

WIDE AREA NETWORK SYSTEM PROVIDING SECURE TRANSMISSION

ABSTRACT OF THE DISCLOSURE

A system that provides secure transmission of data between a subscriber's PC and an online service provider (OLS) over an Ethernet WAN. The system includes a remote transceiver unit located at a subscriber site and connected to the subscriber's PC; a central transceiver unit located at a telephone central office and connected to the remote transceiver unit over a twisted pair network and also connected to a WAN; an authorization server that is connected to the WAN; and one or more OLSs, which may include Internet service providers, connected to the WAN. Security of transmission is provided through a method in which only subscriber transmissions directed to a session-specific OLS are allowed to pass through the central transceiver unit onto the WAN, and only unicast transmissions from authorized OLSs are allowed to pass through the central transceiver unit to the subscriber port of the remote transceiver unit. Broadcast transmissions are minimized in favor of unicast messages. The authorization server delivers the IP and MAC addresses of the session-specific OLSs and the subscriber's PC to the remote transceiver units.

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