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314/816 Area Codes

Witness:

Walt Cecil

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MISSOURI PUBLIC SERVICE COMMISSION

UTILITY OPERATIONS DIVISION

**DIRECT
TESTIMONY**

OF

WALT CECIL

CASE NO. TO-2000-374

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

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DIRECT TESTIMONY

OF

WALT CECIL

IN

CASE NO. TO-2000-374

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

A. My name is Walt Cecil. My business address is Truman State Office Building,
Room 530, 301 W. High St., P.O. Box 360, Jefferson City, Missouri 65102-0360.

Q. By whom are you employed?

A. I am employed by the Missouri Public Service Commission (Commission).

Q. How long and in what capacity have you been employed by the Commission?

A. I have been employed as an economist by the Commission since October, 1999.

Q. Please describe your educational background and employment history.

A. I hold an M.A. in Economics from the University of Kansas and a B.A. in
Business Administration from Baylor University. I have been employed as an
adjunct instructor in Economics at William Jewell College and Longview
Community College. At both institutions, I taught introductory courses in
Microeconomics and Macroeconomics. I also taught Managerial Economics and
held an independent study course at William Jewell. Prior to my graduate studies,

1 I was employed in an executive position by a small Kansas City manufacturing
2 firm.

3
4 **Q. What are your duties at the Commission?**

5 A. My duties include the investigation, analysis, and review of various
6 telecommunications firms' proposals, interconnection agreements, and tariff
7 proposals. I also perform research projects and offer recommendations to the
8 Commission.

9
10 **Q. What is the purpose of your testimony in this case?**

11 A. The purpose of my testimony is to discuss various number conservation
12 techniques considered in the Federal Communication Commission's (FCC) Order
13 (FCC Order)¹, traditional relief alternatives, and to present the Missouri Public
14 Service Commission Staff's (Staff) recommendation of a relief method for the
15 exhaust of central office codes (NXXs) in Number Plan Area (NPA), or area
16 code, 816. Staff witness, Sara Buyak, will present the Staff's case for relief in
17 NPA 314. Ms. Buyak will also discuss sequential number assignment and rate
18 center consolidation in her direct testimony.

19
20

¹ In the Matter of Numbering Resource Optimization, CC Docket No. 99-200, FCC-00-104, Report and
Order and Further Notice of Proposed Rule Making.

Number Conservation

Q. What is number conservation?

A. Number conservation consists of a basket of techniques which are intended to slow the allocation of NXXs so that the NPA in which those NXXs are assigned will have a longer duration before the next exhaust. Those practices are divided into three general subsets: rate center consolidation; thousand-blocks number pooling (pooling); and central office code allocation administration. I will discuss pooling and aspects of central office code allocation administration.

Q. What is pooling?

A. Pooling is the practice of dividing an NXX, which is composed of 10,000 telephone numbers, into ten blocks of 1,000 telephone numbers, and allocating the resultant thousand-blocks one at a time to service providers. One notable consequence of pooling is that a code could be shared with as many as ten service providers. Therefore, the issuance of NXXs can potentially be slowed to 10% of the prepooling rate.

Q. If an entire NXX were formerly assigned to one service provider, how can an NXX be divided into thousand-blocks and allocated to multiple providers without confusion?

A. For pooling to be possible, local number portability must be deployed. Under local number portability, an end-user's telephone service can be changed from one service provider to another without changing the end-user's phone number.

1 Since the NXX under which the telephone number was issued identifies the
2 former service provider, some means must be provided to change the call routing
3 procedure to identify the new service provider so that calls may be correctly
4 terminated. Local number portability provides a means of identifying telephone
5 numbers with the appropriate service provider's switches so that when a customer
6 changes service providers the old switch will read the number and transfer the call
7 to the new service provider's switch. Local number portability will work equally
8 well with one telephone number or a thousand. With local number portability in
9 place, it will be possible to divide a code into thousand-blocks and still uniquely
10 identify a specific service provider.

11
12 **Q. Can pooling be implemented?**

13 A. Yes. The FCC has mandated that pooling be implemented.²
14

15 **Q. When does the FCC expect to implement pooling?**

16 A. According to the FCC Order, pooling will be implemented on a national basis
17 approximately nine months after the FCC chooses a pooling administrator (PA).³
18 The PA is required to establish the rollout schedule no later than 60 days after the
19 PA is selected.⁴ Pooling will be performed in the 100 largest metropolitan
20 statistical areas (MSA) at a rate of three MSAs per number portability

² *Id.* at ¶¶ 122, 128.

³ *Id.* at ¶ 156.

⁴ *Id.* at ¶ 166.

1 administration center region per calendar quarter.⁵ The initial rollout schedule
2 will include NPAs that are in jeopardy but that have an estimated life of more
3 than one year, new NPAs, and NPAs that have been or will be pooled under state-
4 sponsored trials. NPAs with an estimated life of less than one year will not
5 receive priority scheduling.⁶ In discussion with members of the North American
6 Numbering Council (NANC), Staff has learned that the FCC tentatively intends to
7 select the PA by September 2000. Thus the NANC is anticipating a national
8 rollout of number pooling to begin in June 2001.

9
10 **Q. Which carriers are expected to be pooling-capable?**

11 A. All wireline carriers that are in the largest 100 metropolitan statistical areas are
12 mandated to deploy local number portability capability and thus will be mandated
13 to participate in the pooling process.⁷ Commercial mobile radio service (CMRS)
14 providers (personal communications services [PCS] providers and cellular
15 providers) in the largest 100 metropolitan statistical areas are mandated to become
16 local number portability-capable by November 24, 2002, and, prior to that date, to
17 prepare the necessary architecture for pooling to foreshorten the implementation
18 lag of pooling. Those CMRS providers that will never be able to deploy local
19 number portability, such as paging companies, will not be required to pool but

⁵ *Id.* at ¶¶ 158-62.

⁶ *Id.* at ¶¶ 161-62.

⁷ *Id.* at ¶ 125.

1 will be subject to other criteria to ensure that the efficient allocation of NXXs

2 occurs.⁸

3
4 **Q. Can Missouri deploy pooling capability before the rollout schedule allows?**

5 A. Yes. States' petitions for additional delegated authority, of which one is from
6 Missouri, will continue to be considered.⁹ States receiving such authority to
7 perform pooling, however, must adhere to the federal standards¹⁰ and must
8 determine some state-mandated cost recovery mechanism. In order to be
9 considered for further delegated authority, the states petitioning for such authority
10 must have an NPA that is in one of the 100 largest MSAs and is in jeopardy but
11 that has an expected life of more than one year, have a newly issued NPA, or has
12 implemented pooling or will implement pooling pursuant to previously delegated
13 authority.¹¹

⁸ *Id.* at ¶¶ 134-36.

⁹ *Id.* at ¶ 170.

¹⁰ *Id.* at ¶¶ 169, 174. The standards chosen will be those set forth in the AITS Committee-T1 publication T1S1.6, Thousands-Block Number Pooling Technical Requirements.

¹¹ *Id.* at ¶ 161.

1 **Q. When pooling is implemented, how will carriers be expected to acquire, hold,**
2 **and return NXXs and thousand-blocks?**

3 A. The PA will maintain a six-month inventory of thousand-blocks.¹² Service
4 providers seeking an initial NXX or an initial thousand-block will apply to the
5 North American Numbering Plan Administrator (NANPA) or the PA,
6 respectively, for such numbers. As part of the application for initial numbering
7 resources, service providers must submit proof that the carrier has a certificate of
8 authority and the necessary interconnection agreements to operate in the area for
9 which numbers are requested. Upon examination and verification of that
10 supporting documentation by the NANPA or the PA, the requested numbers will
11 be allocated.¹³ Carriers will be allowed to request additional NXXs or thousand-
12 blocks to establish a presence in a particular rate center.¹⁴ Service providers will
13 be required to have facilities in place so that they will be able to provide
14 service from an initial NXX or an initial thousand-block within sixty days of the
15 assignment of those numbers.¹⁵ Providers that are not local number portability-
16 capable will be required to achieve some minimum utilization threshold before
17 growth NXXs may be assigned. That minimum has not been determined.¹⁶
18 Those service providers that are local number portability-capable will not be

¹² *Id.* at ¶ 189.

¹³ *Id.* at ¶ 97.

¹⁴ *Id.* at ¶ 100.

¹⁵ *Id.* at ¶ 97.

¹⁶ *Id.* at ¶ ¶ 115, 141, 248.

1 subject to the utilization threshold requirement. Carriers that are participating in
2 pooling will be required to identify unused and lightly contaminated NXXs and
3 thousand-blocks and contribute those to the pool of NXXs and thousand-blocks.¹⁷
4 Furthermore, when growth NXXs or growth thousand-blocks are sought by a
5 local number portability-capable service provider, the request must be
6 accompanied by a months-to-exhaust (MTE) forecast¹⁸ which will provide
7 information at the rate center level.¹⁹ All service providers are required to submit
8 semiannual reports²⁰ concerning the status of specifically defined categories of
9 numbers and forecasts of number utilization at the NPA and/or rate center level to
10 the NANPA, PA, and the states.²¹ Should a domestic service provider fail or
11 refuse to provide the required forecast or utilization data to the NANPA or PA,
12 the NANPA or PA is required to withhold numbering resources from that
13 provider.²² Non-U.S. service providers are not obligated to provide utilization
14 and forecast data. It should be noted that each rate center will contain its own
15 thousand-block pool.²³
16

¹⁷ *Id.* at ¶¶ 142, 191.

¹⁸ *Id.*

¹⁹ *Id.* at ¶¶ 104, 105.

²⁰ *Id.* at ¶ 60.

²¹ *Id.* at ¶¶ 67, 73, 80, 82.

²² *Id.* at ¶ 84.

²³ *Id.* at ¶ 185.

1 **Q. What will be the states' function in the allocation of number resources?**

2 A. As noted previously, the NANPA is directed to withhold initial numbering
3 resources from providers that fail to submit required supplemental documentation
4 when requesting an initial number resource. The provider may appeal the
5 NANPA's decision to withhold resources to the appropriate state. The state may
6 either affirm or overturn the NANPA's decision.²⁴ The states may investigate and
7 determine whether or not NXX holders or thousand-block holders have activated
8 their respective NXXs or thousand-blocks within the required time period. If a
9 state determines that a NXX holder or thousand-block holder has failed to activate
10 a given NXX within the required time limits, as indicated by the guidelines, that
11 state may order the NANPA or the PA to reclaim the code or block.²⁵ States are
12 allowed some latitude in whether or not they must refer to the Industry
13 Numbering Committee, as specified in the reclamation procedure set forth in the
14 Central Office Code Assignment Guidelines, when determining to reclaim NXXs
15 or thousand-blocks. States must, however, grant a NXX holder or thousand-
16 block holder an opportunity to explain why that holder has not activated the
17 resources in question. An activated NXX is one from which the carrier has begun
18 to issue telephone numbers.²⁶ NXXs and thousand-blocks that have not been
19 activated within 60 days should be reclaimed.
20

²⁴ *Id.* at ¶ 98.

²⁵ *Id.* at ¶¶ 237, 238.

²⁶ *Id.* at ¶¶ 239-241.

1 Carriers are required to submit forecasts and utilization data to the NANPA. If
2 the NANPA concludes that the data is insufficient or unsatisfactory and does not
3 receive an acceptable explanation regarding the submitted data then the NANPA
4 is required to refer its concerns to the Common Carrier Bureau and to the
5 appropriate state's commission. That state's commission is authorized to
6 determine the validity of the data in question and to instruct the carrier on how to
7 correct the insufficiency. The NANPA shall not allocate any numbering
8 resources to that carrier until that state has resolved the insufficiency or
9 inadequacy.²⁷

10
11 **Q. Have any other states reclaimed NXXs and if so, what has been their**
12 **experience?**

13 A. Staff has contacted a staff member at the Florida Commission²⁸ and learned that,
14 under delegated authority, Florida has reclaimed 50 NXXs, or 500,000 telephone
15 numbers, on a statewide basis. Florida has 13 NPAs or a total of 102,960,000
16 possible telephone numbers. This means that Florida reclaimed only 500,000
17 telephone numbers out of a statewide total of 102,960,000 telephone numbers.
18 Given recent rates of allocation, 50 NXXs would delay exhaust in Missouri by,
19 conservatively, 4-6 months if all NXXs were harvested from the same NPA.²⁹

²⁷ *Id.* at ¶ 54.

²⁸ Telephone conversation with Levent Leri, Staff, Florida Commission.

²⁹ Petition of the North American Numbering Plan Administrator filed in Case No. TO-2000-374, on December 17, 1999, exhibit A, p.4. The 4-6 month figure is calculated by dividing the 50 NXXs by an

1 **Q. How will the costs of the federal pooling program be recovered?**

2 A. The FCC, having asserted jurisdiction over number pooling efforts, has mandated
3 that, when implemented, number pooling will be a federal program; therefore, the
4 cost recovery mechanism must be and will be exclusively federal. Further, the
5 cost recovery mechanism will be competitively neutral.³⁰ Staff has learned from
6 the NANPA that cost recovery mechanisms that have or are being considered
7 include surcharges against the final customer or increases in switched access
8 charges (neither seems to be favored at this time).³¹

9
10 **Q. Have other states implemented pooling and what have been their**
11 **experiences?**

12 A. Illinois implemented pooling trials in the NPA 847 in June 1999 and extended the
13 estimated life of the NPA by two years.³² California implemented mandatory
14 pooling in the NPA 310 on March 10, 2000. New York mandated pooling in
15 NPA 716 on April 1, 2000 in addition to already existing voluntary pooling trials
16 in NPAs 212 and 718. On April 3, 2000, Illinois implemented mandatory pooling
17 in NPA 708.³³ Staff notes that these trials have been so recently implemented that

average monthly rate of 9.5 codes. The average monthly code allocation rate is determined by dividing
Neustar's estimate of 115 by 12 months.

³⁰ FCC Order at ¶ 197.

³¹ Telephone conversation with Brent Struthers, Neustar, Inc.

³² FCC Order at ¶ 123.

³³ "Pooling Implemented in Three New NPAs," Neustar, The State Scene (March/April 2000): p1.

1 to expect any actual or reliable estimated results would be premature. Further,
2 Staff has been informed that these states have not yet developed cost recovery
3 mechanisms.³⁴
4

5 **Q. Does Staff have any recommendations regarding number conservation in the**
6 **State of Missouri in general?**

7 A. Yes. Staff notes that the Commission has petitioned the FCC for further
8 delegated authority to implement number pooling under the State's authority.
9 Staff recommends that the Commission order the establishment of an industry
10 implementation team comprised of representatives of all facilities-based service
11 providers in the affected NPAs, members of the Staff, and representatives of the
12 Office of the Public Counsel. The function of the committee would be to manage
13 the details of pooling as it is deployed and to foreshorten implementation lag of
14 thousand-block number pooling as soon as pooling is allowed under the federal
15 order or under the grant of delegated authority.
16

17 Staff notes that the period of time that will be required to implement pooling,
18 whether under federal or Commission jurisdiction, will be sufficient to place both
19 NPA 816 and NPA 314 perilously close to exhaust. In order to execute a
20 Commission-sponsored pooling trial, the current proceedings must be concluded,
21 orders must be issued, committees formed, standards set, and cost recovery

³⁴ Telephone conversation with Brent Struthers, Neustar, Inc.

1 mechanisms established. It is unlikely that the necessary work to deploy pooling
2 will occur much before the federal program rollout begins. If the Commission can
3 deploy pooling before the federal program, Missouri may gain a few weeks or
4 months of relief, but the cost may not be worth the benefit. Since the federal
5 standards are being developed and will likely be implemented in about the same
6 time horizon as those of the Commission, and since the federal standards will
7 immediately supercede the state's standards, it may be more efficient for Missouri
8 to wait for the federal rollout.

9
10 **NPA 816 Relief**

11
12 **Q. What options are available to the Commission to effect NPA relief in NPA**
13 **816?**

14 **A.** The traditional methods employed in NPA relief are the geographic split and the
15 overlay. It is important to note that, "Conservation methods are not, however,
16 area code relief and it is important that state commissions recognize that
17 distinction and implement area code relief when necessary."³⁵ Number
18 conservation is not a substitute for NPA relief but conservation may forestall the
19 need for relief to some degree.

20
21

³⁵ FCC 98-224 at ¶ 21.

Q. What is a geographic split?

A. A geographic split effects relief in an NPA by dividing that NPA into two geographically smaller regions each of which will have its own area code. If the split is balanced, that is if each side has nearly the same number of NXXs assigned, then after the split both sides will have approximately the same number of codes with which to grow and one side will not experience relief at the expense of the other. If the split is not balanced, then one side will exhaust earlier than the other and relief will be required again. In either case, one side of the split will have the former NPA's area code number and the other side will have a new area code number.

An advantage to the geographic split is that it preserves seven-digit dialing within the new, smaller NPAs; but there will be ten-digit dialing across the split line. A disadvantage of the split is that it requires some people to change their NPA and, hence, their telephone numbers. If the former NPA is in a large metropolitan area, or is geographically small, then a split also may divide a community and result in confusion as to which calls within the community are seven-digit dialed and which are ten-digit dialed.

Q. What is an overlay?

A. Overlay is a method of NPA relief in which a new area code is created to exist within the same space as a previously existing NPA. An advantage of the overlay is that it does not require anyone to give up a phone number. Also, communities-

1 of-interest are not divided. A disadvantage of an overlay is that ten-digit local
2 dialing becomes mandatory. It is possible that one could have two NPAs within
3 the same household. An overlay can ensure a more efficient use of scarce number
4 resources: if one side of a split grows slowly, then the relief granted by the split
5 may provide too many NXXs, relative to the demand for those resources. Also,
6 those surplus numbers will not be available to meet the requirements of the other
7 side of the split or of any other NPA. An overlay will not isolate NXXs from the
8 faster growing areas within a respective NPA; hence an overlay has greater
9 efficiency.

Relief Proposals for NPA 816

12
13 **Q. What is the NANPA's proposal for the NPA 816?**

14 A. The relief proposed by the NANPA for the NPA 816 is to implement an overlay.
15

16 **Q. What is Staff's recommendation regarding the relief of the NPA 816?**

17 A. Staff concurs with the NANPA's proposal and recommends that the Commission
18 order the overlay of the NPA 816. The NANC is currently discussing options to
19 deal with the eventual exhaust of the North American Numbering Plan (NANP).
20 Staff is concerned that providing scarce number resources to a slower growing
21 NPA through a split would hasten the eventual exhaust of the NANP. An overlay
22 will result in the most efficient use of the numbering resources.
23

Further, an overlay does not divide communities-of-interest or calling spheres.

No one must give up their own phone number. Businesses who have endured splits have had to change stationery and advertising programs. One such firm in Columbia, Mo. found that customers were still calling the NPA 314 number from two splits previous; that business owner was distressed to learn that he could not get his old 314-NXX-XXXX to ring his 573-NXX-XXXX by means of some special arrangement. Some of his old customers were told that his old number was disconnected or no longer in service and, hence, had thought that he was out of business.

Q. Why should the Commission not order a geographic split in the NPA 816?

A. For a geographic split to provide reasonably long lasting relief in the NPA, it must divide the NXXs in such a way that there are nearly an equal number of NXXs on either side of the split line. However, such a split may divide communities-of-interest which would result in a situation similar to that which exists in the NPAs 314 and 636. The NANPA, in order to avoid dividing communities-of-interest, studied several alternative split possibilities. One such split severed the metropolitan calling area (MCA) from the northern region of the NPA. The fastest growing area, the urban area, would have received an estimated 1.1 years relief while the rural, northern area would have received an estimated 94 years relief. Another split proposed the removal of the metropolitan Kansas City/Independence area from the NPA. This split, while balanced and potentially viable, severs the metropolitan calling scope and the community-of-interest

1 sphere. There will be confusion as to when seven-digit and ten-digit dialing is
2 required. Subsequent relief efforts would also be more complicated. The final
3 split alternative considered separated the greater metropolitan area from the rural
4 areas, north, south, and east, in the NPA. The estimated relief in the rural region
5 of the NPA is 15.4 years while the urban area gains an estimated 3.1 years.
6 Clearly, it is difficult to draw a split in which the resultant NPAs are nearly equal
7 in size while not dividing a community-of-interest or a calling scope. An overlay
8 will avoid these issues.

9
10 The MCA plan also presents an impediment to a geographic split. If the MCA is
11 split to create a new NPA, then ten-digit dialing will become mandatory to dial
12 across the NPA within the MCA. The new NPAs will be geographically small
13 and economically interdependent; the attempt to save seven-digit dialing within
14 an NPA will be defeated by the immense number of cross-NPA intraMCA calls.
15 Also, the question of when to dial seven digits and when to dial ten digits will,
16 again, arise.

17
18 **Q. Does Staff have any other recommendations regarding the NPA 816?**

19 **A.** Yes. Staff recommends that the Commission order Southwestern Bell Telephone
20 Company (SWBT) to examine and implement rate center consolidation in the
21 NPA 816. In discussions with Staff, SWBT stated that it could effect rate center
22 consolidation in the NPA 816, similar to that done in NPA 314, within six to nine
23 months of a Commission order. The implementation of rate center consolidation

1 in NPA 816 would not likely forestall the immediate need for relief in NPA 816;
2 however, it could potentially prolong the life of any relief plan ordered.

3
4 **Summary**

5
6 **Q. Could you please summarize your recommendations in this case?**

7 **A.** Yes. For the NPA 816 Staff recommends the Commission order the following:

- 8 • the implementation of an overlay;
9 • the examination and implementation of rate center consolidation by SWBT in
10 NPA 816 similar to that effected in NPA 314.

11 For the state in general, Staff recommends the Commission:

- 12 • establish an industry implementation team comprised of representatives of all
13 facilities-based service providers in the affected areas, members of Staff, and the
14 Office of Public Counsel to manage the details of deploying pooling and to
15 foreshorten the implementation lag of pooling.

16
17 **Q. Does this conclude your direct testimony?**

18 **A.** Yes, it does.
19
20
21
22

**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 WALT CECIL


STATE OF MISSOURI)
)
COUNTY OF COLE) **ss**

Walt Cecil, of lawful age, on his oath states: that he has participated in the preparation of the foregoing written Direct Testimony in question and answer form, consisting of 18 pages of Direct Testimony to be presented in the above case, that the answers in the attached written Direct Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true to the best of his knowledge and belief.



Walt Cecil

Subscribed and sworn to before me this 9th day of ^{May}, 2000.



Notary Public

My commission expires October 14, 2003