Network Disclosure Announcement #327

Public Notice of Network Change(s), pursuant to CFR 47, subsections 51.325 - 51.335.
Qwest Communications Internet address: http://www.qwest.com/disclosures.

Coin Line Interface for Payphone Services

Disclosure Date: **January 6, 1997**

This document provides the relevant interface requirements between a payphone terminal and U S WEST's Coin Line. The Federal Communications Commission's Docket CC 96-128 requires that this information be announced no later than January 15, 1997.

Summary:

There are two types of network configurations used by the payphone industry. The first arrangement utilizes a Public Access Line (PAL) connected to a payphone designated as customer premises equipment (CPE). This arrangement is utilized primarily by independent payphone providers (other than Local Exchange Carriers). These companies utilize payphones today that contain the intelligence to perform all the required coin control functions (determining when to collect a coin or return it) and coin sent paid rating (how much to ask the end user to deposit on a coin paid long distance call).

The second configuration, typically utilized by a Local Exchange Carrier (LEC), requires a Coin Line interface as described in this announcement. In this instance the payphone is passive and simply acts on instructions received from the Coin Line interface. The Coin Line determines when a coin should be collected or returned. Coin paid long distance calls are then rated through the Automated Coin Toll Service (ACTS).

The Coin Line interface information must be announced so that if payphone providers choose to utilize the Coin Line arrangement to provision service, payphones can be configured to interface correctly.

Interface Requirements:

U S WEST's local switching system and/or an operator services system communicates with a payphone via a Coin Line connected to sets of analog DC and AC signals. The local switch and operator services system generates the signals with respect to control and functionality.

Call Origination - TR-NWT-000505, Section 5.2, Call Processing, and in TR-TSY-000562, Manual Line Features, FSD 01-02-0301. Signaling is contained in TR-NWT-000506, Section 6.2, Customer Line.

Calls originate from coin terminals in the same manner as any other non-coin line. No special dialing procedures are required. Coin terminals operate with either Dial Pulse (DP) or Dual-Tone Multifrequency (DTMF) dialing. DTMF is recommended.

The switch shall be capable of either allowing or denying call termination on a line-by-line basis.

An off-hook condition shall result in dial tone from the switch, whether or not an initial deposit has been made. If the calling party goes back on-hook before call completion, the switch shall provide a coin-return signal.

The switch shall wait at least 15 seconds before providing permanent signal or partial dial treatment. After permanent signal or partial dial treatment, but before idling of the line, the switch shall provide a coin return signal and then apply loop current of at least 18mA for at least 600 ms to restore the coin station totalizer to its normal position.

Operator Services Handled Calls - FR-271, Operator Services Systems Generic Requirements (OSSGR)

Many calls placed from public terminals need an operator or Operator Services Systems (OSS) for proper call handling. The local switch recognizes these calls from the dialed digits and routes the calls through an appropriate tandem switch and an associated OSS. The tandem switch/OSS assumes overall control but the local switch is still required to handle the interface to the public terminal.

The switch shall route and transfer control of alternate-billed calls and non-local calls to an appropriate intra or inter network OSS. The local switch will also pass the Automatic Number Identification (ANI) information digits to the OSS. For coin calls, the switch shall provide a coin return signal and apply tip-ring polarity to prepare the terminal's coin handling mechanism for subsequent deposit.

The switch will interpret signals from the OSS and provide coin control, line current reversal, coin test and disconnect functions.

Local-Area Coin Calls: Flat-rate, local coin is handled exclusively by the local switch. This includes: testing for an initial deposit and collection or return of deposited coins as a function of call completion.

Test for Coin Presence, Coin Disposal, Polarity Reversal - GR-506, Section 6.2.

Test for Coin Presence: The coin terminal ground path is actuated by a sufficient deposit. The test applies a voltage at the switch on the tip lead with respect to ground and looking for a specified range of current.

Coin Disposal: The coin collect and return are actuated at the switch by applying positive and negative voltages to the tip connector with respect to ground which actuates a mechanism at the coin terminal to collect or deposit coins. The decision to collect or return coins is made by the switch or may be requested by the OSS by means of in-band signaling.

Polarity Reversal: Reversal of tip/ring polarity is needed at the coin terminal for two reasons. The first is to reset the totalizer to a toll mode so single-coin deposits will enable coin tone generation. The second is to enable an option whereby a polarity-sensitive filter could be inserted in the voice path of a coin terminal to defeat fraudulent simulation of coin tones. Reversal of tip/ring polarity can occur as a result of in-band signals from an OSS or the local switch.

Connections - TR-NWT-000505, Section 5.3.1.

For the standard interface, the switch shall provide connections to suitable DC sources for the performance of coin collection, coin return and coin tests. The switch shall provide tip-ring polarity reversals when appropriate.

Signaling - GR-506, Section 6.2.

The customer line signaling capabilities apply for DC and AC signals needed for coin control, coin tests, coin deposits and line polarity changes for operator systems interworking.

The technical publications listed can be obtained by contacting:

Bell Communications Research, Inc.
Customer Services
8 Corporate Place
Piscataway, NJ 08854-4196
(800) 521-CORE

TR-NWT-000505 = $75.00
TR-TSY-000562 = $64.00
GR506 = $140 .00
FR271 = $2,105.00

Locations and Timing of Deployment:

Coin Line Service will be available throughout U S WEST's 14 state region. State tariffs will be filed beginning January 15, 1997 with an anticipated effective date of 4/15/97.

Additional Information:

Questions regarding the interface specifications noted in this announcement can be referred to:

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