not provide Staff with any supporting documentation for the charge.[131] This is troubling because Sprint's manual service order charge is $28.10 while the one the Commission approved for BellSouth is $11.90.[132] In regard to coordination activities, Sprint NRC witness Davis could not explain what the CMSC does other than to state it is a service center.[133]

When these problematic aspects are considered, it is little wonder that Sprint proposes a two-wire analog loop NRC of $119.74 while BellSouth's NRC is $49.57.[134] In addressing the BellSouth NRC cost study, the Commission stated that:

> We share the MDTE's concerns that the reliability of cost studies can be impaired if employees are not instructed to assume a forward-looking perspective. We also believe that it is completely natural for some bias to be introduced into a study where employees provide work times for activities that they know will be performed for a competitor. Similarly, we believe that BellSouth's nonrecurring cost study methodology may have flaws, and that any such flaws are likely to create an upward bias in resulting numbers.[135]

Based on this, the Commission made specific reductions to particular BellSouth work times. The Commission should take this approach or it can follow what other commissions have done and implemented a general reduction across the board. The Maine PUC noted that "we like other state commissions will ameliorate the likely upward

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130 Ex. No. 13, JRD-1D (Davis Deposition) at 41: 8-19; 81: 21-24.

131 Ex. No. 13, JRD-1D (Davis Deposition) at 31: 10-16; Ex. No. 10 (Sprint-Stip-1-95, Sprint Response to Staff Request for Production of Document No. 19).

132 Ex. No. 13, JRD-1D (Davis Deposition) at 31: 20-21; 32: 21-22.

133 Ex. No. 13, JRD-1D (Davis Deposition) at 49: 14-18.

134 Ex. No. 13, JRD-1D (Davis Deposition) at 34: 15-20; 36: 1-2.

135 *BellSouth UNE Order* at 395.

bias in the study by establishing rates below those proposed by Verizon."[136] The Maine PUC ordered an overall 57% reduction in work times. Overall, the Maine PUC found that given all the errors in Verizon's NRCM, Verizon's NRCs should be reduced by a factor of 65%.[137] The New Hampshire Public Service Commission also recently determined that "we are convinced that Bell Atlantic's NRC figures are too high because its survey samples are very small and subject to upward bias."[138] This led to a reduction in SME survey times of by 36%. The Commission should take similar action here and reduce Sprint's work times by an appropriate factor.

ISSUE 9: (a) What are the appropriate recurring rates (averaged or deaveraged as the case may be) and non-recurring charges for each of the following UNEs?

(1) 2-wire voice grade loop;
(2) 4-wire analog loop;
(3) 2-wire ISDN/DSL loop;
(4) 2-wire xDSL-capable loop;
(5) 4-wire xDSL-capable loop;
(6) 4-wire 56 kbps loop;
(7) 4-wire 64 kbps loop;
(8) DS-1 loop;
(9) high capacity loops (DS3 and above);
(10) dark fiber loop;
(11) subloop elements (to the extent required by the Commission in Issue 4);
(12) network interface devices;
(13) circuit switching (where required);
(14) packet switching (where required);
(15) shared interoffice transmission;
(16) dedicated interoffice transmission;

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136 *Investigation of Total Element Long-Run Incremental Cost (TELRIC) Studies and Pricing of Unbundled Network Elements*, Maine Public Utilities Commission Docket No. 97-505, Order at 75 (Feb. 12, 2002) ("*ME UNE Order*").

137 *Id.* at 76-77.

138 *Petition for Approval of Statement of Generally Available Terms Pursuant to the Telecommunications Act of 1996*, New Hampshire Public Service Commission Docket No. DT 97-171, Order Granting In Part and Denying in Part, Order No. 23,738 at 63-64 (July 6, 2001) ("*NH SGAT Order*").

(17) dark fiber interoffice facilities;
(18) signaling networks and call-related databases;
(19) OS/DA (where required).

FDN: *The Commission should adjust Sprint's recurring UNE rates and nonrecurring UNE rates to correct for the errors noted above. For loops served by Sprint's remote switches, the Commission should require Sprint to charge the applicable UNE loop recurring and nonrecurring rates.*

FDN urges the Commission to adjust Sprint's recurring and nonrecurring charges to correct for the errors noted in this brief. For instance, as noted in Issue 7, the rates for dark fiber loops and transport should be adjusted to reflect the fact that capacity costs for these facilities are recovered via loop and interoffice facility rates.

FDN would like to address an issue that will become a growing issue in Sprint's territory. Sprint states that it may apply individual case base pricing for loops served by remote switches. A remote switch is a switch location that does not contain the larger components that a host switch location would contain. For instance, a remote switch may have line cards with integrated switching capability while a host switch may contain larger equipment.[139] A remote switch was usually most prevalent in small communities, but now appears to becoming more prevalent in Sprint's network architecture.[140]

Sprint states that it will utilize individual case base pricing "where the equipment necessary to unbundle the loop is not in place in the network; that could be an NGDLC, or it could be an older generation digital loop carrier that doesn't have any COT interface at the central office, and therefore, there's no facilities to provision the loop."[141] Given the fact that Sprint has asserted, as noted above, that it is not technically feasible to unbundle a loop when NGDLC is deployed, the potential for ICB loop pricing is

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139 Ex. No. 13, JRD-1D (Davis Deposition) at 71: 15-25; 72: 1-4.
140 Ex. No. 10, Sprint-Stip-1-313-315 (Sprint Response to Staff Interrogatory No. 138).

significant. Already FDN has encountered numerous instances where it has been quoted exorbitant ICB prices to procure a loop to serve customers behind remote switches.

It is inconceivable that six years after passage of the Telecom Act, an ILEC is still seeking to use ICB pricing for loops. Moreover, it appears Sprint is attempting to pass on charges for network upgrades that should have been made years ago. Sprint has been deploying digital loop carrier since the 1980s, and it contends that every central office should have some degree of central office terminal equipment,[142] yet ALECs still experience ICB pricing for loops served by remote switches. This creates a new "digital" divide where Sprint can serve its retail customers using state of the art, NGDLC technology while ALECs have to pay ICB prices to get an UDLC loop.

As noted above, unbundled loop costs are overstated because they are based on the higher cost, less efficient UDLC technology. Sprint meanwhile utilizes the lower cost, high efficiency IDLC technology for its customers. Compounding this denial of access to the state-of-the-art technology, ALECs will be assessed special construction charges to move the loop from an IDLC to an UDLC system. Sprint is denying ALECs non-discriminatory access to their lower cost, more efficient IDLC architecture, and charging them higher rates for a less-efficient architecture and tacking on special construction charges to make the non-integrated loops they purchase compatible with IDLC network. Sprint should be required to construct a loop cost study that "uses the most efficient, least cost, forward looking technology that can be deployed for purposes of supporting all services and products for which the network will be used," which as shown in Issue 7 would include assumption of IDLC technology for stand-alone UNE

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141 Ex. No. 14, KWD-1 (Dickerson Deposition) at 60: 11-22.

142 Ex. No. 14, KWD-1 (Dickerson Deposition) at 56: 5-7.

loops. The Commission by setting rates that already assume the use of the most efficient technology available, and ignoring, for UNE pricing purposes, the actual technology deployed, would provide Sprint the proper incentive to deploy the most efficient, least cost technology available for all the services/elements they provide. Clearly the lack of central office terminals in all central offices demonstrates that Sprint has not, heretofore, had the proper incentive to upgrade its network.

The Illinois Commerce Commission in addressing the very issue of loops served by remote switches found:

> If an available unbundled loop may only be provisioned via the construction of new non-integrated facilities, the Commission concurs with Staff that such may be done through the acquisition and installation of a COT/RT system. The technical distinctions between IDLC and RSU [remote switching units] do not merit different treatment since the same analysis and principle apply to both. Loops served via RSU may still be unbundled and made available through the use of a COT/RT system. As Staff demonstrated, the average costs of acquiring, installing, and maintaining these facilities necessary to provision an unbundled loop are already included in Ameritech's TELRIC rates. Given that TELRIC rates recover Ameritech's investment in a facility over the life of the facility, Ameritech's assessment of special construction charges for such a COT/RT system would constitute double recovery. Ameritech counters that it has no guarantee that a CLEC will use the new facility long enough to recover its costs. The Commission observes, however, that there is no evidence that the CLEC served by the facility will not use it for the facility's useful life. Even if the first CLEC to use the facility ceases to do so, there is insufficient evidence that other CLECs will not follow; or for that matter, that Ameritech will not use the facility for its own retail customers. Given that the capacity of such new facilities will likely exceed that requested by the CLEC, Ameritech is free to use the additional capacity to serve other CLECs or its own retail customers.[143]

The Commission should likewise require Sprint to deploy the technology required to provide to competitive service to customers served by remote switches without ICB pricing. ALECs should be able to purchase these loops at the corresponding UNE loop

rate. Otherwise, numerous competitors in the Sprint territory may be denied the benefits of competition.

If, however, the Commission allows Sprint to charge ICB pricing for these loops, the Commission should order that Sprint adhere to its statement that its ICB pricing will be developed in full compliance with the TELRIC methodology, and using the cost inputs that will be developed in this proceeding.[144] Another concern is that Sprint suggests that Commission review of these prices will be limited to approval of amended interconnection agreements that would reflect the ICB prices.[145] Under Section 252(e)(2)(A) of the Act, the Commission's review would be limited. If the parties could not agree on the ICB price, the nine month arbitration process would mean that the ALEC would not be able to quote a definitive price to its prospective customer which will all but ensure that the customer will be lost. Given the large number of unbundled loops that may be implicated by Sprint's policy, the Commission should establish a mechanism to ensure that Sprint's rates conform with the requirements of the Act. Even if the rates are TELRIC-compliant, however, the use of ICB pricing places the ALEC at a severe competitive disadvantage vis-à-vis Sprint. Sprint would be able to provide the customer with a prompt price quote and a short provisioning interval. Meanwhile, the ALEC has to await the outcome of the ICB pricing process. The inability of the ALEC to offer its customer a definitive price or a provisioning interval comparable to Sprint's will imperil the ALEC's ability to win the customer.

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143 *Investigation of Construction Charges*, Illinois Commerce Commission Order Docket No. 99-0593, Order at 62 (Aug. 15, 2000).

144 Ex. No. 15, MRH-1D (Hunsucker Deposition) at 46: 18-24; Ex. No. 14, KWD-1 (Dickerson Deposition) at 61: 14-20.

145 Ex. No. 15, MRH-1D (Hunsucker Deposition) at 12: 20-25.

(b) Subject to the standards of the FCC's Third Report and Order, should the Commission require ILECs to unbundle any other elements or combinations of elements? If so, what are they and how should they be priced?

FDN: *The Commission should require Sprint to conform its combinations offerings to the ruling of the U.S. Supreme Court in *Verizon v. FCC* and the FCC's combination rules. If the Commission decides to initiate a proceeding to investigate a new broadband UNE the proceeding should apply to all Florida ILECs.*

The Commission should take notice of the U.S. Supreme Court's decision in *Verizon Communications, Inc. et al., v. FCC*[146] that, among other things, validates the rights of access to combinations of unbundled network elements. The Supreme Court in *Verizon* determined that the Eighth Circuit erred in invalidating the FCC's additional combination rules, Rules 315(c)-(f). FCC Rule 315(c) provides that:

> Upon request, an incumbent LEC shall perform the functions necessary to combine unbundled network elements in any manner, even if those elements are not ordinarily combined in the incumbent LEC's network, provided that such combination is: (1) technically feasible; and (2) would not impair the ability of other carriers to obtain access to unbundled network elements or to interconnect with the incumbent LEC's network.[147]

FCC Rule 315(d) provides that upon request, "an incumbent LEC shall perform the functions necessary to combine unbundled network elements with elements possessed by the requesting telecommunications carrier in any technically feasible manner."[148] Rules 315(e) and (f) place the burden on an ILEC seeking to deny a requested combination to demonstrate that the combination is not "technically feasible" or "would impair the ability of other carriers to obtain access to unbundled network elements or to interconnect with the incumbent LEC's network."[149]

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146 *Verizon Communications, Inc. et al., v. FCC*, Nos. 00-511 and consolidated cases (May 13, 2002) ("*Verizon*").

147 47 CFR § 51.315(c).

148 47 CFR § 51.315(d).

149 47 CFR §§ 51.315(e)-(f).

The Supreme Court found that a combination provided for under the FCC's rules includes both "mechanical connection of physical elements within an incumbent's network, or the connection of a competitive carrier's element with the incumbent's network 'in a manner that would allow a requesting carrier to offer the telecommunications service.'"[150]

The Court also concluded the obligation extends to combinations where the elements are *not* ordinarily combined in the ILEC's network noting:

> this provision of Rule 315(c) is justified by the statutory requirement of "nondiscriminatory access." [FTA] § 251(c)(3). As we have said, the FCC has interpreted the rule as obligating the incumbent to combine '[i]f the carrier is unable to combine the elements." First Report and Order ¶ 294. There is no dispute that the incumbent could make the combination more efficiently than the entrant; nor is it contested that the incumbent would provide the combination itself if a customer wanted it or the combination otherwise served a business purpose. See Third Report and Order ¶ 481. It hardly seems unreasonable, then, to require the incumbent to make the combination, for which it will be entitled to a reasonable fee; otherwise an entrant would not enjoy true "nondiscriminatory access" notwithstanding the bare provision on an unbundled basis of the network elements it needs to provide a service.[151]

The Commission should mandate that Sprint provides combinations in the manner that the Supreme Court has deemed is required under the Act.

Additionally, the record in this case reveals that Sprint does not (1) offer a product whereby ALEC UNE-L or UNE-P voice service may be offered over the same line as Sprint high-speed data service or (2) generally offer to ALECs packet switching as a UNE. In Docket No. 010098-TP, the Commission found that BellSouth's refusing high-speed data service to ALEC voice customers was a barrier to competition. In the BellSouth phase of this case, AT&T and MCI proposed the Commission investigate

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[150] *Verizon*, slip op. at 61, *citing*, *Local Competition Order*, ¶ 294, n. 620 (1996).

creating a new broadband UNE. Accordingly, if the Commission does initiate such an investigation, all Florida ILECs should be included in the review.

ISSUE 10: What is the appropriate rate, if any, for customized routing?

FDN: *No position at this time.*

ISSUE 11(A): What is the appropriate rate if any, for line conditioning, and in what situations should the rate apply?

FDN: *A forward-looking network would not require voice-enhancing devices (i.e., disturbers such as load coils and repeaters) and use of bridged tap on loops. If the Commission nevertheless allows a charge for loop conditioning, the charge should be based on the assumption that multiple loops will be conditioned at a time, regardless of loop length. The charge should also be assessed as a recurring charge.*

The Commission has previously determined that for loops shorter than 18,000 feet, the charges for loop conditioning should be eliminated. The Commission found that such charges do not appear to be consistent with a forward-looking cost methodology.[152] The Commission should reaffirm that ruling and extend it to loops longer than 18,000 feet.

The premise that Sprint must remove load coils, excessive bridged taps or repeaters to render a loop suitable for the provision of DSL-based services is based upon Sprint's embedded network. A forward-looking network architecture would not contain such load coils, excessive bridged tap or repeaters, because they violate the network engineering guidelines in place for over two decades. Indeed, the recurring loop cost studies Sprint submitted to the Commission do not include any load coils and reflect cable sizing that is sufficient to provide dedicated facilities for all existing and reasonably

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[151] *Verizon*, slip op. at 67-68. This focus on "nondiscriminatory access" is in accord with the Commission's approach to the issue of UNE combinations.

[152] *BellSouth UNE Order* at 459.

foreseeable loop demand without resorting to the use of bridged tap.[153] Thus, Sprint has essentially admitted that a forward-looking network would not require "conditioning" to provision DSL-capable loops. Sprint can only propose non-recurring "conditioning" charges if its non-recurring charges are based on a different network architecture that is not forward-looking and does not eliminate conditioning costs.[154]

Fiber feeder facilities provisioned with DLC are placed when the total loop length exceeds certain thresholds. For Sprint's cost study, the threshold is 12,000 ft, which is less than the threshold above which Sprint deploys load coils under CSA guidelines discussed below.[155] The copper portion of the network would be comprised of loops less than 12,000 feet in length, according to Sprint's fiber/copper loop crossover assumption. As a result, the network does not contain load coils at distances beyond 18,000 feet.

Sprint's network design assumes that load coils will not be present because they are unnecessary and that use of bridged tap would be minimized. Since 1980, Sprint has been following Carrier Serving Area guideline in designing its network.[156] These CSA guidelines, per Sprint's admission, contain parameters to minimize the use of bridged tap and load coils.[157] All CSA loops are unloaded and are limited to 2.5kft of bridged tap with no single bridged tap longer than 2.0 kft.[158] Given that Sprint's model establishes that copper loops will not exceed 12,000 feet, it is clear that a network configuration as currently modeled by Sprint does not include inhibiting devices. Therefore, to be

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153 Tr. at 88: 11-13 (Dickerson Direct at 28: 11-13). In fact, as noted above, Sprint is building in ample spare capacity into its network.

154 *See Investigation as to Propriety of the Rates and Charges set forth in M.D.T.E No. 17, etc.*, D.T.E. 98-57-Phase III, at 101-103 (Mass. D.T.E. Sep. 29, 2000) ("*DTE 98-57, Phase III Order*").

155 Ex. No. 14, KWD-1(Dickerson Deposition) at 32: 6-15.

156 Ex. No. 13, JRD-1D (Davis Deposition) at 100: 14-16.

157 Tr. at 203-205 (Davis Direct at 16-18).

158 Tr. at 203: 10-11; 206:10-13 (Davis Direct at 16: 10-11; 18: 10-13).

consistent with TELRIC principles, Sprint should not be permitted to assess nonrecurring charges on CLECs to remove these devices.

Clearly, if the forward looking TELRIC network assumption does not require load coils, there would obviously be no costs incurred for their removal because they would not be present. As the Massachusetts DTE found:

> It would be inappropriate and inconsistent for the Department to allow Verizon to base its loop rates on the costs of a fiber feeder, *which may be greater than the costs of copper feeder in that context, while it bases its line sharing rates on the costs of a copper feeder, which are greater than the costs of fiber in the context of line sharing.* If the FCC in fact were to require the Department to assume the use of copper feeder for calculating TELRIC for line sharing, we would allow Verizon to charge for both loop qualification and loop conditioning, *but we also would have to direct Verizon to recalculate its loop costs in order to maintain consistency* among our various TELRIC analyses. Otherwise, Verizon would be able to tack back and forth between different network assumptions based solely on whether the network assumption produced higher rates for Verizon in each instance.[159]

This Commission should make a similar finding, and not permit Sprint to "tack back and forth" between different network assumptions based solely upon whether the particular network assumption produces higher rates for Sprint in each instance.

The FCC, in its *UNE Remand Order*, did not address the possibility that the ILEC's *recurring charges* for unbundled loops completely capture the forward-looking costs of providing loops free of inhibiting devices such as load coils and bridged taps. Nor did the FCC address situations in which TELRIC prices for loops would presume use of fiber feeder or excess capacity designed to serve future demand for DSL-capable loops, such as Sprint's fiber-fed network architecture. As the Massachusetts DTE noted:

> Concerning Verizon's argument the FCC has explicitly allowed it to recover its costs for line qualification and conditioning related to recovery

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[159] *DTE 98-57, Phase III Order* at 103 (emphasis added).

> of loop conditioning costs, we find that this is not a correct interpretation of the FCC's Order. We believe that the FCC's directives related to recovery of loop qualification and conditioning costs are only relevant to states that have assumed copper feeder for purposes of calculating TELRIC. The FCC has not directed states to assume copper feeder in calculating TELRIC, and, without such a directive, it would be illogical for the FCC to mandate the recovery of costs that are relevant only to a network assumption that may not have been approved in a particular state.[160]

Therefore, the FCC could not possibly have contemplated use of a network design based on fiber feeder and IDLC, for, at the time, the FCC was of the belief that xDSL could not work over fiber.[161]

If the Commission does decide to allow Sprint to charge for loop conditioning, it should require Sprint to remove multiple loops at a time for loops of all lengths. Sprint will currently deload loops shorter than 18,000 feet in groups of 25, finding such a practice to be efficient and in conformance with TELRIC principles.[162] For loops longer than 18,000 it will only deload one loop at a time based on a purported concern for voice service.[163] This concern is entirely invalid and patently transparent. First and foremost, FDN is are not suggesting that any of the loops currently in use by POTS customers should be part of the multiple loops conditioned. The only pairs that are of concern are a portion of the spare pairs, or pairs not currently in use. Since FDN are suggesting that only these spare pairs be considered as candidates for conditioning, existing customers would not be impacted in any way. In addition, because spare pairs are typically plentiful, as demonstrated in Issue 7, the provisioning of POTS services well into the

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160 *DTE 98-57, Phase III Order* at 103.

161 *UNE Remand Order* ¶ 204 n. 390.

162 Tr. at 203: 5-15 (Davis Direct at 15: 5-15).

163 Ex. No. 13, JRD-1D (Davis Deposition) at 96: 19-25; 97: 1-5.

> of loop conditioning costs, we find that this is not a correct interpretation of the FCC's Order. We believe that the FCC's directives related to recovery of loop qualification and conditioning costs are only relevant to states that have assumed copper feeder for purposes of calculating TELRIC. The FCC has not directed states to assume copper feeder in calculating TELRIC, and, without such a directive, it would be illogical for the FCC to mandate the recovery of costs that are relevant only to a network assumption that may not have been approved in a particular state.[160]

Therefore, the FCC could not possibly have contemplated use of a network design based on fiber feeder and IDLC, for, at the time, the FCC was of the belief that xDSL could not work over fiber.[161]

If the Commission does decide to allow Sprint to charge for loop conditioning, it should require Sprint to remove multiple loops at a time for loops of all lengths. Sprint will currently deload loops shorter than 18,000 feet in groups of 25, finding such a practice to be efficient and in conformance with TELRIC principles.[162] For loops longer than 18,000 it will only deload one loop at a time based on a purported concern for voice service.[163] This concern is entirely invalid and patently transparent. First and foremost, FDN is are not suggesting that any of the loops currently in use by POTS customers should be part of the multiple loops conditioned. The only pairs that are of concern are a portion of the spare pairs, or pairs not currently in use. Since FDN are suggesting that only these spare pairs be considered as candidates for conditioning, existing customers would not be impacted in any way. In addition, because spare pairs are typically plentiful, as demonstrated in Issue 7, the provisioning of POTS services well into the

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160 *DTE 98-57, Phase III Order* at 103.

161 *UNE Remand Order* ¶ 204 n. 390.

162 Tr. at 203: 5-15 (Davis Direct at 15: 5-15).

163 Ex. No. 13, JRD-1D (Davis Deposition) at 96: 19-25; 97: 1-5.

future would not be impacted. Thus, Sprint should apply its efficient practice of multiple loop conditioning to loops over 18,000 feet.

Conditioning multiple pairs is consistent with the practices of other ILECs, including BellSouth,[164] and findings by the Texas, Illinois, Nevada, and New York commissions. In Texas[165] and Nevada,[166] for example, the state commissions ordered that loop conditioning costs be developed assuming that 50 loops are conditioned at a time. Similarly, the Illinois Commerce Commission ordered that loop conditioning costs be developed assuming that 25 loops are conditioned at a time.[167] The New York PSC's ALJ found that "deloading only one loop at a time does not appear absolutely essential to system integrity or cost minimization, and might itself jeopardize system integrity by requiring more frequent opening of enclosures."[168] Based on this determination, the New York PSC ordered that Verizon recompute its costs based on the premise that 10 loops would be deloaded at the time.[169]

ISSUE 11(B): What is the appropriate rate, if any, for loop qualification information, and in what situations should the rate apply?

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164 *See Investigation Into Pricing of Unbundled Network Elements*, Florida Public Service Commission Docket No. 990649-TP, PSC-01-1181-FOF-TP, Order, 2001 WL 640804, *242 (2001).

165 *Petition of Accelerated Connections, Inc., d/b/a ACI Corp. for Arbitration to Establish an Interconnection Agreement with Southwestern Bell Telephone Company and Petition of Dieca Communications, Inc., d/b/a Covad Communications Company for Arbitration of interconnection Rates, Terms, Conditions and Related Arrangements with Southwestern Bell Telephone Company*, PUC Docket Nos. 20272, 20226, Arbitration Award at 98 (Tex. .P.U.C. Nov. 30, 1999).

166 *Filing by NEVADA BELL of its unbundled Network Element (UNE) Nonrecurring Cost Study Pursuant to the Order Issued in Docket No. 98-6004; Petition of NEVADFA BELL for Review and Approval of its Cost Study and Proposed Rates for Conditioning Digital Subscriber Line (DSL) Loops*, CC Docket Nos. 99-12033, 00-4001, Order, at 10 (Nev. P.U.C. Nov. 20, 2000).

167 *Proposed Implementation of High Frequency Portion of Loop (HFPL)/ Line Sharing Service*, Docket No. 00-0393, Order, at 82 (Ill. C.C. March 15, 2001).

168 *Proceeding on Motion of the Commission to Examine New York Telephone Company's Rates for Unbundled Network Elements*, NY PSC Case No. 98-C-1357, Recommended Decision of Administrative Law Judge Joel A. Linsider at 194 (May 16, 2001) ("*NYPSC ALJ 5/16/01 UNE Decision*").

169 *NYPSC 1/28/02 UNE Cost Decision* at 145.

FDN: * To the extent the Commission permits Sprint to impose any charge for loop qualification, it should reject the inflated charges proposed by Sprint and set any permissible charge for access to Sprint's loop qualification information as if the ALEC were getting full electronic access to databases that would include the information.*

Sprint does not propose a mechanized loop qualification charge stating instead that it uses a manual process for loop qualification noting that while it has some mechanized information and databases, the information has to be manually researched and gathered.[170] Sprint also contends that its retail division has to use the same process.[171] Sprint, however, provides a description of the process in its attachment to Staff's Request for Production of Documents No. 23.[172] It is clear from Sprint's description, and its own admission, that the records themselves are electronically accessible by Sprint personnel.[173] The manual part of the process is having a Sprint employee review the records and determine if the loop is xDSL-capable. For this, the ALEC is charged $37.55 while Sprint retail personnel could directly access this information and determine the xDSL capability of the loop. The charge for loop qualification should be based as if the ALEC had the same type of access that Sprint personnel has. There should be no manual charge for researching and interpreting the information. The manual process also does not reflect the efficient, forward-looking technology that is currently available. BellSouth is developing a mechanized loop qualification database, and there is no reason that Sprint should not be able to do the same. As the Commission has stated:

> While the costs of implementing these electronic interfaces have not been completely identified, BellSouth did provide some cost estimates and

170 Ex. No. 13, JRD-1D (Davis Deposition) at 104: 22-24.
171 Ex. No. 13, JRD-1D (Davis Deposition) at 106: 1-3.
172 Ex. No. 10, Sprint-Stip-1-206.
173 *Id.;* Ex. No. 13, JRD-1D (Davis Deposition) at 105: 15-18.

> some initial costs of developing such systems. Based on the evidence, we find that these operations support systems are necessary for competition in the local market to be successful. We believe that both the new entrants and the incumbent LECs will benefit from having efficient operational support systems. Thus, all parties shall be responsible for the costs to develop and implement such systems. We note that this is the stance the FCC has recently taken with cost recovery for number portability. However, where a carrier negotiates for the development of a system or process that is exclusively for that carrier, we do not believe all carriers should be responsible for the recovery of those costs. Based on the foregoing, each party shall bear its own cost of developing and implementing electronic interface systems, because those systems will benefit all carriers.[174]

In the *UNE Remand Order*, the FCC ordered incumbent LECs to provide access to loop information.[175] Because the purpose of this decision is to require incumbents to produce the information that will allow CLECs to determine *for themselves* whether a loop satisfies the prerequisites for the service the CLEC intends to provide,[176] the ILEC should be compensated only for providing such information to the CLEC in an electronic format, and *not* for costs incurred by the incumbent in *interpreting* such information for the CLEC. Because all the necessary information is already contained in Sprint's databases – or should be – the forward-looking cost of providing such information is necessarily *de minimis*. Thus, for example, the Texas Commission has found that "SWBT should be fairly compensated for the real time access to its OSS functionalities"

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174 *Re AT&T Communications of the Southern States, Inc.*, Docket Nos. 960833-TP, 960846-TP, 960916-TP, Order No. PSC-96-1579-FOF-TP, 1996 WL 765150. *57 (Dec. 31, 1996).

175 *See Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, Third Report and Order and Fourth Further Notice of Proposed Rulemaking, CC Docket 96-98 at ¶ 427-428 (1999); 47 C.F.R. §51.5.

176 This purpose is implicit in the FCC's finding that "under its existing rules, the relevant inquiry is *not* whether the retail arm of the incumbent has access to the underlying loop qualification information, but, instead, whether such information exists anywhere within the incumbent's back office and can be accessed by any of the incumbent LEC's personnel. *UNE Remand Order* at ¶ 430. Requiring such "back office" information to be made available to the CLEC necessarily excludes "front office" activities engaged on the part of the incumbent to interpret that information.

by establishing a nominal interim nonrecurring charge of 10 cents per loop for loop qualification information.[177]

The Public Utilities Commission of Nevada reached a similar conclusion with regard to the loop qualification charges of Nevada Bell. The Commission rejected Nevada Bell's proposed nonrecurring loop qualification charge of $172.09, noting:

> It appears to the Commission that the method proposed by Nevada Bell of charging for loop qualification is very costly for those loops where the inventory has not been updated or maintained and this cost could very well be a barrier to competition. It appears to the Commission that updating and maintaining Nevada Bell's data base on its loop inventory is the responsibility of Nevada Bell and is a function of doing business and the cost to perform that function is a cost of doing business. The fact that Nevada Bell has not had an aggressive inventory program to maintain its database should not be reason to pass the cost of bringing its loop inventory data base current to CLECs. Furthermore, the Commission notes that if Nevada Bell's loop inventory was current all loop qualifications would be electronical.[178]

The Nevada Commission therefore adopted a 10 cent electronic loop qualification price for all loop qualification.[179]

The Public Utilities Commission of Ohio ("PUCO") has determined that loop qualification charges should be eliminated in their entirety. The PUCO noted:

> Staff witness Francis stated that CBT's lack of knowledge of which loops may or may not need to be conditioned should not result in a loop qualification charge being imposed on competitors. According to the staff, the qualification of loops could have been a type of inventory function developed by CBT to identify the type and location of any loop at any given time. We agree with the staff that loop qualification is not a function of physically conditioning a loop or specifically removing load coils.[180]

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177 *Texas Arbitration Award* at 102-103; Arbitrator's Order, State Corporation Commission of the State of Kansas, Docket No. 00-DCIT-389-ARB, May 9, 2000 at 20.

178 *Nevada Loop Conditioning Order* at ¶¶ 37-42.

179 *Id.*

180 *In the Matter of the Application of Cincinnati Bell Telephone Company for Approval of a Retail Pricing Plan Which May Result in Future Rate Increases and For a New Alternative Regulation Plan,*

If the Commission does not flatly reject Sprint's proposed manual loop qualification rate, the Commission should reject the inflated and impermissible charge that Sprint proposes, and require it to file a nominal loop qualification charge.

Issue 12: Without deciding the situations in which such combinations are required, what are the appropriate recurring and non-recurring rates for the following UNE combinations:

> "UNE platform" consisting of: loop (all), local (including packet, where required) switching (with signaling), and dedicated and shared transport (through and including local termination);
>
> "extended links," consisting of:
>
> (1) loop, DSO/1 multiplexing, DS1 interoffice transport;
> (2) DS1 loop, DS1 interoffice transport;
> (3) DS1 loop, DS1/3 multiplexing, DS3 interoffice transport.

FDN: *Recurring charges for UNE combinations should be the sum of the recurring charges for the UNE components. The nonrecurring charge for UNE combinations where the UNE combination already exists in Sprint's network should be zero or at most provide for a nominal service order charge.*

When a ALEC orders a UNE combination from Sprint, the applicable nonrecurring charge for the order should be zero or at most Sprint should be allowed to apply a nominal service order charge. This approach would be in accord with approaches taken by other states. For instance, the Texas Commission found that a CLEC's interconnection agreement with SWBT placed upon SWBT an obligation to provide contiguous interconnected network elements to the CLEC, without disrupting the end user's service and for a nominal charge.[181] Likewise, in discussing the process to convert

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PUCO Case No, 96-899-TP-ALT, Second Entry on Rehearing at p. 13. (January 20, 2000)("*PUCO CBT Order*").

[181] *Complaint of Premiere Network Services, Inc. Against Southwestern Bell Telephone Company*, Docket No. 19879, Revised Arbitration Award (Phase I) (Tex. P.U.C. Jun. 25, 1999).

a special access circuit to an EEL, the FCC observed that "the conversion should not require the special access circuit to be disconnected and re-connected because only the billing information or other administrative information associated with the circuit will change when a conversion is requested."[182] In Ohio, Ameritech proposed non-recurring charges in the amount of $80.86 for a UNE-P migration. Ameritech used a "sum of the parts" approach to come up with this charge, *i.e.*, it added up the service order charges and non-recurring charges for each element of the UNE Platform. The Public Utilities Commission of Ohio ("PUCO") rejected Ameritech's charge and adopted a total NRC of $0.74 for simple migration UNE-P orders.[183] The PUCO did this by limiting the cost to one service order charge, and eliminating costs for physical installation of facilities since it was an existing arrangement.[184] The Massachusetts DTE determined that CLECs would be prejudiced if they had to submit separate service orders, and incur separate service order charges, for each component of the EEL arrangement. The Massachusetts DTE noted that this would lead to additional service order costs. Therefore, it required that CLECs be able to order all elements of an EEL arrangement in a single service order.[185] Sprint should not be allowed to impose multiple service order charges for combinations of UNEs.

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[182] *In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98, Supplemental Order Clarification, FCC 00-183, ¶ 30 (rel. June 2, 2000).

[183] *In the Matters of the Review of Ameritech Ohio's Economic Costs for Interconnection, Unbundled Network Elements, and Reciprocal Compensation for Transport and Termination of Local Telecommunications Traffic*, Public Utilities Commission of Ohio Case Nos. 96-922-TP-UNC and 00-1368-TP-ATA, Opinion and Order at 13 (Oct. 4, 2001).

[184] *Id.* at 12.

[185] *Investigation by the Department on its own motion as to the propriety of the rates and charges set forth in revisions to M.D.T.E. No. 17 filed with the Department by Verizon New England, Inc d/b/a Verizon-Massachusetts*, MA D.T.E. 98-57 (Phase I-B), Order at 22 (May 24, 2001).

ISSUE 13: When should the recurring and non-recurring rates and charges take effect?

FDN: *The Commission should adopt the procedure used in the BellSouth phase of this docket.*

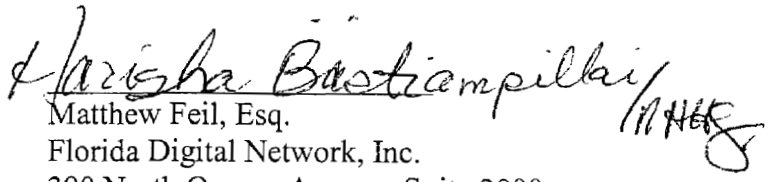
Sprint states it will comply with the approach the Commission took in the BellSouth phase of this docket if the Commission so chooses, so the Commission should adhere to the approach it utilized in the BellSouth phase.[186]

[186] Ex. No. 10, Sprint-Stip-1-308 (Sprint Response to Staff Interrogatory No. 136).

CONCLUSION

The Commission, for the foregoing reasons, should reject Sprint's proposed nonrecurring and recurring UNE rates, and direct Sprint to revise such rates in accordance with the recommendations made herein, and submit the revised filings to the Commission for additional review and approval.

Respectfully submitted,



Matthew Feil, Esq.
Florida Digital Network, Inc.
390 North Orange Avenue, Suite 2000
Orlando, Florida 32801

Eric J. Branfman
Michael C. Sloan
Harisha J. Bastiampillai
Swidler Berlin Shereff Friedman, LLP
3000 K Street, N.W., Suite 700
Washington, D.C. 20007

Attorneys for Florida Digital Network, Inc.

Dated: May 28, 2002

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of Post-Hearing Brief of Florida Digital Network, Inc. For Sprint Florida Phase of Proceeding in Docket No. 990649B-TP has been served on the following parties by e-mail and U.S. mail this 28th day of May, 2002.

Harisha Bastiampillai

Harisha Bastiampillai

Jason Fudge, Esq.
Division of Legal Services, Room 370
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399-0850

Marc W. Dunbar, Esq.
Pennington, Moore, Wilkinson, Bell & Dunbar, P.A.
P.O. Box 10095
Tallahassee, FL 32302-2095

Nancy B. White
c/o Nancy H. Sims
BellSouth Telecommunications, Inc.
150 South Monroe Street, Suite 400
Tallahassee, FL 32301

Charles J. Rehwinkel
Sprint-Florida, Incorporated
MC FLTH00107
P.O. Box 2214
Tallahassee, FL 32399-2214

Claudia Davant-DeLoach, Esq.
AT&T
101 N. Monroe St., Suite 700
Tallahassee, FL 32301

Mark Buechele
Supra Telecom
1311 Executive Center Drive, Suite 200
Tallahassee, FL 32301

Virginia Tate, Esq.
AT&T
1200 Peachtree St., Suite 8068
Atlanta, GA 30309

Carolyn Marek
Vice President of Regulatory Affairs
Southeast Region
Time Warner Communications
233 Bramerton Court
Franklin, TN 37069

Jeffrey Whalen, Esq.
John Fons, Esq.
Ausley Law Firm
P.O. Box 391
Tallahassee, FL 32302

Ms. Wanda Montano
US LEC of Florida, Inc.
6801 Morrison Blvd.
Charlotte, NC 28211-3599

Michael A. Gross
Vice President, Regulatory Affairs
& Regulatory Counsel
Florida Cable Telecommunications Assoc., Inc.
246 E. 6th Avenue
Tallahassee, FL 32301

Kimberly Caswell
Verizon Select Services
P.O. Box 110, FLTC0007
Tampa, FL 33601

Donna McNulty, Esq.
WorldCom
The Atrium Building, Suite 105
325 John Knox Road
Tallahassee, FL 32303

Mr. Brian Sulmonetti
WorldCom, Inc.
6 Concourse Parkway, Suite 3200
Atlanta, GA 30328

BlueStar Networks, Inc.
Norton Cutler/Michael Bressman
5 Corporate Centre
801 Crescent Centre Drive, Suite 600
Franklin, TN 37067

Mr. John Spilman
Broadslate Networks of Florida, Inc.
675 Peter Jefferson Parkway, Suite 310
Charlottesville, VA 22911

Ms. Catherine F. Boone
Covad Communications Company
10 Glenlake Parkway, Suite 650
Atlanta, GA 30328-3495

Vicki Kaufman, Esq.
Joe McGlothlin, Esq.
McWhirter, Reeves, McGlothlin
Davidson, Rief & Bakas, P.A.
117 S. Gadsden Street
Tallahassee, FL 32301

Patrick Wiggins
Charles Pellegrini
Katz, Kutter Law Firm
106 East College Avenue, 12th Floor
Tallahassee, FL 32301

Richard D. Melson
Hopping Green Sams & Smith, P.A.
P.O. Box 6526
Tallahassee, FL 32314

John D. McLaughlin., Jr.
1755 North Brown Road
Lawrenceville, GA 30043-8911

Genevieve Morelli
Andrew Klein
Kelley Drye & Warren, LLP
1200 Nineteenth St. N.W.
Washington, D.C. 20036

Jonathan Canis
Michael Huzzard
Kelley, Drye & Warren, LLP
1200 Nineteenth St. N.W.
Washington, D.C. 20036

Tracy Hatch
Messer, Caparello & Self
P.O. Box 1876
Tallahassee, FL 32302

Florida Digital Network, Inc.
390 North Orange Avenue, Suite 2000
Orlando, Florida 32801

Mr. Don Sussman
Network Access Solutions Corporation
Three Dulles Tech Center
13650 Dulles Technology Drive
Herndon, VA 20171-4602

Rodney L. Joyce
Shook, Hardy & Bacon LLP
600 14th Street, N.W., Suite 800
Washington, D.C. 20005-2004

Michael Sloan
Swidler & Berlin
3000 K Street, N.W., #300
Washington, D.C. 20007-5116

George S. Ford
Z-Tel Communications, Inc.
601 S. Harbour Island Blvd.
Tampa, FL 33602-5706

Lisa Korner Butler
Vice President Regulatory & Industry Affairs
Network Plus, Inc.
41 Pacella Park Drive
Randolph, MA 02368

Andrew O. Isar
Miller Isar, Inc.
7901 Skansie Avenue, Suite 240
Gig Harbour, WA 98335