ORIGINAL

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1		BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION
2		DIRECT TESTIMONY
3		OF
4		KENT W. DICKERSON
5		
6	Q.	Please state your name, business address, employer and
7		current position.
8		
9	Α.	My name is Kent W. Dickerson. My business address is
10		4210 Shawnee Mission Parkway, Fairway, Kansas 66205. I
11		am employed as Director - Cost Support for
12		Sprint/United Management Company.
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14	Q.	Could you please summarize your qualifications and
15		work experience?
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17	Α.	My qualifications and work experience are summarized
18		in Exhibit KWD - 1.
19		
20	Q.	What is the purpose of your Testimony?
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22	Α.	To respond to the following Phase I Issues in this
23		docket:
24		1(a), $1(c)$, $1(d)$, $1(e)$, $1(g)$, and $3(a) - (d)$. DOCUMENT NUMBER-DATE
25		09570 AUG II 8
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1 My responses will be from a perspective of how the 2 underlying costs of various UNEs and UNE combinations 3 relate to specific issues raised in this docket. 4 Sprint's witness Mr. Sichter will provide testimony 5 regarding the deaveraged pricing implications that 6 follow from the cost analysis.

- <u>Phase I_Issues</u>
- 9

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- 10 1. Deaveraging of UNEs:
- 11
- (a) Which UNEs, excluding combinations should be
 deaveraged?
- 14

15 Q. Must certain UNEs, excluding combinations, be 16 deaveraged?

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more fully in Mr. Sichter's As discussed Α. Yes. 18 testimony, the FCC pricing rules require UNEs be 19 priced on a deaveraged basis. The fundamental purpose 20 of the FCC deaveraging requirement is to better match 21 the price of UNEs with the cost on a geographically 22 deaveraged basis (FCC Order 96-325 paragraph 764). 23 Sprint's experience and analysis of the cost of UNEs 24 indicates, however, that the cost of UNEs are driven 25

1 by differing factors and the cost of certain UNEs do not vary significantly based on geography. For 2 example, Sprint's cost analysis of UNEs indicates the 3 costs of Local Loop, Local Switching, and Interoffice 4 Transmission Facilities (Transport) vary significantly 5 6 at differing geographic points in Sprint's Florida serving area. Conversely, when provisioning a single 7 or aggregated point in the network for UNEs such as 8 Tandem Switching, Signalling, Call Related Databases, 9 Service Management Systems, Operations Support Systems 10 and Operator Services, the result is costs that are 11 12 not significantly affected by the location of the 13 purchasing customer or Competitive Local Exchange Carrier (CLEC). 14 15

16 Q. Could you please detail which UNEs provided by Sprint-17 Florida differ in cost depending on the geographic 18 location?

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20 A. From my analysis, the following UNEs differ in cost
21 depending on the location of the UNE.

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Unbundled Local Loop

FCC Rule 51.319 (a) defines Unbundled Local Loop as "...
as a transmission facility between a distribution
frame (or its equivalent) in an incumbent LEC central
office and an end user customer premise."

8 The cost of unbundled local loops varies more on a 9 geographic basis than any other UNE defined by the 10 FCC's 96-325 Order. Under the broad category of 11 physical geography, numerous factors affect the cost 12 of providing loops to a specific customer location. 13 These factors are:

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15 1. Customer Density - Customer density is the single 16 largest factor impacting the cost of local loops. 17 Customer density is commonly expressed in terms of customers or access lines per square mile. 18 Customer density impacts loop cost in an inverse 19 20 manner: the higher the customer density, the 21 lower the cost of the local loop. This 22 relationship is linked to a few fundamental The first being that a trench, conduit 23 factors. or aerial pole route which is required regardless 24 25 of whether a 25 pair or 2400 pair cable is

placed. From this it is obvious that the greater 1 the customer density, the more customers that can 2 be served along a feeder or distribution cable 3 Therefore, customer density ultimately route. 4 determines how many customers or loops there are 5 over which to spread the cost of digging the 6 trench, and or placing conduit or placing aerial 7 pole lines. 8

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Customer density also drives the unit cost of 10 other equipment components associated with loops. 11 Loop components such as SAIs or Serving Area 12 Interfaces (the point of interconnection between 13 and distribution cables), Digital Loop 14 feeder Carrier (DLC) devices and Drop Terminals are all 15 similarly impacted by customer density and 16 exhibit lower per unit costs as customer density 17 increases. 18

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2. Distance -The distance of a given customer 20 directly location from central office 21 the increases loop costs as the distance increases. 22 This relationship results from the obvious need 23 to place more cable, trenches, conduit and/or 24 aerial pole lines as the distance or length of 25

the loop increases. Additionally, as distance 1 increases, generally the need for and overall 2 cost of maintenance increases. Assuming constant 3 customer density, longer cables have more splice 4 points and resulting exposure to risk. A greater 5 number of splice points means there are more 6 areas for possible failure due to lightning, 7 water, rodents, vandalism, and accidents. 8

Terrain - The type of terrain in which cable is 10 З. placed impacts both the cost of the initial cable 11 12 placement and the maintenance of the cable. The cost of below ground cable construction increases 13 as the presence and hardness of rock increases. 14 Terrain factors such as the water table, trees 15 affect both the and mountains all initial 16 construction cost of loops and subsequent 17 maintenance expense. 18

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20 4. Weather - The extremes of weather affect the cost maintaining cable and therefore of figure 21 significantly into the type of cable placed 22 (buried, aerial or underground). The cost of 23 maintaining aerial plant in geographic areas 24 which frequently experience ice storms 25 cr

1 tropical hurricanes is certainly greater than
2 those areas that seldom encounter these
3 conditions.

Local Market Conditions - Issues such as local 5. 5 zoning laws requiring below ground plant, 6 screening and landscaping around SAI and DLC 7 sites, construction permits and restrictions, 8 heavy presence of concrete and asphalt, traffic 9 flows, and local labor costs, all impact the 10 construction and maintenance costs of loop plant 11 and will vary between locations. 12

13

Presented in Exhibit KWD-2 to this testimony are loop 14 costs calculated using the BCPM 3.1 model for the 15 Florida wire centers served by Sprint. (All cost 16 analyses provided with the testimony are intended for 17 illustrative purposes only, and are subject to 18 potential changes prior to filing in Phase II of this 19 20 docket.) This list demonstrates the degree of loop cost variability when the above factors are properly 21 KWD-3 reflected at a wire center level. Exhibit 22 provides an illustrative comparison of the eight 23 individual wire center loop costs for Tallahassee to 24 the exchange level average for Tallahassee and to 25

Sprint's statewide average. The comparison 1 demonstrates that even an exchange level of loop cost 2 material deviations when comparing has verv the 3 statewide average cost and the eight individual wire 4 center costs. Mr. Sichter discusses in his testimony 5 the resulting deaveraged pricing implications of this 6 analysis. 7

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Local Switching

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FCC Rule 51.319 (c) defines Unbundled Local Switching 11 as "(A) line-side facilities, which include, but are 12 limited to, the connection not between а 100p 13 termination at a main distribution frame and a switch 14 line card; (B) trunk-side facilities, which include, 15 but are not limited to, the connection between trunk 16 termination at a trunk-side cross-connect panel and a 17 switch trunk card; and (C) all features, functions, 18 and capabilities of the switch, ... " 19

20

21 Exhibit KWD-3 to this testimony presents the local 22 switching cost per Minute of Use (MOU) and switch port 23 for Class 5 switches in Sprint's Florida network. Due 24 primarily to differences in the number of customers 25 served and the nature (interoffice or intraoffice),

volume, time of day and duration of calls made by 1 those customers, this analysis shows a significant 2 degree of variation in the local switching cost per 3 MOU. For the six Tallahassee Sprint switches studied, 4 the absolute value deviation of these wire center MOU 5 costs to Sprint's statewide average cost, ranges from 6 7 18.58% to 47.22% (See Exhibit KWD-5). Four of the six 8 Tallahassee switches also show significant cost 9 variance to the average switch cost for the overall Tallahassee exchange. Mr. Sichter's testimony 10 discusses the price deaveraging implications of these 11 12 cost variances.

13

The costs provided in KWD-4 and KWD-5 do not include 14 the costs of switch vertical features. Cost for these 15 16 features are separately determined and are generally composed of the following three components: feature 17 software, switch processor costs driven by feature 18 usage and where applicable, the cost of hardware items 19 necessary for some features. Sprint's cost analysis of 20 that features indicates although the volume 21 of customers purchasing a feature will vary by market and 22 switch, the total cost of the actual feature on a per 23 24 unit basis does not vary materially.

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Interoffice Transmission Facilities

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FCC Rule 51.319 (d) defines unbundled Interoffice 3 Transmission Facilities "... as incumbent 4 LEC transmission facilities dedicated to a 5 particular customer or carrier, that provide telecommunications 6 between wire centers owned by incumbent LECs 7 or requesting telecommunications carriers, or between 8 by incumbent switches owned LECs or 9 requesting telecommunications carriers." 10

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unbundled Interoffice Transmission The Facilities 12 element, or simply "transport", is composed of the two 13 14 basic network components: terminals and fiber cable. Terminals are the equipment housed at the central 15 office locations which serve as entry and exit points 16 for telecommunications traffic to be moved between 17 interoffice points in the network. In the majority of 18 today's transport networks and certainly in a forward-19 20 looking network, these interoffice terminals will be optically capable. Additionally, the fiber transport 21 routes in a forward-looking network are constructed in 22 23 ring design which provides diverse routing capability in the event of a fiber cable cut or terminal node 24 failure. This forward-looking transport network design 25

is commonly referred to as survivable SONET ring
 technology.

Effects of Traffic Volumes on Transport Unit Costs

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The largest single determinant in the unit cost of a 6 7 DS0, DS1, or DS3 transport circuit, is the volume of telecommunications traffic transmitted over a specific 8 transport route. This volume of traffic, or demand, 9 10 determines both the appropriate capacity sizing of the terminal equipment and fiber cable. Additionally, it 11 12 defines the units over which these costs are spread. In cost determination, this basic principle is 13 referred to as utilization. As volumes of traffic vary 14 across specific transport routes, so does the sizing 15 and utilization of terminals and fiber cable, and 16 ultimately the resulting unit costs. This concept is 17 illustrated in a series of Exhibits to this testimony. 18 Looking first at Exhibit KWD-6, it shows the decrease 19 20 in DS1 unit costs as larger terminals are deployed. 21 This analysis indicates that as traffic volumes or 22 demand increases, larger terminals with increased capacity are used. Use of larger terminals associated 23 with increased traffic volumes results in greater 24 economies and lower unit costs. This same relationship 25

of increased demand driving down unit costs is also
 illustrated in Exhibit KWD-7, which shows the
 decreases in DS1 unit costs as demand, and therefore
 terminal utilization, increases.

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A basic characteristic of fiber cable is that the 6 volume of traffic that can be carried over fiber is a 7 function of the optic terminal capacity placed on the 8 fiber ring. From this basic principle, it follows that 9 the same traffic volume that drives the unit cost of 10 the terminals is also a major determinant in the 11 12 transport unit cost of the fiber. The same relationship exists for fiber as terminals, in that 13 the more traffic that a specific transport route 14 carries, the lower the unit cost of DSO, DS1, or DS3 15 on that route. 16

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18 Effects of Distance on Transport Unit Costs

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It is perhaps intuitively obvious that as the distance around a transport ring increases, more fiber cable must be placed, thereby increasing the cost of bandwidth on that ring. The impact of increasing distance on DS1 unit cost is illustrated on Exhibit KWD-8. Related to the impacts of distance on transport

unit costs is the fact that as distance increases the 1 likelihood for needing multiple survivable SONET rings 2 connect the two network end points increases. 3 to Exhibit KWD-9 illustrates the increases in unit cost 4 that result from using multiple rings to transport 5 traffic between two points. The potential use of 6 multiple rings to transport traffic between certain 7 end offices is unavoidable due to ultimate capacity 8 constraints of terminal equipment and the need to 9 construct fiber rings that link the predominant 10 communities which originate and terminate the largest 11 volumes of traffic on any given ring. Two communities 12 with a relatively smaller need (i.e. volume) for 13 transporting traffic between themselves would normally 14 not exist on the same ring. Therefore, in order to 15 transport the relatively lower volumes of traffic 16 between these two communities, multiple ring 17 connections are required. 18

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- 20 Transport Cost Summary
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unbundled transport 22 In summary, unit costs vary geographic points due to the between specific 23 underlying variances in the traffic volumes, distances 24 and ring designs that commonly occur in the network. 25

1 In order to properly estimate the geographic-specific forward-looking cost of 2 unbundled transport 3 facilities, the impact of these geographic-specific factors must be considered, Mr. Sichter discusses in 4 his testimony the deaveraged pricing implications that 5 flow from these market specific cost realities. 6 7 8 Q. Are there UNEs whose cost does not vary depending on the location of the UNE? 9 10 11 Α. Yes. 12 13 Network Interface Device (NID) 14 FCC Rule 51.319 (b) defines NID as "... a cross-connect 15 16 device used to connect loop facilities to inside 17 wiring." 18 19 A NID is a device contained in plastic housing 20 measuring approximately 5 by 7 inches, generally mounted on the side of customer's house. It serves the 21 22 dual functions of providing grounding and electrical 23 surge protection as well as providing a demarcation 24 point for conducting tests to determine whether a source of trouble on the 25 line lies within the

customers premise wiring or the Telephone Company's
network. Other than some potential for relatively
immaterial difference in travel times, the cost of a
NID does not vary between customers purchasing similar
services or the geography of those customers.

- Tandem Switching
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function of a tandem switch is to aggregate 9 The interoffice calls from Class 5 local switches so that 10 11 those calls can be carried or transported to a switch 12 at the terminating end of the call. The aggregating 13 nature and limited number of tandem switches 14 significantly lessens the degree of cost variances 15 among tandem switches within Sprint's network when 16 compared with the cost variances among Class 5 Local 17 switches.

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Signaling Network and Service Management Systems

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These UNEs are collectively referred to as Signaling System 7 or SS7 network elements, and include the UNEs of signaling links and signaling transfer points (STPs). The function of the SS7 network is to provide out-of-band signaling which controls call set-up and

provides economies in trunking facilities by avoiding I the use of trunks during call set-up and tear-down. 2 The signaling link component of the SS7 network is 3 either a 56 kilobit or DS1 circuit connection between 4 the Class 5 switch and the STP packet switch. While 5 this circuit connection could logically be argued to 6 exhibit the same cost variances seen in UNE transport 7 facilities, the practical need to deaverage this UNE 8 can certainly be questioned. Generally, only two 9 signaling links are required per class 5 switch 10 location and the cost of these two circuits are then 11 relative to the entire call volumes routing through 12 that class 5 switch location for a given ILEC or CLEC. 13 need to calculate а practical Therefore, the 14 deaveraged cost for a low cost network element that is 15 shared across a very large customer base is slight. 16

17

Signaling Transfer Points (STPs) are packet switches 18 switch out-of-band signaling information to which 19 network in order to more other points in the 20 efficiently setup and tear down calls. STPs are also 21 used as needed to route queries to call completion 22 databases (e.g. to access databases such as LIDB, 800, 23 Calling name, and LNP). To ensure network reliability, 24 STPs are deployed in mated pairs; Sprint's Florida 25

network contains two sets of STP mated pairs. SS7 1 signaling from all points in Sprint's Florida network 2 of these two STP pair then routed to one are 3 locations. Using a common STP switch across a wide 4 geographic area results in STP costs that do not vary 5 based on the location of the call. 6

- 8 Call Related Databases
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Call Related Databases are computer databases which 10 house information used in routing calls such as LIDB, 11 800, LNP, and Calling Name. Sprint utilizes common 12 City and Bristol, databases located in Johnson 13 Similar to the STP discussion above, the Tennessee. 14 cost of the various unbundled network databases do not 15 vary based on the location of the CLEC, nor the call 16 utilizing the database. 17

18

19 Service Management Systems

20

FCC rule 51.319(e)(3) defines Service Management System "... as a computer database or system not part of the public switched network that, among other things: (1) interconnects to the service control point and sends to that service control point the information

1 and call processing instructions needed for a network 2 switch to process and complete a telephone call; and 3 (2) provides telecommunications carriers with the 4 capability of entering and storing data regarding the 5 processing and completing of a telephone call." Sprint utilizes one common service management system located 6 7 in Overland Park, Kansas. Therefore, similar in nature 8 to STP deployment and call related databases, the cost 9 of providing access to the service management system 10 on a unbundled basis does not vary based on the 11 geography of the CLEC customer or the location of the 12 underlying calls.

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14 Operations Support Systems (OSS)

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16 FCC Rule 51.319(f) defines OSS as "Operations support
17 systems functions consist of pre-ordering, ordering,
18 provisioning, maintenance and repair, and billing
19 functions supported by an incumbent LEC's databases
20 and information." As with other database UNEs, the
21 cost of accessing a single database within Sprint's
22 operation does not vary by geography.

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Operator Service and Directory Assistance

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Sprint provides toll and directory assistance operator 3 services from common operator centers within Florida. 4 All calls requiring operator services are routed to 5 the operator center location. Once again, the cost of 6 the operator service function does not vary based on 7 the caller's geography because all service functions 8 are provided from a common operator center. 9 10 should (b) Which UNE combinations, if any, be 11 12 deaveraged? 13 Are there UNE combinations whose costs vary depending 0. 14 on the location of the UNE? 15 16 Yes. Following from the discussion above, any and all 17 Α. UNE combinations which include any of the three UNEs 18 19 of local loop, local switching and transport will 20 exhibit geographic cost variances based on the same underlying cost characteristics of the UNEs that make 21 up the combination. Therefore, as discussed by Mr. 22 Sichter, any and all UNE combinations making use of a 23 local loop, local switching and/or transport UNE 24 should be deaveraged. 25

(d) Should the degree of deaveraging be uniform for 1 all UNEs? 2 3 Do you believe that the degree of cost variations is 4 Ο. uniform for all UNEs? -5 6 No, the degree of cost variation is not uniform across 7 Α. all UNEs. As discussed in response to Issue 1(a) 8 above, the cost of unbundled loops, local switching 9 and transport varies greatly depending on the location 10 of the UNE and all of the associated cost factors 11 that come into play. This contrasts with other UNEs 12 whose costs do not vary materially due to the 13 location of the CLEC, UNE or calling party, as 14 discussed more fully in response to Issue 1(a) above. 15 16 (e) Should the degree of deaveraging be uniform for 17 all affected ILECs for which deaveraged rates are 18 appropriate? 19 20 Do you believe that the degree of cost variation is 21 Ο. 22 uniform for all ILECs? 23 As discussed in Mr. Sichter's testimony, the cost Α. 24 related criteria for deaveraging UNEs should be 25 20

uniform across all ILECs. However, to the extent that
 ILECs serve different areas of the state, it is
 possible for one ILEC to experience a wider range of
 costs for a given UNE than another ILEC serving a
 different area of the state.

- 7 (g) What supporting data or documentation should an
 8 ILEC provide with its deaveraging filing?
- 9

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10 Q. What level of cost support should an ILEC provide with11 its price deaveraging filing?

12

An ILEC's deaveraging filing should include the Α. 13 deaveraged results of the TELRIC studies, the models 14 used, model inputs and supporting documentation, 15 narrative descriptions and testimony. The filing 16 should disclose the detailed deaveraged UNE costs 17 (Sprint recommends wire center level costs be required 18 19 for loops, local switching and transport), and describe how they relate to the deaveraged price 20 proposal put forward. 21

22

23 3. Cost Studies:

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1(a) What guidelines and specific requirements should2be imposed on recurring and nonrecurring cost3studies, if any, required to be filed in this4proceeding?

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Q. Do you believe that there are guidelines and specific
requirements that should be imposed on recurring and
nonrecurring cost studies?

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Yes. The FCC pricing rule 51.505 remains in effect and Α. 10 defines the principles for determining the forward-11 looking economic cost of UNEs. The FCC rules contain 12 language allowing for a differing application 13 no between recurring and nonrecurring cost studies, so 14 presumably the rules define the principles for both. 15 As discussed in my response to Issue 1 (a) above, 16 Sprint suggests that the deaveraged cost of UNE local 17 loops and local switching be calculated at least down 18 to a wire center level. This will enable a proper 19 evaluation of the relationship between deaveraged cost 20 and deaveraged price proposals. Sprint also recommends 21 the cost of transport be calculated on a deaveraged 22 basis to ensure that deaveraged prices reflect market 23 specific traffic volumes and ring distances and 24

designs. Discussed in 1.(q) above are Sprint's 1 suggested filing requirements. 2 3 For which UNEs should the ILECs submit cost (b) 4 deaverage those UNES sufficient to studies 5 identified in Issues 1(a) and 1(b)? 6 7 Do you believe that ILECs should submit cost studies 8 ο. for all UNEs, even those which Sprint's cost analysis 9 suggests do not need to be deaveraged? 10 11 Yes. As I discussed in my response to Issue 3(a), 12 Α. ILECs should submit cost studies for all UNEs. 13 14 (c) To the extent not included in Issue 3(b), should 15 ILECs be required to file recurring cost studies 16 17 for any remaining UNEs, and combinations thereof, identified by the FCC in its forthcoming order on 18 the Rule 51.319 remand? 19 20 To the extent not included in Issue 3(b), should (d) 21 the ILECs be required to file non-recurring cost 22 studies for any remaining UNEs, and combinations 23 thereof, identified by the FCC in its forthcoming 24 order on the Rule 51.319 remand? 25 23

1	Q.	In your opinion how should ILECs respond to the FCC's
2		forthcoming order on the Rule 51.319 remand?
3		
4	А.	ILECs should be required to file recurring and
5		nonrecurring cost studies for all UNEs resulting from
6		the remand of FCC rule 51.319 as well as any
7		additional UNEs deemed necessary by this Florida
8		Commission now or at some future time.
9		
10	Q.	Does this conclude your testimony?
11		
12	А.	Yes.

SPRINT Docket 990649-TP Exhibit KWD - 1 Page 1 of 2

KENT W. DICKERSON QUALIFICATIONS

I received a Bachelor of Science degree from the University of Missouri - Kansas City in 1981 with a major in Accounting. In 1984, I passed the national exam and am a Certified Public Accountant in the State of Missouri.

From 1981 to 1983, I was employed as a Corporate Income Tax Auditor II for the Missouri Department of Revenue. From 1983 to 1985, I worked for Kansas Power and Light (now Western Resources) in the Tax and Internal Audit areas. I joined United Telephone Midwest Group in September, 1985 as a staff accountant in the Carrier Access Billing area. Thereafter, I moved through a progression of positions within the Toll Administration and General Accounting areas of the Finance Department.

In 1987, I was promoted into the Carrier and Regulatory Services group as a Separations/ Settlement Administrator performing Federal and Intrastate access/toll pool settlement, reporting and revenue budgeting functions. I was promoted to Manager - Pricing in June, 1989 where I performed FCC regulatory reporting and filing functions related to the United Telephone - Midwest Group Interstate Access revenue streams.

In 1991, I was promoted to Senior Manager - Revenue Planning for United Telephone - Midwest Group. While serving in this position my responsibilities consisted of numerous FCC regulatory reporting and costing functions. In 1994, I accepted a position within the Intrastate Regulatory operations of Sprint/United Telephone Company of Missouri where my responsibilities included regulatory

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compliance, tariff filings, and earnings analysis for the Missouri company's intrastate operations.

Since December 1994, I have set-up and directed a work group which performs cost of service studies for retail services, wholesale unbundled network elements cost studies, and state and federal Universal Service Fund cost studies. Over the last 4.5 years I have been charged with developing and implementing cost study methods which conform with Total Service Long Run Incremental Cost ("TSLRIC") and Total Element Long Run Incremental Cost ("TELRIC") methodologies. I am responsible for written and oral testimony, serving on industry work groups, and participating in technical conferences related to TSLRIC/TELRIC costing methodology, filing of studies within individual 18 states that comprise Sprint's Local Telephone Division (LTD) and providing cost expertise to Sprint's participation in regulatory cost dockets outside of the LTD territories. I have testified in Florida, Nevada, North Carolina, Texas, Kansas, Georgia, and Wyoming regarding TSLRIC/TELRIC cost matters.

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Sprint - Florida TELRIC Loop Cost by Wire Center

			TELRIC	Wire Center			
		Mo	nthly Cost	Loop Cost to	Total Lines	Cumulative	Cumulative
Row	Wire Center	F	er Loop	Statewide Avg	Served	Total Lines	% Total Lines
1	Maitland XA	\$	4.38	-79%	13,325	13,325	0.68%
2	Maitland TC	\$	4.49	-78%	1,819	15,144	0.77%
3	Tallahassee - Calhoun	\$	5.65	-72%	65,229	80,373	4.07%
4	Tallahassee - FSU	\$	9.03	-56%	10,847	91,220	4.62%
5	Destin	\$ \$ \$ \$	9.57	-53%	19,207	110,427	5.60%
6	South Fort Meyers	\$	10.11	-50%	40,541	150,968	7.65%
7	Boca Grande	\$	10.50	-48%	2,613	153,581	7.78%
8	Murdock	\$	11.13	-45%	5,029	158,610	8.04%
9	Fort Myers	\$	11.33	-44%	23,432	182,042	9.23%
10	Winter Park	\$	11.37	-44%	52,129	234,171	11.87%
11	Fort Myers Beach	\$	11.39	-44%	12,129	246,300	12.48%
12	Lake Brantley	\$	11.53	-43%	49,229	295,529	14.98%
13	North Naples	\$	11.74	-42%	47,947	343,476	17.41%
14	Naples Moorings	\$	11.82	-42%	60,797	404,273	20.49%
15	Marco Island	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	12.02	-41%	21,633	425,906	21.58%
16	Altamonte Springs	\$	12.20	-40%	60,621	486,527	24.66%
17		S	12.35	-39%	14,928	501,455	25.41%
18	Goldenrod	\$	13.21	-35%	48,810	550,265	27.89%
19	Fort Walton Beach XB	\$	13.37	-34%	19,594	569,859	28.88%
20	Fort Walton Beach XA	\$	13.49	-34%	20,172	590,031	29.90%
21	Buenaventura Lakes	\$	13.53	-34%	12,841	602,872	30.55%
22	Tallahassee - Willis	\$	13.62	-33%	22,979	625,851	31.72%
23	Shalimar	\$	13.92	-32%	9,260	635,111	32,19%
24	Cypress Lake XA	\$	13.97	-31%	39,074	674,185	34.17%
25	Casselberry	\$	14.17	-30%	20,427	694,612	35.20%
26	Fort Walton Beach XC	\$	14.52	-29%	4,397	699,009	35.43%
27	Cypress Lake XB	\$	15.00	-26%	11,462	710,471	36.01%
28	Orange City	\$	15.16	-26%	12,508	722,979	36.64%
29	Ocala XJ	\$	15.32	-25%	4,280	727,259	36.86%
30	North Fort Myers XA	\$	15.77	-23%	17,510	744,769	37.74%
31	Cape Coral	\$	15.80	-22%	32,017	776,786	39,37%
	Bonita Springs	\$	15.95	-22%	37,053	813,839	41.24%
	Sanibel-Captiva Islands	ŝ	16.46	-19%	11,985	825,824	41.85%
	West Kissimmee	\$	16.81	-17%	21,921	847,745	42.96%
	Kissimmee	\$	16.91	-17%	45,194	892,939	45.25%
	Windermere	\$	17.18	-16%	8,366	901,305	45.68%
	Ocala - Highlands	\$	17.19	-16%	6,079	907,384	45.99%
	Tallahassee - Perkins	\$	17.24	-15%	9,988	917,372	46.49%
	Eustis	\$	17.36	-15%	19,222	936,594	47.47%
	San Carlos Park	\$	17.72	-13%	11,117	947,711	48.03%
41	North Cape Coral	\$	18.32	-10%	26,879	974,590	49.39%
	Tallahassee - Blairstone	\$	18.57	-10%	38,740	1,013,330	51.35%
	Port Charlotte	\$	18.70	-8%	49,436	1,062,766	53.86%
43	Golden Gate	\$	18.77	-8%	27,808	1,090,574	55.27%
45		\$	18.83	-8%	14,890	1,105,464	56.02%
	Tavares Acopha	\$	18.91	-7%	32,934	1,138,398	57.69%
	Apopka Wortville	\$	19.16	-6%	881	1,139,279	57.74%
47		.⊅ \$		-6%	57,133	1,196,412	60.63%
48	Ocala XA	Φ	19.20	-0%	57,135	1,130,412	00.03%

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Sprint - Florida TELRIC Loop Cost by Wire Center

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			TELRIC	Wire Center			<u> </u>
		м	onthly Cost	Loop Cost to	Total Lines	Cumulative	Cumulative
Row	Wire Center		Per Loop	Statewide Avg	Served	Total Lines	% Total Lines
49	Tallahassee - Mabry	\$	19.46	-4%	24,780	1,221,192	61.89%
50	North Fort Myers XB	\$	19.62	-4%	17,413	1,238,605	62.77%
51	Naples South East	\$	19.80	-3%	34,521	1,273,126	64.52%
52	Winter Garden	\$	19.96	-2%	22,139	1,295,265	65.64%
53	Leesburg	\$	20.20	-1%	33,763	1,329,028	67.35%
54	Lady Lake	\$	20.23	-1%	17,477	1,346,505	68.24%
55	Deltona Lakes	\$	20.44	0%	13,559	1,360,064	68.93%
56	Sebring	\$	20.68	2%	28,424	1,388,488	70.37%
57	Ocala - Shady Road	\$	21.85	7%	28,400	1,416,888	71.81%
58	Silver Springs Shores	\$	22.03	8%	6,722	1,423,610	72.15%
59	Clermont	\$	22.34	10%	16,061	1,439,671	72.96%
60	Tallahassee - Thomasville	\$	22.63	11%	22,464	1,462,135	74.10%
61	Lehigh Acres	\$	22.64	11%	16,323	1,478,458	74.93%
62	East Fort Meyers	\$	23.00	13%	15,222	1,493,680	75.70%
63	Montverde .	\$	23.46	15%	1,600	1,495,280	75.78%
64	Valparaiso	\$	23.96	18%	12,454	1,507,734	76.41%
65	Beverly Hills	\$	24.15	19%	12,776	1,520,510	77.06%
66	Cape Haze	\$	24.29	19%	10,729	1,531,239	77.60%
67	Dade City	\$	24.87	22%	12,577	1,543,816	78.24%
68	Punta Gorda	\$	25.28	24%	26,012	1,569,828	79.56%
69	Mount Dora	\$	25.37	25%	15,807	1,585,635	80.36%
70	Crestview	\$	25.57	26%	15,527	1,601,162	81.15%
71	Crystal River	* * * * * * * * * * * * * * * * *	25.75	26%	15,203	1,616,365	81.92%
72	Lake Helen	\$	26.69	31%	1,974	1,618,339	82.02%
73	Clewiston	\$	27.05	33%	9,056	1,627,395	82.48%
74	Sea Grove Beach	\$	27.46	35%	4,551	1,631,946	82.71%
75	St. Cloud	\$	27.69	36%	20,097	1,652,043	83.72%
76	Homosassa Spgs	\$	27.93	37%	10,268	1,662,311	84.24%
77	Inverness	\$	28.06	38%	28,038	1,690,349	85.67%
78	Oklawaha	\$	28.73	41%	4,026	1,694,375	85.87%
79	Madison	\$	29.02	42%	4,624	1,698,999	86.10%
80	Pine Island		29.05	43%	8,750	1,707,749	86.55%
	Avon Park	\$	29.23	44%	11,541	1,719,290	87.13%
	Silver Springs	\$	29.40	44%	5,433	1,724,723	87.41%
83	Belleview	\$	30.56	50%	20,368	1,745,091	88.44%
84	Chassohowitza	\$	30.73	51%	3,876	1,748,967	88.64% 88.07%
85	Immokalee	e e	31.42 32.97	54% 62%	6,512 8,202	1,755,479 1,763,681	88.97% 89.38%
	Wildwood Moore Heaven	φ ¢	33.43	64%	2,710	1,766,391	89.52%
87 88	Arcadia	÷	34.01	67%	14,436	1,780,827	90.25%
00 89	Marianna	ę	34.58	70%	10,197	1,791,024	90.77%
	Lake Placid	ŝ	34.50	73%	12,613	1,803,637	91.41%
90 91	Okeechobee	ŝ	35.86	76%	22,897	1,826,534	92.57%
92	Bushnell	ŝ	36.33	78%	11,726	1,838,260	93.16%
92 93	Santa Rosa Beach	*****	36.51	79%	4,379	1,842,639	93.38%
	Alva	š	36.88	81%	1,560	1,844,199	93.46%
	Tallahassee - Woodville	\$	37.73	85%	4,458	1,848,657	93.69%
	Astor	\$	39.49	94%	1,440	1,850,097	93.76%
30		¥	00.70	V-170	VTP.		00.1070

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Sprint - Florida TELRIC Loop Cost by Wire Center

			TELRIC	Wire Center			
		M	onthly Cost	Loop Cost to	Total Lines	Cumulative	Cumulative
Row	Wire Center		Per Loop	Statewide Avg	Served	Total Lines	% Total Lines
97	Spring Lake	\$	39.85	96%	5,312	1,855,409	94.03%
98	Wauchula	\$	40.16	97%	7,190	1,862,599	94.40%
99	Starke	\$	40.80	100%	6,733	1,869,332	94.74%
100	San Antonio	\$	41.29	103%	3,456	1,872,788	94 .91%
101	Labelle	\$	41.46	104%	8,849	1,881,637	95.36%
102	Groveland	\$	41.98	106%	5,004	1,886,641	95.61%
103	Bowling Green	\$	42.28	108%	1,635	1,888,276	95.70%
104	Fort Meade	\$	43.06	111%	3,242	1,891,518	95,86%
105	Howey-In-The-Hills	\$	43.17	112%	1,612	1,893,130	95.94%
106	Forest	\$	43.34	113%	5,760	1,898,890	96.23%
107	Trilacoochee	\$	46.80	130%	3,692	1,902,582	96.42%
108	Crawfordville	\$	46.96	131%	6,263	1,908,845	96.74%
109	Everglades	* * * * * * * * * * * * * * * *	49,17	141%	1,665	1,910,510	96.82%
110	Salt Springs	\$	50.86	150%	1,595	1,912,105	96.90%
111	DeFuniak Springs	\$	51.15	151%	8,035	1,920,140	97.31%
112	Umatilla	\$	51.82	154%	7,817	1,927,957	97.71%
113	Sneads	\$	54.44	167%	1,796	1,929,753	97.80%
114	Williston	\$	55.75	174%	5,904	1,935,657	98 .10%
115	Grand Ridge	\$	61.01	200%	2,102	1,937,759	98.20%
116	Zolfo Springs	\$	61.93	204%	2,471	1,940,230	98.33%
117	Monticello	\$	63.90	214%	6,389	1,946,619	98.65%
118	St. Marks	\$	67,19	230%	589	1,947,208	98.68%
119	Freeport	\$	67.39	231%	2,780	1,949,988	98.82%
120	Bonifay	\$	68.11	234%	4,663	1,954,651	99.06%
121	Cottondale	\$	69.48	241%	1,314	1,955,965	99.13%
122	Lawtey	\$	75.46	270%	1,090	1,957,055	99.18%
123	Panacea	\$	76.90	278%	989	1,958,044	99.23%
124	Reynolds Hill	\$	78.30	284%	1,487	1,959,531	99.31%
125	Sopchoppy	\$	85.84	321%	1,049	1,960,580	99.36%
126	Malone	\$	90.16	343%	1,265	1,961,845	99.42%
127	Baker	\$ \$ \$ \$ \$ \$ \$	93.42	359%	2,484	1,964,329	99.55%
	Alford	\$	93,98	361%	1,510	1,965,839	99.63%
129	Kingsley Lake	\$	102.09	401%	343	1,966,182	99.64%
130	Greenville	\$	102.10	401%	1,286	1,967,468	99,71%
131	Ponce de Leon	\$	105.01	416%	1,177	1,968,645	99.77%
132	Kenansville	\$ \$ \$	106.98	425%	696	1,969,341	99.80%
133		\$	108.11	431%	1,002	1,970,343	99.86%
134		\$	109.35	437%	7 9 0	1,971,133	99.90%
135	Cherry Lake	\$	114.03	460%	1,240	1,972,373	99.96%
136	Greenwood	\$	141.35	594%	818	1,973,191	100.00%
	State Average	\$	20.37		1,973,191		

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Sprint - Florida TELRIC Loop Cost by Host Office - Tallahassee Exchange

			TELRIC	Wire Center	Wire Center	
		M	onthly Cost	Loop Cost to	Loop Cost to	Total Lines
Row	Host Office		Per Loop	Exchange Avg	Statewide Avg	Served
1	Tallahassee - Calhoun	\$	5.65	-60%	-72%	65,229
2	Tallahassee - FSU	\$	9.03	-36%	-56%	10,847
3	Tallahassee - Willis	\$	13.62	-4%	-33%	22,979
4	Tallahassee - Perkins	\$	17.24	22%	-15%	9,988
5	Tallahassee - Blairstone	\$	18.57	31%	-9%	38,740
6	Tallahassee - Mabry	\$	19.46	37%	-4%	24,780
7	Tallahassee - Thomasville	\$	22.63	60%	11%	22,464
8	Tallahassee - Woodville	\$	37.73	166%	85%	4,458
	Exchange Average	\$	14.19			199,485
	State Average	\$	20.37			

Sprint - Florida

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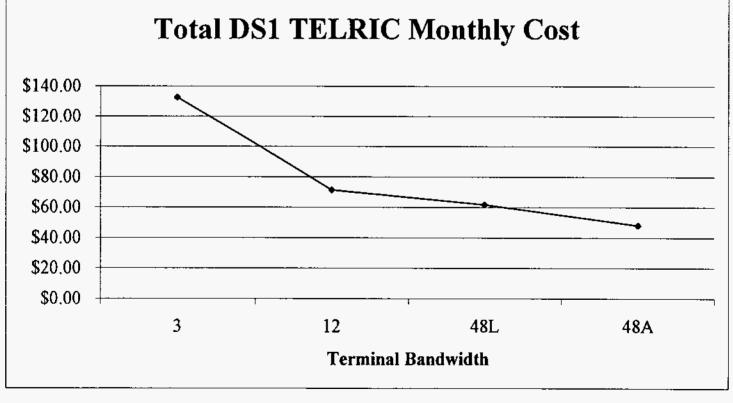
Local Switching TELRIC Cost by Host Office

		T	· · · · · · · · · · · · · · · · · · ·		Wire Center	i	Wire Center
		Total		Port	Port Cost to	Orig/Term	MOU Cost to
Row	Host Office	MOU	Lines	Cost	Statewide Avg	MOU Cost	Statewide Avg
1	Tallahassee - Calhoun	45,225,729	36,736	\$2.37	-0,9%	\$0.001830	-47.22%
2	Tallahassee - Blairstone	57,183,514	27,520	\$2.37	-0.9%	\$0.001832	-47.15%
3	Tallahassee - Mabry	44,858,374	24,960	\$2.37	-0.9%	\$0.002090	-39.72%
4	Lake Brantiey	68,952,635	50,721	\$2.37	-0.9%	\$0.002197	-36.64%
5	Ft. Myers	48,394,457	25,213	\$2.37	-0.9%	\$0.002235	-35.54%
6		88,921,873	67,049	\$2.37	-0.9%	\$0.002307	-33,48%
7	Tallahassee - Willis	36,053,207	18,560	\$2.37	-0.9%	\$0.002348	-32.28%
8	Cypress Lake	62,321,215	41,259	\$2.37	-0.9%	\$0,002389	-31.10%
9	Winter Park	69,606,656	45,116	\$2.37	-0.9%	\$0.002511	-27.58%
10	Goldenrod	74,178,005	57,292	\$2.37	-0,9%	\$0,002715	-21.71%
11	Tallahassee - Thomasville	26,071,058	11,520	\$2.37	-0.9%	\$0.002823	-18,58%
	Ft. Walton Beach	25,207,226	20,480	\$2.37	-0.9%	\$0.002861	-17.51%
13		89,883,004	90,046	\$2.37	-0.9%	\$0.002882	-16.89%
14	Naples Moorings	50,121,484	59,037	\$2.37	-0.9%	\$0.003511	1.26%
15	Leesburg	42,300,434	43,478	\$2.37	-0.9%	\$0.003616	4,28%
	Casselberry	29,700,137	41,710	\$2.37	-0.9%	\$0.003675	5.99%
17	Apopka	52,740,381	49,199	\$2.37	-0.9%	\$0.003715	7.13%
18	Orange City	32,192,327	28,547	\$2.37	-0.9%	\$0.003767	8.64%
	Tavares	18,177,032	22,770	\$2.37	-0.9%	\$0.003995	15.20%
		6,969,598	6,400	\$2.50	4.6%	\$0.004218	21,65%
20	Defuniak Springs	32,634,968	37,518	\$2.41	0.8%	\$0.004273	23.21%
21	North Naples Belleview	6,176,343	7,680	\$2.37	-0.9%	\$0.004334	24.98%
22			1,920	\$2.77	-0.5%	\$0.004376	26.21%
23	Ocala Deflections	1,916,525	31,243	\$2.37	-0.9%	\$0.004458	28.55%
24	Belleview	25,125,974	22,253	\$2.37	-0.9%	\$0.004703	35.63%
25	Dade City	17,321,304		\$2.37	-0.9%	\$0.004741	36.73%
26	West Kissimmee Tallahassee - Perkins	23,744,962	26,843 12,800	\$2.37	-0.9%	\$0,004768	37.51%
27		12,854,717		\$2.37	-0.9%	\$0.004775	37.72%
28	Lehigh Acres	16,261,791	19,765	\$2.57	-0.5%	\$0.004812	38.77%
29	Naples Moorings	4,346,799	5,120 6,400	\$2.52	12.2%	\$0.004812	38.92%
30		6,226,661				\$0.004872	40.50%
31	Valpraiso	21,903,141	16,640	\$2.43	1.6%	• • • •	43.29%
32	Monticello	9,655,624	6,016	\$2.52	5.5%	\$0,004969	43.56%
	Tavares	6,137,243	7,688	\$2.54	6.3%	\$0.004978	45.30%
34	Labelle	13,642,344	17,010	\$2.37	-0.9%	\$0.005001	
35	Beverly Hills	14,522,421	23,343	\$2.37	-0.9%	\$0.005027	44.96%
36	Shady Road	32,825,297	40,543	\$2.37	-0.9%	\$0.005027	44.96%
37	Maitland	17,734,410	23,422	\$2.37	-0.9%	\$0.005065	46.06%
38	Shalimar	11,173,809	9,600	\$2.39	-0.3%	\$0.005146	48.42%
39	Beverly Hills	4,777,972	7,680	\$2.37	-0.9%	\$0.005322	53.48%
	Labelie	7,186,090	8,960	\$2.56	6.9%	\$0.005362	54.63%
41		8,782,718	5,376	\$2.57	7.4%	\$0.005606	61,68%
42	Madison	5,349,402	5,120	\$2.59	8.2%	\$0.005723	65.05% 65.57%
	Clermont	16,570,048	20,841	\$2.37	-0.9%	\$0.005776	66.57%
44	North Ft. Myers	13,509,523	19,200	\$2.47	3.3%	\$0.005911	70.46%
45	Defuniak Springs	6,272,638	5,760	\$2.82	17.9%	\$0.005941	71.33%
	West Kissimmee	3,396,813	3,840	\$2.45	2.6%	\$0.006097	75.83%
47	Dade City	3,985,309	5,120	\$2.74	14.7%	\$0.006505	87.61%
48	Sebring	22,316,836	49,687	\$2.37	-0.9%	\$0.006506	87.62%
49	Destin	13,641,520	14,077	\$2.37	-0.9%	\$0.006881	98.43%
	Clermont	2,035,378	2,560	\$2.62	9.6%	\$0.006932	99.90%
51	Cape Haze	12,145,776	15,144	\$2.37	-0.9%	\$0.007308	110.75%
	Sebring	2,874,550	6,400	\$2.66	11.0%	\$0.007749	123.48%
53	Destin	4,713,530	4,864	\$2.64	10.6%	\$0.008330	140.23%
54	Madison	3,477,112	3,328	\$3.19	33.4%	\$0.009076	161.75%
	Statewide Average	1,374,297,894	1,261,374	\$2.39		\$0.003468	

Sprint - Florida Local Switching TELRIC Cost by Wire Center - Tallahassee Exchange

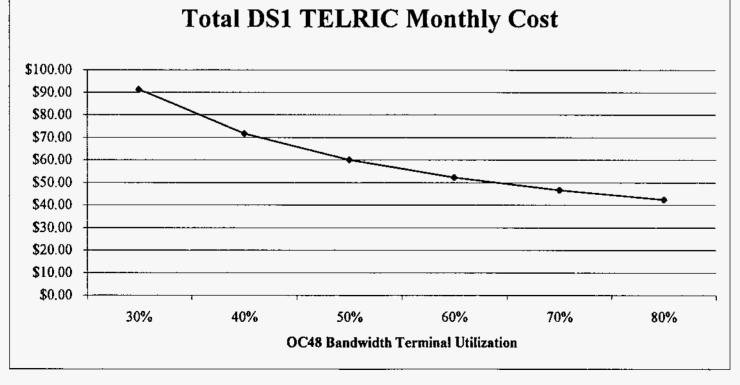
					Wire Center		Wire Center	Wire Center
		Total		Port	Port Cost to	Orig/Term	MOU Cost to	MOU Cost to
Row	Wire Center	MOU	Lines	Cost	Statewide Avg	MOU Cost	Exchange Avg	Statewide Avg
1	Taliahassee - Calhoun	45,225,729	36,736	\$2.37	0.0%	\$0.001830	-18.80%	-47.22%
2	Tallahassee - Blairstone	57,183,514	27,520	\$2.37	0.0%	\$0.001832	-18.69%	-47.15%
3	Taliahassee - Mabry	44,858,374	24,960	\$2.37	0.0%	\$0.002090	-7.25%	-39.72%
4	Tallahassee - Willis	36,053,207	18,560	\$2.37	0.0%	\$0.002348	4.20%	-32.28%
5	Tallahassee - Thomasville	26,071,058	11,520	\$2.37	0.0%	\$0.002823	25.27%	-18.58%
6	Tallahassee - Perkins	12,854,717	12,800	\$2.37	0.0%	\$0.004768	111.56%	37.51%
	Exchange Average	222,246,599	132,096	\$2,37		\$0.002254		
	Excitative Atologe	***'**0'033	132,030	φ2.07		40.002204		
	Statewide Average	1,374,297,894	1,261,374	\$2.39		\$0.003468		

					Floi	rida					SPRINT			
	Docket 990 Sprint - Transport (TELRIC) Cost Model - DS1 Summary Exhibit K													
Sensitivity Analysis														
A	B	С	D	E	F	G	н	1	J	к	L			
Ring Name	Type Term	# of Terminals	Ring Type	Number of DS1 Terminations	Terminal Util. Factor	Monthly Single Termination Cost	Total Route Miles	Monthly Total Transit Cost	Single Termination Cost MOU	Transit Cost MOU	DS1 Cost			
AAAI-BBBI	3	3	S	2	0.67		30	\$91.23	0.000096	0.000422	\$132.51			
AAA2-BBB2	12	3	S	2	0.67		30	\$22.81	0.000113	0.000106	\$71.47			
AAA3-BBB3	48 L	3	S	2	0.67		30	\$11.40	0.000117	0.000053	\$ 61, 8 6			
AAA4-BBB4	48A	3	5	2	0.67		30	\$6.25	0.000097	0.000029	\$48.09			

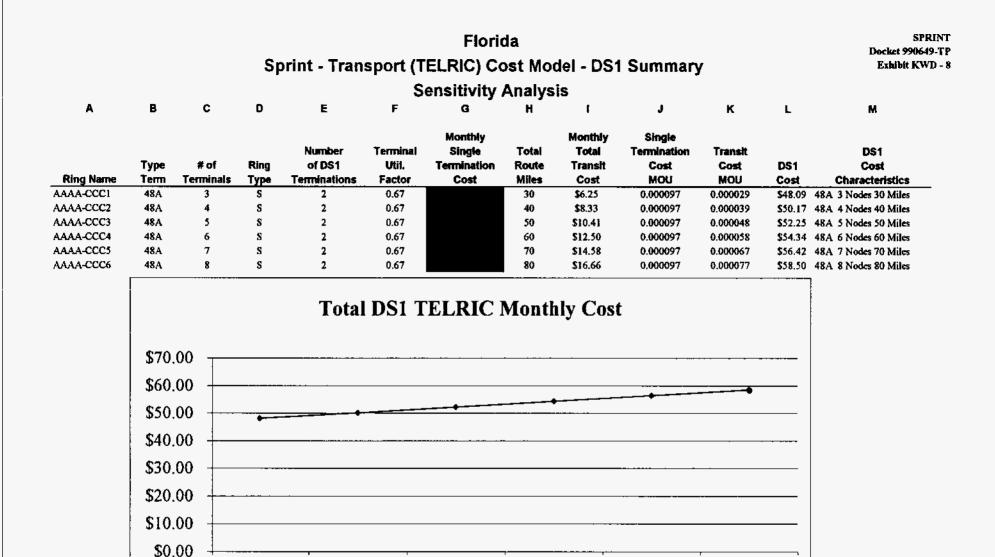


Sprint Docket No. 990649-TP Exhibit KWD-6

SPRIN Docket 990649-T Exhibit KWD -		Florida											
		iry	Summa	I - DS1	ost Mode	ELRIC) C	ansport (Ti	t - Tra	Sprin				
					Analysis	ensitivity	Se						
L	к	J	I	Н	G	F	E	D	С	в	A		
	Transit	Single Termination	Monthly Total	Total	Monthly Single	Terminal	Number						
DS1	Cost	Cost	Transit	Route	Termination	Utilization	of DS1	Ring	# of	Туре			
Cost	MOU	MOU	Cost	Miles	Cost	Factor	Terminations	Туре	Terminals	Term	Ring Name		
\$91.23	0.000065	0.000179	\$13.95	30		30%	2	S	3	48A	AA7-BBB7		
\$71.71	0.000048	0.000142	\$10.47	30		40%	2	S	3	48A	AA8-BBB8		
\$59.97	0.000039	0.000119	\$8,37	30		50%	2	S	3	48A	AA9-BBB9		
\$52 .16	0.000032	0.000105	\$6.98	30		60%	2	S	3	48A	AAx-BBBx		
\$ 46.58	0.000028	0.000094	\$5.98	30		70%	2	S	3	48A	AAy-BBBy		
\$42.39	0.000024	0.000086	\$5.23	30		80%	2	S	3	48A	AAz-BBBz		



Sprint Docket No 990649-TP Exhibit KWD-7



Sprint Restricted - Proprietary Information

Ring Characteristics

48.4 6 Nodes 60 Miles

484 8 Nodes 80 Miles

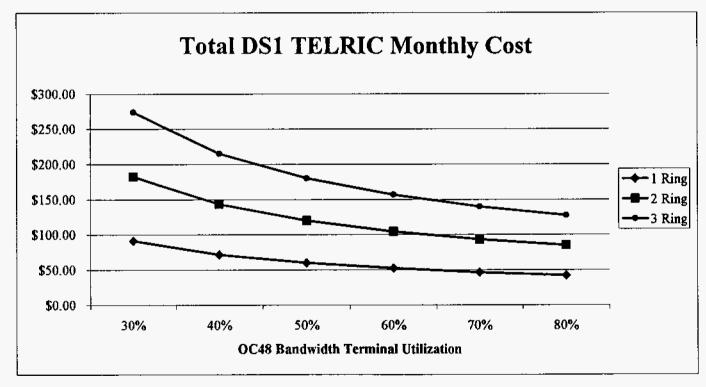
48.4 7 Nodes 70 Miles

484 5 Nodes 50 Miles

48.4 4 Nodes 40 Miles

48A 3 Nodes 30 Miles

	Florida Sprint - Transport (TELRIC) Cost Model - DS1 Summary													
Sensitivity Analysis														
A	В	С	D	E	F	G	н	I	J	к	L	М	N	
Ring Name	Type Term	# of Terminals	Ring Type	Number of DS1 Terminations	Terminal Utilization Factor	Monthly Single Termination Cost	Total Route Miles	Monthly Totai Transit Cost	Single Termination Cost MOU	Transit Cost MOU	1 Ring D\$1 Cost	2 Ring DS1 Cost	3 Ring DS1 Cost	
AAA7-BBB7	48A	3	S	2	30%		30	\$13.95	0.000179	0.000065	\$91.23	\$182.46	\$273.69	
AAA8-BBB8	48A	3	S	2	40%		30	\$10.47	0.000142	0.000048	\$71.71	\$143.42	\$215.13	
AAA9-BBB9	48A	3	S	2	50%		30	\$8.37	0.000119	0.000039	\$59.97	\$119.94	\$179.91	
AAAx-BBBx	48A	3	S	2	60%		30	\$6.98	0.000105	0.000032	\$52.16	\$104.32	\$156.48	
AAAy-BBBy	48A	3	S	2	70%		30	\$5.98	0.000094	0.000028	\$46.58	\$93.16	\$139.74	
AAAz-BBBz	48A	3	S	2	80%		30	\$5.23	0.000086	0.000024	\$42.39	\$84.78	\$127.17	



Sprint Docket No. 990649-TP Exhibit KWD-9