News from the Oklahoma Corporation Commission

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MEDIA ADVISORY – 918 AREA CODE

The Oklahoma Corporation Commission is scheduled to vote Friday on what plan to institute in the 918 area code to deal with the predicted exhaust of available phone numbers.

The Commission has two choices: 1) Overlay or 2) Split.

In an overlay, all existing numbers would keep the old 918 area code. Eventually all new numbers would get a new area code.

In a split, the existing 918 area code's geographic area is split into two parts, with one part keeping the 918 area code and the other part getting a new area code.

Please see the attached document for the history and full information on this issue.

The Commission vote is scheduled for Friday 12-18, 9:30 a.m. in Room 301 of the Jim Thorpe Building, 2101 North Lincoln, Oklahoma City.

-OCC-

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Oklahoma Corporation Commission

ENERGY•TRANSPORTATION•UTILITIES

AREA CODE EXHAUST AND RELIEF

Questions and Answers

Area Code Exhaust and Relief
Questions and Answers
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Area Code Exhaust and Relief
Questions and Answers

Introduction

This guide is meant only as an information resource to help you in determining how you would be impacted by an area code split or an area code overlay, and to aid you in reaching a decision as to which you would prefer. It is not intended, nor should it be interpreted, as an argument for or against those options.

The information contained herein regarding the effects of an area code split or overlay is not exhaustive. The Corporation Commission wants to hear from you regarding how you think either option may impact you. You can submit your comment and opinions via the web (www.occeweb.com), or by phone: 1-800-522-8154.

If you have further questions, please email us (m.skinner@occeweb.com or j.palmer@occeweb.com) or call us, (405) 521-2211.

Questions and Answers

Why are we running out of numbers?

In recent years, a combination of new technologies and increased consumer demand for regular telephones in homes and offices, cellular and PCS phones, pagers, lines used for fax machines, modems, internet access, and other uses have strained existing telephone number resources. Also, new local telephone service providers need telephone numbers in order to provide service to their customers. All of these factors have resulted in an increased demand for numbers in the 918 area code. As a result, telephone number shortages have occurred at what's called the *prefix* level. A *prefix* is the three-digit number that is between the area code and your 4-digit line number.

Why are we adding a new area code?

Due to the many choices in service providers, significant increases in products and additional lines, and the limit to the amount of resources in an area code that can be allocated to telecommunication providers, it has become necessary to add the new area code to the 918 area.

Will the cost of calls change because of a new area code?

No. Calls that were local before the introduction of the new area code will remain local calls. Local calling areas do not change when a new area code is established.

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How does a new area code affect other services?

911 Services will NOT be affected by the introduction of a new area code. Emergency calls will continue to be handled just as they are today.

411 Services will NOT be affected by the introduction of a new area code. Directory assistance calls will continue to be handled just as they are today. There is no change in the cost of a directory assistance call because of an area code change.

211 Services will NOT be affected. Calls to 211 will continue to be handled just as they are today.

How are numbers added?

An area code (technically called a Numbering Plan Area, or **NPA**) consists of 792 available prefixes, each in turn consisting of 10,000 numbers. A prefix (NXX) is the three-digit number that is between the area code and your 4-digit line number. An area code would consist of 1,000 prefixes (NXXs) **if** all of the numbers 0 through 9 were utilized. However, ***N*** is a number from 2 to 9 and ***X*** is a number from 0 to 9. Since no prefixes begin with 0 (0XX) or 1 (1XX) because these digits serve special functions in the network, this eliminates 200 prefixes. In addition, *N*11 prefixes are not available except as special use prefixes, such as 911 for Emergency Services. That eliminates 8 more prefixes from assignment to individual companies. This is why there are only 792 prefixes available in an area code.

Numbers are allocated to telecommunications service providers by prefix. As most of the numbers available in each of the 792 prefixes are assigned, the area code approaches what is called ***exhaust***. In other words, the supply of available numbers begins to shrink to a critically low level. Exhaust, in turn, creates the need for an additional area code for that particular geographic area. While the Oklahoma Corporation Commission has adopted number conservation measures which have been successful at delaying the onset of exhaust, one cannot change the fact that the telecommunications numbering system is finite.

Telecommunications service providers request prefixes from the NANPA (North American Number Plan Administrator). NANPA assigns new prefixes, monitors the usage of prefixes within an area code, and forecasts when an area code will most likely exhaust and a new area code will be required.

Area code forecast exhausts are determined by NANPA using the Numbering Resource Utilization and Forecast (NRUF) reports, which are 5-year forecasts of number demand provided semi-annually be each telecommunications service provider of demands submitted; the historical CO code demand, the current demand for codes, the number of rate centers within each area code and other factors pertaining to the individual area codes.

Area Code Exhaust and Relief
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What is the planning process to establish a new area code?

The North American Numbering Plan Administrator (NANPA) notifies the Oklahoma Corporation Commission (OCC) and the telecommunication industry 3 years in advance of when it is anticipated that a particular area code will run out of prefixes.

The area code planning process begins with NANPA and the telecommunications industry group meeting to identify viable solutions. When developing and evaluating area code relief plans, the industry is required to follow regulations established by the Federal Communications Commission (FCC) and the state commissions, as well as the telecommunications industry guidelines.

After feasible alternatives are developed the industry strives to reach consensus on the best plan for the area as a whole. That plan is then submitted to the OCC. If the Industry is unable to reach consensus on a relief plan, then the planning results are submitted to the OCC.

Who decides who receives the new area code?

The OCC makes the final decision on all area code relief plans. If an area code split is approved, they decide which area will retain the existing area code or receives a new area code.

Why not simply assign a new area code to faxes / wireless services as a way to provide more numbers?

Perhaps the most common suggestion from the public threatened with an unwelcome area code change is to create an area code that can be assigned to wireless services, fax machines, or other non-wire line, non-voice uses, e.g. credit card verification and Point of Sale. The reason we can't do that is because the federal government won't allow it. The FCC (Declaratory Ruling and Order, FCC Docket 95-19, IAD File No. 94-102, adopted January 12, 1995) has banned such a use of area codes. This Order specifically precludes area code plans that exclude a particular kind of telecommunications service from an area code or that segregate services and technologies into different area codes. The reasoning is that this prohibition is needed to protect new telecommunications services from discrimination or disadvantage. If a new area code were assigned to cellular services, for example, all calls between a cellular customer and a wire line customer would require 10 digits while a wire line-to-wire line call could be made with seven digits. Some would argue that this would favor wire line customers at the expense

of cellular customers. Currently, with local number portability, wireline numbers are now being ported to wireless service providers and vice-versa. Therefore, there is a co-mingling between the technologies of numbers within the assigned blocks

and codes of numbers that prevents them from being separated by area codes. Area code relief is done at the full prefix level and involves all numbers associated with each prefix.

Why not add a digit or two to the telephone number instead of adding area codes?

People have also suggested various means of expanding the current dialing plan which permits seven-digit dialing within an area code and require 10-digit dialing between area codes. The most frequent suggestion was adding an 8th digit to the customer line number. However, this state is an integral part of the North American Numbering Plan Administration and cannot unilaterally make changes in the dialing protocol that other regions and countries rely upon. National planners are studying means of expanding the numbering system. Such changes will almost certainly require years to implement in a coordinated manner, and therefore will not eliminate the need for area code relief in the immediate future.

What is a rate area?

A **rate area**, also known as a **rate center**, is that geographic area containing one or more wire centers, used as the basis to define the local and long distance areas. When communities were smaller, the rate area was the center of each community's greatest concentration of population, such as the post office or other centrally located points. As communities grew and population centers changed, planners connected large population centers by drawing vertical and horizontal lines across a map of the United States. When the vertical and horizontal lines intersected, a rate center was identified, and the distance between rate centers (which became the basis of what constitute a long distance call) was measured in airline miles. Local and long distance telephone companies in the United States use rate areas to calculate the rates that are charged for telephone calls.

What is a wire center?

A ***wire center*** is a building in which local switching systems are installed and where the outside lines, or wire, leading to customer premises is connected to the central office equipment. A ***wire center boundary*** is the perimeter of the area surrounding a wire center containing all customers whose lines are physically connected to a switching system at that wire center. There may be one or more wire centers within each rate center.

Why don't area code boundaries conform to Municipal or County boundaries?

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When the telecommunications industry considers new area code boundaries it is obliged to follow rate area boundaries which reflect the physical infrastructure that enables telecommunications service. The alternative to following these boundaries would be to rip out in-ground facilities and re-wire affected customers at a tremendous cost.

The grid of telephone wires was, in most cases, laid down prior to municipal boundaries, which tend to change more frequently.

What are the methods of area code relief?

The most common methods of relief are:

1) Splitting the present area served by the area code, and assigning a new area code to part of the region, while the other part would keep the old area code. This technique is called a **split**.
2) Adding another area code to the entire geographic area currently served by one area code, This technique is called an **overlay**.

What are the attributes of geographic splits?

- Splits provide a single area code for each geographic area. This may minimize confusion for customers outside the area. Future splits will reduce the geographic size of the area code.

- Splits require an area code change for approximately one half of customer's numbers in a two way split. Stationery, business cards and advertising will need to be revised by customers receiving the new area code.

- Geographic splits permit seven digit dialing within an area code.

How is a new area code introduced in a geographic split?

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A new area code is introduced in two steps. These steps are designed to guide consumers, familiarize them with the new area code and facilitate the correct use of that code.

- ***Permissive Dialing:***

  The *permissive dialing* period begins with the introduction of the new area code and generally lasts approximately six months*. It provides a 'get acquainted' transition period for the new area code.

  Permissive dialing allows the old and new area code customers to call between the two area codes using seven-digit dialing. Customers from outside the area can call the new area code by dialing either the old or the new area code + the telephone number; the call will complete during the *permissive period.*

  (* The permissive dialing period varies in length per commission decision)

- ***Mandatory Dialing:***

  Approximately six months after the introduction of the new area code, an *intercept recording* period* will begin. At this time, callers **must use the appropriate area code** plus the telephone number. Calls incorrectly dialed will be referred to a recording throughout the recording period. It will inform the calling party that the new area code must be used to complete the call.

  After the completion of the *recorded announcement* period, if customers do not use the correct area code they may reach a wrong number or a recording.

  (* The recording period varies in length per commission decision)

How would an area code split impact home and business telephone service?

If your area code changes, you would need to notify family, friends and business associates of the change. You may also need to change stationery, business card and other printed material or reprogram your equipment to reflect the change.

Other changes that may be required include: address books, advertisements, alarm equipment, automatic dialers, bill statements, business cards, checks, computer lists, electronic banking information, emergency contact lists, identification

bracelets, fax machines, health provider cards, the number plate on your telephone, pet ID tags, and speed dial lists.

Additionally, business customers should check for:

Impacts with PBX and other business equipment
Some business customers may need to upgrade or adjust their equipment to handle the new area code. Not all business equipment would require upgrading. Call routing lists may also need to be changed.

Impacts to Integrated Service Digital Network (ISDN) Customers:
Some ISDN equipment may have the area code included in the Service Profile Identifier (SPID). If so, that equipment would have to be reprogrammed to accommodate a new area code. ISDN customers would be notified of the specific date that they need to reprogram their SPID. If the SPID is not reprogrammed on that date, the ISDN equipment won't work.

Impacts to Least Cost Routing:
Customers with PBXs who use the Least Cost Routing feature may require upgrades to their PBX or they can eliminate the Least Cost Routing feature and allow the local exchange carrier to route the traffic.

Test number available for new area code:
Once the new area code has been determined, a test number is established at least 30 days prior to the start of permissive dialing. This allows business customers to verify that their equipment can complete calls to the new area code. The test number may be obtained from the associated planning letter for each area code on the NANPA web site. Their web address is www.nanpa.com.

What is the overlay method of area code relief?

An area code overlay occurs when more than one area code serves the same geographic area. In an area code overlay, relief is provided by opening up a new area code within the same geographic area as the area code requiring relief. With an overlay, all current customers keep their area code and telephone number. Numbers using the new area code are assigned to new telephone customers or those adding additional lines. Because two area codes reside in the same geography, all local calls would require ten digit dialing, the area code + the seven-digit telephone number (10 digits).

What are the attributes of overlays?

- With an overlay there would be multiple area codes for each geographic area and it will end further shrinking of the geographic size of the area code. Subsequent relief would likely be another overlay.

- An overlay would not require existing customers to change their area code.

- An overlay would require customers to dial 10 digits (or 1+10 digits) for all calls within the geographic area.

Why must an overlay apply to all services?

The FCC has decided that an overlay must apply to all services to mitigate any anti-competitive effects that would advantage incumbent telecommunication providers and disadvantage new providers and their customers.

Why is it necessary to dial the area code + the seven digit number (10 digits) for overlays?

10 digit dialing is a regulatory requirement established for an overlay area code by the FCC in its Second Report and Order (FCC 96-333) to mitigate any anti-competitive effects that would advantage incumbent providers and disadvantage new providers and their customers and to ensure dialing parity between the two area codes.

This dialing requirement results from a concern that customers in the original area code and customers with the overlay area code would have different dialing arrangements for the same geographic area. Those in the original area code could reach a party in their same geographic area with a seven digit call, while those in the overlay area code would have to dial 10 digits to reach the same party.

How is a new area code introduced in an overlay?

An Overlay area code is introduced in three steps.

- ***Formal 10 Digit Permissive Dialing:***

During a determined formal *permissive 10 digit dialing* period, customers are encouraged to begin using the area code + the seven-digit number to place all calls within the area code, although calls will still complete if only the seven-digit number is dialed. During this time, life safety systems, alarms, PBX's, fax machine calling lists, speed dialers, private entry access systems, auto-dialers and out-dialing lists on personal computers should be reprogrammed.

- ***Mandatory 10 Digit Dialing:***

  Mandatory10 digit dialing* begins at the end of the formal permissive dialing period. Callers must use the area code + the seven digit number for all calls within the area code. Calls incorrectly dialed using only seven digits are referred to a recording which will inform the calling party it is necessary to dial the area code + the seven-digit telephone number to complete the call. This recorded announcement will remain indefinitely.
  *Some states require 1+10-digit dialing

- ***Introduction of New Overlay Area Code:***

  Numbers in the Overlay Area Code are introduced at the beginning or shortly after the Mandatory 10 digit dialing begins.

How would an overlay and 10 digit dialing impact home and business telephone service?

- All local calls would require use of the area code + the seven-digit number (10 digits).

- Equipment or services that are programmed to dial out using only seven digits would have to be reprogrammed to use 10 digits.

- Items such as stationery, checks, business cards would have to be changed to include the 10-digit number.

Additionally business customers would:

- Update life safety systems, fax machines, private dial access entry and PBXs.

- Update other sophisticated services and equipment such as message detail recording equipment, alternate route or least-cost routing systems, toll restriction, mobile telephone service, cellular telephone service, alarm circuits and PC modems.

- Include 10-digit numbers on all printed materials, such as stationery, checks, business cards, advertisements, promotional items, brochures, and catalogs.

- Notify alarm service providers of 10 digit dialing requirement so alarm service records and equipment can be updated as needed.

- Test telephone equipment to determine if it can dial and accept 10-digit dialed calls.

Who is the official source of area code information?

NeuStar, Inc., is the North American Numbering Plan Administrator (NANPA). It can be found at: **http://www.nanpa.com**

Whom do I contact with my questions and comments?

Oklahoma Corporation Commission
2101 North Lincoln
Oklahoma City, OK 73135
405-521-4180 or 405-521-4018
You can also get more information and submit comments/opinions via the web: www.occeweb.com

NANPA (North American Numbering Plan Administration)
46000 Center Oak Plaza
Sterling, VA 20166
Web site address: **http://www.NANPA.com**

Code (Central Office Code) Central Office Codes may also be referred to as prefixes or NXXs.

Community of Interest: Many items can be considered as "Community of Interest". These would include a city, closely located cities, a neighborhood, a business with multiple locations, government agencies that serve a wide area (not must one entity, i.e., county sheriff department) or other agencies/businesses with multiple locations.

Cut Date The date (Effective Date) by which routing changes must be completed of the assigned area code. Also, the date by which the area code becomes active.

Exhaust A point in time at which the quantity of telephone numbers at the prefix level within an existing area code equals zero.

FCC Federal Communications Commission

Geographic Split: The exhausting area code is split into two or more geographic areas, leaving the existing area code to serve one side of the geographic area and assigning new area codes to the remaining areas.

Growth Growth and demand for telephone numbers are not specifically tied to population. With the technology explosion and the advent of local competition in the telecommunications industry (to provide local service), more and more telephone numbers are needed. Growth is measured in the demand for telephone numbers.

INC Industry Numbering Committee, a standing committee of the Alliance for Telecommunications Industry Solutions (ATIS) that provides an open forum to address and resolve industry-wide issues associated with the planning, administrations, allocation, assignment and use of numbering resources and related dialing considerations for public telecommunications with the North American Numbering Plan (NANP) area.

INPA Interchangeable Numbering Plan Area - ("2" through "9" as second digit instead of the traditional "0" or "1")

LNP Local Number Portability

MSAG Master Street Address Guide (Data base for 911)

NANC North American Numbering Council

NANP North American Numbering Plan

NANPA North American Numbering Plan Administration

NPA Numbering Plan Area (Area Code)

NXX An NXX (prefix) is the three-digit number that is between the area code and the 4-digit line number, where N is a number from 2 to 9 and X is a number from 0 to 9.

Overlay An area code overlay occurs when more than one area code serves the same geographic area.

PCS Personal Communications Services

Pooling Administrator The term Pooling Administrator refers to the entity or entities responsible for administering a thousands-block number pool

Prefix See description of CODE or NXX

PSAP Public Service Access Point - "For 9-1-1 Services"

Relief (NPA Code Relief) Relief refers to an activity that must be performed when an area code nears exhaust of the 792 prefix capacity.

Service Provider Number Portability The ability to keep your current telephone number and have service from any telecommunications service providers within the same rate area.

Thousands-Block Number Pooling The process by which the 10,000 numbers in a central office code (NXX) are separated into ten sequential blocks of 1,000 numbers each (thousands-block) and allocated separately within a rate center.

Wireless Cellular, Paging, Specialized Mobile Radio (SMR) and Personal Communications Service (PCS) services

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