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APR 11 1994

U S WEST, Inc.  
Suite 700  
1020 Nineteenth Street, NW  
Washington, DC 20036  
202 429-3106  
FAX 202 296-5157

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY  
**USWEST**

Cyndie Eby  
Executive Director-  
Federal Regulatory

**EX PARTE**

DOCKET FILE COPY ORIGINAL

April 11, 1994

Mr. William F. Caton  
Acting Secretary  
Federal Communications Commission  
1919 M Street, NW, Room 222, MS-1170  
Washington, DC 20554

RE: CC Docket 92-91 - Open Network Architecture (ONA)  
Tariffs of Bell Operating Companies (BOCs)

Dear Mr. Caton:

The attached document was provided today by U S WEST Communications, Inc. to Mr. Greg Vogt of the Common Carrier Bureau's Tariff Division.

In accordance with Section 1.1206(a)(2) of the Commission's rules, the original and one copy of this letter are being filed with your office. Please include a copy of this letter in the record in this proceeding.

Acknowledgment and date of receipt of this transmittal are requested. A duplicate of this letter is attached for this purpose.

Sincerely,

*Cyndie Eby*

Attachments

cc: Mr. Greg Vogt

No. of Copies rec'd  
List ABCDE

*DAI*

APR 11 1994

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1020 Nineteenth Street, NW  
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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY  
**USWEST**

Cyndie Eby  
Executive Director-  
Federal Regulatory

April 11, 1994

Mr. Greg Vogt  
Chief, Tariff Division  
Federal Communications Commission  
1919 M Street, NW, Room 518, MS-1600C  
Washington, DC 20554

RE: CC Docket No. 92-91 -- Open Network Architecture (ONA)  
Tariffs of Bell Operating Companies (BOCs)

Dear Mr. Vogt:

As a follow-up to the March 31, 1994 meeting in the above-mentioned proceeding, U S WEST Communications (USWC) respectfully submits the following information:

- USWC Cost & Rate Process
- Chronology of USWC SCM Events

The USWC Cost & Rate flow chart depicts the steps to develop USWC rates. The first two steps are performed utilizing the SCM and yield the unit investments by switch function and unit investments for switching system features such as call waiting. The last two steps are calculations performed outside the SCM and provide the cost and finally the rate. In other words, the first two steps are model programs and the last steps are calculations which U S WEST and the other RBOCs perform outside of the model environment.

The Chronology of Events lists the series of meetings, conference calls and submissions regarding the independent review of both SCIS and SCM. The chronology also identifies at what point in the process intervenors' reviewed the redacted version of the model and the documentation. The memos, faxes, and letters are included to document the activities surrounding the review.

The July 1992 proprietary Independent Review of SCIS/SCM submitted to the FCC by Arthur Andersen supports our belief that the USWC SCM and SCIS core models were subjected to essentially the same level of scrutiny. Arthur Andersen states in

Mr. Greg Vogt  
April 11, 1994  
Page 2

the Review (See page 7, Results of Review) that SCM provides reasonable estimates of switching system investments attributable to services and features. There is recognition of the fact that there are methodological differences between SCIS and SCM, but the Report states that the rationale for different costing approaches are substantiated and reasonable.

The Review recognizes the fact that SCM is similar to SCIS in many respects (See page 4, Description of SCIS/SCM):

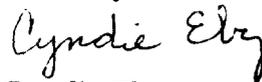
- Based upon long run incremental cost and average cost methods.
- Uses a bottoms-up, functional approach for attributing switching system investment to services and features according to cost causation.
- Models actual offices based upon switch technology, size, usage characteristics and configuration.

Arthur Andersen states in the "Evaluation of SCM" (page 70) that SCM was evaluated in each of the four areas used in the evaluation of SCIS. The report goes on to say that the models were compared in terms of model objectives and costing principles. In addition, the SCM review addressed the accuracy of the model and its application. The report states that Arthur Andersen reviewed model documentation and methods papers and discussed SCM costing principles extensively with model developers. Arthur Andersen concludes that SCM provides reasonable estimates of switching system investment for use in ONA BSE cost support.

USWC believes that the SCIS and SCM core models were subjected to essentially the same level of scrutiny and any difference in the level of scrutiny came with the review of the features.

Please contact me when you wish to discuss this further.

Sincerely,



Cyndie Eby  
Executive Director  
Federal Regulatory

**Attachments**

cc: David Nall  
Stan Wiggins  
Tom Quaile

# U S WEST Cost and Rate Process

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OFFICE OF THE SECRETARY

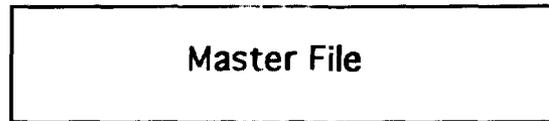
## Step 1: SCM Model

Central office information, such as lines & trunks is input. Vendor information, e.g., capacities & prices, resides in the model.



← switch type  
← traffic information  
← line and trunk information

Output information includes the inputs and the functional category outputs e.g., investment per analog line, investment per analog line CCS, investment per CPU millisecond, etc.



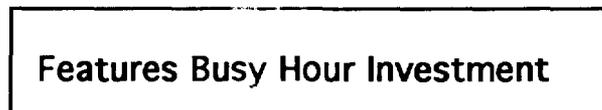
## Step 2: SCM Model

Features usage information and core studies are input into the model. Vendor information resides in the model, i.e., millisecond & pricing.



← features usage information

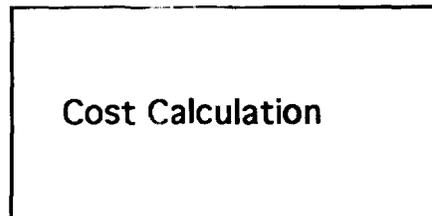
Output of features program would be BH unit investment per line for call forward, investment per line for call waiting, etc.



# U S WEST Cost and Rate Process

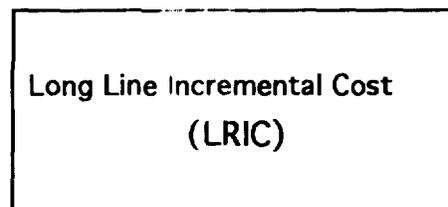
## Step 3: Cost Calculation

Cost is computed by utilizing taxes, cost of money, annual cost factor, etc. Takes BH investment to annual/mo. cost. This step is done outside SCM model.

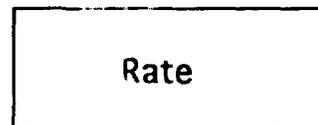


## Step 4: Pricing

This calculation is the LRIC plus the overhead loading. This step is done outside of the SCM model.



← overheads



**NOTE:** Whereas all LECs utilize a model for steps 1 & 2, steps 3 & 4 would be calculated by each LEC using its own individual methodology (outside of model).



May 13, 1992 Meeting with Arthur Anderson and intervenors to socialize input on scope of review & format of report. Arthur Anderson reviewed & incorporated input.

July 1992 Arthur Anderson report (Independent Review of SCIS/SCM) to FCC

August 3, 1992 USWC letters to AT&T, Allnet, MCI, U S Sprint, Hogan & Hartson (Wiltel) and Jones, Day, Reavis & Pogue (Metromedia) offering to allow review of redacted version August 16 through August 26 at WDC Bellcore offices  
Review took place: 8/19, 8/20, 8/21, 8/24, 8/25, and 8/26

November 18, 1992 FCC initiated conference call with FCC Staff, Arthur Anderson and RBOCs  
FCC requesting supplemental review  
No intervenor queries

November 24, 1992 More FCC questions submitted to Arthur Anderson, Bellcore SCIS companies and USWC

November 24, 1992 Additional FCC questions submitted to Arthur Anderson, Bellcore SCIS companies and USWC

November 24, 1992 Meeting between FCC Staff, Arthur Anderson and RBOCS to discuss questions  
Established 12-23-92 as submission date for answer to questions with possible extension until 1-6-93 (Tab 4)

December 9, 1992 Official query list to Arthur Anderson from FCC Staff

December 15, 1992 G. Vogt letter to Britt (overall coordinator for RBOCs) from FCC staff requesting additional information by 1-15-93 (Tab 5)

December 22, 1992 McKenna letter to FCC transmitting the updated SCM inclusion of all BSEs in SCM, under protective agreement, in response to the 12-15 Vogt letter (Tab 6)

December 23, 1992 Arthur Anderson provided C. Tritt, Independent Review of SCIS/SCM (Response to request for Further Information)

January 14, 1993 Arthur Anderson provided C. Tritt, Independent Review of SCIS/SCM (Supplemental Sensitivity Analysis)

January 15, 1993      Stahlhut letter to FCC (Quaile) further  
responding to 12-15 letter regarding  
SCM and BSE updates. (Tab 7)

December 15, 1993    Order on Direct case, ordering refile of full  
cost supported BSEs within 10 days  
Requested extension of time for filing, granted

January 26, 1994      Fully supported ONA BSE rates filed with the  
FCC under Transmittal No. 446  
SCM computer discs outlining the SCM Core model  
and the SCM Features filed with the FCC under  
protective agreement - McKenna Letter (Tab 8)  
No intervention except Ad Hoc who was concerned  
that the rates varied widely



12/30/91

US WEST, Inc.  
Suite 700  
1020 Nineteenth Street, NW  
Washington, DC 20036  
202 426-3123  
FAX 202 283-0681



Robert H. Jackson  
Managing Counsel & Director,  
Federal Regulatory

December 30, 1991

Richard Firestone, Chief  
Common Carrier Bureau  
Federal Communications Commission  
1919 M Street, N.W., Room 500  
Washington, D.C. 20554

Re: *Commission Requirements for Cost Support Material To Be  
Filed with Open Network Architecture Access Tariffs*

Dear Mr. Firestone:

Enclosed on behalf of U S WEST Communications, Inc. ("USWC") for filing with the Common Carrier Bureau ("Bureau") is material related to USWC's Service Cost Model ("SCM"). This material is being provided in accordance with the Bureau's *December 23 Order* in the above-captioned proceeding<sup>1</sup> as confidential material exempt from disclosure under Section 552(b)(4) of the Freedom of Information Act and the Federal Communication Commission's ("Commission") implementing regulations.<sup>2</sup> Paragraph 22 of the *December 23 Order*, directs USWC to provide a copy of its SCM for one study area, and SCM inputs and outputs for all study areas.

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<sup>1</sup> *Commission Requirements for Cost Support Material To Be Filed with Open Network Architecture Access Tariffs, Order, DA 91-1592, rel. December 23, 1991 (Com.Car.Bur.) ("December 23 Order").*

<sup>2</sup> 5 U.S.C. § 552(b)(4); 47 C.F.R. §§ 0.457(d) and 0.459. See *December 23 Order* at ¶¶ 18 and 21, along with n. 29.

Received by [unclear] 12/30/91 - 4500

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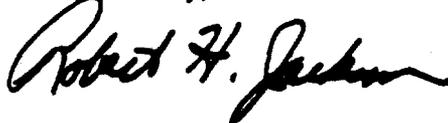
**Richard Firestone**  
**December 30, 1991**  
**Page 2**

Since USWC has aggregated its interstate access rates, including those for Open Network Architecture ("ONA") access tariffs, at the USWC level, USWC prepares cost support, as required under the Price Cap rules, at the USWC level. Accordingly, USWC does not have any cost support, including the SCM or its inputs or outputs, for any of USWC's individual study areas. USWC's SCM, including its inputs and outputs, exist at the USWC level. Therefore, USWC is providing all material at the USWC level in accordance with the *December 23 Order*.

In light of this determination that the SCM is USWC's confidential material exempt from public disclosure, we request that the SCM be returned to USWC upon completion of the Bureau's analysis of the model. Please direct any questions related to this letter or the confidential material filed herewith to Janis A. Stahlhut (202) 429-3106 or the undersigned.

Acknowledgement and date of receipt of this letter are requested. A duplicate is provided for that purpose.

Sincerely,



Robert H. Jackson  
Managing Counsel & Director  
- Federal Regulatory

**Enclosures**





James F. Britt  
Executive Director

LCC 2E-243  
280 West Mt. Pleasant Avenue  
Livingston, New Jersey 07039 USA  
201-740-4810  
201-740-4818  
FAX No. 201-740-8897

February 28, 1992

Donna R. Searcy, Secretary  
Federal Communications Commission  
1919 M Street, N.W.  
Room 222  
Washington, D.C. 20554

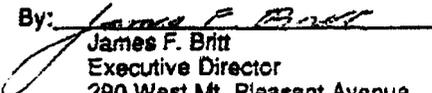
Re: Ex Parte Report: DA 92-129

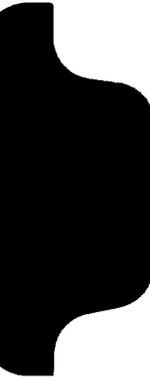
On behalf of Arthur Andersen & Co., Bellcore and US WEST, I hereby give notification of an ex parte communication in the above referenced proceeding. On February 27, 1992, a meeting was held to discuss the proposed contents of the February 28, 1992 Arthur Andersen submission to the FCC describing the scope and arrangements of their independent examination of the Switching Cost Information System (SCIS) and the Switching Cost Model (SCM).

Bellcore was represented by the undersigned, US WEST by Ms. Anna Lim and Arthur Andersen by Messrs. Joseph Perrone, James Farmer, Craig Conwell and Richard Storey. The Commission was represented by Ms. Mary Brown-Deputy Chief, Tariff Division; Mr. Stan Wiggins-Senior Attorney Tariff Division; Mr. Mark Uretsky-Economist, Tariff Division; Mr. Steve Spaeth-Attorney, Tariff Division; Mr. Tom Quaille-Cost Analyst, Tariff Division; and Mr. Brian Clopton-Staff, Accounting and Audits Division.

Should any questions arise relative to the preceding, please contact the undersigned on 201-740-4810.

Respectfully submitted,  
Bell Communications Research, Inc.

By:   
James F. Britt  
Executive Director  
280 West Mt. Pleasant Avenue  
Livingston, NJ 07039-0486



**Bellcore**

Bell Communications Research

*James F. Britt  
Executive Director*

---

LCC 2E-243  
250 West Mt. Pleasant Avenue  
Livingston, New Jersey 07039 USA  
201-740-4810  
201-740-4816  
FAX No. 201-740-6267

April 21, 1992

Ms. D. R. Searcy, Secretary  
Federal Communications Commission  
1919 M Street, N.W.  
Room 222  
Washington, D.C. 20554

Re: Ex Parte Notice: DA 92-129

Dear Secretary Searcy:

On behalf of Arthur Andersen & Co., Bellcore, Bell Atlantic, US WEST, AT&T Technologies, Northern Telecom Inc., and Ericsson Inc., this is to advise that on April 14, 1992 the individuals named on Attachment A met with members of the Common Carrier Bureau at the Bellcore offices in Washington, D.C.

The purpose of the communication was to discuss the switch manufacturers concerns regarding the competitive and proprietary nature of their information contained in the Switching Cost Information System (SCIS) and the Switching Cost Module (SCM). As a result of the discussion, Arthur Andersen has agreed to conduct a seminar with all interested parties to this proceeding on May 13, 1992 at which time it will describe its schedule for completing the examination of SCIS (and SCM), the procedures and processes employed in its examination and, specifically, its program for performing sensitivity analyses. Arthur Andersen will also be prepared to demonstrate its sensitivity analyses on one BSE to illustrate the scope of its examination and the extent to which information will be disclosed in its Final Public Report.

All parties who would be interested in attending this meeting should inform the undersigned by April 29, 1992. The meeting will be held at the Bellcore offices in Washington, D.C., and will be open to those who have been signatories to the NonDisclosure and/or Access Agreements pertaining to SCIS and SCM.

Should any questions arise relative to the preceding, please contact the undersigned on 201-740-4810.

A copy of this Ex Parte Notice was filed with the Commission and delivered to all of the Commission personnel named on Attachment A and all SCIS parties of record on April 21, 1992.

Respectfully submitted,  
Bell Communications Research, Inc.,

By James F. Britt

James F. Britt

Executive Director

290 West Mt. Pleasant Avenue, Rm. 2E243  
Livingston, N.J. 07039

Attachment A

cc: M. Brown  
S. Spaeth  
M. Uretsky  
S. Wiggins  
All SCIS Parties of Record

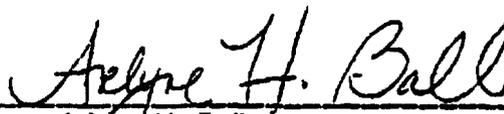
## Attachment A

Attendees at FCC Meeting on Tuesday, April 14, 1992

Bellcore:	Louise Tucker Jim Britt John Del Re Rich Tortorella
US WEST	Anna Lim Bob Bowman Barbara Stock
AT&T	Chuck King Lee Nye Carrie Fischer
NTI	Lynn Baker Paul DeJongh John Beall Bert Halprin Bill Blatt
Ericsson	Michelle Boeckman Joel Sanders
FCC	Mary Brown Stan Wiggins Steve Spaeth Mark Uretsky
Bell Atlantic	J. Manning Lee
Arthur Andersen	Joe Perrone Jim Farmer

CERTIFICATE OF SERVICE

I, Arlyne H. Ball , do hereby certify that I caused, on April 21, 1992, a copy of the foregoing "Ex Parte Notice: D A 92-129" to be served via facsimile on each of the parties listed on the attached Service List.

  
\_\_\_\_\_  
Arlyne H. Ball

Service List

**Ad Hoc Telecommunications Users**

**James S. Blaszak  
Charles C. Hunter  
Gardner, Carton & Douglas  
1301 K. Street, N.W.  
Suite 900 - East Tower  
Washington, D.C. 20005**

**Allnet Communications Services, Inc.**

**J. Scott Nicholls  
Manager of Regulatory Affairs  
Roy L. Morris, Esq.  
Director, Public Policy and  
Government Affairs  
1990 M. Street, N.W.  
Suite 500  
Washington, D.C. 20554**

**The American Newspaper Publishers Association**

**Richard E. Wiley  
Michael Yourshaw  
William B. Baker  
WILEY, REIN & FIELDING  
1776 K. Street, N.W.  
Washington, D.C. 20006**

**American Telephone & Telegraph Co.**

**Francine J. Berry  
David P. Condit  
Peter H. Jacoby  
Edward A. Ryan  
295 North Maple Avenue  
Room 3244J1  
Basking Ridge, NJ 07920**

**The Competitive Telecommunications Association**

**Richard E. Wiley  
Robert J. Butler  
WILEY, REIN & FIELDING  
1776 K. Street, N.W.  
Washington, D.C. 20006**

The Public Service Commission of the District of Columbia  
Daryl L. Avery  
General Counsel  
Peter Wolfe  
Staff Counsel  
450 Fifth Street, N.W.  
Washington, D.C. 20001

General Services Administration  
Michael J. Ethner  
Senior Assistant General Counsel  
Personal Property Division  
18th & F Streets, N.W., Room 4002  
Washington, D.C. 20405

MCI Telecommunications Corporation  
Larry A. Blosser  
Frank W. Krogh  
Donald J. Elardo  
1133 19th Street, N.W.  
Washington, D.C. 20036

US Sprint Communications Company Limited Partnership  
Leon M. Kestenbaum  
1850 M. St., N.W., Suite 1110  
Washington, D.C. 20036

Williams Telecommunications Group, Inc.  
Peter A. ROHRBACK  
Karl A. Hastings  
HOGAN & HARTSON  
555 13th St., N.W.  
Washington, D.C. 20004

Meteromedia Communications Corp.  
Randall B. Lowe  
John E. Hoover  
Michael R. Carper  
JONES, DAY, REAVIS & POGUE  
1450 G. Street, N.W.  
Washington, D.C. 20005

MCI Telecommunications Co.  
Michael F. Hydock  
Senior Staff Member  
1133 19th Street, N.W.  
Washington, D.C. 20036

Ericsson Network Systems Inc.  
L. Michelle Boeckman  
730 International Parkway  
Richardson, TX 75081

Northern Telecom Inc.  
Albert Halprin  
Stephen L. Goodman  
VERNER, LIIPFERT, BERNHARD,  
MCPHERSON & HAND  
901 Fifteenth St., N.W.  
Suite 700  
Washington, D.C. 20005

Richard Firestone  
Chief, Common Carrier Bureau  
Federal Communications Commission  
1919 M Street, N.W.  
Washington, N.J. 20554

John Cimko  
Chief, Tariff Division  
Common Carrier Bureau  
Federal Communications Commission  
1919 M Street, N.W.  
Washington, D.C. 20554

Stan Wiggins  
Senior Attorney  
Tariff Division  
Common Carrier Bureau  
Federal Communications Commission  
1919 M Street, N.W.  
Washington, D.C. 20554



**FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

Joseph P. Perrone  
Arthur Andersen and Co.  
101 Kissameter Parkway  
Roseland, N.J. 07068

Dear Mr. Perrone:

Pursuant to the SCIS Disclosure Order,<sup>1</sup> the Common Carrier Bureau (Bureau) directs Arthur Andersen and Co. (Andersen) to provide the further information and analysis specified below by December 23, 1992, regarding the Switching Cost Information System (SCIS) and the Switching Cost System (SCS).

**I. Category I: Verification of software review**

**A.** Compare the total switch investment developed by SCIS and SCS with the investment generated by the switch vendors' engineering models.

**B.** Given that the investment generated by SCIS and SCS are equal to the investment generated by the switch vendors' engineering models, explain why the following statements must be true:

1. The model office equations for host, remote, and tandem switches accurately reflect the investment required to provide OMA services;
2. The switch vendors' engineering rules<sup>2</sup> for each switch technology are reasonably reflected in the software's accompanying "model office" algorithms;
3. The proprietary switch vendor pricing data used by the SCIS model to project future prices are accurate;
4. The subcategory investments are reasonably estimated based on category investments.

<sup>1</sup> Commission Requirements for Cost Support Material To Be Filed With Open Network Architecture Access Petitions, 7 FCC Rcd 1526, 1536 para. 56 (Com. Car. Bur. 1992) (SCIS Disclosure Order).

<sup>2</sup> Engineering rules are documented definitions and criteria that describe a switching office from an engineering standpoint. The model offices developed by Bellcore for SCIS are designed according to the vendor's engineering rules. After Bellcore develops the equations used to develop the model office, the Bellcore model is validated against the engineering model.

*Change:*

5. The investment for each category contained in the investment tables are accurate.

C. Review and validate the algorithms used by the SCIS model to develop investments for the four BSEs studied in the Anderson report.

Category II: Additional Anderson Review

A. User-Defined Study

1. Explain why BellSouth used a "user-defined" study to generate OMA investment data from SCIS studies rather than developing a model office on the basis of BellSouth's actual network.

2. BellSouth has informally agreed to submit by December 14 a narrative description of the "user-defined" study method it used. Andersen should examine BellSouth's explanation, and determine whether the "user-defined" study produces results consistent with results that would have been produced if BellSouth had used a model office study as did other BOCs.

B. Varied Concerns

1. Andersen should clarify or expand its report to quantitatively describe OMA rate variation due to (1) switch generic software upgrades and (2) upgrades to the SCIS model. (Wiltel Opposition at 30-31.)

2. Andersen should determine whether the age of traffic studies used to develop SCIS inputs has a significant effect on SCIS outputs. If so, quantify this effect. If not, explain why not, and explain why the traffic data adjustments made by WYNEX and described in its erratum to its OMA Reply, filed November 23, 1992, are consistent with that conclusion. (AT&T Opposition at 12-13.)

3. In order to better determine the effects of using embedded or prospective technology mix, Andersen should recalculate the results of Appendix 27 of its report excluding Bell Atlantic, which provided only a one year view rather than a three year view as did other BOCs.

4. For each BOC that elects the SCIS/SCM "average study" option, Andersen should compare the switch replacement projections used in SCIS with the switch replacement projections made in depreciation reports filed with the Accounting and Audits Division.

5. Andersen should quantify BSE rate variation attributable to the three types, or sources, of variation identified by Andersen in its report, or provide a detailed explanation as to why

*SCIS used to be out*

DEC 10 '92 10:41

the results of its examination of SCIS and sensitivity analyses<sup>3</sup> cannot be displayed in this manner. (Wiltel Opposition at 22-23.)

6. Andersen should examine the effects of the SCM sensitivity function and provide quantitative examples of the effect of this function on SCM outputs or US West BSE rates. (MCI Opposition at 32.)

7. How does the separate spreadsheet used by US West for ANI rate development affect the SCIS and/or SCM sensitivity analyses performed on the ANI BSE in the Andersen report.

8. Ad Hoc's consultant contends that SCIS programs often ceased to operate after several sensitivity studies, and characterizes as "archaic" the computer used by Bellcore to provide access to redacted SCIS and SCM software. Describe equipment used by Andersen and operating experience with unredacted software, including incidence of crashes for both SCIS and SCM. (Ad Hoc Opposition, Appendix at 3 n.2.)

9. The Andersen report states that SCM software did not originally recognize the switch manufacturer's upgrades to the 5ESS switch. Describe these and any other switch upgrades not reflected in the SCM version used to develop rates, and quantify the effect on costs for the four BSEs upon which sensitivity analyses were performed in the Andersen Report.<sup>4</sup> Confirm whether the results of the Andersen SCM examination discussed in the report were developed from SCM as used by US West for original rate development, or as adjusted to recognize switch upgrades.

10. The Andersen report finds significant differences between SCIS and SCM results, and states that other significant divergences between the models are described elsewhere in the report "as noted."

a. Prepare a list of such references, and list and explain any other differences that have not been examined by the Andersen review. The list should include an itemized description of the SCM software application itself, and the use of external spreadsheets to supplement or replace SCM for specific BSE studies. // ?

<sup>3</sup> A major part of the examination in the Arthur Andersen report was to perform sensitivity analyses, i.e., to determine the sensitivity of SCIS or SCM cost studies to changes in rates.

<sup>4</sup> If the BSEs examined were developed using SCIS software, perform this analysis for the two BSEs for which US West utilized SCM with the highest projected demand.