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Issues: Network Issues
Witness: Richard T. Scharfenberg
Type of Exhibit: Surrebuttal Testimony
Sponsoring Party: Southwestern Bell Telephone Company
Case No: TO-99-593

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IN THE MATTER OF THE INVESTIGATION
INTO SIGNALING PROTOCOLS, CALL RECORDS,
TRUNKING ARRANGEMENTS, AND TRAFFIC MEASUREMENT

CASE NO. TO-99-593

SURREBUTTAL TESTIMONY
OF
RICHARD T. SCHARFENBERG

ON BEHALF OF
SOUTHWESTERN BELL TELEPHONE

Little Rock, Arkansas
January 2001

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Investigation)
into Signaling Protocols, Call)
Records, Trunking Arrangements,)
and Traffic Measurement)

Case No. TO-99-593

AFFIDAVIT OF RICHARD T. SCHARFENBERG

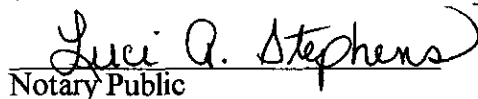
STATE OF ARKANSAS)
)
COUNTY OF PULASKI) SS

I, Richard T. Scharfenberg, of lawful age, being duly sworn, depose and state:

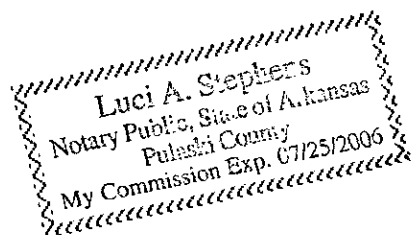
1. My name is Richard T. Scharfenberg. I am presently Vice President of R & A Consulting, Inc.
2. Attached hereto and made part hereof for all purposes is my surrebuttal testimony.
3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my knowledge and belief.


Richard T. Scharfenberg

Subscribed and sworn to before this 2nd day of January, 2001.


Notary Public

My Commission Expires: 7/25/2006



1 **SURREBUTTAL TESTIMONY OF RICHARD T. SCHARFENBERG**

2 **ON BEHALF OF**

3 **SOUTHWESTERN BELL TELEPHONE COMPANY**

4 **CASE NO. TO-99-593**

5 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

6 A. I am Richard T. Scharfenberg. My business address is 2805 Timber Creek
7 Court, North Little Rock, Arkansas.

8 **Q. ARE YOU THE SAME RICHARD SCHARFENBERG THAT FILED DIRECT**
9 **AND REBUTTAL TESTIMONY IN THIS CASE?**

10 A. Yes.

11 **Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?**

12 A. I will be responding to portions of the rebuttal testimony of Mr. David Jones who
13 filed on behalf of the Missouri Independent Telephone Group (MITG), Mr. Robert
14 C. Schoonmaker who filed on behalf of the Small Telephone Company Group
15 (STCG) and Mr. Kent Larsen who filed on behalf of MITG.

16 **Q. ON PAGE 4 OF HIS REBUTTAL TESTIMONY, MR. SCHOONMAKER STATES**
17 **THAT THE TERMINATING RECORDING SYSTEM "IS A MUCH SIMPLER**
18 **SYSTEM" THAN THE ORIGINATING RECORDING SYSTEM. DO YOU**
19 **AGREE WITH HIS ASSESMENT?**

20 A. No. From a network perspective, the originating and terminating recording
21 system have the same degree of complexity and are subject to potential errors
22 from switch technicians and system designers. While the tandem companies'
23 systems may be larger, to accommodate greater volumes, the degree of

1 complexity of the terminating recording systems would be similar, which would
2 lead me to believe that there could be as great an incidence of errors with the
3 use of terminating systems.

4 **Q. DOES MR. SCHOONMAKER GIVE ANY EXAMPLES OF PROBLEMS**
5 **ENCOUNTERED DURING THE RECORDS TEST?**

6 A. Yes. He mentions problems encountered with both the originating and
7 terminating records systems that were used during the records test.

8 In his direct testimony he covers problems encountered by SWBT in recording
9 Local Plus Calls that resulted in errors in the originating records system. In his
10 rebuttal testimony he mentions problems with the Kingdom Telephone Company
11 recordings where originating records existed but did not have a corresponding
12 terminating record match. Also, Mr. Cowdrey of Sprint discusses this problem in
13 his direct testimony. These are examples that illustrate that both the originating
14 and terminating record systems can and do have errors. These errors are
15 unfortunate and need to be corrected as soon as they are discovered. However,
16 the occasional occurrence of errors is not a reason to abandon the significant
17 investments the tandem companies have made to deploy and maintain the
18 existing records systems.

19 **Q. ON PAGE 9 OF HIS TESTIMONY, MR. SCHOONMAKER STATES THAT THE**
20 **"...ORIGINATING RECORDS PROCESS DOES NOT WORK." DO YOU**
21 **AGREE WITH HIS CONCLUSION?**

22 A. No. SWBT's originating records process is used to bill over 2.5 Million access
23 lines each month in Missouri. Similar systems are also used by other Local

1 Exchange Carriers (LEC) like Fidelity, Sprint, Spectrum and Verizon. It is
2 obvious to the millions of customers that we bill each month that the originating
3 record system does work. Any recording system, originating or terminating,
4 occasionally will have errors that require correction but to declare, as Mr.
5 Schoonmaker does, that the "originating records process does not work" is
6 unjustified.

7 **Q. DOES MR. SCHOONMAKER AGREE WITH YOUR POSITION THAT**
8 **NETWORK EFFICIENCY SHOULD BE CONSIDERED IN DECISIONS**
9 **REGARDING THE ESTABLISHMENT OF TRUNK GROUPS?**

10 A. Yes. On page 12 of his rebuttal testimony, Mr. Schoonmaker acknowledges that
11 network efficiency should be considered in decisions regarding the establishment
12 of new trunk groups. The establishment of trunk groups is a process that is
13 impacted by many factors, some of which are indicated below:

- 14 • Type of traffic (e.g., Toll, Local, Operator Service, etc.)
- 15 • Capabilities of switching equipment (e.g., Electronic Switching, Crossbar,
16 Step-by-Step, etc.)
- 17 • Volume of traffic (e.g., high verses low call volumes)
- 18 • Route distance (e.g., Kansas City to Independence verses Kansas City to
19 Kirksville)
- 20 • Labor costs to install or delete trunks or trunk groups
- 21 • Facility costs to implement trunk groups

22 These factors and others are used to determine the network trunking
23 arrangement at a given point in time. Network efficiency is a goal that network
24 planners use to keep the cost of the network as low as possible.

1 **Q. DO YOU AGREE WITH MR. SCHOONMAKER IN HIS ASSESSMENT ON**
2 **PAGE 13 OF HIS REBUTTAL TESTIMONY THAT THE STCG'S PROPOSAL**
3 **TO SPLIT TRUNK GROUPS FOR MCA TRAFFIC WOULD BE RELATIVELY**
4 **MINOR?**

5 **A.** No. His conclusion that the implementation of separate trunk groups for MCA
6 traffic would not cause any significant change in overall network efficiency is not
7 supported by any detailed analysis or study. His claim that my example of
8 dividing a trunk group of 100 trunks would not increase the number of T-1 groups
9 (24 trunks per T-1) is correct , but he ignores the many other cases where
10 additional T-1 groups would be required. For example, if you have a trunk group
11 of 96 trunks (only four fewer trunks than my original example) using the same
12 trunk tables and dividing it into two trunk groups as suggested by Mr.
13 Schoonmaker, you would require 108 trunks to carry the same capacity, resulting
14 in a 13% trunking penalty. In terms of T-1 groups, you would increase the
15 requirement from four T-1's to five T-1's resulting in a 25% penalty. To conclude
16 that there would be no, or even little, cost to split the MCA traffic into additional
17 trunk groups is simply not supported.

18 If the Commission orders the implementation of additional trunk groups for MCA
19 traffic, a method of cost recovery should be provided so that the additional costs
20 incurred can be recovered.

21 **Q. DO YOU AGREE WITH MR. JONES' STATEMENT ON PAGE 13 OF HIS**
22 **REBUTTAL TESTIMONY THAT THE SMALL COMPANY PROPOSAL WOULD**

**NOT REQUIRE THE CONVERSION OF FEATURE GROUP C (FGC) TO
FEATURE GROUP D (FGD)?**

A. If that is their position, I certainly will accept it as it is clearly the appropriate conclusion. However, I was confused by his statement on page 5 of his direct testimony in which he testifies as follows:

- E. Any former PTC not willing to accept this terminating compensation business relationship may avoid it by either:
1. terminating its existing access connection with other ILECs, or
 2. convert its existing access connection with other ILECs to a FGD access connection, or
 3. cease transiting traffic types (B.1.e or B.2.d. above) via the existing access connection with other ILECs

I understood, perhaps mistakenly, that Mr. Jones wanted to keep the network conversion issue alive so that he could have another bite at the apple in case he did not get the new business relationship he is proposing.

**Q. DO YOU AGREE WITH MR. JONES' STATEMENT ON PAGE 10 OF HIS
REBUTTAL TESTIMONY THAT THERE IS NO FUNCTIONALITY
DIFFERENCE BETWEEN THE FGC AND FGD TRUNKS?**

A. No. While an end user or IXC customer would not perceive any difference in quality between FGC and FGD, these feature groups have many differences. Originating FGC routes calls based on the 10-Digit telephone number and FGD routes calls based on the Carrier Identification Code (CIC). Originating FGC routes calls to other LECs and FGD routes calls to IXCs. FGC bills end users based on conversation time and FGD bills IXCs based on connection time. FGC uses GR-317 signaling protocol and FGD uses GR-349 signaling protocol. There are many differences between FGC and FGD.

1 **Q. MR. JONES INDICATES ON PAGE 14 OF HIS REBUTTAL TESTIMONY THAT**
2 **IT IS NOT APPROPRIATE FOR SWBT TO BE COMPENSATED FOR**
3 **BLOCKING REQUESTS MADE BY THE SMALL COMPANIES. DO YOU**
4 **AGREE WITH HIS POSITION ON THIS MATTER?**

5 A. No. As stated by SWBT witness Mr. Hughes in his rebuttal testimony, it is
6 essential that SWBT be able to recover the cost of implementing blocking on
7 behalf of the small companies. Considerable network translations efforts are
8 required to install and remove any blocking ordered by this Commission.

9 **Q. MR. LARSEN STATES ON PAGE 6 OF HIS REBUTTAL TESTIMONY THAT**
10 **"MR. SCHARFENBERG ACKNOWLEDGES THAT THE DATA ASSOCIATED**
11 **WITH BOTH FGC AND FGD TRAFFIC TERMINATING TO THE EXCHANGES**
12 **OF THE SMALL COMPANIES AND NECESSARY TO RENDER A BILL IS**
13 **IDENTICAL." DOES HE ACCURATELY SUMMARIZE YOUR TESTIMONY?**

14 A. No. The portions of my direct testimony he cites deal with the quality of access
15 service provided over FGC and FGD. As I stated, the quality of service provided
16 over FGD is not superior. In this section of my testimony, I did not discuss the
17 information provided for billing purposes. But I did clearly state in my direct
18 testimony, page 26 at line 16, that since the CIC code is not available in records
19 created at the terminating end office, the identification of the responsible service
20 provider cannot be made and therefore the correct party cannot be billed.

21 **Q. MR. LARSEN STATES ON PAGE 6 OF HIS REBUTTAL TESTIMONY THAT**
22 **YOUR TESTIMONY "REVEALS THAT THE MAJOR DIFFERENCE BETWEEN**
23 **THE BUSINESS ARRANGEMENTS OF CARRIERS IS THE SEGREGATION**

**OF TRAFFIC ONTO TRUNKS BY CARRIER". DOES THIS ACCURATELY
SUMMARIZE YOUR TESTIMONY?**

A. No. The referenced portion of my testimony does not mention anything about
"business arrangements of carriers." I was only describing where an
Interexchange Carrier (IXC) access billing record is made in the network.

**Q. DO YOU AGREE WITH MR. LARSEN'S STATEMENT THAT THE COST TO
CONVERT THE SWBT NETWORK FROM FGC TO FGD IS IRRELEVANT?**

A. If none of the small companies truly are seeking a physical conversion of the
network from FGC to FGD, then I would agree that there is no issue on this point
and the Commission could disregard that portion of my testimony. However, if
the conversion of the network from FGC to FGD continues to be an issue, my
testimony would be appropriate to show the expense required for the conversion
of the network to FGD.

**Q. MR. LARSEN CONTENDS ON PAGE 16 OF HIS REBUTTAL TESTIMONY
THAT MUCH OF YOUR TESTIMONY IS IRRELEVANT TO THE MATTER
BEFORE THIS COMMISSION. DO YOU AGREE WITH HIS ASSESSMENT OF
YOUR TESTIMONY?**

A. No. The purpose of my testimony was to address the issues the Missouri Public
Service Commission directed be investigated in its Report and Order issued on
June 10, 1999, in Case No. TO-99-254, et al. The following is a portion of the
Commission's Order as contained on page 19, in item 7:

"That Case Number TO-99-593 is established to investigate signaling
protocols, call records, trunking arrangements and traffic measurement."

1 My testimony gives necessary background information and directly addresses
2 the issues contained in this Commission's Order. This testimony is appropriate
3 for this case.

4 But as I indicated above, if MITG and STCG are no longer asking for the physical
5 conversion of the network from FGC to FGD, it would appear the parties are in
6 agreement and the Commission would not need to decide on this issue.

7 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

8 **A.** Yes.