ORIGINAL

Sprint

Charles J. Rehwinkel
General Attorney

VIA HAND DELIVERY

August 3, 1998

Ms. Blanca S. Bayo, Director
Division of Records and Reporting
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Re: Docket No. 980696-TP

Dear Ms. Bayo:

Enclosed for filing in the above docket are the original and fifteen (15) copies of Sprint-Florida, Incorporated's Prepared Direct Testimonies of Brian K. Staihr and Kent W. Dickerson. A portion of Exhibit KWD-1 is confidential and submitted under seal by a separate filing. Also enclosed is Exhibit BKS-1 consisting of a CD-ROM containing the Benchmark Cost Proxy Model and supporting documentation. Only one copy of the CD-ROM is being filed. Additional copies can be supplied.

Also submitted for filing is a copy of Sprint's Request for Confidential Classification for Information Included in the Testimony Exhibit of Kent Dickerson.

ACK ____
AFA ✓ Service of the above has been made as indicated in the attached certificate of service.
APP ____
CAF ____ Please acknowledge receipt and filing of the above by stamping the duplicate copy of this
CMU Dowds letter and returning the same to this writer.
CTR ____ Thank you for your assistance in this matter.
EAG ____
LEG 2 Sincerely,
LIN 5th
OPC ____
RCH ____ Charles J. Rehwinkel
SEC 1 *CD given to L. King 8/6/98
WAS ____ Enclosures
OTH ____ cc: Parties of Record

Test. of Stahr Test. of Dickerson Request Confidential Redacted Exhibit

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DOCUMENT NUMBER-DATE 08174 AUG-3 98 FPSC-RECORDS/REPORTING

CERTIFICATE OF SERVICE
DOCKET NO. 980696-TP

I HEREBY CERTIFY that a true and correct copy of the foregoing was served by U.S. Mail this 3rd day of August, 1998 to the following:

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ORIGINAL

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY OF KENT W. DICKERSON

ON BEHALF OF SPRINT-FLORIDA, INCORPORATED

DOCKET 980696-TP

AUGUST 3, 1998

Q. Please state your name, business address, employer and current position.

A. My name is Kent W. Dickerson. My business address is 4200 Shawnee Mission Parkway, Fairway, Kansas 66205. I am presently employed as Director Cost Support for Sprint Management Company. I am testifying on behalf of Sprint - Florida (hereafter also referred to as "Sprint," or the "Company".)

Q. Please describe your educational background and business experience.

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

Since December 1994, I have set-up and managed a work group, which performs cost of service studies for retail and wholesale local network services. Over the last 3 years I have been charged with developing and implementing cost study methods related to the evolving Total Service Long Run Incremental Cost ("TSLRIC") and Total Element Long Run Incremental Cost ("TELRIC") methodologies. In addition, I am responsible for filing written comments, serving on industry work groups, and participating in technical conferences related to TSLRIC/TELRIC costing methodology and the filing of studies within the individual 19 states that comprise

Sprint's Local Telephone Division. I have testified in Wyoming, Kansas, Nevada, North Carolina, Texas and Florida regarding TSLRIC/TELRIC cost matters.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony is to respond to the portion of the Commission's issues list related to the determination of Florida-specific model inputs. In addition my testimony supports the Benchmark Cost Proxy Model 3.1 ("BCPM 3.1 or "BCPM"), (as sponsored by Dr. Brian K. Staihr and filed in this docket) outputs for Sprint's Florida serving territories as calculated using inputs specific to Sprint's Florida operations. I am sponsoring a summary of the results of the study along with the study inputs. These are provided as part of my testimony in Exhibit KWD-1.

Q. The Commission's issue 4 requests information on the appropriate input values to the cost proxy model used for determining the cost of basic local services. What are Sprint's recommendations for the appropriate input values for its universal service cost study submitted in this docket?

A. Sprint's cost study inputs were developed to produce an appraisal of the probable future costs of providing basic local telecommunications services in the individual Florida geographic areas currently served by Sprint. Since the primary purpose of the cost model is to identify the cost of providing basic local service to a specific geographic area, cost inputs were developed from Sprint's operational experience in Florida wherever possible. When this "company specific" information was not available, industry average cost information developed by the BCPM sponsors was

used. This industry average information, "default" inputs, was used only if believed to be consistent with Sprint's experience in providing local telephone service in Florida.

Q. How should inputs be developed for conducting a forward looking economic cost study?

A. The inputs should reflect the costs that an efficient provider of telecommunications service would most likely experience in providing basic local services in Florida.

Q. Does Sprint recommend the use of National default inputs in the calculation of the forward looking cost of Basic Local Service in Florida?

A. No. Many of the factors that determine the cost of providing basic service are specific to customer location or service area and the company providing the service. The BCPM estimates cost in a two stage process: The model determines the cost of constructing the telephone network, and then determines the cost of *operating* it. In constructing the network, the model takes into account natural characteristics of the area served such as topography, geology and geography. When the model places buried telephone cable, it considers the specific soil type that is encountered. When the model places aerial cable, it considers the terrain and slope of the area that is covered. It takes into account the dispersion of actual customer locations and the amount of land area that must be covered in order to reach all customers in the market. These are all geographic factors that are obviously location-specific. In addition, the BCPM can also accommodate company specific inputs which reflect

location-specific factors that can affect plant costs e.g. local zoning codes impacting construction techniques or use of aerial plant.

Q. You've mentioned the cost of constructing the network. Should the inputs that determine the cost of operating the network be Florida-specific as well?

A. In many cases, yes. Operating expense data that are directly related to plant investment might certainly vary from location to location because these expenses are often maintenance-related. There may be location-specific factors that affect maintenance costs differently in Florida than, say, in Vermont. For example, average maintenance expenses for aerial plant might be significantly greater in a hurricane-prone state such as Florida, than they would be in a state not known for its tropical storms such as Vermont. Regional wage differences can also create significant differences in operating costs among states.

Q. Should the model reflect a standard set of inputs for all Florida companies using BCPM 3.1?

A. No. The primary purpose of the model is to develop deaveraged cost estimates by geographic area. If a standard set of inputs were included for all companies, the model's precision in developing cost by location would be diminished.

Q. What Model input issues has the Commission identified?

A. In its issues list (issue 4) for this docket, the Commission identified a series of input

values and asked for information on the appropriate values for these input items. The remainder of my testimony will provide Sprint's methodology for developing its input values for each of the items identified by the Commission. The issues identified in the Commission's issue 4 are as follows:

Depreciation rates.

Cost of money.

Tax rates.

Supporting structures.

Structure sharing factors.

Fill factors.

Manholes.

Fiber cable costs.

Copper cable costs.

Drops.

Network interface devices.

Outside plant mix.

Digital loop carrier costs.

Terminal costs.

Switching cost and associated variables.

Traffic data.

Signaling system costs.

Transport system costs and associated variables.

Expenses.

Other inputs.

Q. Please describe why the approach used in developing Sprint-Florida's proposed cost inputs provides the best data for estimating the forward looking cost of basic local service within Sprint - Florida's serving area.

A. Sprint - Florida's inputs reflect the realities of providing service within Sprint - Florida's operating territory for the following reasons:

Sprint's inputs reflect the contractor prices currently in effect for 1998 for constructing plant within Sprint's Florida serving area.

Sprint's inputs reflect the actual construction techniques (plow, trench and backfill, cut and restore asphalt, bore cable etc.) utilized in placing plant in Sprint - Florida's serving area for the very recent period of 1997. The same terrain, local building codes, and infrastructure issues (density) encountered in placing these recently installed facilities in Sprint - Florida's serving area can reasonably be expected to continue into the future.

Sprint's recent experience with actual purchases and installations of telephone plant equipment provides the best information for predicting the forward looking installed costs within Sprint - Florida's serving area. These inputs are based on current vendor prices for material and equipment purchases and current Sprint - Florida specific contract and company labor costs for engineering and installation.

Clearly the recent factual and objective data provides the best basis for predicting the forward-looking cost of constructing telephone plant in the very same area from

which the data was drawn (i.e., Sprint - Florida's serving area).

Q. What depreciation rates are reflected in Sprint's study?

A. Sprint's filing reflects forward looking economic depreciation lives consistent with the concept of building a network composed of forward looking least cost technologies. The depreciation lives for the critical network components of Digital Switching, Digital Circuit Equipment and all Cable & Wire Facilities are based on a study performed by Technology Futures, Inc.

Q. What is the cost of capital reflected in Sprint's study?

A. As provided in the FCC's Order, the FCC authorized rate of return of 11.25% was used in Sprint's study.

Q. What tax rates are reflected in Sprint's cost study filing?

A. Actual tax rates for Florida were utilized as inputs including the state tax rate, ad valorem tax, and Public Service Commission regulatory assessment fee.

Q. Which costs fall into the category of "supporting structures"?

A. Sprint has interpreted the Commission's issue 4d, "supporting structures" to refer to those inputs associated with the installation costs for placing conduit, the cost of creating trenches for buried cable, and the installation cost for poles. These

costs are included in the Model's structure input tables.

Q. How were Sprint's proposed values for these inputs developed?

A. The BCPM inputs for these functions were based on the specific conditions encountered in the Company's Florida service area. Costs for buried and underground structures were developed based on the contractor prices currently in effect for 1998 within Sprint's Florida serving area. The construction activity percentages, also contained in the structure tables, were based upon an analysis of the total 1997 actual contractor jobs for construction of feeder and distribution routes within Sprint's Florida serving area.

The use of current 1997 and 1998 data, barring any known reason to change, is clearly the best predictor of the future construction costs in the very same geographic market from which the data was gathered.

Q. Would you please describe the structure sharing input?

A. Structure sharing, which impacts the percent of costs assigned to telephone, is based upon an assessment of current and projected opportunities to have other entities share the cost of the support structure. For example, the percent assigned to telephone is set at 30 percent for aerial feeder to reflect existing and expected pole sharing and pole attachment agreements. On the other hand, the percent assigned to telephone for buried and underground (conduit and manhole) feeder structures is set at 95 percent for most grids to reflect the fact that sharing with

other entities, such as power companies and cable companies, is limited. There are work coordination, safety, and available space considerations which make significant sharing of buried and underground construction costs unlikely.

Q. Could you please describe the fill factor inputs?

A. Sprint's cost study calculates cable fill factor inputs separately for feeder and distribution cables.

Feeder routes, as the name implies, feed several distribution routes. Feeder routes normally are constructed so that capacity can be added at a relatively lower cost at some future date. Sprint calculated actual feeder fill based upon working pairs (cable pairs in service) divided by total pairs available as tracked in the Customer Loop Assignment System, Sprint's internal system for maintaining cable pair inventory. This data reflects a real world balance between inventory carrying costs (non-working cable pairs) against the cost of construction for adding additional cable pairs at a later date. These same economics are expected to continue into the future, thus these cable fill input factors were used to develop the Florida specific cost results.

Distribution cable contrasts with feeder cable in that it serves individual customer locations. The Company must anticipate individual customer's line demand in order to provide service when requested and to avoid costly construction to add cable pairs at a later date. The distribution cable sizing factor input of 100% works in concert with the related model input assumption of two pairs per

household to achieve a reasonable overall distribution cable fill. Generally these model inputs result in distribution cable fills ranging from approximately 40% to 50%.

Q. How did Sprint develop its input for manhole costs?

A. The costs for manholes were based on Sprint's current vendor costs and recent actual installation costs.

Q. How were the model's loop cost inputs for the fiber and copper cable material costs developed?

A. The inputs for cable costs were developed separately for copper and fiber cable and include labor and material costs. Copper cable inputs were based on Sprint's current material prices and Florida specific company and contractor labor costs prices for engineering and installation. Fiber cable costs were developed in the same manner.

Q. How were the cost inputs for the feeder/distribution cable interface devices and drop cable, terminals, and network interface devices estimated?

A. The cost inputs for these items of outside plant are included in the Model's loop cost input tables and were developed based on Sprint's actual current vendor material prices and specific estimates for installation.

Q. Please describe the cable plant mix inputs?

A. The cable plant mix inputs are developed separately for copper feeder and distribution and fiber feeder. The percentages of cable facilities placed in either buried, underground or aerial locations were based on an analysis of Sprint's facilities in Florida adjusted to reflect a forward-looking trend for greater use of buried copper cable and greater use of underground fiber cable.

Q. How were the cost inputs associated with digital loop carrier systems determined?

A. The costs for digital loop carrier systems (DLC) were based on Sprint's current vendor costs and actual installation costs within its Florida serving area. The DLC model costs reflect Sprint's use of forward looking Next Generation Digital Loop Carrier Systems (NGDLCs) which can support a wide range of services from a single device, as opposed to one device providing Plain Old Telephone Service (POTS), and a separate device providing non-switched special services. Sprint's NGDLC model configuration include costs only to support the level of basic service specified by the FCC, but has the flexibility to support additional services with incremental investment additions which may be required to meet individual demands for advanced services. Sprint uses a low density NGDLC for subscriber applications up to 240 lines, and a high-density NGDLC for applications up to 2016 lines. The BCPM inputs reflect the appropriate levels of investment for the corresponding line demand and resulting modeled DLC system size.

Q. Please identify the inputs necessary to develop central office switching equipment costs?

A. The inputs included in BCPM related to the development of switching costs are included in the SW (switching) State Default Inputs Table, the Signaling Investments Table, the Switching-Coefficient Input Table, the Global Inputs Table, and the SW Discount Factor Table, the Audited LEC Switching Model (ALSM) and the Switch User Data File These tables include data specifying the calling characteristics of Sprint's customers in Florida and financial information necessary to determine the cost of switching equipment used in providing local telephone service in Florida. The information included in these tables is used by the model to determine the amount of switching investment required to provide the level of local service specified by the performance parameters in the tables. The model also uses the information included in these tables to determine that portion switching equipment costs that are required to provide the basic local service.

Q. How were the forward looking Sprint Specific inputs for the SW State Default Input table developed?

A. The company specific inputs included in the SW State Default Input Table are the 5ESS and DMS share inputs. The remaining inputs in the table are default values that are believed to be representative of Sprint operations in Florida. Additional company specific inputs contained in the Audited LEC Switching Model (ALSM) and the switch user data File include the following:

Minimum Investment per line

Getting Started Investment

Line CCS Investment and Trunk CCS Investment

SS7 Investment

Umbilical CCS investment

Engineered Call per line and CCS per line

Line/Trunk Ratio

Percent Fill

Q. How were the inputs to the Signaling Investment, Switching Coefficient, and Global Input Tables developed?

A. The inputs for these tables are default values that are representative of Sprint's operations in Florida.

Q. How were the inputs for the SW Discount Factor table developed?

A. The company specific inputs included in this table are the current discount rates applicable to new switching equipment purchases for Sprint - Florida and the distribution of access lines by switch equipment type.

Q. How were the inputs used for determining the investment in interoffice transport introduced into the Model?

A. From input parameters included in the Transport Input Table, the Equipment Price Table and the Ring Size Table, the BCPM 3.1 develops the interoffice transport facilities investment necessary to provide basic local services.

Q. How were the inputs developed for the Transport Input Table?

A. With limited exceptions the inputs for the Transport Input Table were developed from data relating to Sprint's Florida operations. The inputs for the percentage of fiber optic cable installed in aerial, buried and underground locations were derived from data contained in the mechanized plant in place (MPIP) engineering databases, adjusted to reflect a forward-looking trend of increased underground fiber plant. The Miscellaneous Equipment and Power Factor was derived based on the very recent 1997 ARMIS Report data.

The air-to-route mile factor was developed by comparing air miles calculated using V&H coordinates to actual route miles for a sample of routes.. The sample included over 130 local and EAS routes in all areas of the Company's service territory. The sheath sharing factor was developed from engineering databases of route-specific fiber facilities.

The EAS% factor was developed from 1997 usage data. Finally the BCPM default values for Line to Trunk ratio factors were determined to be representative of Sprint - Florida's forward-looking service quality standards and thus were utilized in Sprint's filing.

Q. How were the inputs for the Equipment Price Table developed?

A. The inputs for the Equipment Price Table specify equipment and installation prices for circuit equipment used in providing interoffice facilities. The material prices included in the table reflect vendor discounted prices, Florida sales tax, and Florida specific engineering and labor costs.

Q. How were the inputs for the Ring Size Table developed ?

A. The Ring Size Table specifies the parameters for determining the capacity of the fiber optic ring facilities used to provide interoffice communications. The inputs included in this table are consistent with current engineering standards employed in sizing interoffice fiber optic ring facilities in Florida.

Q. How were operating expense estimates included in the Model?

A. Operating expenses are included in the model on a per line basis for administrative and retailing expenses not associated with specific network facilities. Operating expenses associated with network facilities were included as a percentage of investment in network facilities. Both of these estimates were derived from the actual operating expenses Sprint experienced in Florida during 1997. These operating expense ratios, when applied against the BCPM forward looking investment levels, provide a reasonable estimate of the forward looking expenses associated with basic local service.

Q. What other inputs not specified in the Commission's Issue 4 were included in Sprint's universal service cost study?

A. Other significant inputs to Sprint's universal service cost study were pole costs, pole and manhole spacing and Sprint's actual wire center line counts.

Q. What is the basis for Sprint's pole cost inputs?

A. The input for pole material cost was calculated as the sum of the bare material cost for a standard pole from Sprint's invoiced pole cost, plus material and overhead loadings. Labor associated with placing the pole consists of the contract unit cost. These assumptions reflect Sprint's actual experience in Florida. Again these recent experiences provide the best basis for estimating the forward looking costs of poles under these same market conditions.

Costs for related anchors and guys, including material, labor and overheads, were based on Sprint's actual experience in the Florida market.

Q. How did Sprint develop its inputs for pole and manhole spacing?

A. The inputs for both pole and manhole spacing reflect Sprint's current engineering design and placement practices for the different density zones. The design for manhole installation reflects the use of manholes to provide fiber feeder as well as copper distribution requiring access points for drop installations.

Q. Do Sprint's BCPM wire center line count inputs reflect the actual wire center line counts for Sprint's local service operations in Florida?

A. Yes, actual wire center line counts for each Sprint company were included in the model.

Q. Are the inputs used by Sprint reasonable and do they reflect "real-world" telecommunications engineering?

A. Yes, the inputs are reasonable and represent "real-world" telecommunications engineering. Since most of the inputs are based on Sprint's current real world experience in providing local service in Florida, the inputs reflect practical experience, and the reality based forward-looking cost characteristics of the geographic territory that must be served.

Q. Has Sprint conducted a cost study using BCPM 3.1 to determine the forward looking economic cost of basic local service that should be supported by a universal service funding mechanism?

A. Yes, Sprint conducted a forward looking economic cost study using the BCPM 3.1 and the Sprint - Florida specific inputs described in my testimony.

Q. Does this conclude your testimony?

A. Yes.