

# NEWTON'S TELECOM DICTIONARY

**11<sup>th</sup> Edition**

The Official Dictionary of Telecommunications  
Computer Telephony, Data Communications  
Internet Telephony, Voice Processing  
Windows 95 & NT Communications  
LAN, WAN and Wireless Networking

by **Harry Newton**



NEWTON'S TELECOM DICTIONARY

**NEWTON'S TELECOM DICTIONARY**

A Flatiron Publishing, Inc. Book  
copyright © 1996 Harry Newton  
published by Flatiron Publishing, Inc.

All rights reserved under International and Pan-American Copyright conventions, including the right to reproduce this book or portions thereof in any form whatsoever. Published in the United States by Flatiron Publishing, Inc., New York.

12 West 21 Street  
New York, NY 10010  
212-691-8215 Fax 212-691-1191  
1-800-999-0345  
1-800-LIBRARY  
Email [harrynewton@mcimail.com](mailto:harrynewton@mcimail.com)

## NEWTON'S TELECOM DICTIONARY

**Circuit** The physical connection (or path) of channels, conductors and equipment between two given points through which an electric current may be established. Includes both sending and receiving capabilities. A circuit can also be a network of circuit elements, such as resistors, inductors, capacitors, semiconductors, etc., that performs a specific function. A circuit can also be a closed path through which current can flow.

**Circuit Board** Same as a Printed Circuit Board, namely a board with microprocessors, transistors and other small electronics components. Such a board slides into a slot in a telephone system or personal computer. Also called a circuit card.

**Circuit Breaker** A special type of switch arranged to open a circuit when overloaded, without injury to itself. A circuit breaker is basically a re-usable fuse.

**Circuit Card** Same as a Circuit Board. See CIRCUIT BOARD.

**Circuit Emulation** A connection over a virtual channel-based network providing service to the end user that is indistinguishable from a real, point-to-point, fixed bandwidth circuit.

**Circuit Identification Code** CIC. The part of CCS/SS7 signaling message used to identify the circuit that is being established between two signaling points (14 bits in the ISDNUP).

**Circuit Mode** 1. An AT&T term for the method of communications in which a fixed bandwidth circuit is established from point to point through a network and held for the duration of a telephone call.

2. An AIN term for a type of switching that causes a one-to-one correspondence between a call and a circuit. That is, a circuit or path is assigned for a call between each switching node, and the circuit or path is not shared with other calls.

**Circuit Noise Level** At any point in a transmission system, the ratio of the circuit noise at that point to some arbitrary amount of circuit noise chosen as a reference.

**Circuit Order Management System** COMS. An automated processing system of MCI circuit- and service-related information. Processes hardwire service circuit orders from order entry through scheduling and completion. COMS also provides circuit order data, hardwire customer data, and circuit inventory data to other MCI systems in Finance, Engineering, and Operations.

**Circuit Order Record** COR. Report generated by the COR Tracking System within NOBIS, indicating circuit installations, changes, and disconnects.

**Circuit Provisioning** The telephone operating company process that somehow organizes to get you a trunk or other special service circuit.

**Circuit Segregation** Differentiating between services that are maintained by separate technicians or departments. Can be accomplished through visual and/or mechanical means.

**Circuit Switched Digital Capability** CSDC. A service implemented by some regional Bell Operating Companies that offers users a 56-Kbps digital service on a user-switchable basis.

**Circuit Switching** The process of setting up and keeping a circuit open between two or more users, such that the users have exclusive and full use of the circuit until the connection is released. There are basically three types of switching — CIRCUIT, PACKET and MESSAGE.

— PACKET SWITCHING is like circuit switching in that you can also switch information between people or devices, but in packet switching (as in circuit switching), no circuit is left open on a dedicated basis. Circuit switching is like having your own railroad track for your conversation to travel on that's yours as long as you keep the connection open. Once you hang up, the next caller gets to use that track.

— PACKET SWITCHING is a data switching technique only. In packet switching, the addresses on your packets are read by the switches as they approach, and are switched down the tracks. The next packet is read to throw the switches to send THAT packet where it needs to go. The data conversation is sent in packets. Each packet can be sent along different tracks as they are open. The packets are assembled at the other end — typically in the last switching office before the packets reach the distant computer or distant user.

— MESSAGE SWITCHING sends a message from one end to the other. But it's not interactive, as in packet or circuit switching. In message switching, the message is typically received in one block, stored in one central place, then retrieved or sent in one clump to the other end.

**Circuit Tier** An AT&T term for the tier within the Universal Information Services network that provides real-time circuit switching of channels.

**Circuit, Four Wire** A path in which four wires are presented to the terminal equipment (phone or data), thus allowing for simultaneous transmission and reception. Two wires are used for transmission in one direction and two in the other direction.



# NEWTON'S TELECOM DICTIONARY

The Official Dictionary of Telecommunications  
Computer Telephony, Data Communications, Internet Telephony  
Voice Processing , Windows 95 & NT Communications  
LAN, WAN and Wireless Networking

**ELEVENTH UPDATED AND EXPANDED EDITION**

I wrote this book for all of us who are trying to keep up.

This is not a technical book. I explain technical concepts in non-technical terms. I figure anyone ought to be able to understand my definitions.

Some of my definitions are several pages long. They're mini-essays. They explain the term, its benefits and occasionally a checklist on buying and using the item. Sometimes I include warnings. I want my dictionary to make you informed, buyer or seller.

## **HARRY NEWTON**

Harry Newton has 27 years in telecommunications. He is the telecom industry's most prolific writer. He is publisher of four monthly magazines — Computer Telephony, Teleconnect, Call Center and Imaging. He also founded LAN Magazine and Telecom Gear. He is promoter of the annual trade show, Computer Telephony Conference and Exposition. He holds an MBA from the Harvard Business School and an Economics undergraduate degree from the University of Sydney, Australia. He is not an engineer, but wishes he were. He is the telecom industry's

