review of SCIS/SCM involved in excess of 4,000 hours of work by Arthur Andersen professionals with a majority of the effort related to performing sensitivity analyses.

A description of the approach taken and scope of work performed in each of the four areas identified above follows.

3.5 Evaluation of SCIS/SCM Methodology

Arthur Andersen performed a detailed review of the SCIS model and supporting user documentation. The purpose was to reach conclusions about the reasonableness of switching investment costs produced by SCIS.

The review addressed the following questions:

- What types of costs does SCIS model?
- Are the costing principles incorporated in SCIS appropriate for the types of costs the models are intended to estimate?
- Does SCIS accurately model switch investments?
- Is SCIS likely to produce reasonable results in actual use given user training, documentation, the introduction of model enhancements and other considerations?

Arthur Andersen did not attempt to answer a key question that precedes the above series of questions from an FCC policy making standpoint. That is, "What cost standard **should** be used by the BOCs for developing the switch investment costs used to support BSE tariffs?" The answer to that question entails difficult policy decisions that must be made by the FCC. Such decisions potentially involve past precedents and other factors that were beyond the scope of the review. However, Arthur Andersen's approach was to describe what cost standards are inherent in SCIS and SCM and how those standards were implemented and applied by the BOCs. This information should aid all interested parties in the informed discussion and debate of this central costing standard issue.

The review focused primarily on SCIS due to its wide use by the BOCs, including U S WEST, for purposes of developing cost support for the ONA BSEs (see Table 2B for a summary of the use of SCM by U S WEST). SCM was reviewed in a more limited manner and compared and contrasted with SCIS.

In evaluating SCIS and SCM, Arthur Andersen drew upon its prior experience with cost accounting in order to assess the reasonableness of the models in relation to accepted economic and industry definitions, standards and practices.

3.6 Identification of Parameters Subject to BOC Variation

SCIS provides the BOCs with a flexible menu of options and input variables. These choices and inputs allow each BOC to tailor the model application to its own costing preferences, circumstances and operating conditions. This flexibility, however, inevitably leads to variability in the model results and ultimately to the differences in BSE costs noted in the BOCs ONA tariff filings.

Arthur Andersen identified the choices and inputs (referred to subsequently in this report for convenience as "parameters") within SCIS over which the BOCs have discretion. The identification was limited to the four BSEs for which comprehensive sensitivity analyses were performed (discussed below).

Initial identification of the parameters subject to individual BOC variation was accomplished by reviewing the underlying equations within the SCIS software. The equations provide a clear indication of the inputs that affect the resulting cost computations within the model. Confirmation of the purpose and definition of the components of the equations was obtained by reference to the SCIS user documentation provided to the BOCs by Bellcore.

While there are many parameters within SCIS, it is possible to readily identify those which are likely to have a significant effect on SCIS output by reference to the equations. Such an evaluation was made by Arthur Andersen in order to determine the parameters that would be subjected to sensitivity analysis.

3.7 Sensitivity Analyses

Comprehensive sensitivity analyses were performed on four of the BSEs offered by the BOCs. "Sensitivity analyses", in the context of Arthur Andersen's review, refer to a comparison of 1) the results obtained from applying SCIS or SCM based on the parameters actually used by the BOCs with 2) the results that would have been obtained if a different parameter were substituted for the actual one used.

3.71 BSE Selection Process

The selection of BSEs for sensitivity analyses was independently made by Arthur Andersen giving priority to BSEs that were offered by all or most of the BOCs and for which significant revenue was projected. The FCC Staff also provided input to Arthur Andersen concerning the BSE selection process.

Table 3B indicates the number of BOCs offering each BSE and the estimated revenue to be generated from their offering.

Table 3B

BSE Cat.	BSE NAME	ESTIMATED REVENUE AM	BA	BS	NET	NYT	NV	PAC	SWB	USW	Total Revenue	# of BOC's
	PREMIUM BSEs:											
J	Calling Billing Number Delivery	$12,994,220	$3,082,960	$1,359,248	$3,159,754	$6,233,955	$37,951	$2,363,952	$458,136	$2,413,566	$32,103,742	9
W	Multiline Hunt Group	158,468	1,657	27,642	2,211	16,722	5,880	11,647	2,898	23,838	250,963	9
AD	Multiline Hunt Group Uniform Call Dist Line Hunting	1,820	20,952	6,274	30	400	0	3,630	1	0	33,107	9
AC	Multiline Hunt Group UCD with Queing	1,696		43,130	50	367		202	152	15,670	61,267	7
R	Make Busy Key	9,553	27,818	248,583					1,599	0	287,553	5
AL	Three Way Call Transfer	32	70,590	22,574				0		0	93,196	5
Y	Multiline Hunt Group CO Announcement	358			81	567		1,308	986		3,300	5
Z	Multiline Hunt Group Individual Access to Each Port	0	0	19			0	0			19	5
A	Alternate Routing				119	56			43,824	32,169	76,168	4
AM	Three Way Calling		81		0	100				0	181	4
S	Message Desk (SDMI)	587	6,637	151,816							159,040	3
B	Answer Supervision W/ Line Side Interface	3,053	9,631							0	12,684	3
X	Multiline Hunt Group Circular	1,368	433								1,801	2
AB	Multiline Hunt Group Preferred	86	52								138	2
AA	Multiline Hunt Group Overflow	0						0			0	2
G	Called Directory Number Delivery via 900NXX	13,357,122									13,357,122	1
AE	Network Reconfiguration							267,498			267,498	1
P	Flexible ANI Information Digits	172,436									172,436	1
AS	Other BSE- DNAL BSA	68,747									68,747	1
AP	Other BSE- Calling Directory Number Delivery Via BCLID			63,832							63,832	1
AT	Other BSE- DNAL BSA SMDI - E	29,109									29,109	1
O	Faster Signalling on DID			25,698							25,698	1
E	Call Denial							20,928			20,928	1
F	Call Detail Recording Reports	18,517									18,517	1
BA	Traffic Data Reports Ongoing Per Month									17,254	17,254	1
H	Called Directory Number Delivery via DID									16,666	16,666	1
Q	Line Monitor Service		11,421								11,421	1
AQ	Other BSE- Surrogate Client Number			9,141							9,141	1

Source: ChartNETREV - PREMIUM BSES from IRP

Table 3B

BSE Cat.	BSE NAME	ESTIMATED REVENUE AM	BA	BS	NET	NYT	NV	PAC	SWB	USW	Total Revenue	# of BOC's
	PREMIUM BSEs:											
T	Message Desk (SMDI) Expanded	$4,211									$4,211	1
AO	800 Service to DID			4,171							4,171	1
V	Message Waiting Indicator - Expanded	3,038									3,038	1
AI	Service Code Denial							1,836			1,836	1
AR	Other BSE- Remote Make Busy - Trunk Side								965		965	1
U	Message Waiting Indicator - Activation (Audible)	212									212	1
I	Called Directory Delivery via ICLID									0	0	1
M	DID Trunk Queing									0	0	1
AP	Caller ID- Bulk Per Multiline Hunt Group									0	0	1
AQ	Caller ID- Bulk Per Record									0	0	1
AR	Call Forward Variable									0	0	1
AS	Caller ID									0	0	1
BB	Call ID - Bulk Called Data I/O CO Facility									0	0	1
C	Automatic Protection Switching										0	0
D	Bridging										0	0
K	Carrier Selection on Reverse Charge Multiline Hunt Group										0	0
L	Conditioning										0	0
N	Fast Select Acceptance										0	0
AF	Reverse Charge Acceptance										0	0
AG	RPOA Preselection										0	0
AH	Secondary Channel Capability										0	0
AJ	Statistical Multiplexer										0	0
AK	Tandem Routing										0	0
AN	Uniform Seven-Digit Access Number Remote Call Forward										0	0
AU	Message Delivery Svc MDS Arrangement										0	0
AV	Message Delivery Svc Call Data Per Line										0	0
AW	Queing With UCD Std Announcement Per Que Slot										0	0
AX	DID Trk Queing Per Que Slot in Group										0	0
AY	DID Trk Queing Std Announcement Per Announcement										0	0
AZ	DID Trk Queing Std Announcement Per Que Slot										0	0

Source: ChartNETREV - PREMIUM BSES from TRP

The BSEs selected by Arthur Andersen for sensitivity analyses and the bases for selection are shown in Table 3C below.

Table 3C

BSE Categories	BSE Name	Basis for Selection
J	Calling Billing Number Delivery	Offered by all BOC entities Highest esimated revenue
R	Make Busy Key	Offered by five BOC entities Third highest estimated revenue FCC Staff request
W	Multiline Hunt Group	Offered by all BOC entities fifth highest estimated revenue
AD	Multiline Hunt Group Uniform Call Dist. Line Hunting	Offered by all BOC entities

3.72 Types of Sensitivity Analyses Performed

Two types of sensitivity analyses were performed for each of the four BSEs:

- o Substitution of average for actual parameters
- o Variation of actual parameters

The purpose and approach to each type of sensitivity analyses is discussed in the following sections.

3.721 Substitution of Average for Actual Parameters

For these sensitivity analyses, consistent parameter assumptions or simple averages of parameter values used by the BOCs were substituted for the actual parameters used in order to determine how much of the overall variation in BSE costs was attributable to each significant parameter.

For example, assume that a parameter in the models for a BSE is a particular demand assumption such as the number of calls. If five BOCs offered the BSE, the simple average of parameter values actually used would be substituted for the actual values as illustrated in Table 3D below:

Table 3D

BOC	Calls Actually Used
1	200
2	75
3	250
4	325
5	150
Total	1000
Average substituted for actual value for sensitivity analysis (1,000/5) 200	

In this simple example, it would be expected that sensitivity analyses for each of the companies except BOC 1 would produce results that are different from those obtained by using actual values. The sensitivity analyses quantify these differences and, in doing so, can be used to account for variations noted among the BOCs in the total direct unit costs included in the TRP supporting the ONA tariff filings.

The direct output of SCIS and SCM is deemed to be proprietary for various reasons. Arthur Andersen concluded that it therefore would be beneficial to all interested parties to state the results of the sensitivity analyses of this first type in terms of publicly disclosed information. The point of reference used to state results was TRP Chart UNIT, "Direct Unit Investment and Direct Unit Costs for Unbundled Lineside and Trunkside BSEs." The information presented in this chart for each of the BSEs is presented below in Table 3E.

Table 3E

Direct Unit Costs	
1	Depreciation
2	Return on Investment
3	Taxes
4	Maintenance
5	Administration
6	Other
7	Total Direct Recurring Costs

Indirect Unit Costs	
8	Overhead Loadings

9	Total Direct and Indirect Unit Costs

Unit Investment	
10	COE Switching
11	COE Transmission
12	Cable and Wire
13	Information
14	Amortizable Assets
15	Total Unit Investment

All of the sensitivity analyses in this category were stated in terms of their effects on Line 7, "Total Direct Recurring Costs." This line represents the projected annual direct **expenses**, return and taxes associated with each BSE. SCIS and SCM produce the cost of switch **investment** (i.e., capital costs) for each switch technology (i.e., a particular model produced by a specific switch vendor). These amounts are then converted into annual costs and certain loadings are applied. In order to translate the effects of sensitivity analyses from SCIS/SCM output to this subsequent step

in the BSE cost development process, it was necessary to also analyze the post-SCIS/SCM steps that take place.

Arthur Andersen developed a model to simulate the actual post-SCIS/SCM cost development processes used by each of the BOCs for purposes of their ONA tariff filings. To do this, all of the voluminous cost support material filed by the BOCs was obtained and analyzed. With the model, it was possible to take the SCIS/SCM output after sensitivity analyses were performed and run the recast information through the post-SCIS/SCM costing processes in order to determine the effects on total direct recurring costs. In addition, sensitivity analyses were performed on each of the post-SCIS/SCM processes to determine the contribution that each of these steps made to the overall variation in results observed in total direct recurring costs.

This approach, while in some respects beyond the scope of work required by the SCIS Disclosure Order agreement, had the following benefits:

- o It enabled Arthur Andersen to present the results of the sensitivity analyses in a format that could be disclosed to intervenors.
- o It allows the reader of this report to understand the relative significance of variations at each stage of the BSE cost development process and places the variations resulting from the application of SCIS and SCM in context within the overall variation in direct costs.
- o It resulted in a verification by Arthur Andersen that the SCIS/SCM models and inputs provided by the BOCs for sensitivity analyses were, in fact, the ones used to develop the cost support filed for each BSE

In excess of 110 individual sensitivity analyses were performed and the results of those which had a significant effect on the total direct costs for each BSE are presented in this report. To ensure that all parameters that could potentially have a significant effect were analyzed, Arthur Andersen also performed a cumulative sensitivity analysis for each BSE which linked the individual analyses. This test verified that the overall variation in total direct costs for each BSE was fully reconciled by the parameters for which sensitivity analysis had been performed.

3.722 Variation of Actual Parameters

The second series of sensitivity analyses performed involved varying parameters along a spectrum of possible values to determine the relationship between changes in the input variables and the SCIS output values. The purpose of these sensitivity analyses was:

- o To illustrate the degree of linearity of changes in SCIS parameters and model output.
- o To provide information about the effects of using values outside the range of those actually used by the BOCs which were analyzed in the first set of sensitivity analyses.

- To offer additional insight into the relative significance of each parameter to the overall operation of the models.

Arthur Andersen performed approximately 60 of the second type of sensitivity analyses. The results of these analyses are stated in terms of applicable model output. Due to the significant effort required to perform more comprehensive applications, the analyses were conducted for representative samples of model offices and BOCs and the results were not run through the post-SCIS cost development processes.

3.8 Validation of SCIS/SCM Aggregation Methodologies

The BOCs must perform an aggregation process to the unit investment costs obtained from SCIS and SCM which are technology-specific. The various switch technologies used are melded within and across state jurisdictions in some manner to arrive at a weighted average cost for the tariff filing entity.

Different methodologies were used by the BOCs to accomplish this aggregation. Arthur Andersen documented the methodology used by each BOC and assessed the reasonableness of each approach in relation to principles of cost causation.

APPENDIX 2

PROPOSED WORK PLAN FOR INDEPENDENT REVIEW OF SCIS /SCM

ARTHUR ANDERSEN

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INDEPENDENT REVIEW OF SCIS/SCM
PROPOSED WORK PLAN

Planning and Orientation

1. Provide an arrangement letter to Bellcore describing the:

   a. Scope of the project

   b. Deliverables

   c. Timing

   d. Staffing

   e. Preliminary estimated fees and expenses

2. Execute the nondisclosure agreement specified in Attachment C of the SCIS Disclosure Order

3. Read the relevant FCC orders including:

   a. Part 69 ONA Orders

   b. ONA TRP Order

   c. Ameritech TRP Waiver Order

   d. SCIS In-Camera Order

   e. Ameritech ONA Tariff Order

   f. Investigation Order

   g. SCIS Disclosure Order

4. Conduct training for project team members covering:

   a. Telecommunications overview

   b. Tariff rate development process

   c. ONA

   d. Service costing

   e. SCIS/SCM overviews

   f. SCIS/SCM demonstrations

5. Obtain SCIS/SCM documentation from the BOCs as required by paragraph 67 of the SCIS Disclosure Order

6. Develop a macro flowchart of the sequential BSE rate development process reflecting the following steps:

   a. Identification of investments for each switch function (cost primitives) by switch technology

   b. Calculation of investments for each switch feature, by switch technology, using costs primitives and company-specific inputs

   c. Loading of engineering, installation and other cost factors to produce "in-service" investment costs for each feature, by switch technology

   d. Conversion of aggregated in-service investments into associated annual costs (depreciation, return, taxes, maintenance, administration etc.)

   e. Aggregation of in-service investments for each switch technology into a weighted average cost reflecting the mix of technology utilization

   f. Application of overhead loadings to BSE direct unit costs to obtain indirect unit costs

   g. Addition of direct and indirect unit costs to develop rates for each BSE

   Note: The scope of the independent review of SCIS/SCM by Arthur Andersen & Co. is limited to steps a. through c. and e. above.

7. Meet with the FCC staff to discuss the scope of the independent review of SCIS/SCM and their observations based on the in-camera review conducted

8. Prepare a work plan for the independent review of SCIS/SCM and submit it to the FCC as required by paragraph 72 of the SCIS Disclosure Order

9. Provide an updated estimate of fees and expenses to Bellcore reflecting the level of effort necessary to carry out the work plan described in 8. above

Phase 1 - Validation of SCIS/SCM Methodology and Identification of Model Parameters Subject to BOC Variation

1. Obtain all SCIS/SCM user documentation:

   a. Identify specific versions of models used by the BOCs to develop unit switching investment for BSE costs

   b. Obtain complete documentation for each version

   c. Determine whether any other relevant methods papers, memoranda etc. exist which further explain underlying economic cost principles or methods and procedures and obtain copies

   d. Identify subject matter experts at Bellcore and U S WEST involved in the conceptual design and day-to-day operations of SCIS and SCM

   e. Prepare a complete bibliography of SCIS/SCM documentation

2. Review SCIS/SCM documentation:

   a. Review organization and content of SCIS and SCM documentation

   b. Conduct an in-depth review of relevant documentation sections, methods papers etc. to gain an understanding of:

      1. Model architecture

      2. Model development process

      3. Underlying costing principles and their application, e.g.:

         - Marginal vs. average costing

         - Treatment of fixed vs. volume-sensitive costs

- Treatment of spare capacity

- Study period factors - average percent utilization, year of replacement etc.

4. User input requirements, tables and table contents, model run options etc.

5. Model offices and their characteristics

6. Model office equations and their relationship to office engineering

7. Partitioning

8. Form and content of model office cost algorithms

9. Regression techniques, goodness of fit of regressions and implications of non-linear regression equations for constant unit investments

10. Model flow to produce unit investment output

c. Gain a similar understanding of modules used to compute feature and vertical service investments

d. Develop flowcharts, schematic diagrams, tables of methods and other display techniques which clearly characterize:

1. Economic costing principles

2. Model flow

3. User options

4. Input data, tables and table structure

5. Model office equations

6. Other

e. Document and evaluate the adequacy of the EDP control environment surrounding SCIS and SCM

f. Draw inferences regarding significant methodological assumptions, key input variables, differences in model versions and other factors which would influence SCIS/SCM results

g. Given a detailed review of SCIS, make an evaluation of whether the "model implementation" (actual model development offices, partitions, algorithms, feature usage data characteristics etc.) is consistent with design principles, e.g., cost assignment based on cost causation, long run versus short run incremental costing, marginal versus average costing etc.

   The evaluation in this case is not whether the economic costing principles are appropriate; rather whether the actual model was implemented in a manner consistent with the economic costing principles whatever they might be.

3. Gain familiarity with procedures for running models and make test runs in order to:

   a. Understand model operations

   b. Assess likelihood of model being inadvertently used to produce unintended results

   c. Prepare for sensitivity analyses in Phase 2

4. Contrast SCIS and SCM at a high level in terms of:

   a. Model objectives

   b. Model scope

   c. Underlying costing principles

   d. General approaches to partitioning, model development, algorithms etc.

      Particular attention is to be given to differences in scope which require users to make different post-model adjustments to unit investment data before computing annual costs. Also, actual comparisons of model output for the purpose of "quantifying" model differences will be made in Phase 2.

5. Investigate queries related to SCIS/SCM models forwarded by FCC:

   a. Determine nature of query

   b. Evaluate extent to which a query has already been addressed by work plan

c. Determine approach to investigate query

d. Gather required data and perform analysis

e. Review and document findings

f. Provide query resolution to FCC

6. Prepare a draft report summarizing the results of Phase 1 work and submit it, in camera, to the FCC staff for their review and comments

Phase 2 - Sensitivity Analysis and Validation of Conversion of Model Results into Aggregated Output

1. Design sensitivity tests to determine the influence of particular input variables, methods options, model assumptions and table values/parameters on unit switching investments and feature investments

   In performing these tests, comparisons will be made to previous results obtained by the FCC staff during the course of the in camera review.

   The analysis will also determine interactions of input variables, methods options etc. such that when multiple factors interact, unreasonable model results are not produced or inconsistencies in costing methods occur

   Although a complete list of "test variables" will be determined, an initial list is expected to include:

   a. Marginal versus average costing options for SCIS and LRIC versus average LRIC for SCM

   b. BSE demand

   c. Cost of money

   d. Changes in EF&I loadings and discounts

   e. Switch vendor discounts

   f. Utilization factors, year of replacement and other switch assumptions

2. In order to isolate reasons for differences among BOC unit investments and feature investments, a second set of sensitivity analyses is to be designed. In designing this analysis:

   a. Ranges in BOC unit investments (cost category unit investments and feature/vertical service switching unit investments) will be determined

   b. Possible factors contributing to BOC differences will be identified, e.g.:

      1. SCIS model versions

      2. Differences in SCIS and SCM

         Note: A comparison of SCIS and SCM results will be made using one or more sets of common test data and methods options. If there are significant differences in results, SCM methods will be further analyzed and compared with SCIS to understand reasons for differences

      3. Material price dates and discounts

      4. Alternative methods selections, e.g., marginal versus average costing

      5. Switch exhaustion assumptions

   c. Test sequences will be designed to isolate incremental effects of factors; interactions in factors will be determined to the extent possible

3. Perform sensitivity analyses, and develop graphical techniques for portraying model sensitivities and explaining variances among BOC unit investments

4. To the extent practicable, compare BOC model inputs with public data to determine factual and conceptual consistency

5. Analyze post-SCIS and SCM aggregation of unit investments by technology leading to average BSE switching investments:

   a. Flowchart aggregation procedure used by each BOC

   b. Obtain demand forecasts and other input data

   c. Validate aggregation calculations

d. Contrast methods and input data among BOCs and between SCIS and SCM-derived unit investments

e. Perform sensitivity analyses as appropriate, e.g., differences in average unit investments due to changes in demand forecasts, differences in mixes of switch types etc.

6. Address specific FCC staff work elements not otherwise covered by generic work plan:

a. Obtain vendor list prices for each switching technology and determine that they have been accurately reflected in the model office equation

b. Obtain BOC-specific switch prices and ascertain that model inputs reflect appropriate discounts

c. For ANI, review and determine the consistency of the BOCs' methods for converting SCIS/SCM investment from a busy hour to a per call/attempt basis

7. Investigate queries related to model sensitivity, differences in BOC costs and BOC aggregation techniques (Follow query resolution approach as described in Phase 1)

8. Prepare a draft report summarizing the scope and findings of the Phase 2 work and submit it, in camera, to the FCC staff for their review and comments

Final Report

1. Prepare and submit redacted and unredacted final reports to the FCC covering the Phase 1 and Phase 2 work and responses to any queries not otherwise addressed by such work

APPENDIX 3

INTERVENOR LETTERS

INTERVENOR LETTERS

INDEX

MAY 2 6 1992

MCI Telecommunications Corporation
1801 Pennsylvania Avenue N.W.
Washington, D.C. 20006
202 887 2737

Larry A. Blosser
Senior Regulatory Attorney
Regulatory Law

May 22, 1992

Mr. James E. Farmer
Arthur Andersen & Co.
101 Eisenhower Parkway
Roseland, NJ 07968-1099

Dear Mr. Farmer:

MCI wishes to express its appreciation to you and your colleagues for presenting the May 13 briefing for intervenors in CC Docket No. 92-91, and also for expressing your willingness to consider changes in the form and content of your report in response to intervenor suggestions.

However, MCI must also express its disappointment that what the FCC described in the SCIS Disclosure Order as an "independent audit" has now been allowed to atrophy -- apparently through a process in which everyone except intervenors was given an opportunity to participate -- into something called an "independent review." Unlike an audit, the "independent review" will apparently not involve any expressions of professional opinion as to the auditability and verifiability of the SCIS/SCM models as costing tools.

The suggestions made in this letter are intended to enable MCI to participate in the Commission's investigation in a meaningful way when we are given the opportunity to submit more detailed queries. If the Commission were to grant MCI's request for full access to the models and data under the terms of an appropriate nondisclosure agreement, we would have a better opportunity for meaningful participation, and many of the suggestions in this letter would be unnecessary. Without access to the unredacted models and software, MCI will have no alternative but to request that Arthur Andersen conduct numerous sensitivity analyses and provide reams of paper at that time.

With the foregoing in mind, MCI offers the following specific suggestions concerning your report to the Commission:

1. Results of sensitivity analyses. At the briefing, you indicated that you had not intended to include in the final report (or Exhibits thereto) all of the sensitivity analyses performed, but only those which "had a significant effect on the variability of the BSE annual unit costs." As discussed, MCI would prefer to receive the results of all sensitivity analyses performed, without regard to whether Arthur Andersen concludes that changes in a particular parameter or combination of parameters have a significant effect on BSE costs. We do not object to sorting through massive printouts, as we would expect to do so if we were given the opportunity to conduct our own sensitivity analyses.

2. Format of redacted report. In general, the version of the final report (the "redacted" report) made available to intervenors should be formatted the same as the full report filed with the Commission. By blacking out specific data fields rather than reformatting the report, Arthur Andersen will allow MCI and other intervenors to more readily determine the nature and scope of the information presented to the Commission in the full report. This will greatly facilitate intervenors' formulation of queries to be submitted to Arthur Andersen at a later stage of the proceeding. Consistent formatting of tables, graphs and charts in both versions of the report will also make it easier for all parties to refer to specific exhibits in correspondence and pleadings.

3. Scope of redaction. Redaction should be minimized, consistent with the Commission's most recent guidelines.

4. Manner of redaction. Any numeric or other data field which is redacted should be readily discernible. In the normal mode of presentation (black print on white paper), redacted material would be blacked out, rather than whited out.

ARTHUR ANDERSEN

ARTHUR ANDERSEN & CO. SC

5. Identification of redacting party. At the briefing, Arthur Andersen stated that it would make a "first cut" at redaction, after which the report would be sent to Bellcore and other interested parties for review and possible further redaction. MCI suggests that any data fields redacted subsequent to Arthur Andersen's "first cut" be annotated (by addition of a two- or three-letter uniform code) to indicate the party requesting redaction. For example, redactions requested by Bellcore would be blacked out and accompanied by the symbol BC. Those requested by Northern Telecom could be annotated with NTI, etc.

MCI believes that identification of the redacting party should minimize (and possibly eliminate) the problem of unnecessary (and even frivolous) redactions. Because each party requesting that particular data be redacted would be clearly identified, the Commission (and intervenors, in appropriate circumstances) could obtain from that party further information concerning the basis for the redaction. As was evident at the briefing, such communications may potentially lead to agreements which provide intervenors with enough information to enable them to assess, at least preliminarily, the sensitivity of the models to various inputs, without the need to examine proprietary switch vendor data.

6. Vendor discount sensitivity analysis. As discussed at the briefing, MCI believes that the alternative presentation described below would provide us with useful information concerning the sensitivity of costs to vendor discounts, without compromising switch vendor proprietary data. (Of course, MCI reserves the right to seek additional information at a later date should we deem it necessary to do so.)

The redacted version of the report would contain, for each filing entity and for each BSE, a table showing the effect of specified percentage changes (e.g., plus or minus 1, 2, 5, 10, 20 percent) in the vendor volume discount on the annual direct and indirect costs. The choice of particular percentage change values and the number of data points would be left, in the first instance, to the auditors' discretion, on the assumption that they will endeavor to include an accurate representation of the sensitivity in the redacted report. The auditors' selection of values and number of data points should be verified by the Commission staff, which will have access to both the redacted and unredacted presentations. (An accurate and complete representation of a non-linear relationship would likely entail a greater number of test runs with more discrete values and/or a broader range of values than a linear relationship.)

MCI respectfully requests that Arthur Andersen incorporate these suggestions in your report to the Commission. Should you or your colleagues have any questions concerning our suggestions, please do not hesitate to contact us.

Sincerely,

Larry A. Blosser

Larry A. Blosser

cc: Ms. Donna R. Searcy, FCC (for inclusion in CC Docket No. 92-91)
Mr. Gregory J. Vogt, Chief, Tariff Division
All parties of record, CC Docket No. 92-91

US Sprint

May 22, 1992

James E. Farmer
Arthur Anderson & Co.
101 Eisenhower Parkway
Roseland, NJ 07068-1099

Re: SCIS/SCM Review
CC Docket No. 92-91, Investigation of ONA Tariffs

Dear Mr. Farmer:

As suggested by the Chief of the Tariff Division of the FCC,[1] Sprint hereby offers the following proposals regarding Arthur Andersen's initial report on its review of the SCIS/SCM models. In addition to the information which Bellcore has indicated will be provided,[2] Sprint suggests that the initial report should also include, at a minimum, the following:

- a list of all inputs and/or parameters identified as being subject to BOC variation; an explanation of how Arthur Andersen determined which parameters were significant, and which were minor; and a list of any other selections made (e.g., average versus incremental costs);

- a detailed description of all analyses performed, including a list of all factors subjected to sensitivity analyses as well as the different input values assumed for each factor. For example, if sensitivity analyses are done assuming several different EF&I loadings and discounts, the report should enumerate each of the loading and discount factors used;

- a description of key data used to evaluate post-SCIS ratemaking methodologies (for example, demand forecasts or other input data). If this data was not included in the BOCs' direct cases in

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[1] Letter dated May 14, 1992.

[2] See, e.g., letter dated April 3, 1992, from J. Britt, Bellcore, to J. Cimko, FCC.

CC Docket No. 92-91,[3] it should be provided as part of the Arthur Andersen report:

- the templates of exhibits, tables, etc., and an outline of verbiage or other material, contained in the unredacted version of the report which are expected to be excluded from the redacted report. Futhermore, the report should include an explication of the reasons for any redaction; such justification should go beyond a simple blanket statement that redacted material is "proprietary."

Because it is not clear precisely what will be included in Arthur Andersen's initial report, the suggestions listed above are necessarily broad. However, Sprint anticipates that subsequent questions, based upon review of the actual filed report, will be both more specific and more comprehensive.

Thank you for your consideration.

Sincerely,

Norina Moy

Norina Moy
Manager, Federal
Regulatory Affairs

cc: James Britt, Bellcore
Anna Lim, US West
Gregory Vogt, FCC
Donna Searcy, FCC

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[3]ONA Tariffs, CC Docket No. 92-91, Order Designating Issues for Investigation, released April 16, 1992. The BOC direct cases were to be filed on May 18.

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CHICAGO, ILLINOIS

May 22, 1992

via Federal Express

Arthur Anderson & Co.
c/o Mr. James F. Britt
Executive Director
Bell Communications Research
LCC 2E-243
290 West Mount Pleasant Avenue
Livingston, New Jersey 07039

Re: Independent Review of
SCIS/SCM (CC Docket No. 92-91)

Gentlemen:

By letter dated May 14, 1992, the Chief of the Federal Communications Commission's Common Carrier Bureau invited interested parties to identified aspects of Arthur Andersen's ongoing independent review of the Switching Cost Information System ("SCIS")/Switching Cost Module ("SCM") models which could be improved. The Ad Hoc Telecommunications Users Committee participated in the May 13 briefing regarding the anticipated scope and nature of the review Arthur Andersen proposed to undertake, as well as the projected form and content of its final report. The Ad Hoc Committee commissioned Economics and Technology, Inc. to assess Arthur Andersen's approach and to suggest refinements which would enhance the usefulness of the results thereof. Attached hereto is a memorandum prepared by Page Montgomery, Senior Vice President of Economics and Technology, Inc., which proposes a number of modifications to Arthur Andersen's methodology which the Ad Hoc Committee believes would produce superior results.

Sincerely,

Charles C. Hunter
Attorney for the Ad Hoc
Telecommunications Users
Committee

CCH/rs
Enclosure
cc (w/enc.): Donna R. Searcy, Secretary
John Cimko, Jr., Chief, Tariff Division
SCIS Parties of Record

ECONOMICS AND TECHNOLOGY, INC.

WILLIAM PAGE MONTGOMERY
Senior Vice President

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MEMORANDUM

TO: Charles Hunter
RE: Comments relative to the Arthur Andersen SCIS study
DATE: May 21, 1992

As you requested, I have examined the written material that was presented at the May 13, 1992 meeting concerning Bellcore's SCIS model and the analysis to be undertaken by Arthur Andersen. I reviewed your notes and we have discussed the application of SCIS with respect to ONA basic service elements (BSEs). I wish to make four points with respect to SCIS and its utilization in the ONA tariff context.

First, it is imperative that the Arthur Andersen audit should be sufficient to address *all* issues raised in the ONA tariff petitions by parties such as the Ad Hoc Committee. That is the examinations should produce results with respect to all facets of the tariff development process that may implicate SCIS and the getting started investments, or "investment building blocks" produced by SCIS. In my opinion, it will not be sufficient for Arthur Andersen to study only the most commonly offered BSEs. As documented in the November 1991 ONA tariff petitions, a number of BSEs were offered only by a subset of the RBOCs. Some RBOCs did not offer BSEs that *had* been identified in their ONA plans. To the extent a carrier's decision not to offer a BSE was based upon economic feasibility or market demand estimates based in part upon costs produced by SCIS, SCIS would be relevant to examining why the BSE was not offered. In other words, beyond the cases where SCIS *was* used for a tariffed BSE, presumably some other LECs relied upon possibly questionable SCIS runs in order to determine that the same BSE was not feasible and thus they did not tariff it. The Commission has not, however, required LECs to file SCIS or related data for any BSEs not tariffed; this fact cannot be changed now. Accordingly, it is extremely important that SCIS-related BSE cost data be examined even in those instances where as few as three (3) RBOCs *did propose* to offer it,[1] rather than confining to the analysis to the few BSEs that were offered by most or all RBOCs.

Second, each RBOC should be required to identify with respect to each BSE study item

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1. For convenience I will refer to any such BSE that is offered by at least three RBOCs as a "BSE Study Item."