

NEWTON'S TELECOM DICTIONARY

30th Updated, Expanded, Anniversary Edition

Harry Newton

Steve Schoen, Technical Editor

Gail Saari, Artistic Director

New York

NEWTON's TELECOM DICTIONARY
30th Updated, Expanded, Anniversary Edition
copyright © 2016 Harry Newton
Harry@TechnologyInvestor.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 in the United States by Harry Newton 50 Central Park West New York,
NY 10023

Printed by United Book Press, a division of Ironmark,
1807 Whitehead Road Baltimore, MD 21207-4104
800-726-0120 410-944-4044 Represented by Larry Davis

Distributed by National Book Network (NBN)
4501 Forbes Boulevard, Suite 200 Lanham, MD 20706
Orders 1-800-462-6420 Direct 1-717-794-3800 Fax 1-800-338-4550
custserv@nbnbooks.com

Steve Schoen, Technical Editor
Gail Saari, Artistic Director
Gail Saari and Leigh McLellan, Typesetting

ISBN 13 digit Number 978-0-9793873-8-8

fabless Fabless is a term used to describe a company that designs and sells semiconductor chips but doesn't own a semiconductor manufacturing factory, also called a fabrication plant. Such fabless manufacturer has others make their chips under contract. There are arguments for owning and not owning factory to make semiconductor chips.

fabric 1. A descriptive term referring to the physical structure of a switch or network. Much like a piece of cloth, physical/logical communications channels (threads) are interwoven from port-to-port (end-to-end). Ideally, data are transferred through this switch or network on a seamless basis. In ATM and Fibre Channel, the switching fabric generally is non-blocking, or virtually so, from port-to-port. In the Internet, data works its way through a complex, and even unpredictable, interwoven network of networks comprising transmission facilities, packet switches and multiple carriers. See also Fabric Application Platform.

2. Multiple Fibre Channel switches interconnected and using Fibre Channel methodology for linking nodes and routing frames in a Fibre Channel network. See Fibre Channel.

fabric application platform What Brocade, a maker of FC (Fibre Channel) switches, calls a technique for running storage software in the network rather than in the host or the FC array. See also Fabric.

fabric blindness An inability to look deeply into the guts of a storage area network to identify the root cause of a performance problem.

Fabry-Perot Laser A low cost, long wavelength laser used in short and intermediate reach transmitters. Because of a wide spectral width, these devices are not typically used in WDM systems. Lasers are available in either 1310nm or 1550nm wavelength windows. Most Gigabit Ethernet 1000Base-LX modules use 1310nm Fabry-Perot lasers.

FACE See Forced Authorization Code.

face I never forget a face, but in your case I'll be glad to make an exception—Groucho Marx.

face time Time in front of your boss. Time in front of someone important. Time where you show your face as against working from home or working on a trip. Time where you pitch your ideas to a venture capitalist, as against sending emails or business plans. Time when you show your face, or see someone else's face in the flesh. A fairly stupid term.

Facebook An online social network launched in 2004, which became the most popular online social network in the U.S. and the world in 2008, measured by unique visitors per month. Today, Facebook still is in first place. See social networking. See also F-commerce.

faceplate A cover that fits around the pushbuttons or rotary dial of a telephone. Hotels and motels put instructions on them. More businesses should also.

facial recognition system Facial recognition system use a camera to zoom in on an individual's eyes, mouth and nose, and extract a "feature vector," a set of numbers that describes key aspects of the image, such as the precise distance between the eyes. Those numbers can be fed back into a large database of faces in search of a match. The accuracy of this software is limited today (by, among other things, pictures shot in profile), but the progress in this field is remarkable, wrote Eric Schmidt and Jared Cohen in the *Wall Street Journal* of April 19, 2013. "A team at Carnegie Mellon demonstrated in a 2011 study that the combination of 'off-the-shelf' facial recognition software and publicly available online data (such as social-network profiles) can match a large number of faces very quickly. With cloud computing, it takes just seconds to compare millions of faces. The accuracy improves with people who have many pictures of themselves available online—which, in the age of Facebook, is practically everyone."

facilitate An overly pompous way to say "to make easy" or "to make it happen." Ditto for using utilize when you mean use.

facilities A stupid, imprecisely defined word that means anything and everything. To me it sounds like toilets. But it's not. It can mean the equipment and services which make up a telecom system. It can mean offices, factories, and/or building. It can be anywhere you choose to put telecom things. Oops, I nearly said telecom facilities. So "facilities" means practically anything you want it to mean so long as it covers a sufficiently broad variety of "things" which you haven't got a convenient name for. "Facilities" sounds better than "things", especially if you want to sound pompous and erudite.

facilities administration and control A PBX feature which allows you, the subscriber, to assign to your users features and privileges like authorization codes, restriction levels and calling privileges.

facilities assurance reports This feature allows a subscriber to get an audit trail of the referrals produced by the automatic circuit assurance feature of some PBXs. The audit trail will identify the trunk circuit, the time of referral, the nature of the problem and if a test was performed, the outcome of the test.

facilities based carrier A telecommunications carrier which owns most of its own facilities (i.e. stuff), such as switching equipment and transmission lines. A non-facilities based carrier is one which leases most of its switching and lines from others. There are probably no 100% facilities based carriers in the world, since even the old government monopoly phone companies leased international lines and all today's competitive carriers lease circuits from each other. There are three benefits to being a mostly-facilities based carrier:

1. In the long run it tends to be cheaper to own your own plant.
2. You can roll out new features faster. You don't have to rely on someone else.

3. You can set your own standards of service and thus achieve better network integrity than if you had to rely on bits and pieces of other peoples' networks.

ILECs (Incumbent Local Exchange Carriers) such as CenturyLink, FairPoint, AT&T and Verizon and IXCs (Interexchange Carriers) such as AT&T and Verizon are facilities based carriers under this definition. These IXCs have switching offices, or POPs (Points Of Presence) in all service areas of the United States and provide both originating and terminating service nationwide. Major facilities based carriers sell their services to business and residential users and to other carriers which resell those services.

Non facilities based long distance carriers are known as switchless resellers. To be recognized as a CLEC (Competitive Local Exchange Carrier) by most local regulatory authorities in the United States and to receive reciprocal compensation from the local ILEC, you must, at minimum, own a central office switch; thus you must be a facilities based carrier to some degree. There's probably not one single carrier—local, long distance or international—in the entire North America that is 100% facilities based these days. Everyone seems to be renting someone else's lines. The most facilities based would be the ILECs. The least facilities based would be the CLECs (Competitive LECs). They tend to resell local loops from the local ILEC which they terminate in their own switching centers. See also CLEC, ILEC, IXC and POP.

facilities data link FDL An Extended SuperFrame (ESF) term. ESF extends the superframe from 12 to 24 consecutive and repetitive frames of information. The framing overhead of 8 Kbps in previous T-1 versions was used exclusively for purposes of synchronization. ESF takes advantage of newer channel banks and multiplexers which can accomplish this process of synchronization using only 2 Kbps of the framing bits, with the framing bit of only every fourth frame being used for this purpose. As a result, 6 Kbps is freed up for other purposes. This allows 2 Kbps to be used for continuous error checking using a CRC-6 (Cyclic Redundancy Check-6), and 4 Kbps to be used for a FDL which supports the communication of various network information in the form of in-service monitoring and diagnostics. ESF, through the FDL, supports non-intrusive signaling and control, thereby offering the user "clear channel" communications of a full 64 Kbps per channel, rather than the 56 Kbps offered through older versions as a result of "bit robbing." FDL implementations can vary, and the 4Kbps data bandwidth can be allocated among different functions, such as managing line side and equipment side operations. For example, ADC just introduced a new HDSL service to compete with T-1. ADC allocates 2 Kbps of the FDL channel for managing the HDSL interface and 2K bps for remotely managing attached channel banks and data terminals. As you can see, FDL has great potential for reducing the cost of on-site provisioning and maintenance. See also ESF and T-1.

facilities management Also called Outsourcing, facilities management is having someone else run your computers or your telecommunications system. The concept is that you're a great bank and you should concentrate on being in the banking business. Your outside facilities manager should concentrate on running your computers or telecom systems. He can do it cheaper, allegedly. Ross