

**OADM**

optical add drop multiplexer. Optical multiplexing equipment that provides interfaces between different signals in a network.

**OAKLEY**

Key establishment protocol (proposed for IPsec but superseded by IKE) based on the Diffie-Hellman algorithm and designed to be a compatible component of ISAKMP.

**OAM cell**

Operation, Administration, and Maintenance. ATM Forum specification for cells used to monitor virtual circuits. OAM cells provide a virtual circuit-level loopback in which a router responds to the cells, demonstrating that the circuit is up and the router is operational.

**OAM&P**

operations, administration, management, and provisioning. Provides the facilities and the personnel required to manage a network.

**OARnet**

Ohio Academic Resources Network. Internet service provider that connects a number of U.S. sites, including the Ohio supercomputer center in Columbus, Ohio.

**OBC**

out-of-band control. Refers to the standard method of issuing MICA technologies commands on the control channel, versus IBC, on the in-band data channel. Out-of-band commands are passed through the MICA mailbox mechanism.

**object identifier**

See *OID*.

**object instance**

Network management term referring to an instance of an object type that has been bound to a value.

**OC**

optical carrier. Series of physical protocols (OC-1, OC-2, OC-3, and so on), defined for SONET optical signal transmissions. OC signal levels put STS frames onto multimode fiber-optic line at a variety of speeds. The base rate is 51.84 Mbps (OC-1); each signal level thereafter operates at a speed divisible by that number (thus, OC-3 runs at 155.52 Mbps). See also *SONET*, *STS-1*, and *STS-3c*.

**OCC**

originating call control.

**OCLC**

Online Computer Library Catalog. Nonprofit membership organization offering computer-based services to libraries, educational organizations, and their users.

**OC-n**

SONET optical carrier, Level *n* (such as  $n = 3, 12, 48, 192$ ).

**octet**

8 bits. In networking, the term *octet* often is used (rather than byte) because some machine architectures employ bytes that are not 8 bits long.

**ODA**

Open Document Architecture. ISO standard that specifies how documents are represented and transmitted electronically. Formerly called *Office Document Architecture*.

**ODBC**

Open DataBase Connectivity. Standard application programming interface for accessing data in both relational and nonrelational database management systems. Using this application programming interface, database applications can access data stored in database management systems on a variety of computers even if each database management system uses a different data storage format and programming interface. ODBC is based on the call level interface specification of the X/Open SQL Access Group and was developed by Digital Equipment Corporation, Lotus, Microsoft, and Sybase. Contrast with *JDBC*.

**ODI**

Open Data-Link Interface. Novell specification providing a standardized interface for NICs (network interface cards) that allows multiple protocols to use a single NIC. See also *NIC*.

**OEMI channel**

See *block multiplexer channel*.

**OFA**

optical fiber amplifier. A device that amplifies an optical signal directly, without the need to convert it to an electrical signal, amplify it electrically, and reconvert it to an optical signal.

**off hook**

Call condition in which transmission facilities are already in use. Also known as *busy*.

**Office Document Architecture**

See *ODA*.

**Ohio Academic Resources Network**

See *OARnet*.

**OID**

object identifier. Values are defined in specific MIB modules. The Event MIB allows a user or an NMS to watch over specified objects and to set event triggers based on existence, threshold, and boolean tests. An event occurs when a trigger is fired; this means that a specified test on an object returns a value of true. To create a trigger, a user or an NMS configures a trigger entry in the *mteTriggerTable* of the Event MIB. This trigger entry specifies the OID of the object to be watched. For each trigger entry type, corresponding tables (existence, threshold, and boolean tables) are populated with the information required for carrying out the test. The MIB can be configured so that when triggers are activated (fired) either an SNMP Set is performed, a notification is sent out to the interested host, or both.

**OIM**

OSI Internet Management. Group tasked with specifying ways in which OSI network management protocols can be used to manage TCP/IP networks.

**OIR**

online insertion and removal. Feature that permits the addition, the replacement, or the removal of cards without interrupting the system power, entering console commands, or causing other software or interfaces to shutdown. Sometimes called *hot swapping or power-on servicing*.

**OLO**

other local operator.

**OMG**

Object Management Group.

**on hook**

1. Condition that exists when a receiver or a handset is resting on the switchhook, or is not in use.
2. Idle state (open loop) of a single telephone or private branch exchange (PBX) line loop.

**ONC**

Open Network Computing. Distributed applications architecture designed by Sun Microsystems, currently controlled by a consortium led by Sun. The NFS protocols are part of ONC. See also *NFS*.

**ones density**

Scheme that allows a CSU/DSU to recover the data clock reliably. The CSU/DSU derives the data clock from the data that passes through it. To recover the clock, the CSU/DSU hardware must receive at least one 1 bit value for every 8 bits of data that pass through it. Also called *pulse density*.

**one-way encryption**

Irreversible transformation of plaintext to ciphertext, such that the plaintext cannot be recovered from the ciphertext by other than exhaustive procedures even if the cryptographic key is known.

**online insertion and removal**

See *OIR*.

**on-the-fly packet switching**

See *cut-through packet switching*.

**OOS**

1. Out-of-Service.
2. Telecommunications: Out-of-Service signaling.

**OOTB**

out-of-the-box. Default configuration of the product when it is first installed.

**OPC**

own point code. Point code of the Cisco SC2200 signaling controller.

**OPI**

See *OPI* in the “Cisco Systems Terms and Acronyms” section.

**open architecture**

Architecture with which third-party developers legally can develop products and for which public domain specifications exist.

**open circuit**

Broken path along a transmission medium. Open circuits usually prevent network communication.

**open database connectivity**

See *ODBC*.

**Open Data-Link Interface**

See *ODI*.

**Open Document Architecture**

See *ODA*.

**Open Group**

Group formed in February 1996 by the consolidation of the two leading open systems consortia: X/Open Company Ltd (X/Open) and the Open Software Foundation (OSF).

**Open Network Computing**

See *ONC*.

**Open Shortest Path First**

See *OSPF*.

**Open System Interconnection**

See *OSI*.

**Open System Interconnection reference model**

See *OSI reference model*.

**Operation, Administration, and Maintenance cell**

See *OAM cell*.

**OPSS/INE**

Operations Provisioning System/Intelligent Network Element. Bellcore OSS that provides provisioning services for intelligent network elements. See also *OSS*.

**OPT**

See *OPT* in the “Cisco Systems Terms and Acronyms” section.

**Optical Carrier**

See *OC*.

**optical fiber**

See *fiber-optic cable*.

**Optimized Bandwidth Management**

Cisco wide-area switches ensure fair and cost-efficient bandwidth utilization using various techniques. ABR and Optimized Bandwidth Management are used for ATM and Frame Relay traffic. ABR is a standards-based ATM traffic management mechanism, and ForeSight is Cisco’s implementation that mirrors ABR capabilities for Frame Relay traffic. ABR and Optimized Bandwidth Management optimize real-time traffic performance and throughput, and minimize data loss. Bandwidth management for voice is achieved through the use of standards-based voice compression and silence suppression mechanisms for circuit data services. Formerly called ForeSight.

**Organizational Unique Identifier**

See *OUI*.

**OSF**

Open Software Foundation. Group responsible for the Distributed Computing Environment (DCE) and the Distributed Management Environment (DME). See also *DCE*.

**OSI**

Open System Interconnection. International standardization program created by ISO and ITU-T to develop standards for data networking that facilitate multivendor equipment interoperability.

**OSI Internet Management**

See *OIM*.

**OSI network address**

Address, consisting of up to 20 octets, used to locate an OSI Transport entity. The address is formatted into two parts: an Initial Domain Part that is standardized for each of several addressing domains and a Domain Specific Part that is the responsibility of the addressing authority for that domain.

**OSI presentation address**

Address used to locate an OSI Application entity. It consists of an OSI Network Address and up to three selectors, one each for use by the transport, session, and presentation entities.

**OSI reference model**

Open System Interconnection reference model. Network architectural model developed by ISO and ITU-T. The model consists of seven layers, each of which specifies particular network functions, such as addressing, flow control, error control, encapsulation, and reliable message transfer. The lowest layer (the physical layer) is closest to the media technology. The lower two layers are implemented in hardware and software whereas the upper five layers are implemented only in software. The highest layer (the application layer) is closest to the user. The OSI reference model is used universally as a method for teaching and understanding network functionality. Similar in some respects to *SNA*. See also *application layer*, *data link layer*, *network layer*, *physical layer*, *presentation layer*, *session layer*, and *transport layer*.

**OSINET**

International association designed to promote OSI in vendor architectures.

**OSP**

Open Settlement Protocol. Client/server protocol defined by the ETSI TIPPHON to establish authenticated connections between gateways, and to allow gateways and servers to transfer accounting and routing information securely. OSP allows service providers to roll out VoIP services without establishing direct peering agreements with other ITSPs.

**OSPF**

Open Shortest Path First. Link-state, hierarchical IGP routing algorithm proposed as a successor to RIP in the Internet community. OSPF features include least-cost routing, multipath routing, and load balancing. OSPF was derived from an early version of the IS-IS protocol. See also *IGP*, *IS-IS*, and *RIP*. See also *EIGRP* and *IGRP* in the “Cisco Systems Terms and Acronyms” section.

**OSS**

Operations Support System. Network management system supporting a specific management function, such as alarm surveillance and provisioning, in a carrier network. Many OSSs are large centralized systems running on mainframes or minicomputers. Common OSSs used within an RBOC include *NMA*, *OPS/INE*, and *TIRKS*.

**OSSI**

operations support system interface. DOCSIS specification. For example, DOCSIS OSSI 1.0 defines the network management requirements for support in a DOCSIS 1.0 environment.

**OUI**

Organizational Unique Identifier. Three octets assigned by the IEEE in a block of 48-bit LAN addresses.

**outframe**

Maximum number of outstanding frames allowed in an SNA PU 2 server at any time.

**out-of-band signaling**

Transmission using frequencies or channels outside the frequencies or channels normally used for information transfer. Out-of-band signaling often is used for error reporting in situations in which in-band signaling can be affected by whatever problems the network might be experiencing. Contrast with *in-band signaling*.

**outpulse rule**

Sequence of instructions that define autonomous call processing actions to be completed on outgoing ports in the Cisco VCO/4K switch. See also *answer supervision template* and *inpulse rule*.

**overlap**

Mode where call control is waiting for possible additional call information from the preceding PINX because it received acknowledgment that the subsequent PINX can receive additional call information.