Notice of Inquiry to consider the new flat-rated charges that have appeared on the bills of many customers, particularly low-volume residential and single-line business customers.[48] In that Notice the Commission expressed concern that carriers assessing charges to end users may be recovering more from the end user than they are paying over in expenses. The creation of a new carrier charge for 1K block number pooling assessed on a per-presubscribed line basis would raise the same concern that IXCs would impose an additional mark-up on these charges as they are passed through to end users.[49]

Third, it is reasonable to recover the one-time costs of 1K number pooling implementation through an end-user charge because end users really are driving the demand for new numbers and stand to materially and substantially benefit from 1K number pooling. As the Commission recognized, many end users are choosing to have multiple lines into their homes (e.g., main line, computer line, children's line, fax line) and one or more wireless devices (e.g., PCS phones, pagers).[50] This increased demand, combined with the increased availability of alternatives for local telephone service, has led to an "explosion" in the demand for

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[47] In the Matter of Telephone Number Portability, Third Report and Order, 13 FCC Rcd. 11701 at ¶ 135 (1998).

[48] In the Matter of Low-Volume Long-Distance Users, CC Docket No. 99-249, Notice of Inquiry, FCC 99-168, rel. July 20, 1999 ("Notice of Inquiry"). In the Notice of Inquiry, the Commission seeks comment on whether IXCs are recovering more than their universal service or access charge contributions (e.g., the Presubscribed Interexchange Carrier Charge ("PICC")) through end-user charges, and asks whether and how the Commission should correct such over-recovery. Id. ¶ 19.

[49] Id.

[50] NPRM ¶ 3.

numbering resources.[51] Number pooling and other number optimization measures will provide direct benefits to consumers by allowing them to avoid, or at least delay, the increased costs and inconveniences of ever-changing area codes.[52]

Fourth, an end-user charge will be easy to administer. The billing capabilities are already in place for the number portability charge which could be adjusted to include any additional billing for 1K block number pooling surcharges.

b. Alternatives to End-User Surcharges

(1) There Should be no Price Cap Adjustment

The Commission's tentative conclusion that price cap LECs should recover number pooling implementation costs through a price cap adjustment[53] is off the mark and should be rejected. The one-time costs associated with 1K block number pooling implementation should not be subject to price caps or the downward pressure of the productivity factor.

The purpose of the productivity factor is to capture that portion of LEC productivity increases that outstrip the general productivity increase reflected in the "GDP-PI minus X" calculations, so that it results in lower prices for consumers of existing products and services.[54] Clearly, that purpose is not served by applying the productivity factor to the extraordinary, one-time costs of number pooling implementation because these costs are not affected in any way by changes in LEC productivity.

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[51] Id.

[52] Id. ¶ 14.

[53] NPRM ¶ 204.

[54] See United States Tel. Ass'n v. FCC, Nos. 97-1469, et al. (D.C. Cir. May 21, 1999).

(2) Establishment of a Charge on Local Switching MOUs

If the Commission rejects the establishment of an end-user charge for 1K block number pooling cost recovery, the one-time costs associated with such pooling implementation should be recovered through a usage-based charge assessed on the local switching MOUs of all carriers.[55] This charge would exist for a specific period of time and not be under price cap regulations for the same reasons given above.

One benefit of this approach is that the charge would apply to all carriers, including dial-around carriers and carriers with presubscribed lines. Another benefit of a usage-based charge is that it is less likely to be passed on to low-volume users in the form of a flat-rated charge, as has happened in the case of access charge reform and the PICC.

c. A True-Up Will be Necessary

Because the costs associated with 1K block number pooling implementation and the demand to which these costs will be applied can only be approximated ahead of time, the Commission should provide for a true-up, once implementation is complete. Of course, the true-up would allow for additional cost recovery if actual implementation costs exceed the forecasted amount or if demand did not meet forecast projections. A credit mechanism would apply in the event of over recovery.

[55] U S WEST would apply this charge to all carriers throughout its region because U S WEST's billing systems currently are unable to collect such a charge on a geographically targeted basis. The cost of modifying U S WEST's billing systems to facilitate geographic billing for carriers would be prohibitive, given the amounts to be recovered.

2. Ongoing Cost Recovery

Ongoing costs associated with 1K number pooling should be recovered through an ongoing exogenous adjustment in the price-cap LECs' access tariffs. An exogenous adjustment to the traffic sensitive basket would ensure that all carriers, both dial-around and those with presubscribed lines, are assessed a portion of number pooling costs. Further, the exogenous adjustment should be removed from price caps to avoid the downward pressure inherent in the productivity factor or include a mark-up to counteract the effect of the productivity factor. Particularly in the case of ongoing, industry-wide costs such as the NANP administrator costs, U S WEST will not be able to increase productivity and keep pace with the productivity factor.

It is also possible that there may be additional costs related to the LNP queries. Carriers should have the ability to revisit these tariffs to make adjustments as necessary due to the impacts of 1K block number pooling.

V. CONCLUSION

For all of the above reasons, U S WEST urges the Commission to reassert its leadership regarding numbering policies and practices. Only with such leadership will industry and consumers begin to realize the promise of national, uniform management of what is clearly a national resource.

Area code relief authority previously delegated to the states should be circumscribed. And, authority with respect to design and deployment of any number pooling methodology should remain with the federal regulatory authority.

As a part of the exercise of that authority, the Commission should allow carriers to pursue number optimization methods other than 1K block number pooling if it can be demonstrated that their non-participation will not materially operate adversely to parallel number pooling initiatives. We believe the numbering optimization proposal the Commission outlines framed within the idea of "thresholds" provides such a vehicle for this kind of flexibility.

Finally, the Commission must ensure that -- if 1K block number pooling is pursued -- affected carriers are assured of full cost recovery. This means that costs incurred in fact to bring about 1K block number pooling must equate with costs recognized in law.

In framing the cost recovery mechanism, we agree that the model established for LNP cost recovery is desirable. We encourage the use of an end-user surcharge as the primary cost-recovery vehicle for the recovery of one-time 1K number pooling implementation costs. If, however, the Commission decides not to authorize an end-user charge, then it should permit the recovery of those costs through a usage-based charge assessed on the local switching MOUs of all carriers over a specific period of time.

Ongoing costs associated with 1K number pooling should be recovered through an ongoing exogenous adjustment in the price-cap LECs' access tariffs. And, finally, because the costs associated with 1K block number pooling implementation and the demand to which these costs will be applied can only be

approximated ahead of time, the Commission should provide for a true-up, once implementation is complete.

Respectfully submitted,

U S WEST COMMUNICATIONS, INC.

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Of Counsel,
Dan L. Poole

July 30, 1999

Attachment 1

The longer the number, the better the service

An historic perspective by Herb Hackenburg. U S WEST Historian

*Editor's note: Before I begin, I probably should introduce myself. I retired from U S WEST in 1990 after 27 years of service. I began with Ohio Bell and after eight years, I schlepped my schlock to Mountain Bell. My entire telephone career was spent in the corporate public relations department as an advertising manager, news manager, speech writer, financial writer, magazine editor, and newsletter editor. It was as an editor for the M B Times that I began to write about fascinating facets of telephone history in my column, "Ear Voice." Thus began my fantastic journey into the world of telephone history. My historic jottings gained some fans and I was asked to write the official history of Mountain Bell. After three exciting years of research; interviews; snooping through Mountain Bell's basements, attics and archives; writing; and production my book, **Muttering Machines to Laser Beams**, burst upon the scene 1986. I became a full-fledged telephone historian and upon my retirement, beginning my third career (my first career was in the area of public health) as the executive director of the Telecommunications History Group in Denver. Frankly, I can hardly wait to get to work in the morning. Now, on with the show.*

The thesis I'm going to present in this monograph is quite simple: **Telephone numbers grow longer in proportion to the telephone's convenience.**

Most would agree that there is no "free lunch." Thus, as the telecommunications systems grows and keeps offering more and more sophisticated and enhanced services, in addition to fees, customers must "pay" for all these additional services by having to use longer telephone numbers. History proves the point.

In the beginning there were no numbers. The very first telephones (1876-1877) were really nothing more than two-station intercom systems. Here in the west, a rancher would buy a "telephone system" from a mail order catalog, string some wire between the main house to the bunk house, connect some "wet" batteries, then attach a phone at each end. There was a button by each phone that would activate a buzzer at the other phone when someone wanted to talk. That was the "phone system."

By 1878, in the big cities, crude exchanges were being built. Everyone's telephone line terminated at the exchange. Every telephone line was connected to it's own "jack" (hole) on a big board. Young men (actually rather obnoxious, street-tough boys for the most part) would take "patch cords" with a "plug" at each end and insert one plug into the jack from the calling party and the other plug into the called party's jack, and the call would be connected. Thus, each call was "hand-built" for the duration of the call, then taken down by hand after the call was completed. The operators were expected to know every subscriber's "jack" by location and name.

That, in my words, is how the first "switchboards" worked. The following is an official description of how such a switchboard worked from "Manufacturing the Future"—the official history of Western Electric—by Stephen B. Adams and Orvill R. Butler, Cambridge University Press, 1999:

The initial telephone switchboard of the 1880s was hardly a labor-saving device. A call would go through a call register clerk, who then sent a ticket, naming the party, to the operator (boy), who then made the connection. Upon the completion of the call, both parties signaled "telephone through" on their call boxes and the register clerk advised the operator to disconnect. As the number of lines increased, the operators moved to a separate room from the call-box clerks, and another go-between was added: runners between the call-box clerks and the operators. A slow, cumbersome, labor intensive process at best

And while all this was going on there were no numbers. At least no numbers the public knew about. Denver's first telephone book (copy attached) issued by The Denver Telephone Dispatch Company, April 1, 1879, lists 161 subscribers, but not a single telephone number. The Denver exchange was the 17th exchange in the United States when it opened for business on Feb., 24, 1879. In Minneapolis, The North West Telephone Exchange opened for business on Dec. 10, 1878, to become the 16th exchange in the United States. More up to date than everyone, as was true in seaport cities around the world at the time, Portland, Oregon, was the first "U S WEST" city, and the 10th in the nation, to have a telephone exchange which was open for business on August 2, 1878.

A few months after the Denver exchange opened, measles happened and numbers broke out!

Late in 1879, telephone subscribers began for the first time to be designated and called by numbers rather than by their names. It began in Lowell, Massachusetts. During a measles epidemic it occurred to local physician, Dr. Moses Greely Parker, that if the ailment should simultaneously attack all four of the town's operators, their substitutes would have a devil of a time learning the subscriber names connected to each of the switchboard's 200 jacks, thus paralyzing local telephone service. Accordingly, the good doctor suggested to the telephone company officials that numbers be used instead of names. The telephone managers, of course, resented such intrusion into their business suggesting that telephone customers would consider being designated by a number to be beneath their dignity. However the managers did see the logic behind the doctor's suggestion, and ended up following it. The subscribers were not outraged; the epidemic passed quickly, but telephone numbers did not.

In fact, numbers were added to the subscriber's listings in Denver's 1880 telephone book, the number of digits depended upon when the subscriber signed up for service--the first nine subscribers having the single-digit numbers, the next 90 customers having the two-digit numbers and so on.

Not unexpectedly, as various improvements were made on the telephone and the service came down in cost, more and more customers began to use it. The more subscribers, the longer the telephone numbers became. In the decade of 1885 to 1895 the number of telephones in the United States increased from 155,000 to 340,000. But in the five years between 1895 to 1900, the number of telephones in the nation quadrupled to 1,355,000.

Each switching office was engineered to serve 10,000 customers (actually, 9,999 customers), so the longest number any customer being served out an office would be four-digits long. As the telephone grew to be more and more popular more and more exchanges had to be added to the telephone network. And because the telephone numbers

began to convey more information to the operators who had to use the numbers to place the calls, the longer and more complicated the numbers became.

Without going through all of the electrical mechanics involved with making a telephone call, let's say the earlier switchboards the operators used were fairly simple and straight forward on how they worked. As switchboards were made to serve more and more customers, the numbers given to those customers became more complicated. One of the complications was adding an exchange name to the subscriber's number. In the simple time a customer would click the telephone's switch hook up and down, or turn the crank to tell the operator that her service was needed. The operator would say, "Number, please." The customer would say, "Give me 2345, please."

A few years later with bigger and better switch boards, the operator would say the same thing, the customer would have to say, "Give me Main 2345, please." The name of the exchange office (Main usually being the first exchange built in the middle of downtown) was added to the number. By telling your local operator, who is serving your Gallup exchange, that you wanted a Main exchange number, she knew she had to "trunk" your call to the Main exchange, where the operator there completed your call.

In 1920, the dial telephone began to appear across the Bell System. The dial telephone was invented by an undertaker in Kansas City in 1891 because he thought the Bell operators were directing his customers to another undertaker who happened to be the chief operator's brother. He invented an automatic switch that bypassed the operator completely. He hated the Bell System so much, he wouldn't let any Bell company use his invention until the patent rights ran out.

Anyway, the Bell dial system was vastly improved over the original automatic systems. With the dial, the customer is now doing a lot of the work the operator used to do, and the telephone number got longer. Remember the dial contains both letters and numbers, so the new dial system numbers now included those exchange names and a number. So now our customer had to dial MAin 2345 (in reality six digits) to reach his party.

THE DENVER TELEPHONE DESPATCH COMPANY.

CENTRAL OFFICE, 370 LARIMER STREET.

OPEN DAY AND NIGHT. INSTANT COMMUNICATION THROUGHOUT THE CITY.

MESSENGERS FURNISHED INSTANTLY AT ALL HOURS.

CARRIAGES & EXPRESS WAGONS FURNISHED PROMPTLY, BY TELEPHONE, WITHOUT EXTRA CHARGE.

The Despatch Company are in Direct Telephonic Communication with the Police and Fire Departments.

JAMES S. LOWELL,
SUPT. OF LINES.

F. O. VAILLE,
GENERAL MANAGER.

DENVER, COLORADO, APRIL 1, 1879.

DIRECTIONS FOR USING THE TELEPHONE.

1. Always hang the telephone on its hook, as your circuit cannot be used by others until the telephone is so hung.
2. Never touch the instrument when the bell hammer stands away from the bell, as that indicates that the line is in use.
3. TO SIGNAL. Press the button on the right of the bell.
4. TO COMMUNICATE WITH THE CENTRAL OFFICE. Signal two bells, wait for their response, AFTER WHICH remove the telephone from its hook, and be careful to push the hook to the left; and then, holding the *telephone firmly* to the ear, you will hear the voice of the operator at the Central Office.
5. TO CONVERSE WITH STATIONS ON YOUR OWN CIRCUIT. Signal slowly the number of the station you desire to converse with. After receiving their response, sound your own signal, that they may know who is to talk with them.
6. TO CONVERSE WITH STATIONS NOT ON YOUR OWN CIRCUIT. Notify the Central Office with whom you wish to be placed in communication, first giving your own name; then hang your telephone on its hook, and as soon as the desired connection is made the operator at the Central Office will tap your bell once, as a signal to go ahead; and PROMPT ATTENTION to these signals is desired, to save waiting on the part of either party.
7. When your signal is sounded, always answer by repeating it, then you will hear the station calling, sound their signal, that you may know with whom you are to talk.
8. Subscribers will please limit their use of the telephone to three minutes in succession, as others may wish to use the circuit.

Subscribers are requested to report promptly to the office any trouble with the wires or instruments.

The signal for this station is _____

BELOW ARE THE NAMES OF THE SUBSCRIBERS ON THIS CIRCUIT.

SIGNAL OF STATION.	Push the hook to the LEFT to talk with the Central Office, with subscribers on any other circuit, and with:	Push the hook to the RIGHT to talk with:	SIGNAL OF STATION.

SUBSCRIBERS.

A

Acceas, Geo. L., 315 Larimer.
Accers, Geo. L., 345 Curtis.
Abel, Albert, 275 15th.
Alvord & Gannon, 15th and Larimer.
Alvord House, 15th and Larimer.
Allen, J. H. & Co., 16th and Blake.
Allison Bros., 282 15th.
Alkire, L. & Co., 372 Lawrence.
American House, 16th and Blake.
Ammen, J. N. & Co., 335 Blake.
Anthony & Landon, 303 Lawrence.
Ashley, E. M., 231 Stout.
Austin, S. S., 371 Curtis.

B

Bailey, A. W., 270 15th.
Bailey, J. W., Sherman Avenue and Olive.
Bailey, Joe L., 16th and Wazee.
Balcom, A. D., 449 Larimer.
Balcom House, 440 Larimer.
Ball, J. I. T., 495 Champa.
Bancroft, F. J., M. D., 16th and Stout.
Bandhauer, Robt., 382 Wazee.
Bank City National, 15th and Holladay.
Bank Colorado National, 15th and Holladay.
Bank Denver Safe Deposit and Savings, 15th and Lawrence.
Bank, First National, 16th and Larimer.
Bank, German National, 16th and Larimer.
Bacon, J. H., 391 Larimer.
Becaurts, Herman, 16th and Holladay.
Bell, Clinton, 16th and Larimer.
Bresay, John M. & Co., 271 15th.
... & Wi... ers 375 Holladay.
...ead, E. J., 109 15th.
...son & Stewart, 15th and Blake.
...ett, Wm. M., Larimer and 17th.
Boston and Colorado Smelting Works, Argo.
Bosworth, Babcock & Co., 15th and Blake.
Bosworth & Hover, 411 Larimer.
Brewer, Benn, 219 15th.
Brinker, Arthur W., 511 Arapahoe.
Brinker, Isaac, 569 Blake.
Brown, Albert, 374 Lawrence.
Brown, Albert, North Denver.
Brown, G. W., 307 15th.
Brown, J. F., 370 Welton.
Brown, J. S., 14th and Stout.
Brown, J. S. & Bro., 375 Blake.
Brown, W. C., 9 McClintock Block.
Brown & Keiffer, 356 and 358 Lawrence.
Brown, F. O. & Co., 15th and Larimer.
Butler, Wright & King, 359 Lawrence.

C

Campbell, Wm. L., 22d and Curtis.
Carmichael, D. F., 130 South 14th.
Carroll, Dr. W. K., 318 Glenarm.
Carroll, Dr. W. K., office 370 Larimer.
Central Colorado Improvement Co., 16th and Larimer.
Charpiot's Hotel, 364 Larimer.
Cheesman, W. S., 17th and Larimer.
Cherry, James A., 403 Lawrence.
Chrisman, O., 15th and Platte River, N. D.
Christenson, John S., Waverly and 21st.
City Laundry, 555 Blake.
Clark, Thomas, 506 Wazee.
Clayton, C. W., Receiver D. P. R. R., 264 15th.
Cobb, Wilson & Co., 362 Lawrence.
Cobb, E. W., Stout and 26th.
Cook, J. Jr. & Co., 380 Lawrence.
Collar, E., 431 Lawrence.
C. C. R. R. Ticket Office, 16th and Larimer.
...orado Central Freight Office.
...orado Iron Works, Office, 16th.
...rado Iron Works, 33d.
...forth, Birks, 205 15th.
Cornforth, Birks, 595 Holladay.
Cornforth & Co., 371 Blake.
Crowell, A. N., Builder, enquire Tel. Office.
Crocker, F. W., Blake, corner 19th.

D

Daniels & Fisher, 16th and Lawrence.
Davis, Chas. K., West Denver Mills.
Davis, F. N., 325 Champa.
Davis, F. N., 320 Lawrence.
Deane, C. A., 50 South 13th.
Democrat Office, 371 Larimer.
Denison, Dr. Chas., 14th and Champa.
Denver Whip, Leather and Collar Co., 337 Larimer.
D. P. R. R. General Freight and Pass. Office, 405 Larimer.
Denver Pacific Freight Depot.
Denver Whip, Leather and Collar Co., Tannery, W. D.
Denver Brewing Co., 9th and Lawrence.
Denver, South Park & Pacific R. R., 6th and Lawrence.
Denver, South Park & Pacific R. R., 360 Lawrence.
Detroit Safe Co., 273 15th.
Dingle, Wm., 590 Larimer.
Dingle, Wm., Schinner Avenue.
Dorr, D. C., 16th and Larimer.
Dodge, D. C., 17th and Lincoln Avenue.
Dun, R. G. & Co., 16th and Larimer.
Dunsmore, Dan, with W. H. Pierce, 19th and Wazee.
Durbin, J., 566 Blake.
Durbin, J., McCullough's Add.

E

Elsner, Dr. John, 381 Larimer.
Enslinger & Davis, 8th and Larimer.
Estabrook, Geo. H., 303 16th.
Estabrook, J. H., 353 Holladay.
Estes, A. H., 376 Curtis.

F

Farmer & Anderson, 371 Larimer.
Fisk, A. C., 405 Lawrence.
Ford, Geo., 455 Larimer.
Foltz I. Francis, 391 Lawrence.
French, S. W., 17th and Tremont.
Funke, Phillip, Enquire Telephone Office.

G

Gage & Lay, 17th and Lawrence.
Given & Owens, 389 Lawrence.
Gonner, John F., Broadway, near Cherry Creek.
Grand Central Hotel, 17th and Lawrence.

H

Hallack & Howard, 18th and Holladay.
Hart, Dr. C. N., 495 Lawrence.
Hartman, C. R., 295 Holladay.
Hartman, C. R., (Stables) 294 Holladay.
Hallett, Moses, Judge, 407 Larimer.
Haskell & Waters, 203 15th.
Heiser, Herman H., 378 Blake.
Hendry & Mayer, 16th and Delgany.
Henrie & Bolthoff Mfg. Co., 376 Holladay.
Hill, N. P., 333 Welton.
Hill & Thompson, 418 Arapahoe.
Holmes & White, 307 15th.
Holzman, J., 366 Larimer.
Hubbard, John M., Stables.
Huyck & Hyde, 367 Holladay.
Hudson, J. G., 401 Blake.
Humphrey, Ezra, 15th and Stout.
Hurlton, G. W., D. P. Junction.

I

Inman, James, 303 15th.

J

Jackson, James W., 9th, bet. Larimer and Lawrence.
Jacobson & Devereux, McClintock block, Larimer.
Jensen, Bliss & Co., 240½ 15th.
Jones, A. H., 628 California.
Jones, A. H. & Co., 202 16th.
Johnson & Co., 299 15th.
Johnson & Co., 301 15th.
Journal of Commerce, 389 Lawrence.

K

Kansas Pacific R. R. Freight Depot.
Kansas Stables, 305 15th.
Keene & Chase, 11th and Larimer.
Kellogg, E. L., 377 Larimer.
King, F. G., Water block, 16th and Blake.
King, F. G., McCullough's add.
Kinsey, W. J., Fifteenth and Wazee.
Kettler, Chas., 377 Holladay.
Knapp, B. F., 613 California.
Kountze, C. B., 14th and Welton.

L

Lathrop, Dr. C. C., 15th and Arapahoe.
Lee, Underwood & Co., 240 15th.
Leichsenring, Chas. E., Walla Walla Hall.
Lennox, S. & Co., 275 15th.
Light, Edw. B., Sherman ave. and 16th.
Londoner, Wolfe, Blake & 15th.
Lutheur, W. C., 355 Lawrence.

M

Mahurin, Dr. J. A.
Marble, C. C. & Co., 221 15th.
McClure, F. D., 15th and Arapahoe.
McClure, F. D., Coal Yards foot of 21st.
McCormick, R. R., 9th and Lawrence.
McPhee, Chas. H. & Co., 183 15th.
Marlow, J. U., 16th and Blake.
Marquis, Robert, 15th and Curtis.
Marshall, W. S., 405 Larimer.
Marshall Coal Mining Co., Office, 365 Lawrence.
Marshall Coal Mining Co., Yards foot 21st.
Martin, J. H. & Co., 221 15th.
Melbuan, L. A., 456 Larimer.
Merchants's Hotel, 377 Holladay.
Moffatt, Jr., D. H., 14th and Curtis.
Morgan, French & Co., 273 15th.
Mullen, J. K., 8th and Lawrence.
Mueller & McCrary, 371 Holladay.

N

Nesmith, J. W., 219 16th.
News Office, 389 Larimer.
Netter & Mathews, 15th and Holladay.

O

Oatman, Geo. S., 13th and Wynkoop, Office.
Oatman, Geo. S., 423 Wazee, House.
Opera House, 15th and Curtis.

P

Patten, Wm. L. & Co., 352 Lawrence.
Parker, Dr. C. M., 339 Arapahoe.
Pearce, R., 10th and Broadway.
Perkins, W. F., 15th and Lawrence.
Perry & Co., 357 Blake.
Phillips, Wm. & Son, 401 Holladay.
Pierce, G. H., 16th and Lawrence.
Pierce, W. H., 377 Blake.
Planters' Hotel, 189 16th.
Post Office, 15th and Lawrence.
Potter, A. G., 370 Blake.
Potter Hotel and Restaurant, 370 Blake.
Price, W. H., Agent C. C. Depot.

Q

Quinn, Barney, 349 Blake.

R

Red Lion Inn, 202 16th.
Reynolds, Aug., 11 Water.
Reynolds, Chas. H., 568 Larimer.
Richards, J. W. & Co., 415 Blake.
Richy, Jerome S., 384 Larimer.
Richards, P. R., 200 Broadway.
Riethmann, J. J. & Co., 15th and Larimer.
Roberts, C. A. & Co., 416 Larimer.
Rothschild, Robert, Larimer and 15th.
Rothschild, Robert, 315 Tremont.
Rollins, E. W., 403 Lawrence.
Ruhle, George, 333 Holladay.
Rublee, D., 865 Lawrence.

SUBSCRIBERS---Continued.

S

SCHOENFELD, HARRY, 396 15th.
SHAFFENBURG, MRS. K. D., 250 14th.
SLEETH, E. B. 760 Larimer.
STEINHAUER & WALBRACH, 581 Larimer.
SOUTHERN COLORADO COAL & IRON CO., 16th and Larimer.
STEAM CRACKER WORKS, Blake and 19th.
SURVEYOR GENERAL'S OFFICE, Larimer and 17th.
SILVERS, E. C., Post Office.
SWEM, J. M., K. P. Freight Depot.
SWEM, J. M., 556 Larimer.

T

TABOR, H. A. W., 96 Broadway
TIMES OFFICE, 387 Lawrence.

T—Continued

TRIBUNE OFFICE, 16th and Holladay.
TAITT, GEORGE, 200 15th.
TERRELL, E. A. & CO., 367 15th.

V

VEATCH, J. C., 209 16th.

W

WALKER, DR. J. M., 550 Larimer.
WALKER, DR. J. M., Stout and 17th.
WALL & WITTER, Elephant Corral, Wazee
WALL & WITTER, General Office, 15th.
WENTWORTH HOUSE, 378 Curtis.
WEST LINDELL HOTEL, Larimer and 11th.
WHEELER & MONROE, Dent., 535 Larimer.
WHEELER & MONROE, Dent., 712 California.

W—Continued

WHITEHEAD, DR. W. K., 19th and Champa.
WHITNEY, K. L., Arlington Heights.
WHITNEY, R. E., 273 15th.
WILLIAMS, A. J., 21st and Stout.
WITTER, MRS. C. V., Larimer and 9th.
WILEY, A. S., 375 15th
WOERZ BROS., 242 11th.
WOODBURY, R. W., 387 Lawrence.

Y

YATES, F. D., Brunswick Billiard Parlor.

Z

ZANC, PHILLIP, 7th and Platte River, N. D
ZANC, PHILLIP, Colorado Bakery, 354 Holladay
ZECH BROS., 312 16th.

Attachment 2

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

	)	
	)	NSD File No. L-98-134
Public Notice DA 98-2265	)	

COMMENTS OF U S WEST COMMUNICATIONS, INC.

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Attorney for

U S WEST COMMUNICATIONS, INC.

Of Counsel,
Dan L. Poole

December 21, 1998

- What is the cost to implement?
- What value is derived comparing the cost to the extended life (if any)?
- Are the number of actual telephone numbers increased?
- How many actual telephone numbers are activated and in use?
- How many actual available (spare) numbers are there?
- What is the estimated consumption of telephone numbers projected over some specified interval, e.g., 3 years)?
- How large should each service provider's pool be?

2. ITN Pooling

Given that U S WEST opposes the NANC Report recommendation around 1 K block pooling, and based on what we have already said in these comments, it is obvious that we also oppose ITN pooling. ITN pooling, as a numbering conservation initiative, could not be accomplished by December, 1999. Thus, it really did not present an "alternative" that the NANC could recommend within the confines of the Commission's request. And, it certainly would not prove a readily-available alternative for those area codes currently pressing toward exhaust. Yet, as discussions in the NANC made clear and as is evident from the NANC Report, certain carriers support ITN pooling.

ITN would require a massive computer system/administrative process in order to deploy. Furthermore, it would deprive carriers of any ability to act as their own customer source for numbering resources. While "conservation" of numbering resources is certainly a laudable goal, depriving all carriers of all inventories of numbers is hardly a "scalpel" or targeted approach to the optimization or management of numbering resources.

Depriving carriers of numbering inventories would clearly adversely affect the carrier-customer relationship. The insinuation of a "numbering manager" at the level of every carrier-customer transaction would increase time and make it less feasible to address idiosyncratic customer numbering needs (e.g., sequential number blocks). Thus, while 1 K block pooling has its own problems (the primary one being lack of need), ITN compounds the problem by adding insult to injury. At least 1 K pooling allows the carrier to retain some management control over numbers such that it can efficiently manage the day-to-day carrier/customer relationship.

U S WEST also opposes ITN because the costs of the lack of guidelines and specifications to evaluate the potential impacts and because the estimated enormous costs of such deployment would fall inappropriately hard on incumbent carriers, much as they do with respect to LNP deployment itself. As mentioned above, such expenditures become significant financial drains on companies that should be permitted to become more market-oriented, serving customers with capital rather than theoretical and speculative regulatory ventures.

ITN would impose unwarranted expense because of the additional STP, SCP and NPAC capacity and capability that would be required for the increased volumes associated with queries regarding all telephone numbers. These types of queries would necessitate real time access to a database in order to do real time assignment of a telephone number to a customer. None of that architecture exists today.

3. UNP

Theoretically, UNP would permit a service provider needing telephone numbers to "query" a list of unassigned numbers under any other service provider's control and select a number to be ported to them. This would require the queried service provider (i.e., those who have historically planned and managed their numbering resources) to operate as "pools" from which others can pick and choose the numbers they want. The UNP method would primarily benefit service providers who have only a few or no numbers, or those who may have inefficiently managed their allocated numbering resources, and could lead to further inefficiencies and inequities among the carriers (e.g., inability to forecast demand when other carriers can at any time take numbers).[21]

With respect to large metropolitan areas where the call for number pooling is most often heard, however, UNP provides virtually no relief. The numbers that

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[21] This phenomena requires that any UNP design require participation by all carriers. If this is not required, only LRN-capable service providers who have NXXs will have to contribute their resources and numbers for the availability of others. LRN service providers who choose not to have NXXs will literally "feed" off of the numbers of another active service provider, avoiding the cost associated with managing the resources.

The impact of UNP is greater on those carriers who have the majority of NXXs assigned to their switches. Conceivably a provider would only have to open one NXX in a switch, for LRN purposes, and then never open another NXX. The carrier in question could possibly game the situation to the point that it would never have to open another NXX. Therefore, it would never have to port numbers to anyone else after the original NXX and would not have any of the obligations of being a default code holder (other than for the first code), i.e., LERG notifications, activations, monitoring utilization, and forecasting, etc. Certainly a carrier could reduce its own operating expenses by doing this. It would "feed" off the numbers of the other active service providers, never sharing any of the cost of managing the access to the public numbering resources, numbers.

might be available to a carrier in such a geographic area are generally those in a "churn/hold" state (awaiting reassignment after some period of non-use) or are viewed as undesirable numbers (numbers such as 666-XXXX). Thus, even if such numbers were pooled, little benefit would be realized since few of the unassigned numbers would be acceptable for assignment by the ultimately affected end user. That is, the numbers that were in a hold state would be released after some period of time (as they are now) and the undesirable numbers would remain so and would not be assigned.

Furthermore, UNP -- like ITN and 1 K block pooling -- requires Number Portability Administration Center ("NPAC") development. UNP increases the number of queries to be handled, and it requires an expansion of the current systems capacity and capability that will be required for the increase in the expected volumes of calls to be processed. These impacts have been well documented in the NANC Report.[22]

One of the misconceptions about UNP that is reflected even in the NANC Report[23] is that no pool administer is necessary under this option. This is incorrect. It is just that the incumbent carrier, rather than a formally-anointed national "administrator," would be required to perform the function.

Because ILECs have more switches deployed than most other carriers, the majority of the active NXXs in the country are assigned to those switches. Consequently, if a non-ILEC service provider wants to get a number, it would have

[22] NANC Report at Sections 6.3, 6.4, 6.6.4.

to have some ability to access information regarding the number's availability and to execute a request to have that number ported from an existing location to the recipient carrier's switch. Some call this situation a bilateral arrangement between two carriers at the direction of a UNP coordinator, not requiring a pool administrator.

These distinctions are a matter of semantics. The ILEC will be administering the process. Clearly, at this time, the onus of forecasting, tracking utilization and requesting of new codes to replace those that exhaust falls to the default code holder -- in most cases the ILEC. Therefore, the majority of the administrative responsibilities associated with UNP implementation will fall on the ILECs, who would be forced into the role of *de facto* pool administrator. And, undoubtedly, there would be those who advocate that such "non-administrator" function be performed for free.

Having eliminated the role of carriers in the number administration process (transferring the function to the North American Numbering Plan Administrator ("NANPA"), the UNP proposal would insinuate them right back in. Not a good idea and not one that most "would-be-administrator" carriers would support. U S WEST, for one, is certain that we do not want to be cast back into the role of uncompensated administrator for telephone numbers.

UNP is a concept that is tied to a poorly defined set of circumstances. This type of "sharing" involves consideration of a number of questions/issues which so far

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[23] Id. 6.1.1. at p. 119.

have not been analyzed or adequately answered. For example, how will industry be able to forecast the need for NXXs if a company cannot determine, until nearing exhaust, where the numbers will be used and for what purpose? Also, the problems associated with real time access for number assignment purposes comes into play with respect to UNP, as it did with ITN. UNP also causes a LEC, most likely the ILEC, to be in the service order flow for another LEC in order to port the number when it has no association with the customer or any other reason to process a service order. UNP should be further examined to determine what the real impacts are, what the costs are and if there really is value in making changes to systems to permit access to a limited supply of numbers (many of which may have already been turned down by some customers).

Finally, U S WEST agrees with the minority opinion presented by GTE and WINSTAR.[24] As indicated there, UNP can only be realized if the existing industry NPA code relief guidelines are disregarded. Such Guidelines currently require service providers in need of codes to document and verify the actual need, activation and use. Furthermore, only the code requester is held responsible for the administrative functions of updating the LERG (Local Exchange Routing Guide), code activation and utilization reporting. Pursuing UNP as presented in the NANC Report would be totally dependent on assignment guidelines and specifications that have yet to be developed. Furthermore, those guidelines and specifications would

[24] Minority opinion of GTE and WINSTAR attached to the NANC Report.

require strict application and enforcement to avoid gaming of the process by carriers that might be so inclined.

C. Non-LRN-Based "Solutions"

Below, U S WEST addresses a single LRN-based "solution" to numbering optimization objectives. While the NANC Report and the CCB request for comments present three non-LRN based possibilities (i.e., Rate Center Consolidation ("RCC"), Extended Local Calling Areas ("ELCA") and Inconsistent Rate Centers ("IRC"), we believe that only one of these three has the potential to materially aid in numbering optimization models. RCCs have such potential.[25]

In appropriate circumstances, RCC is an attractive optimization method designed to minimize the demand for NXX codes within an NPA by reducing the number of rate areas in a given LATA. As presented in the NANC Report, RCC has been successfully deployed in the U S WEST region. Examples are Minneapolis and Phoenix, with Denver currently underway.[26] This has given service providers the opportunity to actually return codes (after audits of NXXs were ordered by Commissions to verify utilization) and has reduced the demand for codes.

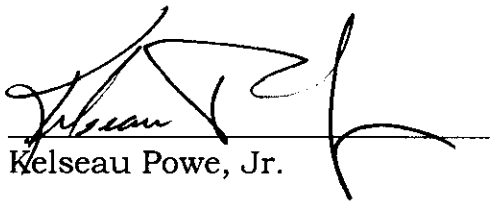
With RCC, service providers do not have to obtain as many NXXs as they previously had to, in order to serve the same geographic area. According to the report "...the number of rate centers could be reduced by combining or collapsing

[25] ELCAs and IRCs have traditionally resulted from agreements between carriers regarding local services that have been approved by state commissions.

[26] In Colorado, 43 rate centers were reduced to 16; and in both Minneapolis and Phoenix, more than 20 rate centers were combined into one.

CERTIFICATE OF SERVICE

I, Kelseau Powe, Jr., do hereby certify that on this 30th day of July, 1999, I have caused a copy of the foregoing **COMMENTS OF U S WEST, INC.** to be served, via hand delivery, upon the persons listed on the attached service list.



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Last update: 7/30/99