

Decision 00-05-032 May 18, 2000

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking on the
Commission's Own Motion Regarding
Commission Policy on Area Code Relief.

Rulemaking 98-12-014
(Filed December 17, 1998)

INTERIM OPINION

I. Summary

This decision finds that (1) hexadecimal telephone (HT) numbers are not feasible at this time, and (2) a proceeding should not be opened to consider the adoption of HT numbers.

II. Background

All telephone numbers in the United States must conform to the North American Numbering Plan (NANP).¹ To conform with the NANP, a telephone number must be ten digits in length and have the following structure:²

NXX-NXX-XXXX

N = any digit 2-9

X = any digit 0-9

The first three digits of NANP telephone numbers comprise the area code. The next three digits comprise the central office code or "prefix." The final four

¹ Federal Communications Commission Order (FCC Order) 93-87, ¶ 14. We take official notice of all FCC orders referred to herein pursuant to Rule 73 of the Commission's Rules of Practice and Procedure (Rule).

² FCC Order 95-283, ¶ 9.

digits comprise the line number.³ NANP telephone numbers are based on the familiar "decimal" numbering system composed of the digits 0-9.

On May 26, 1999, Professor Bill Neill filed a petition in which he asked the Commission to adopt a hexadecimal numbering system for telephone numbers in California. According to Neill, HT numbers would be comprised of the "decimal" digits 0 through 9, plus the "hex" digits of A, B, C, D, E, F. HT numbers would look as follows:

ZZZ-ZZZ-ZZZZ

Z = any digit 0-9, A, B, C, D, E, F

On June 29, 1999, the assigned Administrative Law Judge (ALJ) issued a ruling that took the following actions. First, the ruling denied Neill's petition to consider in this proceeding the issue of whether to adopt HT numbers. Second, the ruling allowed Neill and other parties to file comments on whether HT numbers are feasible. Finally, the ruling notified the parties that the Commission would use these comments to decide whether, and to what extent, HT numbers would be considered in a future proceeding. Neill filed comments on July 23, 1999. GTE California Incorporated (GTE) and Pacific Bell (Pacific) filed reply comments on August 6, 1999. Neill filed rebuttal comments on August 20, 1999.

On January 25, 2000, the ALJ issued a ruling that instructed the parties to file additional comments. Neill filed comments on February 2, 2000. GTE, Pacific, the California Alarm Association (CAA), and Carlos Lopez filed reply comments on February 11, 2000.

³ 47 C.F.R. § 52.7.

III. Position of Parties

Neill states that HT numbers would be based on touch-tone calling. Touch-tone calling, also known as dual tone multi-frequency signaling, uses 16 separate tones to transmit signals over voice-grade networks. Most touch-tone calling relies on 12 of the 16 available tones. These 12 tones are represented on a telephone key pad as the numbers zero through nine, plus the symbols "*" and "#". Existing "decimal" telephone numbers use only 10 of the 16 available tones, i.e., the numbers zero through nine.

Neill states that using all 16 of the available tones to construct telephone numbers would vastly expand the supply of telephone numbers. For example, there are 268 million HT numbers available in an area code, versus 10 million of the traditional "decimal" telephone numbers. Neill states that because of the vast supply of HT numbers within existing area codes, the Commission should order telephone companies to immediately implement HT numbers to (1) relieve the severe shortage of "decimal" telephone numbers that currently exists in several area codes, and (2) indefinitely postpone the need for new area codes.

Neill claims that telephone companies could implement hexadecimal dialing with little effort or cost. Neill also claims that HT numbers comply with the NANP. Neill further states that the impact of HT numbers on the public could be minimized by allowing phone numbers that are routinely called by people, such as residential phone numbers, to remain traditional "decimal" telephone numbers. According to Neill, hexadecimal dialing should be focused on machine-to-machine calls, such as calls involving alarm systems, ATMs, and point-of-sale terminals.

Neill states that some types of telecommunications equipment utilized by consumers, telephone companies, and business would have to be modified to fully accommodate hexadecimal dialing. For example, telephone key pads

would have to be expanded from 12 keys to 16 keys in order to take full advantage of hexadecimal dialing. To make HT numbers universally available, Neill recommends that the Commission sponsor legislation that would require equipment manufacturers to sell equipment in California that is fully compatible with hexadecimal dialing.

CAA states that it would cost more for the alarm industry to implement HT numbers than to implement new area codes.

Carlos Lopez states that implementing HT numbers would be tantamount to changing every street sign in America.

GTE and Pacific state that subscribers with HT numbers could not receive out-of-state calls unless hexadecimal dialing is implemented on a world-wide basis. They also state that modifying switches, operational support systems, and end-user equipment to support hexadecimal dialing would prove costly for both telephone companies and consumers. They further state that hexadecimal dialing is not backward compatible with rotary telephones.

IV. Discussion

The issue before us is whether HT numbers are feasible. Neill, as the proponent of HT numbers, has the burden of demonstrating that HT numbers are feasible. If we find that HT numbers are feasible, then we must decide whether to open a proceeding to consider if HT numbers should be adopted.

We have carefully reviewed Neill's proposal for HT numbers and parties' comments on the proposal. Based on this review, we find that Neill has failed to demonstrate that HT numbers are feasible at this time. To begin with, all telephone numbers in the United States must comply with the NANP. We find no merit in Neill's claim that HT numbers comply with the NANP. As described previously in this decision, only "decimal" telephone numbers comply with the

NANP. Since "hexadecimal" telephone numbers are, by definition, not "decimal" telephone numbers, HT numbers do not comply with the NANP.

We find no merit in Neill's claim that telephone companies could implement HT numbers with little effort or cost. Telephone companies incur substantial costs to implement a new area code, and we believe that it would cost at least as much, if not more, to implement HT numbers on a statewide basis.

We are skeptical of Neill's claim that HT numbers could (1) relieve the severe shortage of "decimal" telephone numbers that currently exists in several area codes, or (2) indefinitely postpone the need for new area codes. In order for Neill's claim to be correct, many California subscribers would have to be assigned HT numbers. However, GTE and Pacific correctly note that California subscribers with HT numbers could not receive calls from out of state. Thus, HT numbers would appeal only to subscribers who do not want or need the ability to receive calls from other states and countries. The number of such subscribers is likely to be relatively small. Consequently, HT numbers would do little to relieve exhausted area codes or postpone the need for new area codes in California unless hexadecimal dialing is implemented on a national or global basis.

For the preceding reasons, we find that Neill has failed to met his burden to demonstrate that HT numbers are feasible. Accordingly, there is no need to open a proceeding to consider if HT numbers should be adopted. But even if HT numbers were feasible, there would still be no point in such a proceeding before this Commission. Pursuant to Section 251(e)(1) of the Telecommunications Act of 1996, the FCC has exclusive jurisdiction over the NANP as it pertains to the

United States (U.S.).⁴ Since all telephone numbers in the U.S. must comply with the NANP, and since the FCC has exclusive jurisdiction over the NANP, we conclude that only the FCC has authority to adopt HT numbers. Therefore, since we lack the authority to adopt HT numbers, there is no point in our opening a proceeding to consider this matter.

Although HT numbers are not currently feasible, we recognize that circumstances may change. For example, if the NANP were revised to accommodate HT numbers, and telephone companies were authorized to implement hexadecimal dialing on a nationwide basis, then HT numbers would be feasible. Should HT numbers become feasible, we would be willing to consider them as a means to reduce or eliminate the need for new area codes.

V. Public Utilities Code Section 311(g)

This draft decision of ALJ Kenney was mailed to the parties in accordance with Pub. Util. Code § 311(g) and Rule 77.1. No comments were filed.

Findings of Fact

1. HT numbers do not comply with the NANP.
2. Telephone companies would incur substantial costs to implement HT numbers on a statewide basis.
3. California subscribers with HT numbers could not receive out-of-state calls unless hexadecimal dialing were implemented outside the state.
4. Most California subscribers are unlikely to want an HT number if they could not receive out-of-state calls.
5. The FCC has exclusive jurisdiction over the NANP.

⁴ We recognized the FCC's plenary jurisdiction over numbering issues in D.99-12-051, Finding of Fact 7, and D.99-12-049, *mimeo.* p. 6.

Conclusions of Law

1. HT numbers are not feasible at this time.
2. The Commission has no authority to implement HT numbers.
3. The Commission should not open a proceeding to consider the adoption of HT numbers unless and until there are circumstances which indicate that (i) HT numbers are feasible, and (ii) the Commission has authority to adopt HT numbers in California.
4. The following order should be effective immediately.

INTERIM ORDER

IT IS ORDERED that the Commission shall not open a proceeding to consider the adoption of hexadecimal telephone (HT) numbers unless and until there are circumstances which indicate that (1) HT numbers are feasible, and (2) the Commission has authority to adopt HT numbers in California.

This order is effective today.

Dated May 18, 2000, at San Francisco, California.

LORETTA M. LYNCH
President
HENRY M. DUQUE
JOSIAH L. NEEPER
RICHARD A. BILAS
CARL W. WOOD
Commissioners