

# Glossary of Terms

**ACK:** Short for *acknowledgement code*, a transmission control character used to indicate that a transmitted message was received uncorrupted or without errors or that the receiving station is ready to accept transmissions. The receiver sends the code to the sender to indicate that the transmission has been accepted.

**DIME (*Direct Internet Message Encapsulation*):** a new specification for sending and receiving SOAP messages along with additional attachments, like binary files, XML fragments, and even other SOAP messages, using standard transport protocols like HTTP.

**Gateway:** a node on a network that serves as an entrance to another network. In enterprises, the gateway is the computer that routes the traffic from a workstation to the outside network that is serving the Web pages. In homes, the gateway is the ISP that connects the user to the Internet.

In enterprises, the gateway node often acts as a proxy server and a firewall. The gateway is also associated with both a router, which use headers and forwarding tables to determine where packets are sent, and a switch, which provides the actual path for the packet in and out of the gateway.

**HTTP (*Hypertext Transfer Protocol*):** the underlying protocol used by the World Wide Web. HTTP defines how messages are formatted and transmitted, and what actions Web servers and browsers should take in response to various commands. For example, when you enter a URL in your browser, this actually sends an HTTP command to the Web server directing it to fetch and transmit the requested Web page. By convention, URLs that require an SSL connection start with **https:** instead of **http:**.

**J2EE (*Java 2 Platform Enterprise Edition*):** a platform-independent, Java-centric environment from Sun for developing, building and deploying Web-based enterprise applications online. The J2EE platform consists of a set of services, APIs, and protocols that provide the functionality for developing multi-tiered, Web-based applications.

**MeF (*Modernized e-File*):** the 1120/1120S e-file Project that the IRS has been reporting on since 2001 is now known as Modernized e-file (MeF). MeF utilizes a new architecture for processing returns and will accept and validate tax returns in Extensible Markup Language (XML) format. Eventually all IRS e-file programs will use the MeF system to receive and process electronically filed returns.

**MIME (*Multipurpose Internet Mail Extensions*):** a specification for formatting non-ASCII messages so that they can be sent over the Internet. Many e-mail clients now support MIME, which enables them to send and receive graphics, audio, and video files via the Internet mail system. In addition, MIME supports messages in character sets other than ASCII.

**.NET:** a Microsoft operating system platform that incorporates applications, a suite of tools and services and a change in the infrastructure of the company's Web strategy.

**SSL (*Secure Sockets Layer*):** a protocol developed by Netscape for transmitting private documents via the Internet. SSL works by using a private key to encrypt data that's transferred over the SSL connection. Both Netscape Navigator and Internet Explorer support SSL, and many Web sites use the protocol to obtain confidential user information, such as credit card numbers. By convention, URLs that require an SSL connection start with **https:** instead of **http:**.

**SOAP** (*Simple Object Access Protocol*): a lightweight XML-based messaging protocol used to encode the information in Web service request and response messages before sending them over a network. SOAP messages are independent of any operating system or protocol and may be transported using a variety of Internet protocols, including SMTP, MIME, and HTTP.

**TIGERS** (*Tax Implementation Group for EC Requirements Standardization*): a part of the American National Standards Institute's ASC (Accredited Standards Committee) X12-Government Subcommittee. The Government Subcommittee is a standing committee of ASC X12. TIGERS is a Work Group of Task Group 2 (G/TG2). It has been chartered with discussing matters relating to business standards and practices surrounding national tax data formatting and transfer. This group develops and maintains electronic technical format standards for a variety of tax filing and other related government electronic reporting or data exchange applications.

**UDDI** (*Universal Description, Discovery and Integration*): a Web-based distributed directory that enables businesses to list themselves on the Internet and discover each other, similar to a traditional phone book's yellow and white pages.

**Web Services**: describes a standardized way of integrating Web-based applications using the XML, SOAP, WSDL and UDDI open standards over an Internet protocol backbone. XML is used to tag the data, SOAP is used to transfer the data, WSDL is used for describing the services available and UDDI is used for listing what services are available.

**WSDL** (*Web Services Description Language*): an XML-formatted language used to describe a Web service's capabilities as collections of communication endpoints capable of exchanging messages. WSDL is an integral part of UDDI, an XML-based worldwide business registry. WSDL is the language that UDDI uses. WSDL was developed jointly by Microsoft and IBM.

**W3C** (*World Wide Web Consortium*): an international consortium of companies involved with the Internet and the Web. The W3C was founded in 1994 by Tim Berners-Lee, the original architect of the World Wide Web. The organization's purpose is to develop **open standards** so that the Web evolves in a single direction rather than being splintered among competing factions.

**XML** (*Extensible Markup Language*): a specification developed by the W3C. XML is a pared-down version of SGML, designed especially for Web documents. It allows designers to create their own customized **tags**, enabling the definition, transmission, validation, and interpretation of data between applications and between organizations.

**XML SCHEMA (XSD)**: short for **XML Schema Definition**, a way to describe and validate data in an XML environment. A *schema* is a model for describing the structure of information. XSD is a recommendation of the W3C. XSD has advantages over earlier XML schema languages, such as DTD. Because XSD is written in XML, there is no need for a parser. XSD defines a richer set of **data types** such as booleans, numbers, dates and times, and currencies -- which is invaluable for e-commerce applications. DTDs, on the other hand, express data types as explicit enumerations, which makes validation much more difficult and less accurate.

More important, XSD makes it easier to validate documents based on **namespaces** (used to qualify element and attributes names by associating them with namespaces identified by URI references. Namespaces prevent identically custom-named **tags** that may be used in different XML documents from being read the same way), something DTDs cannot do.