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USWEST

John L. Traylor
Senior Attorney

September 15, 1997

William F. Caton
Secretary
Federal Communications Commission
Room 222
1919 M Street, N.W.
Washington, D.C. 20554

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SEP 15 1997

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

re: CC Dockets Nos. 96-45 and 97-160

Dear Mr. Caton:

BellSouth Corporation, BellSouth Telecommunications, Inc., U S WEST, Inc. and the Sprint Local Telephone Companies ("Joint Sponsors") submit this letter in response to the "Guidance to Proponents of Cost Models in Universal Service Proceeding: Switching, Interoffice Trunking, Signaling, and Local Transport Investment," DA 97-1912, released September 3, 1997 in the above-referenced dockets.

Sincerely,


John L. Traylor

c: Chuck Keller
Universal Service Branch

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Sprint Local Telephone Companies

CONFORMITY OF BCPM TO THE PUBLIC NOTICE

INTRODUCTION AND DELIVERY SCHEDULE

The Benchmark Cost Proxy Model ("BCPM") sponsors are pleased to provide this letter of conformity with the platform guidelines defined in the Bureau's Public Notice, DA 97-1912, released September 3, 1997. We have already put on the public record our "beta" versions of the Transport and Signaling Cost Proxy Models. As we will explain in detail, these "beta" Signaling and Transport modules already address most of the Commission Staff's platform design issues. In regard to switching, we are anticipating the release of a "beta" stand-alone version of our Switching Module by early October. This module should account for all of the switching-related platform design issues in the Public Notice, as listed below. The BCPM sponsors are also planning on an end of October/early November release of the BCPM that will integrate the new Transport, Signaling and Switching modules. Any currently outstanding platform design issues in the Signaling, Transport, or the planned Switching modules should be addressed in this next major release.

I. SWITCHING

A. Mix Of Host, Stand-Alone, And Remote Switches

Platform Issue 1

"The Bureau recommends that the models permit individual switches to be identified as host, remote, or stand-alone."

Response 1

We agree that separate identification of host, remote, and stand-alone switches will produce a more accurate identification of wire-center costs.

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Platform Issue 2

“The models should . . . be capable of processing, as inputs, information identifying each individual switch as a host, remote, or stand-alone.”

Response 2

BCPM does so, and will select the appropriate switch curve based on this input. BCPM will be supplied with multiple regression coefficient tables that will generate switch investment costs by line port and usage categories, based on wire center level inputs such as the number of lines. BCPM will select the appropriate coefficient table for each wire center based on that wire center's identification as host, remote, or stand-alone. BCPM will be supplied with a wire center database which is common to several modules. An input development process will tag each wire center as host, remote, or stand-alone based on a data field used for remotes, that identifies the host office for each remote.

Platform Issue 3

“The Bureau recommends that the models be capable of accepting switch classification information from either a separate database or a software module to be developed in the future.”

Response 3

The BCPM Switch module can accept data from either source. BCPM can be provided with an override table that replaces the identification from the input development process described in Response 2.

B. Switch Costs

Platform Issue 4

“...the Bureau recommends that the components of the models that estimate switching investment costs employ separate cost curves for host, remote, and stand-alone switches. This flexibility will allow the Commission to prescribe inputs for switching costs according to switch type. Actual cost curves for host, remote, and stand-alone switches will be determined in the input-selection stage of this proceeding.”

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Response 4

As mentioned in Response 1, we shall create separate switch curves for the three types of switches. BCPM developers had previously decided to treat the switch curve as an input to the actual model, with detailed documentation to be developed separately. Moreover, BCPM includes an additional layer of complexity by addressing other drivers of cost differences in switches due to differences in switch type. The switch module software will be specifically designed to accept these switch curves. It may not be possible to incorporate switch cost curves from other sources without major modification to the software and its cost methodology.

Platform Issue 5

“The Bureau believes that it is important to allocate costs between host switches and remote switches so that the efficiencies generated by the use of host-remote arrangements are shared by all users in the wire centers benefiting from such arrangements.” “The Bureau believes . . . that this cost savings should be allocated among all of the wire centers covered by any host-remote arrangement.”

Response 5

We intend to implement cost methods that are consistent with the sharing of costs between the host and its attendant remote switches to properly reflect the efficiencies of such arrangements. This entails determining the additional costs incurred at the host site to accommodate remote switches off that host and apportioning that incremental cost among the remotes associated with that host-remote arrangement.

Platform Issue 6

“We also encourage the proponents to configure their models to be able to accept individual switch cost calculations that are tailored to the specific characteristics of a particular switch, and are generated by a software module to be developed in the future.”

Response 6

The BCPM Switch module provides for direct input of locally-developed switch investments from any appropriate source, should a separate software module be developed in the future. These investments can be input for individual switches, as

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available. The BCPM user is provided an override table in which to input these switch-specific investments.

C. Capacity Constraints

Platform Issue 7

“ . . . the Bureau recommends that the models’ algorithms for determining switch size should include switch capacity constraints based on (1) number of lines; (2) number of busy-hour call attempts; and (3) busy-hour traffic . . . ” “The models should be capable of determining whether the busy-hour call attempt constraint has been reached by multiplying a value, specified by the model user, for the number of call attempts per busy hour by the number of business and residential lines in the wire center.” “ . . . the models should be able to determine whether the busy hour traffic constraint has been reached . . . ”

Response 7

The BCPM Switch module will test the values for each one of the capacity constraints for each wire center against the predetermined constraints for the type of switch installed at that wire center. If any capacity constraints are exceeded, BCPM will insert additional switches and repeat the test until no capacity constraints are exceeded. BCPM will be supplied with default values for each of the constraints and the traffic and usage characteristics.

Platform Issue 8

“The models should be capable of accepting different inputs for business and residential lines with respect to each of the latter two constraints [busy hour call attempts and busy hour traffic].”

Response 8

The BCPM Switch module will accept different inputs for business and residential lines for busy hour call attempts and busy hour traffic.

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Platform Issue 9

“We anticipate that the line count limitations chosen as inputs will take into account the percentage of lines that must be reserved for additional demand and administrative activities.”

Response 9

We agree. Administrative fill will be considered in generation of the switch investment data points used for the switch curve.

D. Percentage Of Switch Assigned To Port And To Provision Of Universal Service

Platform Issue 10

“ . . . all of the line-side port costs and a percentage of usage costs should be assigned to the cost of providing the supported services.” “The models should accommodate this approach to identifying the switch costs that are attributable to providing supported services.”

Response 10

The switch curve development process will provide a sound identification of the portions of the switch attributable to line ports and usage based upon the Audited LEC Switching Model (“ALSM”) output. The ALSM process for apportionment of usage costs to supported services may necessarily require data which is not publicly available. We believe that there is a tradeoff between model accuracy and data requirements for determining the portion of usage costs attributable to supported services. Accurate determination of these costs requires the use of vendor-specific switch architecture modeling and data inputs such as the number of processor milliseconds per call. Without such data it is not possible, for example, to calculate the portion of the switch investment that is attributable to vertical services and features.

Platform Issue 11

“ . . . trunk port costs should be included when calculating usage costs.”

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Response 11

We shall include an appropriate portion of trunk port costs in the usage costs to reflect interoffice Extended Area Service (EAS) calls that are a component of basic service.

II. INTEROFFICE TRUNKING, SIGNALING, AND LOCAL TANDEM INVESTMENT

A. Design Of The Interoffice Network

Platform Issue 12

"The models' interoffice modules should therefore be capable of accommodating interoffice facilities that will successfully interconnect the switches as assigned by the switching modules." ". . . this type of switch identification [host, remote, and stand-alone] requires that the interoffice network be designed to account for individual switches' identity as a host, remote, or stand-alone switch."

Response 12

We agree. Our interoffice transport and switching module currently under development will conform with this item, as demonstrated in our joint comments of BellSouth Corporation, BellSouth Telecommunications, Inc., U S WEST, Inc., Sprint Local Telephone Companies, filed August 8, 1997 ("Joint Comments"). Attached to the Joint Comments was a narrative describing our new interoffice transport enhancements to BCPM.

The Transport Cost Proxy Model ("TCPM") is a new enhanced transport module that develops forward-looking transport cost utilizing SONET technology. TCPM can determine the Total Element Long Run Incremental Cost ("TELRIC") of host-remote and host-tandem interoffice transport. TCPM utilizes data regarding remotes and the corresponding host office that the respective remote homes off of, and data on hosts and the corresponding tandems that the respective host switch homes off of. **This data enables TCPM to use today's homing relationships as the appropriate starting point for a meaningful forward-looking costing application of transport that uses reality as its foundation.** In addition, TCPM uses V&H coordinates, number of working lines, and traffic characteristics for all existing switches in a study area. BCPM contains sophisticated optimization algorithms that determine the most efficient ring configuration by minimizing the

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distance of transport and utilizing efficient SONET bandwidth (OC3, OC12, OC48), given the specified host and remote locations, number of access lines, and traffic characteristics. Furthermore, BCPM provides for redundancy via what is commonly referred to as self-healing rings. This route redundancy extends to remote offices.

Both of the new modules, Transport and Switching, will utilize the same data source, Local Exchange Routing Guide ("LERG"), identifying switches as a host, remote, or stand-alone switch. With LERG data or "LERG-like" data we can determine which remotes home off which hosts and which hosts home off which tandems.

The Signaling Cost Proxy Module ("SCPM") within BCPM supports this item. SCPM recognizes the distinction between host, remote, and stand-alone switches. Signaling message demand and the requisite number of links and ports is based on all switches, while the physical location of signaling links and ports is determined using only stand-alone, host and tandem offices.

Platform Issue 13

" . . . we recommend that model proponents ensure that their models possess this [IOF network be designed to account for individual switches' identity as a host, remote, or stand-alone switch] capability . . ."

Response 13

The new BCPM will incorporate a new enhanced TCPM module that develops forward-looking transport costs utilizing SONET technology, based upon the LERG. The new transport module shall determine the universal service cost or TELRIC of host-remote and host-tandem interoffice transport. With LERG data or "LERG-like" data we can determine which remotes home off which hosts and which hosts home off which tandems. **Because we use existing homing relationships, we know that viable transport media and routes exist and should be the starting point for any forward-looking cost study.** Modeling the existing transport routes is critical because it ensures that the routes chosen are feasible, given issues such as topography and rights of way involving jurisdictional boundaries.

TCPM takes as input the V&H coordinates, number of lines, and traffic characteristics for all existing switches in a study area. BCPM contains

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sophisticated optimization algorithms that determine the most efficient ring configuration for the specified host and remote locations, numbers of access lines, and traffic characteristics. Within the module, algorithms are utilized that optimize the distance of transport on the ring as well as determine the most efficient SONET bandwidth (OC3, OC12, OC48) associated with the traffic demand. All of the transport cost impacting characteristics can be edited by the user in the development of the transport cost associated with USF and Unbundled Network Elements ("UNE").

Platform Issue 14

"To this end, the models should accommodate an interoffice network that is capable of connecting switches designated as hosts and remotes in a way that is compatible with the capabilities of equipment and technology this is available today and current engineering practices."

Response 14

The new transport module will utilize the LERG, which provides the necessary data for the module to use today's homing relationships as the appropriate starting point for a meaningful forward-looking costing application of transport that uses reality as its foundation. BCPM then utilizes these characteristics of reality and applies forward-looking cost of SONET technology that can be purchased today.

Platform Issue 15

"The bureau recommends, to protect adequately against network failure, that the models ensure that the facilities interconnecting each office with the rest of the interoffice network provide at least one level of redundancy."

Response 15

The TCPM provides for redundancy via what is commonly referred to as self-healing rings when there are more than two node locations located on the ring. This route redundancy also extends to remote offices.

In the case of a stand alone host or a remote the model has a user-changeable input associated with the placement of the fiber cable. The user could indicate separate cables be utilized in this situation or only one cable to be utilized. Separate cable

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diversity will provide actual physical redundancy, which would provide two levels of redundancy.

B. Interoffice Cost Attributable To Providing Supported Services

Platform Issue 16

“...we recommend that the models be capable of calculating specific cost estimates for the interoffice trunking, signaling, and local tandem facilities that are necessary to provide supported services.”

Response 16

The new BCPM will incorporate a new enhanced TCPM module that develops forward-looking transport costs utilizing SONET technology, based upon the LERG. The new transport module shall determine the universal service cost or TELRIC of host-remote and host tandem interoffice transport. With LERG data or “LERG-like” data we can determine which remotes home off which hosts and which hosts home off which tandems. Because we use existing homing relationships, we know that viable transport media and routes exist and should be the starting point for any forward-looking cost study. Modeling the existing transport routes is critical because it ensures that the routes chosen are feasible, given issues such as topography and rights of way involving jurisdictional boundaries.

TCPM takes as input the V&H coordinates, number of lines, and traffic characteristics for all existing switches in a study area. BCPM contains sophisticated optimization algorithms that determine the most efficient ring configuration for the specified host and remote locations, numbers of access lines, and traffic characteristics. Within the module, algorithms are utilized that optimize the distance of transport on the ring as well as determine the most efficient SONET bandwidth (OC3, OC12, OC48) associated with the traffic demand. All of the transport cost impacting characteristics can be edited by the user in the development of the transport cost associated with USF and UNEs.

The SCPM within BCPM supports this item.

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Platform Issue 17

“ . . . we recommend that the models also permit the insertion of an input, specified by the model user, to determine the proportion of these interoffice costs that should be attributed to providing supported services.”

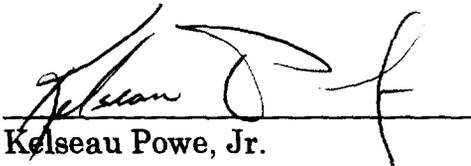
Response 17

Within the new enhanced TCPM there is a user-changeable input provided that allows the model user to input an EAS/Exchange percentage of minutes of use associated with supported services.

All signaling event types are itemized separately within SCPM and are user-definable as either supported or not supported for Universal Service purposes. The Universal Service signaling investment is a subset of the total signaling investment calculated by SCPM.

CERTIFICATE OF SERVICE

I, Kelseau Powe, Jr., do hereby certify that on this 15th day of September, 1997, I have caused a copy of the foregoing **LETTER** to be served via first-class United States Mail, postage prepaid, upon the persons listed on the attached service list.


Kelseau Powe, Jr.

*Served via hand-delivery

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