

Exhibit 14

NEWTON'S TELECOM DICTIONARY

The Official Dictionary of
Telecommunications & the Internet

**16th Updated, Expanded and Much
Improved Edition**

NEWTON'S TELECOM DICTIONARY

copyright © 2000 Harry Newton
Email: Harry Newton@TechnologyInvestor.com
Personal web site: www.HarryNewton.com

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 by Telecom Books
An imprint of CMP Media Inc.
12 West 21 Street
New York, NY 10010

ISBN # 1-57820-053-9

Sixteenth Edition, Expanded and Updated, February 2000

For individual orders, and for information on special discounts for quantity orders, please contact:

Telecom Books
6600 Silacci Way
Gilroy, CA 95020
Tel: 800-LIBRARY or 408-848-3854
FAX: 408-848-5784
Email: telecom@rushorder.com

Distributed to the book trade in the U.S. and Canada by
Publishers Group West
1700 Fourth St., Berkeley, CA 94710

Manufactured in the United States of America

Data Stream 1. Collection of characters and data bits transmitted through a channel.

2. An SCSA term. A continuous flow of call processing data.

Data Surfer A person who makes a living doing online research and information retrieval. Also known as a Cybrarian (comes from cyberspace librarian) or a super searcher. See Cybrarian.

Data Switching Exchange DSE. The equipment installed at a single location to perform switching functions such as circuit switching, message switching, and packet switching.

Data Synchronization The process of keeping database data timely and relevant by sending and receiving information between laptops, between desktops in the field and between bigger computers at headquarters. See also Synchronization and Replication.

Data Terminal Equipment DTE. A definition of hardware specifications that provides for data communications. There are two basic specs your hardware can conform to, DTE (Data Terminal Equipment) or DCE (Data Communications Equipment). See DCE and DTE.

Data Terminal Ready One of the control signals on a standard RS-232-C connector. It indicates if the data terminal equipment is present, connected and ready and has had handshaking signals verified. See RS-232-C and the Appendix.

Data Transfer Rate The average number of bits, characters, or blocks per unit of time passing in a data transmission system.

Data Transfer Request Signal A call control signal transmitted by a DCE to a DTE to indicate that a distant DTE wants to exchange data.

Data Transfer Time The time that elapses between the initial offering of a unit of user data to a network by transmitting data terminal equipment and the complete delivery of that unit to receiving data terminal equipment.

Data Typing When converting a database from one format to another, several conversion programs will convert the data to a common format before converting it to the final version. During the conversion process a program may check through the data in the database to determine what it is and arbitrarily make one field numeric, one field character, one field memo, etc.

Data User Part DUP. Higher layer application protocol in SS7 for the exchange of circuit switched data; not supported by ISDNs.

Data Warehouse A database warehouse consolidates information from many departments within a company. This data can either be accessed quickly by users or put on an OLAP server for more thorough analysis. Data warehouses often use OLAP servers. OLAP stands for On Line Analytical Processing, also called a multidimensional database. According to PC Week, these databases can slice and dice reams of data to produce meaningful results that go far beyond what can be produced using the traditional two-dimensional query and report tools that work with most relational databases. OLAP data servers are best suited to work with data warehouses. See Data Warehousing.

Imaging Magazine, one of our publications, wrote a story on data warehouses. The writer, Joni Blecher, found "defining a data warehouse to be puzzling at best." She said these definitions seem to make the most sense.

A collection of physical data stores designed to concisely present a historical perspective of the events that occur in an enterprise. Data warehousing is a set of activities some of which are optional and some mandatory that create, operate and evolve

the collection of data stores that make up the data warehouse.

- Actium. An extremely comprehensive solution that includes hardware, software, middleware, partner products as well as their own professional services focused on solving business problems through the enterprise level.

- NCR. The place where business managers can access information for managerial processes. They're built for decision making purposes. It's an elaborate process that consists of a solution made up of many products.

- Oracle. A group of individuals, processes, methodologies — all the things that deal with and manage data including cleansing, enhancing, standardizing, consolidating and disseminating it.

- Axiom. A data store that companies build where they're storing their information assets so they can extract knowledge and understanding to the operation and performance of their business.

- Logic Works.

Data Warehousing A software strategy in which data is extracted from large transactional databases and other sources and stored in smaller databases, making analysis of the data somewhat easier. See Data Warehouse.

Database A collection of data structured and organized in a disciplined fashion so that access is possible quickly to information of interest. There are many ways of organizing databases. Most corporate databases are not one single, huge file. They are multiple databases related to each other by some common thread, e.g. an employee identification number. Databases are made up of two elements, a record and a field. A record is one complete entry in a database, e.g. Gerry Friesen, 12 West 21 Street, New York, NY 10010, 212-691-8215. A field would be the street address field, namely 12 West 21 Street.

Databases are stored on computers in different ways. Some are comma delineated. They differentiate between their fields with commas — like Gerry's record above. A more common way of storing databases is with fixed length records. Here, all the fields and all the records are of the same length. The computer finds fields by index and by counting. For example, Gerry's first name might occupy the first 15 characters. Gerry's last name might be the next 20 characters, etc. Where Gerry's names are too short to fill the full 15 or 20 characters, their fields are "padded" with specially-chosen characters which the computer recognizes as padded characters to be ignored. The most important thing to remember about databases is that all the common database programs, like dBASE, Paradox, Rbase, etc. don't automatically make backups of their files like word processing programs do. Therefore, before you muck with a database file — sort it, index it, restructure it, etc. Please make sure you make a backup of the main database file.

Database Administrator 1. A person who organizes, designs, implements and runs the company's databases. Since I personally believe databases — especially of prospects and customers — are pretty well a company's most important asset, this job of database administrator is very important.

2. DBA. A computer at MCI Worldcom that maintains the master file of Vnet translation information. The master file is created when a customer begins service and can be changed at anytime through CIM. The updated copies of the database are downloaded each night to the DAPs.

Database Lookup A software program which allows telephone users to find information on someone calling via the LCD window on their phone. This information comes to the