

Hyperlink

From Wikipedia, the free encyclopedia

A **hyperlink** (often referred to as simply a **link**), is a reference or navigation element in a document to another section of the same document, another document, or a specified section of another document, that automatically brings the referred information to the user when the navigation element is selected by the user. As such it is similar to a citation in literature, but with the distinction of automatic instant access. Combined with a data network and suitable access protocol, a computer can be instructed to fetch the resource referenced.

Hyperlinks are part of the foundation of the World Wide Web created by Tim Berners-Lee, but are not limited to HTML or the web. Hyperlinks may be used in almost any electronic media.

HREF is an acronym for Hypertext REFERENCE, as used in HTML.

Hyperlink formats

There are a number of ways to format and present hyperlinks in hypermedia. What distinguishes the various formats of links are the various ways in which links are accessed. Most links are accessed via selecting (pointing and clicking) hypertext or a graphical user interface element (widget) such as a button.

Embedded link

An embedded link is a link embedded in an object such as hypertext or a hot area. The ninth word of this sentence is an example of an embedded hypertext link.

Hot area

A hot area (image map in HTML) is an invisible area of the screen that covers a text label or graphical image. A technical description of a hot area is a list of coordinates relating to a specific area on a screen created in order to hyperlink areas of the image to various destinations, to disable linking via negative space around irregular shapes, or to enable linking via invisible areas. For example, a map of the world may have irregular shaped countries which are hyperlinked to further information about that country. A separate invisible hot area interface allows for swapping skins or labels within the linked hot areas without repetitive embedding of links in the various skin elements.

Inline link

Contents

- 1 Hyperlink formats
 - 1.1 Embedded link
 - 1.1.1 Hot area
 - 1.2 Inline link
 - 1.3 Random accessed
 - 1.4 Hardware accessed
- 2 Hyperlinks in various technologies
 - 2.1 Hyperlinks in HTML
 - 2.2 XLink: Hyperlinks in XML
 - 2.3 Hyperlinks in other technologies
- 3 How hyperlinks work in HTML
 - 3.1 Link behavior in web browsers
- 4 History of the hyperlink
- 5 Legal and moral issues concerning hyperlinks
- 6 See also
- 7 References
- 8 External links

An inline link displays remote content without the need for embedding the content. The remote content may be accessed with or without the user selecting the link. Inline links may display specific parts of the content (e.g. thumbnail, low resolution preview, cropped sections, magnified sections, description text, etc.) and access other parts or the full content when needed, as is the case with print publishing software. This allows for smaller file sizes and quicker response to changes when the full linked content is not needed, as is the case when rearranging a page layout.

Random accessed

Random-accessed linking data are links retrieved from a data base or variable containers in a program when the retrieval function is from user interaction (e.g. dynamic menu from an address book) or non-interactive (e.g. random, calculated) process.

Hardware accessed

A hardware-accessed link is a link that directly via an input device (e.g. keyboard, microphone, remote control) without the need or use of a graphical user interface.

Hyperlinks in various technologies

Hyperlinks in HTML

Tim Berners-Lee saw the possibility of using hyperlinks to link any unit of information to any other unit of information over the Internet. Hyperlinks were therefore integral to the creation of the World Wide Web.

Links are specified in HTML using the `<a>` (anchor) elements.

XLink: Hyperlinks in XML

The W3C Recommendation called **XLink** describes hyperlinks which offer a far greater degree of functionality than those offered in HTML. These **extended links** can be *multidirectional*, linking from, within, and between XML documents. It also describes *simple links* which are unidirectional and therefore offer no more functionality than hyperlinks in HTML.

Hyperlinks in other technologies

Hyperlinks are used in e-mails, Text editors, PDF documents, word processing documents, spreadsheets, Apple's HyperCard and many other places.

How hyperlinks work in HTML

A link has two ends, called anchors, and a direction. The link starts at the source anchor and points to the destination anchor. However, the term *link* is often used for the source anchor, while the destination anchor is called the link target. A link from one domain to another is said to be *outbound* from its source anchor and *inbound* to its target.

The most common link target is a URL used in the World Wide Web. This can refer to a document, e.g. a webpage, or other resource, or to a *position* in a webpage. The latter is achieved by means of a

HTML element with a "name" or "id" attribute at that position of the HTML document. The URL of the position is the URL of the webpage with "*#attribute name*" appended — this is a fragment identifier.

When linking to PDF documents from a HTML page the "*attribute name*" can be replaced with syntax that references a page number or another element of the PDF, for example *page=[pageNo]* - "*#page=386*".

Link behavior in web browsers

A web browser usually displays a hyperlink in some distinguishing way, e.g. in a different colour, font or style. The behaviour and style of links can be specified using the Cascading Style Sheets (CSS) language.

In a graphical user interface, the appearance of a mouse cursor may change into a hand motif to indicate a link. In most graphical web browsers, links are displayed in underlined blue text when not cached, but underlined purple text when cached. When the user activates the link (e.g. by clicking on it with the mouse) the browser will display the target of the link. If the target is not a HTML file, depending on the file type and on the browser and its plugins, another program may be activated to open the file.

The HTML code contains some or all of the five main characteristics of a link:

- **link destination** ("href" pointing to a URL)
- **link label**
- **link title**
- **link target**
- **link class** or **link id**

It uses the HTML element "a" with the attribute "href" and optionally also the attributes "title", "target", and "class" or "id":

```
<a href="URL" title="link title" target="link target" class="link class">link label</a>
```

Example: To embed a link into a Page, blogpost, or comment, it may take this form:

```
<a href="http://www.wikipedia.org">Wikipedia</a>
```

Thus, the complex link string is reduced to, [Wikipedia]. This contributes to a clean, easy to read text or document.

When the cursor hovers over a link, depending on the browser and/or graphical user interface, some informative text about the link can be shown:

- It pops up, not in a regular window, but in a special hover box, which disappears when the cursor is moved away (sometimes it disappears anyway after a few seconds, and reappears when the cursor is moved away and back). IE and Mozilla Firefox show the title, Opera also shows the URL.
- In addition, the URL may be shown in the status bar.

Normally, a link will open in the current frame or window, but sites that use frames and multiple windows for navigation can add a special "target" attribute to specify where the link will be loaded.

Windows can be named upon creation, and that identifier can be used to refer to it later in the browsing session. If no current window exists with that name, a new window will be created using the ID.

Creation of new windows is probably the most common use of the "target" attribute. In order to prevent accidental reuse of a window, the special window names "_blank" and "_new" are usually available, and will always cause a new window to be created. It is especially common to see this type of link when one large website links to an external page. The intention in that case is to ensure that the person browsing is aware that there is no endorsement of the site being linked to by the site that was linked from. However, the attribute is sometimes overused and can sometimes cause many windows to be created even while browsing a single site.

Another special page name is "_top", which causes any frames in the current window to be cleared away so that browsing can continue in the full window.

History of the hyperlink

The term "hyperlink" was coined in 1965 (or possibly 1964) by Ted Nelson at the start of Project Xanadu. Nelson had been inspired by "As We May Think," a popular essay by Vannevar Bush. In the essay, Bush described a microfilm-based machine (the Memex) in which one could link any two pages of information into a "trail" of related information, and then scroll back and forth among pages in a trail as if they were on a single microfilm reel. The closest contemporary analogy would be to build a list of bookmarks to topically related Web pages and then allow the user to scroll forward and backward through the list.

In a series of books and articles published from 1964 through 1980, Nelson transposed Bush's concept of automated cross-referencing into the computer context, made it applicable to specific text strings rather than whole pages, generalized it from a local desk-sized machine to a theoretical worldwide computer network, and advocated the creation of such a network. Meanwhile, working independently, a team led by Douglas Engelbart (with Jeff Rulifson as chief programmer) was the first to implement the hyperlink concept for scrolling within a single document (1966), and soon after for connecting between paragraphs within separate documents (1968). See NLS.

Legal and moral issues concerning hyperlinks

See also: Deep linking

While hyperlinking among pages of Internet content has long been considered an intrinsic feature of the Internet, some websites have claimed that linking to them is not allowed without permission.

In some jurisdictions it is or has been held that hyperlinks are not merely references or citations, but are devices for copying web pages. In the Netherlands, for example, Karin Spaink was initially convicted of copyright infringement for linking, although this ruling was overturned in 2003. Although this principle is generally rejected by digerati, the courts that adhere to it see the mere publication of a hyperlink that connects to illegal material to be an illegal act in itself, regardless of whether referencing illegal material is illegal.

In Japan, it is considered rude to link to a personal website-- especially that of an artist-- without getting permission beforehand. Some sites use the phrase "Link Free" on their websites to indicate that they will not be upset by unauthorized linking.

In 2000, British Telecom sued Prodigy claiming that Prodigy infringed its patent (U.S. Patent 4,873,662 (<http://patft.uspto.gov/netacgi/nph-Parser?patentnumber=4873662>)) on web hyperlinks. However, after costly litigation, a court found for Prodigy, ruling that British Telecom's patent did not actually cover web hyperlinks. ^[1]

Moreover, although there is not much case law to support it, some have argued that hyperlinks could infringe the "making available right" provided in the WIPO Internet treaties.

When linking to illegal or infringing copyrighted content the law of linking liability is currently considered a grey area. There are examples where sites have been proven liable such as Plaintiff Intellectual Reserve vs Utah Lighthouse Ministry, Universal City Studios, Inc. v. Reimerdes, and Comcast vs. Hightech Electronics Inc ^[2], and there are examples where sites have not been proven liable for linking, for example Perfect 10 v. Google Inc. The cases of websites are proved liable outweigh those where websites were not liable.

See also

- Object hyperlinking
- HTML element
- Xenu's Link Sleuth - checks Web sites for broken hyperlinks

References

1. ^ CNET News.com, Hyperlink patent case fails to click (<http://news.com.com/2100-1033-955001.html>). August 23, 2002.
2. ^ WebTVWire.com, Linking to Infringing Video is probably Illegal in the US (<http://www.webtvwire.com/linking-to-infringing-content-is-probably-illegal-in-the-us/>). December 10, 2006.

External links

- Links & Law (<http://www.linksandlaw.com/>) - Overview of legal issues and court rulings involving linking
- UCSC Instructional Computing: Linking to Specific Pages in a PDF File (<http://ic.ucsc.edu/tutorials/linkingtopdfs/index.php>) - an excellent reference that outlines syntax and provides examples for linking to and controlling the way a PDF link opens.
- What is it Back link (<http://www.1234directory.com/What-is-it-Back-link.asp>)
- Fact vs. Fiction: A Look at Link Building (<http://www.seo-innovation.com/seo-link-building-tips.html>) Ethical link building is a vital component to improve a website's rankings.
- Anatomy and Deployment of Links (<http://www.smart-it-consulting.com/article.htm?node=155>) - an in-depth guide to hyperlinks
- Inlink Checker (<http://linkpopularitytips.com/>) - A simple tool for determining who links to a particular url
- gu.ma (<http://gu.ma/index.php?lang=en>) - A tool to shorten long links. You can include your own words in the generated link.

Retrieved from "<http://en.wikipedia.org/wiki/Hyperlink>"

Category: Hypertext

- This page was last modified 18:33, 2 July 2007.
- All text is available under the terms of the GNU Free Documentation License. (See **Copyrights** for details.) Wikipedia® is a registered trademark of the Wikimedia Foundation, Inc., a US-registered 501(c)(3) tax-deductible nonprofit charity.