

W E B D A V

Collaborative Document Authoring and Management

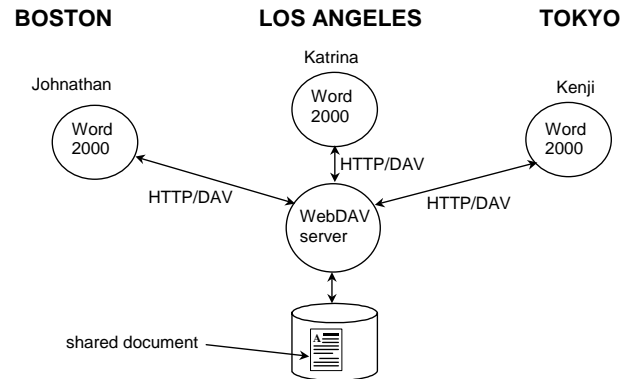
WebDAV (Web Distributed Authoring and Versioning) is a network protocol that extends the Hypertext Transfer Protocol (HTTP), the core network protocol that carries Web traffic between a Web server and a Web browser. WebDAV-enabled applications make it so **geographically separated people can work together over the Web** on documents, spreadsheets, Web pages, and images. The WebDAV protocol has been integrated into existing authoring tools, adding Web-based remote authoring capabilities to applications people use daily.

To date WebDAV is supported in document authoring tools such as Word 2000, PowerPoint 2000, and Excel 2000 (via the "Web Folders" feature) as well as in Acrobat 5 and Photoshop 6, and in Web authoring tools such as Go Live 5, and Dreamweaver 4. WebDAV's features also allow a Web server to be viewed as a network disk; Web Folders (Windows98/2000), MacOS X webdavfs, WebDrive, and Goliath all use WebDAV to provide file-system style manipulation of Web resources. With so many well-known applications supporting WebDAV, **you may already have a WebDAV-capable application!**

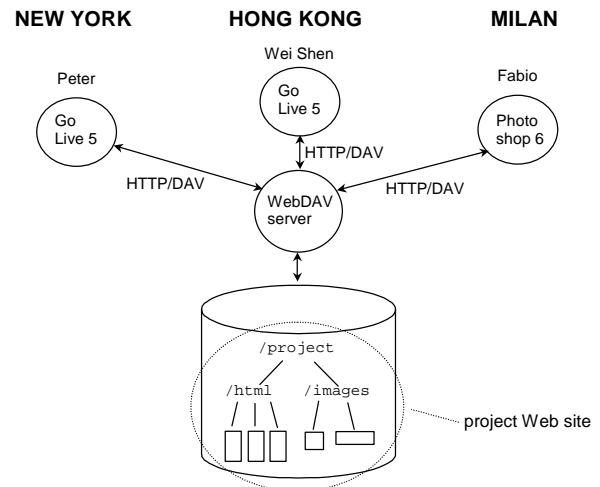
Consider the following Web site authoring and document collaboration scenarios:

- A task force with workers from geographically dispersed business units need to develop a document together.
- A home computer user wants to develop a Web site, but has no Unix shell or programming experience. Their Internet service provider (ISP) must host their Web site, since they do not have a server computer in their home, and the ISP limits up channel traffic. Furthermore, the ISP would prefer not to give out shell accounts, for security reasons.
- A geographically diverse project team needs to be able to maintain their project's Web site, allowing all project members to make Web site updates.
- A large corporate Web site needs to accept content contributions from any of the company's geographically separate business units.

All of these scenarios have in common the need to *remotely author Web pages and other documents*. **WebDAV is an open, standards-based infrastructure** that supports these authoring scenarios.



WebDAV Document Collaboration: Three collaborators, located at three different sites, are jointly authoring a document using the WebDAV capabilities of Microsoft Word 2000.



WebDAV Web Site Collaboration: A team with members in New York, Hong Kong, and Milan collaboratively maintain their project's Web site using a combination of Web site authoring, and image authoring tools, in this case Go Live 5, and Photoshop 6, both of which use the WebDAV protocol to interact with the project Web site server.

For more information:

W E B D A V . O R G

WebDAV Protocol Capabilities

Overwrite prevention: keeping more than one person from working on a document at the same time. This prevents the "lost update problem" in which modifications are lost as first one author, then another writes their changes without merging the other author's work.

WebDAV provides an exclusive write lock, which guarantees that only the lock owner can overwrite a locked resource, and a shared write lock, which allows a group of collaborators to work together on a resource. Locks automatically time out, easing administration of a WebDAV server.

Since WebDAV locks exist independent of a TCP connection, it is possible to take out a lock, work disconnected from the network, and then reconnect to submit editing updates. This type of work pattern is very useful for wireless networking, where network connections can frequently get dropped.

Properties: creation, removal, and querying of information about Web pages, such as its author, last modified date, etc. Also included is the ability to link pages of any media type to related pages.

WebDAV properties are (name, value) pairs where the value is a well-formed Extensible Markup Language (XML) document, thus permitting storage of a wide range of XML-tagged data. XML values provide typing via structured markup, extensibility from addition of new tags, and plug and play support for XML Linking (Xlink) and Resource Description Framework (RDF) values.

Namespace management: The ability to copy and move Web pages within a server's namespace, and the ability to create and list the contents of collections. Namespace management permits the creation of "Save As..." style dialog boxes found in most application software.

Applications and Servers Supporting WebDAV

Document Authoring

- Microsoft Word 2000
- Microsoft Excel 2000
- Microsoft PowerPoint 2000
- Microsoft Publisher 2000
- Adobe Photoshop 6
- Adobe Acrobat 5
- ExcOSOFT Documentor (XML Editor)

Web Site Authoring

- Adobe Go Live 5
- Macromedia Dreamweaver 4

File Managers

- Apple MacOS X webdavfs
- RiverFront WebDrive
- GNOME Nautilus
 - Goliath
 - cadaver
 - sitcopy

Servers

- Apache mod_dav
- Microsoft IIS 5
- Microsoft Exchange 2000
- Microsoft Sharepoint
- Adobe InScope
- Oracle Internet File System
- Xythos Storage Server
- Novell Netware 5.1
- Novell Net Publisher
- Endeavors MagiExpress
- W3C Jigsaw
- IBM DAV4J
- CyberTeams WebSite Director
- HyperWave Information Server 5.5
- Openlink Virtuoso
- Intraspect Intraspect4
- DataChannel DataChannelServer (DCS 4.1)

Contact Information

The WebDAV protocol has been developed by the WebDAV Working Group of the Internet Engineering Task Force (IETF), a standards developing organization which focuses on network protocol standards. IETF working groups are completely open, and anyone may join. To join the WebDAV working group, send an email with a subject line of "subscribe" to <w3c-dist-auth-request@w3.org>.

The Chair of the WebDAV Working Group is Jim Whitehead <ejw@soe.ucsc.edu>, Assistant Professor of Computer Science at the University of California, Santa Cruz.

The protocol specification for the WebDAV Distributed Authoring Protocol can be found at:

<http://www.ics.uci.edu/pub/ietf/webdav/>

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