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Witness:

Sara Buyak

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Missouri Public  
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**MISSOURI PUBLIC SERVICE COMMISSION**

**UTILITY OPERATIONS DIVISION**

**DIRECT  
TESTIMONY**

**OF**

**SARA BUYAK**

**CASE NO. TO-2000-374**

**Jefferson City, Missouri  
May 10, 2000**

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**Direct Testimony**  
**Of**  
**Sara Buyak**  
**Missouri Public Service Commission**  
**Case No. TO-2000-374**

**Q. Please state your name and give your business address.**

A. My name is Sara Buyak and my business address is 301 West High Street, Room 530, Post Office Box 360, Jefferson City, Missouri 65102-0360.

**Q. By whom are you employed?**

A. I am employed by the Missouri Public Service Commission (MoPSC or Commission) as a research analyst in the Rates and Tariff section of the Telecommunications Department. I began my employment with the MoPSC in November 1998.

**Q. What are your current responsibilities at the Commission?**

A. My responsibilities include the investigation, review, and analysis of tariff filings, certificate applications, interconnection agreements, and special projects, as assigned.

**Q. What is the purpose of your direct testimony in this docket?**

A. My testimony addresses the Missouri Public Service Commission Staff's (Staff) recommendation on a relief method for the 314 Numbering Plan Area (NPA or area code).

I will provide some basic information concerning the 314 NPA followed by a discussion of certain number conservation measures. The remainder of my testimony will recommend a proposed relief plan for the 314 area code.

1 **Q. What is the expected exhaust date for the 314 NPA?**

2 A. According to North American Numbering Plan Administrator's (NANPA)  
3 January 18, 2000 Central Office Code Utilization Study (COCUS) and NPA Exhaust  
4 Analysis, the 314 NPA is expected to exhaust in the Third Quarter of 2001.

5 **Q. Why are the NXXs<sup>1</sup> rapidly depleting?**

6 A. According to the Federal Communications Commission (FCC), the depletion of  
7 telephone number resources is driven by several factors including "an increase in the  
8 number of new competitors; the introduction of new technologies, such as wireless  
9 telephones; the spread of new services, such as Internet, data, and facsimile services; and  
10 the way our numbering resources are currently managed." <sup>2</sup>

11 **Q. Who assigns NXX codes?**

12 A. The NANPA is the entity responsible for administering and assigning central  
13 office codes and area codes, as well as facilitating the relief planning process for the  
14 industry in a neutral, third-party role.<sup>3</sup>

15 **Q. How many NXXs are currently available in the 314 NPA?**

16 A. According to the NANPA, a total of 192 codes are available for assignment to  
17 telecommunications providers in the 314 NPA as of May 2000.

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<sup>1</sup> The NXX, in a seven-digit local phone number, is the first three digits that identify the specific telephone company central office which serves that number. These digits are referred to as the NXX where N can be any number from 2 to 9 and X can be any number.

<sup>2</sup> In the Matter of Numbering Resource Optimization, FCC 00-104, CC Docket No. 99-200, Report and Order and Further Notice of Proposed Rule Making (*FCC Order*) at ¶5. Federal Communications Commission Press Release, "Federal Communication Commission Takes a Major Initiative to Improve U.S. Telephone Number Usage", March 17, 2000.

<sup>3</sup> "An Introduction to Numbering," <http://www.nanpa.com/>, Issued by the North American Numbering Plan Administrator (NANPA), September 28, 1999, pg. 2.

1    **NUMBER CONSERVATION METHODS**

2    **Q.     What is number conservation?**

3    A.     Number conservation consists of a basket of techniques which are intended to  
4    slow the allocation of NXXs so the NPA in which those NXXs are assigned will have a  
5    longer duration before the next exhaust. Those practices are divided into three general  
6    subsets: rate center consolidation; thousands-block number pooling; and central office  
7    code allocation administration. I will discuss rate center consolidation and an aspect of  
8    central office code allocation administration known as sequential number assignment.  
9    Thousands-block number pooling and additional aspects of central office code allocation  
10   administration are addressed in the Direct Testimony of Staff Witness Walter Cecil.

11   **Q.     What is Sequential Number Assignment?**

12   A.     Sequential number assignment refers to procedures for assignment or use of  
13   numbers or number blocks in a manner meant to provide for or prepare for number  
14   pooling (i.e., the benefits of thousands-block number pooling are maximized by the use  
15   of sequential number assignment). In the FCC Order, the FCC adopted a flexible  
16   requirement for sequential number assignment which mandates that carriers first assign  
17   all available telephone numbers within an opened thousands-block before opening  
18   another thousands-block, unless the available numbers in the opened thousands-block are  
19   not sufficient to meet a customer request.<sup>4</sup>

20  
21  

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<sup>4</sup> FCC Order at ¶ 244.

1  
2 **Q. What has been done to implement sequential number assignment?**

3 A. In the Number Conservation Methods in the St. Louis Area, Report on Sequential  
4 Number Assignment filed on October 22, 1999 in Case No. TO-99-14, the parties  
5 developed guidelines designed to conserve 1000 number blocks.

6 Based on conversations with a SWBT representative, Staff's understanding is that  
7 SWBT has already begun utilizing these guidelines to assign telephone numbers  
8 sequentially.

9 **Q. Does the Commission need to take any action with respect to sequential**  
10 **number assignment?**

11 A. Since the FCC mandated the flexible requirement for sequential number  
12 assignment, it is unnecessary for the Commission to order carriers to comply with the  
13 FCC requirement. However, the FCC requires that a carrier opening a clean block, prior  
14 to utilizing in its entirety a previously opened thousands-block, should be prepared to  
15 demonstrate to the state commission:

- 16 1) A genuine request from a customer detailing the specific need for telephone  
17 numbers;  
18 2) The inability on the part of the carrier to meet the specific customer request for  
19 telephone numbers from the surplus of numbers within the carrier's currently  
20 activated thousands-block.”<sup>5</sup>

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<sup>5</sup> *Id.* at ¶ 245.

1        Thus, it appears the FCC has contemplated a role for states in the administration  
2 of sequential number assignment.

3        **Q.     What is Rate Center Consolidation (RCC)?**

4        A.     A rate center is a geographic area identified by vertical and horizontal coordinates  
5 used as a point for rating and routing telephone calls. A metropolitan area may  
6 potentially contain numerous rate centers. When a local carrier wants to serve the entire  
7 metro area, it needs a NXX for each rate center. If there are several rate centers in an  
8 area and carriers want to offer service in each rate center, more NXXs are utilized. By  
9 consolidating rate centers within an NPA, a new local service provider can serve the  
10 entire area with fewer NXXs.

11       **Q.     What are the advantages of RCC?**

12       A.     It potentially reduces the number of codes needed by new entrants. The codes are  
13 currently assigned in blocks of 10,000 numbers in each rate center. If the rate centers  
14 were consolidated, carriers may request fewer blocks of 10,000 numbers.

15       **Q.     What RCC option was implemented in the St. Louis NXX and when was it**  
16 **implemented?**

17       A.     In the Number Conservation Methods in the St. Louis Area, Report on Rate  
18 Center Consolidation (RCC Report),<sup>6</sup> the Technical Committee (Committee) determined  
19 RCC offers some long-term number conservation benefits but will not significantly delay  
20 the next NPA exhaust without severe customer impacts.<sup>7</sup> In the RCC Report, the  
21 Committee recommended Option 1 which involved the consolidation of fourteen rate

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<sup>6</sup> Case No. TO-99-14, December 22, 1998.

1 centers located in the core area of St. Louis to create seven rate centers.<sup>8</sup> Option 1 did not  
2 involve calling scope issues because all the customers located in MCA 1 and MCA 2 had  
3 the same local rates and calling scopes. On December 17, 1999, RCC was completed.

4 **Q. Does Staff recommend implementation of further RCC?**

5 A. Staff does not recommend further RCC for the 314 NPA at this time. According  
6 to the RCC Report: "The types of impacts produced by more extensive RCC, beyond  
7 Option 1, which are outlined in Options 2-6, are: end user customer calling scope  
8 changes; end user customer local rate changes; extensive changes to LECs' operational  
9 support systems and network facilities; and cost recovery and revenue impact  
10 considerations."<sup>9</sup> Based on the RCC Report, Staff does not believe the benefit of further  
11 RCC in the 314 area code would justify the potential costs and customer impacts.

12  
13 **PROPOSED RELIEF PLANS FOR THE 314 NPA**

14 **Q. What are the 314 NPA relief alternatives proposed by NANPA?**

15 A. NANPA presented four possible solutions to the exhaust forecasted for the 314  
16 NPA. The solutions were variations of geographic splits and overlays, as follows:

17 **Alternative #1 All Services Distributed Overlay.** This plan implements a  
18 new NPA over the existing 314 NPA. Two NPAs would exist in the same geographic  
19 space. The expected life of this plan is 6.3 years. Ten-digit dialing would be mandatory,  
20 but existing phone numbers would not be changed. Only new lines would be required to

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<sup>7</sup> RCC Report at 1.

<sup>8</sup> *Id.* at 1.

<sup>9</sup> *Id.* at 1.



1 use the new NPA. When the 314 area code is exhausted all code assignments will be in  
2 the overlay area code.

3 **Alternative #2 Single Split.** In this plan the 314 NPA would be reduced to  
4 an existing 557 NXXs for an anticipated life of 2.4 years with the remaining 213 NXXs  
5 creating a new NPA with an anticipated life of 16.4 years. This alternative would split a  
6 local calling scope, require ten-digit dialing across the MCA, and require consumers in  
7 the new NPA to change their existing phone numbers.

8 **Alternative #3 Retroactive Overlay.** In this plan the existing 314 NPA  
9 would be overlaid by the existing 636 NPA combining the two areas. The excess  
10 capacity of the 636 NPA would be used to supplement the 314 NPA. The estimated life  
11 of this plan is 4.4 years. Ten-digit dialing would be mandatory.

12 **Alternative #4 Single Split.** In this split the NPA is reduced to 272  
13 NXXs, essentially the St. Louis rate center, with an anticipated life of 11.4 years. The  
14 remaining 498 NXXs would create a new NPA with an anticipated life of 3.4 years. This  
15 proposal also splits a local calling scope, requires ten-digit dialing across the NPA  
16 boundaries, and requires consumers in the new NPA to change their existing phone  
17 numbers.

18 **Q. What is a geographic split?**

19 A. A geographic split occurs when an area served by an NPA is divided into two  
20 areas with one retaining the original NPA and the other receiving a new NPA.

21 **Q. What is an overlay?**

22 A. The overlay occurs when a new NPA is introduced into the same geographic area  
23 as the original NPA.

1 **Q. What is NANPA's proposal for the 314 NPA?**

2 A. The proposal for the 314 NPA is the implementation of a "retroactive" overlay  
3 followed by an all-services distributed overlay. This proposal extends the current 636  
4 area code to encompass the existing 314 area code followed by the implementation of a  
5 second overlay introducing a new NPA. With the implementation of an overlay 10-digit  
6 local dialing is required.

7 **Q. What are the disadvantages and advantages of a geographic split?**

8 A. The geographic split has some disadvantages and advantages for customers:

9 **Disadvantages:**

- 10 • Changes customers' NPA telephone numbers;
- 11 • Causes business customers' to incur costs of reprinting stationery, signage, and
- 12 advertising materials; and,
- 13 • Results in business customers' risking loss of business.

14 **Advantages:**

- 15 • It attempts to preserve seven-digit local dialing.

16 **Q. What are the disadvantages and advantages of an overlay relief plan?**

17 A. The overlay has some advantages and disadvantages for the customer:

18 **Disadvantage:**

- 19 • Customers are required to dial 10-digits for every call.

20 **Advantages:**

- 21 • Customers do not have to change their telephone numbers; and,
- 22 • Business customers do not incur the expense to reprint to stationery, signage, and
- 23 advertising materials.

1 **Q. Why is the NANPA proposing a retroactive overlay?**

2 A. The retroactive overlay was proposed primarily to allow time for the E911 system  
3 to be upgraded to allow the introduction of an additional NPA.

4 **Q. Please explain.**

5 A. The E911 switches in Missouri are currently set up to handle only four NPAs  
6 each. At the time the retroactive overlay plan was approved, the industry was operating  
7 under the assumption that the E911 switch that serves the 314 and 636 NPAs was at its  
8 capacity of four NPAs. If that were the case, upgrading the system to allow an additional  
9 NPA would take some time.

10 **Q. Does Staff share the industry's concern about upgrading the E911 system**  
11 **which serves the 314 and 636 NPAs?**

12 A. Upon investigation, Staff found that the E911 switch in the Webster Groves  
13 control office has one vacant slot for an additional NPA. Therefore, the industry's  
14 concern about needing additional time to upgrade the E911 system is no longer valid. In  
15 conversations with Staff, SWBT has acknowledged the E911 issue is no longer a concern  
16 in the 314 NPA, and a new NPA could be added without additional time needed for E911  
17 upgrades.

18 **Q. Does Staff support the retroactive overlay proposed by the NANPA?**

19 A. Staff does not necessarily oppose the retroactive overlay. However, Staff favors a  
20 straight, all-services distributed overlay of the 314 NPA (presented as Alternative #1 on  
21 page 6 of my Direct Testimony).

1 **Q. Why does Staff favor Alternative #1, the overlay of the 314 NPA, over the**  
2 **retroactive overlay?**

3 A. There are two reasons. First, with the recent split of the 314 and 636 NPAs, the  
4 customers in the 636 NPA have had to bear the lion's share of the cost of NPA exhaust in  
5 the 314 NPA. The customers in the 636 NPA have had to change their telephone  
6 numbers, endure the inconvenience of informing their relations and associates of the  
7 number change, possibly change stationery, signage, and business cards, as well as  
8 reprogram alarm systems, PBX equipment, wireless telephones, etc. Since 314 is the  
9 NPA in jeopardy of exhaust, it is reasonable to allow the 636 NPA customers to retain  
10 seven-digit dialing as long as possible. Moreover, since 314 is the exhausting NPA, it is  
11 reasonable to have users of numbers in the 314 NPA to bear the costs of relief in that  
12 NPA (namely, the introduction of ten-digit dialing for all local calls).

13 Second, Staff reasons that a straight overlay of the 314 NPA would cause less  
14 customer confusion than the retroactive overlay. Staff notes the difficulty the media had  
15 early on in presenting the retroactive overlay accurately. Even reporters who cover  
16 strictly telecommunications issues had trouble understanding the concept of the  
17 retroactive overlay. Thus, from a customer education standpoint, the straight overlay of  
18 the 314 NPA is a far better option.

19 **Q. Have other states implemented an overlay?**

20 A. Yes, overlays have become a common method of area code relief in metropolitan  
21 areas across the United States. Since 1995, Virginia, Florida, New York, Texas,  
22 Pennsylvania, Colorado, Georgia, and Maryland have utilized overlays for NPA relief.

1 **Q. Why does Staff not recommend a geographic split for the 314 NPA?**

2 A. With a geographic split, customers receiving the new NPA have to change their  
3 telephone numbers and businesses have to reprint stationery and advertising materials,  
4 and risk loss of business.

5 In addition, one split option identified by NANPA will only extend the life of the  
6 314 NPA by an estimated 2.4 years. The other split option presented by NANPA would  
7 extend the life of the 314 NPA by 11.4 years but would create a new NPA with a  
8 projected life of only 3.4 years. Additionally, the split will divide the mandatory local  
9 calling scope and cause needless customer confusion as to when to dial seven-digit and  
10 ten-digit local calling. The Staff also notes that judging from public hearings on April  
11 24<sup>th</sup> the public generally favors an overlay plan.

12 **Q. Please summarize your recommendation.**

13 A. For relief of the 314 NPA Staff recommends Alternative #1, an all-services  
14 distributed overlay. Staff does not necessarily oppose the retroactive overlay proposed  
15 by NANPA; however, Staff favors the straight overlay for reasons outlined above.  
16 Regarding RCC, Staff recommends that no further action be ordered by the Commission  
17 at this time for the 314 NPA.

18 **Q. Does this conclude your Direct Testimony?**

19 A. Yes, it does.

**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

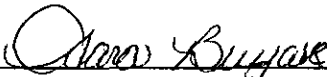
In the Matter of the North American )  
Numbering Plan Administrator, on Behalf of )  
the Missouri Telecommunications Industry, )  
Petition for Approval of NPA Relief Plan for )  
the 314 and 816 Area Codes. )

Case No. TO-2000-374

**AFFIDAVIT OF SARA BUYAK**

STATE OF MISSOURI     )  
                                  )     ss  
COUNTY OF COLE     )

Sara Buyak, of lawful age, on her oath states: that she has participated in the preparation of the foregoing written Direct Testimony in question and answer form, consisting of 12 pages of Direct Testimony to be presented in the above case, that the answers in the attached written Direct Testimony were given by her; that she has knowledge of the matters set forth in such answers; and that such matters are true to the best of her knowledge and belief.

  
\_\_\_\_\_  
Sara Buyak

Subscribed and sworn to before me this 9<sup>th</sup> <sup>May</sup> day of, 2000.

  
\_\_\_\_\_  
Notary Public

My commission expires October 14, 2003

NILA S HAGEMEYER  
NOTARY PUBLIC STATE OF MISSOURI  
COLE COUNTY  
MY COMMISSION EXP. OCT. 14, 2003