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content analytics"Content analytics tools track performance indicators like page views, time on page, and conversion rates. Best SEO Sydney Agency. Best SEO Agency Sydney Australia. By analyzing this data, you can identify strengths, address weaknesses, and continuously improve your content strategy."

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- Best SEO company Sydney
- Best SEO Sydney
- Black-hat link building risks
- Blogger outreach
- bounce rate optimization
- brand comparison keywords
- Branded anchor text

content clarity"Content clarity involves making your text straightforward and easy to understand.

SEO services Sydney - User-focused keyword selection

1. Keyword mapping
2. Search result diversity

Clear, concise content improves user satisfaction, reduces bounce rates, and helps search engines determine the pages relevance to a particular search query."

content cluster keywords"Content cluster keywords are thematically grouped terms that support a pillar topic. Creating clusters improves site structure, boosts internal linking, and strengthens your authority on a given subject."

content clusters"Content clusters organize related pages around a central topic, improving site structure and user navigation. Best [Search Engine Optimisation Services](#). By creating pillar content and supporting articles, businesses can boost search rankings and establish themselves as authorities on specific subjects."

Black-hat link building risks

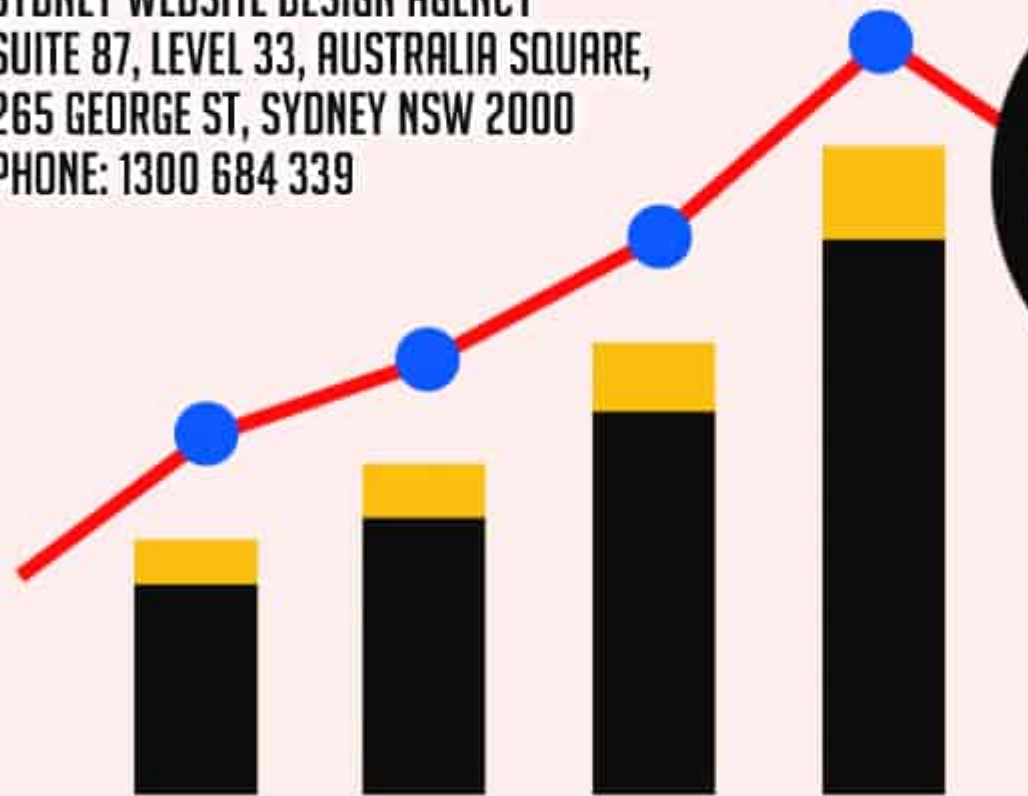
content competitiveness"Assessing content competitiveness involves comparing your material to top-ranking pages in search results. [SEO Audit](#) . By understanding what makes competing content successful, you can refine your approach and create more compelling, higher-ranking material."

content consistency"Ensuring content consistency across your website strengthens brand identity and user trust. Consistent tone, style, and formatting improve readability and engagement, making it easier for users to connect with your material."

content curation"Content curation involves gathering and organizing high-quality material from various sources. By presenting curated content alongside your own insights, you add value for your audience and strengthen your sites authority."

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content delivery for imagesUsing a content delivery network (CDN) for images ensures faster load times by serving files from the closest server to the user. comprehensive [SEO Packages Sydney](#) services. Improved delivery speeds enhance user experience and help maintain strong search rankings.

content depth"Content depth refers to how thoroughly a topic is covered in your material. By providing detailed, well-researched information, you demonstrate expertise, satisfy user queries, and increase your chances of ranking higher for relevant keywords."

content depth improvements"Content depth improvements involve adding more detailed, comprehensive information to a page. In-depth content often ranks higher because it better satisfies user intent, increases time on page, and demonstrates expertise on the topic."

bounce rate optimization

content engagement"Increasing content engagement means creating material that resonates with your audience, encouraging them to read, share, and interact. Engaged users spend more time on your site, improving key metrics that influence search rankings."

content flow"Optimizing content flow means ensuring a logical progression of ideas and information. A smooth flow keeps readers engaged, reduces bounce rates, and helps search engines understand your contents structure and relevance."

content formatting"Content formatting involves organizing text into headings, subheadings, lists, and tables. Proper formatting makes content easier to read and scan, which improves user engagement and helps search engines understand the structure of the information."

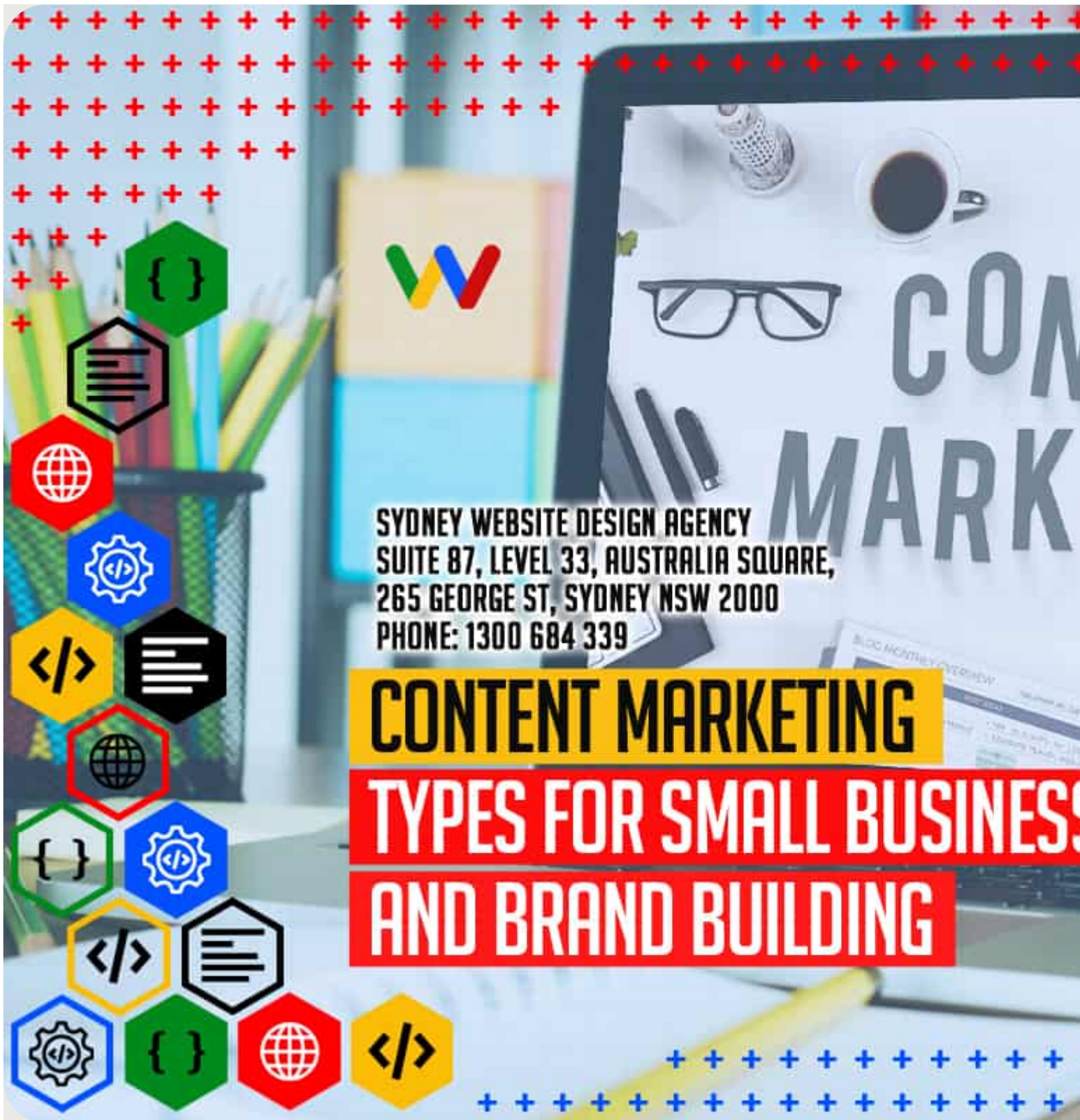
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1. Google SEO best practices
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CONTENT MARKETING TYPES FOR SMALL BUSINESS AND BRAND BUILDING

brand comparison keywords

content formatting"Optimizing content formatting includes using bullet points, numbered lists, and shorter paragraphs.

SEO services Sydney - SEO-friendly URLs

- User-focused keyword selection
- Google Knowledge Panel
- SEO-friendly URLs

These elements make content easier to scan and read, improving user engagement and increasing the likelihood of higher search rankings."

content formatting improvements"Content formatting improvements make text easier to read and scan. Using headings, bullet points, and shorter paragraphs increases user engagement, reduces bounce rates, and helps search engines better understand the pages structure."

content freshness"Content freshness is a factor search engines consider when ranking pages. By regularly updating and adding new content, businesses can demonstrate relevance, maintain strong rankings, and continue attracting organic traffic over time."

Branded anchor text

content freshness"Keeping content fresh means regularly updating articles with new information, current statistics, and recent examples. Fresh content signals to search engines that your site is active and relevant, which can improve rankings and maintain user interest."

content freshness indicators"Content freshness indicators, such as recent updates or newly added sections, signal to search engines that the page is current. Fresh content often ranks higher and attracts more visitors by meeting the latest user intent."

content freshness signals"Content freshness signals, such as recent updates or new sections, indicate to search engines that your material is current. Maintaining fresh content improves visibility, attracts repeat visitors, and helps sustain strong rankings."



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About MediaWiki

Not to be confused with [Wikimedia](#).

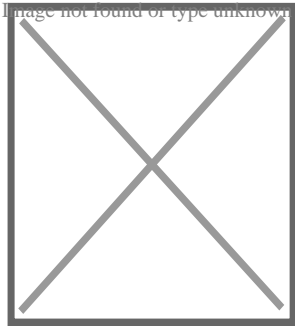


This article **relies excessively on references to primary sources**. Please improve this article by adding **secondary or tertiary sources**.

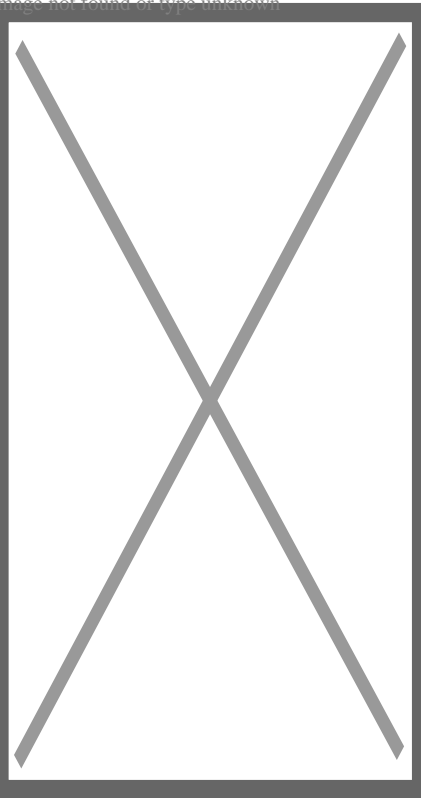
Find sources: "MediaWiki" – news · newspapers · books · scholar · JSTOR (January 2025) (Learn how and when to remove this message)

- o [gerrit.wikimedia.org/g/mediawiki/core/](https:// Gerrit Wikimedia.org/g/mediawiki/core/) [Edit this at Wikidata](#)

MediaWiki



Screenshot



The **Main Page** of the **English Wikipedia** running an alpha version of MediaWiki 1.40

Original author(s)	<ul style="list-style-type: none"> ○ Magnus Manske ○ Lee Daniel Crocker
Developer(s)	Wikimedia Foundation
Initial release	January 25, 2002; 23 years ago
Stable release	1.43.0[1]  Edit this on Wikidata December 2024; 2 months ago
Repository	
Written in	PHP[2]
Operating system	Windows, macOS, Linux, FreeBSD, OpenBSD, Solaris
Size	79.05 MiB (compressed)
Available in	459[3] languages
Type	Wiki software
License	GPLv2+[4]
Website	mediawiki.org  Edit this at Wikidata

MediaWiki is free and open-source wiki software originally developed by Magnus Manske for use on Wikipedia on January 25, 2002, and further improved by Lee Daniel Crocker,[5][6] after which development has been coordinated by the Wikimedia Foundation. It powers several wiki hosting websites across the Internet, as well as most websites hosted by the Wikimedia Foundation including Wikipedia, Wiktionary, Wikimedia Commons, Wikiquote, Meta-Wiki and Wikidata, which define a large part of the set requirements for the software.[7] Besides its usage on Wikimedia sites, MediaWiki has been used as a knowledge management and content management system on websites such as Fandom, wikiHow and major internal installations like Intellipedia and Diplopedia.

MediaWiki is written in the PHP programming language and stores all text content into a database. The software is optimized to efficiently handle large projects, which can have terabytes of content and hundreds of thousands of views per second.[7][8] Because Wikipedia is one of the world's largest and most visited websites, achieving scalability through multiple layers of caching and database replication has been a major concern for developers. Another major aspect of MediaWiki is its internationalization; its interface is available in more than 400 languages.[9] The software has hundreds of configuration settings[10] and more than 1,000 extensions available for enabling various features to be added or changed.[11]

Key features

[\[edit\]](#)

MediaWiki provides a rich core feature set and a mechanism to attach [extensions](#) to provide additional functionality.

Internationalization and localisation

[\[edit\]](#)

Niklas Laxström explains the features that allowed [translatewiki.net](#) to provide MediaWiki with more than 400 locales.

Due to the strong emphasis on multilingualism in the Wikimedia projects, [internationalization and localization](#) has received significant attention by developers. The user interface has been fully or partially translated into more than 400 languages on [translatewiki.net](#),^[9] and can be further customized by site administrators (the entire interface is editable through the wiki).

Several extensions, most notably those collected in the MediaWiki Language Extension Bundle, are designed to further enhance the multilingualism and internationalization of MediaWiki.

Installation and configuration

[\[edit\]](#)

Installation of MediaWiki requires that the user have [administrative privileges](#) on a server running both PHP and a compatible type of SQL [database](#). Some users find that setting up a [virtual host](#) is helpful if the majority of one's site runs under a framework (such as [Zope](#) or [Ruby on Rails](#)) that is largely incompatible with MediaWiki.^[12] [Cloud hosting](#) can eliminate the need to deploy a new server.^[13]

An installation PHP script is accessed via a [web browser](#) to initialize the wiki's settings. It prompts the user for a minimal set of required parameters, leaving further changes, such as enabling uploads,^[14] adding a site logo,^[15] and installing extensions, to be made by modifying configuration settings contained in a file called LocalSettings.php.^[16] Some aspects of MediaWiki can be configured through special pages or by editing certain pages; for instance, abuse filters can be configured through a special page,^[17] and certain gadgets can be added by creating [JavaScript](#) pages in the MediaWiki namespace.^[18] The MediaWiki community publishes a comprehensive installation guide.^[19]

Markup

[[edit](#)]

One of the earliest differences between MediaWiki (and its predecessor, [UseModWiki](#)) and other wiki engines was the use of "[free links](#)" instead of [CamelCase](#). When MediaWiki was created, it was typical for wikis to require text like "WorldWideWeb" to create a link to a page about the [World Wide Web](#); links in MediaWiki, on the other hand, are created by surrounding words with double square brackets, and any spaces between them are left intact, e.g. [[World Wide Web]]. This change was logical for the purpose of creating an encyclopedia, where accuracy in titles is important.

MediaWiki uses an extensible[\[20\]](#) [lightweight wiki markup](#) designed to be easier to use and learn than [HTML](#). Tools exist for converting content such as [tables](#) between MediaWiki markup and HTML.[\[21\]](#) Efforts have been made to create a MediaWiki markup spec, but a consensus seems to have been reached that Wikicode requires [context-sensitive grammar](#) rules.[\[22\]\[23\]](#) The following side-by-side comparison illustrates the differences between wiki markup and HTML:

MediaWiki synt
(the "behind the scene"
used to add formatting

====A dialogue====

"Take some more [[tea]]," the March Hare said to Alice, very earnestly.

"I've had nothing yet," Alice replied in an offended tone: "so I can't take more."

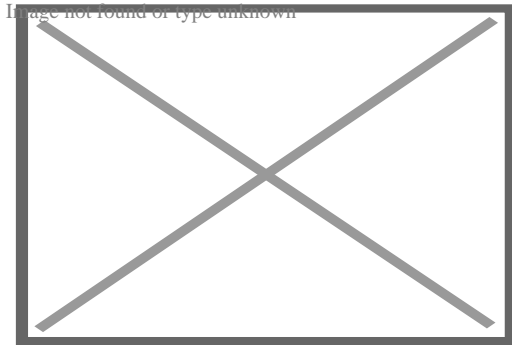
"You mean you can't take "less"," said the Hatter: "it's "'very'" easy to take "more" than nothing."

(Quotation above from [Alice's Adventures in Wonderland](#) by [Lewis Carroll](#))

Editing interface

[[edit](#)]

See also: [VisualEditor](#)



Editing interface of MediaWiki 1.44.0-wmf.4 with [syntax highlighting](#), showing the edit toolbar of 2017 wikitext editor and some examples of wiki syntax

MediaWiki's default page-editing tools have been described as somewhat challenging to learn.^[24] A survey of students assigned to use a MediaWiki-based wiki found that when they were asked an [open question](#) about main problems with the wiki, 24% cited technical problems with formatting, e.g. "Couldn't figure out how to get an image in. Can't figure out how to show a link with words; it inserts a number."^[25]

To make editing long pages easier, MediaWiki allows the editing of a subsection of a page (as identified by its header). A registered user can also indicate whether or not an edit is minor. Correcting spelling, grammar or punctuation are examples of minor edits, whereas adding paragraphs of new text is an example of a non-minor edit.

Sometimes while one user is editing, a second user saves an edit to the same part of the page. Then, when the first user attempts to save the page, an [edit conflict](#) occurs. The second user is then given an opportunity to merge their content into the page as it now exists following the first user's page save.

MediaWiki's user interface has been localized in many different languages. A language for the wiki content itself can also be set, to be sent in the "Content-Language" HTTP header and "lang" [HTML attribute](#).

VisualEditor has its own integrated wikitext editing interface known as 2017 wikitext editor, the older editing interface is known as 2010 wikitext editor.

Application programming interface

[\[edit\]](#)

MediaWiki has an extensible **web API** (**application programming interface**) that provides direct, high-level access to the data contained in the MediaWiki databases. Client programs can use the API to log in, get data, and post changes. The API supports thin web-based JavaScript clients and end-user applications (such as vandal-fighting tools). The API can be accessed by the **backend** of another web site.^[26] An extensive **Python bot** library, **Pywikibot**,^[27] and a popular semi-automated tool called **AutoWikiBrowser**, also interface with the API.^[28] The API is accessed via URLs such as `https://en.wikipedia.org/w/api.php?action=query&list=recentchanges`. In this case, the query would be asking Wikipedia for information relating to the last 10 edits to the site. One of the perceived advantages of the API is its language independence; it listens for **HTTP** connections from clients and can send a response in a variety of formats, such as **XML**, serialized PHP, or **JSON**.^[29] **Client code** has been developed to provide layers of **abstraction** to the API.^[30]

Tracking edits

[\[edit\]](#)

Among the features of MediaWiki to assist in tracking edits is a Recent Changes feature that provides a list of recent edits to the wiki. This list contains basic information about those edits such as the editing user, the edit summary, the page edited, as well as any tags (e.g. "possible **vandalism**")^[31] added by customizable abuse filters and other extensions to aid in combating unhelpful edits.^[32] On more active wikis, so many edits occur that it is hard to track Recent Changes manually. Anti-vandal software, including user-assisted tools,^[33] is sometimes employed on such wikis to process Recent Changes items. Server load can be reduced by sending a continuous feed of Recent Changes to an **IRC channel** that these tools can monitor, eliminating their need to send requests for a refreshed Recent Changes feed to the API.^[34]^[35]

Another important tool is watchlisting. Each logged-in user has a watchlist to which the user can add whatever pages he or she wishes. When an edit is made to one of those pages, a summary of that edit appears on the watchlist the next time it is refreshed.^[36] As with the recent changes page, recent edits that appear on the watchlist contain clickable links for easy review of the article history and specific changes made.

There is also the capability to review all edits made by any particular user. In this way, if an edit is identified as problematic, it is possible to check the user's other edits for issues.

MediaWiki allows one to link to specific versions of articles. This has been useful to the scientific community, in that expert peer reviewers could analyse articles, improve them and provide links to the trusted version of that article.^[37]

Navigation

^[edit]

Wikilinks

^[edit]

Navigation through the wiki is largely through internal wikilinks. MediaWiki's wikilinks implement page existence detection, in which a link is colored blue if the target page exists on the local wiki and red if it does not. If a user clicks on a red link, they are prompted to create an article with that title. Page existence detection makes it practical for users to create "wikified" articles—that is, articles containing links to other pertinent subjects—without those other articles being yet in existence.

Interwiki links

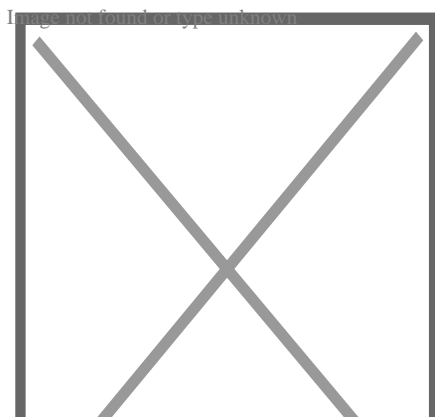
^[edit]

"Inter-wiki link" redirects here. For help with interwiki linking on Wikipedia, see [Help:Interwiki linking](#).

Interwiki links function much the same way as namespaces. A set of interwiki prefixes can be configured to cause, for instance, a page title of [wikiquote:Jimbo Wales](#) to direct the user to the Jimbo Wales article on [Wikiquote](#).^[38] Unlike internal wikilinks, interwiki links lack page existence detection functionality, and accordingly there is no way to tell whether a blue interwiki link is broken or not.

Interlanguage links

^[edit]



An example of interlanguage links

Interlanguage links are the small navigation links that show up in the sidebar in most MediaWiki skins that connect an article with related articles in other languages within the same Wiki family. This can provide language-specific communities connected by a larger context, with all wikis on the same server or each on its own server.^[39]

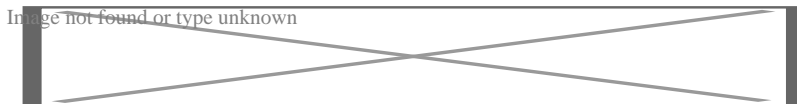
Previously, Wikipedia used interlanguage links to link an article to other articles on the same topic in other editions of Wikipedia. This was superseded by the launch of Wikidata.^[40]

Content organization

^[edit]

Page tabs and associated pages

^[edit]



MediaWiki page tabs, using the "Vector 2010" skin. The red coloration of the "discussion" tab indicates that the article does not yet have a talk page. As with any other red wikilink, clicking on it prompts the user to create the page.

Page tabs are displayed at the top of pages. These tabs allow users to perform actions or view pages that are related to the current page. The available default actions include viewing, editing, and discussing the current page. The specific tabs displayed depend on whether the user is logged into the wiki and whether the user has sysop privileges on the wiki. For instance, the ability to move a page or add it to one's watchlist is usually restricted to logged-in users. The site administrator can add or remove tabs by using JavaScript or installing extensions.^[41]

Each page has an associated history page from which the user can access every version of the page that has ever existed and generate **diffs** between two versions of his choice. Users' contributions are displayed not only here, but also via a "user contributions" option on a sidebar. In a 2004 article, Carl Challborn and Teresa Reimann noted that "While this feature may be a slight deviation from the collaborative, 'ego-less' spirit of wiki purists, it can be very useful for educators who need to assess the contribution and participation of individual student users."^[42]

Namespaces

^[edit]

"Talk page" redirects here. For talk pages on Wikipedia, see **Help:Talk pages**.

MediaWiki provides many features beyond [hyperlinks](#) for structuring content. One of the earliest such features is [namespaces](#). One of Wikipedia's earliest problems had been the separation of encyclopedic content from pages pertaining to maintenance and communal discussion, as well as personal pages about encyclopedia editors. Namespaces are prefixes before a page title (such as "User:" or "Talk:") that serve as descriptors for the page's purpose and allow multiple pages with different functions to exist under the same title. For instance, a page titled "[[The Terminator]]", in the default namespace, could describe [the 1984 movie](#) starring [Arnold Schwarzenegger](#), while a page titled "[[User:The Terminator]]" could be a profile describing a user who chooses this name as a pseudonym. More commonly, each namespace has an associated "Talk:" namespace, which can be used to discuss its contents, such as "User talk:" or "Template talk:". The purpose of having discussion pages is to allow content to be separated from discussion surrounding the content.^{[43][44]}

Namespaces can be viewed as [folders](#) that separate different basic types of information or functionality. Custom namespaces can be added by the site administrators. There are 16 namespaces by default for content, with 2 "pseudo-namespaces" used for dynamically generated "Special:" pages and links to media files. Each namespace on MediaWiki is numbered: content page namespaces have even numbers and their associated talk page namespaces have odd numbers.^[45]

Category tags

[\[edit\]](#)

Users can create new categories and add pages and files to those categories by appending one or more category tags to the content text. Adding these tags creates links at the bottom of the page that take the reader to the list of all pages in that category, making it easy to browse related articles.^[46] The use of categorization to organize content has been described as a combination of:

- [Collaborative tagging systems](#) like [del.icio.us](#) and
- [Hierarchical classifications](#) like the [Dewey Decimal Classification](#).^[47]

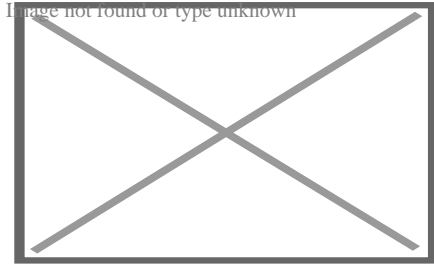
Subpages

[\[edit\]](#)

In addition to namespaces, content can be ordered using *subpages*. This simple feature provides automatic [breadcrumbs](#) of the pattern [[Page title/Subpage title]] from the page after the slash (in this case, "Subpage title") to the page before the slash (in this case, "Page title").

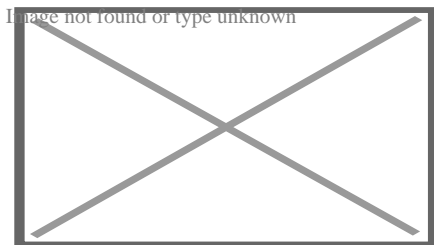
Customization

[[edit](#)]



Users can configure custom **JavaScript** that is executed on every pageview. This has led to JavaScript tools that users can "install", the "navigation popups" tool shown here displays a small preview of an article when hovering over a link title.

If the feature is enabled, users can customize their stylesheets and configure **client-side JavaScript** to be executed with every pageview. On Wikipedia, this has led to a large number of additional tools and helpers developed through the wiki and shared among users. For instance, *navigation popups* is a custom JavaScript tool that shows previews of articles when the user hovers over links and also provides shortcuts for common maintenance tasks.^[48]



A **screenshot** of a wiki using MediaWiki with a customized skin

The entire MediaWiki user interface can be edited through the wiki itself by users with the necessary permissions (typically called "administrators"). This is done through a special namespace with the prefix "MediaWiki:", where each page title identifies a particular user interface message. Using an extension,^[49] it is also possible for a user to create personal scripts, and to choose whether certain sitewide scripts should apply to them by toggling the appropriate options in the user preferences page.

Templates

[[edit](#)]

The "MediaWiki:" namespace was originally also used for creating custom text blocks that could then be dynamically loaded into other pages using a special syntax. This content was later moved into its own namespace, "Template:".

Templates are text blocks that can be dynamically loaded inside another page whenever that page is requested. The template is a special link in double curly brackets (for example "date=October 2018"), which calls the template (in this case located at Template:Disputed) to load in place of the template call.

Templates are **structured documents** containing **attribute–value pairs**. They are defined with **parameters**, to which are assigned **values** when **transcluded** on an article page. The name of the parameter is **delimited** from the value by an **equals sign**. A class of templates known as **infoboxes** is used on Wikipedia to collect and present a subset of information about its subject, usually on the top (mobile view) or top right-hand corner (desktop view) of the document.

Pages in other namespaces can also be transcluded as templates. In particular, a page in the main namespace can be transcluded by prefixing its title with a colon; for example, :MediaWiki transcludes the article "MediaWiki" from the main namespace. Also, it is possible to mark the portions of a page that should be transcluded in several ways, the most basic of which are:[50]

- <noinclude>...</noinclude>, which marks content that is not to be transcluded;
- <includeonly>...</includeonly>, which marks content that is not rendered unless it is transcluded;
- <onlyinclude>...</onlyinclude>, which marks content that is to be the *only* content transcluded.

A related method, called template *substitution* (called by adding subst: at the beginning of a template link) inserts the contents of the template into the target page (like a **copy and paste** operation), instead of loading the template contents dynamically whenever the page is loaded. This can lead to inconsistency when using templates, but may be useful in certain cases, and in most cases requires fewer **server** resources (the actual amount of savings can vary depending on wiki configuration and the complexity of the template).

Templates have found many different uses. Templates enable users to create complex table layouts that are used consistently across multiple pages, and where only the content of the tables gets inserted using template parameters. Templates are frequently used to identify problems with a Wikipedia article by putting a template in the article. This template then outputs a graphical box stating that the article content is disputed or in need of some other attention, and also categorize it so that articles of this nature can be located. Templates are also used on user pages to send users standard messages welcoming them to the site,[51] giving them awards for outstanding contributions,[52][53] warning them when their behavior is considered inappropriate,[54] notifying them when they are blocked from editing,[55] and so on.

Groups and restriction of access

[\[edit\]](#)

MediaWiki offers flexibility in creating and defining user groups. For instance, it would be possible to create an arbitrary "ninja" group that can block users and delete pages, and whose edits are hidden by default in the recent changes log. It is also possible to set up a group of "autoconfirmed" users that one becomes a member of after making a certain number of edits and waiting a certain number of days.^[56] Some groups that are enabled by default are bureaucrats and sysops. Bureaucrats have the power to change other users' rights. Sysops have power over page protection and **deletion** and the blocking of users from editing. MediaWiki's available controls on editing rights have been deemed sufficient for publishing and maintaining important documents such as a manual of **standard operating procedures** in a hospital.^[57]

MediaWiki comes with a basic set of features related to restricting access, but its original and ongoing design is driven by functions that largely relate to content, not content segregation. As a result, with minimal exceptions (related to specific tools and their related "Special" pages), page access control has never been a high priority in core development and developers have stated that users requiring secure user access and authorization controls should not rely on MediaWiki, since it was never designed for these kinds of situations. For instance, it is extremely difficult to create a wiki where only certain users can read and access some pages.^[58] Here, wiki engines like **Foswiki**, **MoinMoin** and **Confluence** provide more flexibility by supporting advanced security mechanisms like **access control lists**.

Extensibility

[\[edit\]](#)

The MediaWiki codebase contains various **hooks** using **callback functions** to add additional PHP code in an **extensible** way. This allows developers to write extensions without necessarily needing to modify the core or having to submit their code for review. Installing an extension typically consists of adding a line to the configuration file, though in some cases additional changes such as database updates or core patches are required.

Five main extension points were created to allow developers to add features and functionalities to MediaWiki. Hooks are run every time a certain event happens; for instance, the ArticleSaveComplete hook occurs after a save article request has been processed.^[59] This can be used, for example, by an extension that notifies selected users whenever a page edit occurs on the wiki from new or anonymous users.^[60] New tags can be created to process data with opening and closing tags (<newtag>...</newtag>).^[61] Parser functions can be used to create a

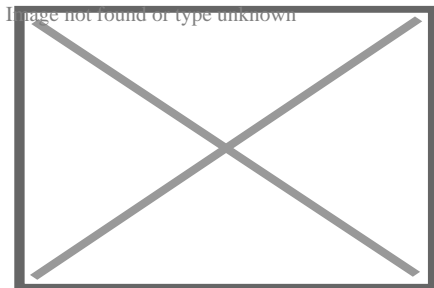
new command (#if:...).[62] New special pages can be created to perform a specific function. These pages are dynamically generated. For example, a special page might show all pages that have one or more links to an external site or it might create a form providing user submitted feedback.[63] **Skins** allow users to customize the look and feel of MediaWiki.[64] A minor extension point allows the use of **Amazon S3** to host image files.[65]

Extensions

[edit]

Text manipulation

[edit]



Tim Starling in 2008

Among the most popular extensions is a parser function extension, ParserFunctions, which allows different content to be rendered based on the result of **conditional statements**.[66] These conditional statements can perform functions such as evaluating whether a parameter is empty, comparing strings, evaluating mathematical expressions, and returning one of two values depending on whether a page exists. It was designed as a replacement for a notoriously inefficient template called Qif.[67] Schindler recounts the history of the ParserFunctions extension as follows:[68]

In 2006 some Wikipedians discovered that through an intricate and complicated interplay of templating features and CSS they could create conditional wiki text, i.e. text that was displayed if a template parameter had a specific value. This included repeated calls of templates within templates, which bogged down the performance of the whole system. The developers faced the choice of either disallowing the spreading of an obviously desired feature by detecting such usage and explicitly disallowing it within the software or offering an efficient alternative. The latter was done by Tim Starling, who announced the introduction of parser functions, wiki text that calls functions implemented in the underlying software. At first, only conditional text and the computation of simple mathematical expressions were implemented, but this already increased the possibilities for wiki editors enormously. With time further parser functions were introduced, finally leading to a framework that allowed the simple

writing of extension functions to add arbitrary functionalities, like e.g. geo-coding services or widgets. This time the developers were clearly reacting to the demand of the community, being forced either to fight the solution of the issue that the community had (i.e. conditional text), or offer an improved technical implementation to replace the previous practice and achieve an overall better performance.

Another parser functions extension, StringFunctions, was developed to allow evaluation of string length, string position, and so on. Wikimedia communities, having created awkward workarounds to accomplish the same functionality,[69] clamored for it to be enabled on their projects.[70] Much of its functionality was eventually integrated into the ParserFunctions extension,[71] albeit disabled by default and accompanied by a warning from Tim Starling that enabling string functions would allow users "to implement their own parsers in the ugliest, most inefficient programming language known to man: MediaWiki wikitext with ParserFunctions." [72]

Since 2012 an extension, Scribunto, has existed that allows for the creation of "modules"—wiki pages written in the scripting language **Lua**—which can then be run within templates and standard wiki pages. Scribunto has been installed on Wikipedia and other Wikimedia sites since 2013 and is used heavily on those sites. Scribunto code runs significantly faster than corresponding wikitext code using ParserFunctions.[73]

For footnotes and academic-related display

[[edit](#)]

Another very popular extension is a citation extension that enables footnotes to be added to pages using inline references.[74] This extension has, however, been criticized for being difficult to use and requiring the user to memorize complex syntax. A gadget called **RefToolbar** attempts to make it easier to create citations using common templates. MediaWiki has some extensions that are well-suited for academia, such as mathematics extensions[75] and an extension that allows molecules to be rendered in **3D**. [76]

Integration

[[edit](#)]

A generic Widgets extension exists that allows MediaWiki to integrate with virtually anything. Other examples of extensions that could improve a wiki are category suggestion extensions[77] and extensions for inclusion of **Flash Videos**,[78] YouTube videos,[79] and **RSS feeds**. [80] **Metavid**, a site that archives video footage of the **U.S. Senate** and **House** floor proceedings, was created using code extending MediaWiki into the domain of collaborative video authoring. [81]

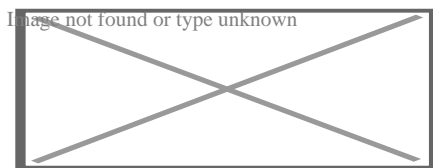
Combating linkspam

[[edit](#)]

There are many [spambots](#) that search the web for MediaWiki installations and add [linkspam](#) to them, despite the fact that MediaWiki uses the [nofollow](#) attribute to discourage such attempts at [search engine optimization](#).^[82] Part of the problem is that third party republishers, such as [mirrors](#), may not independently implement the nofollow tag on their websites, so marketers can still get [PageRank](#) benefit by inserting links into pages when those entries appear on third party websites.^[83] [Anti-spam](#) extensions have been developed to combat the problem by introducing [CAPTCHAs](#),^[84] [blacklisting](#) certain URLs,^[85] and allowing bulk deletion of pages recently added by a particular user.^[86]

Searches and queries

[[edit](#)]



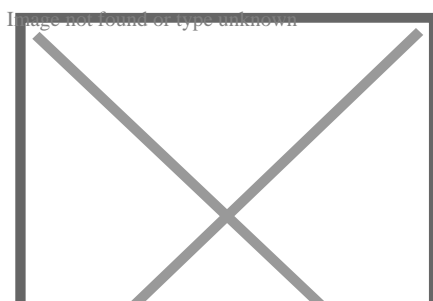
A search box showing a [drop-down list](#)

MediaWiki comes pre-installed with a standard text-based search. Extensions exist to let MediaWiki use more sophisticated third-party search engines, including [Elasticsearch](#) (which since 2014 has been in use on Wikipedia), [Lucene](#)^[87] and [Sphinx](#).^[88]

Various MediaWiki extensions have also been created to allow for more complex, [faceted search](#), on both data entered within the wiki and on [metadata](#) such as pages' revision history.^[89]^[90] [Semantic MediaWiki](#) is one such extension.^[91]^[92]

Rich content

[[edit](#)]



Images can be arranged in galleries, a feature that is used extensively for Wikimedia's media archive, **Wikimedia Commons**.

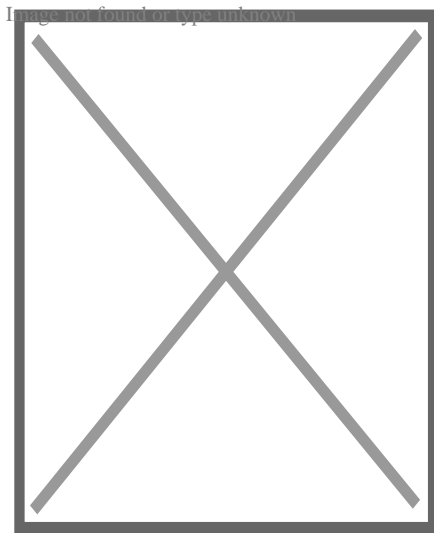
Various extensions to MediaWiki support **rich content** generated through specialized syntax. These include mathematical formulas using **LaTeX**, graphical timelines over mathematical **plotting**, **musical scores** and **Egyptian hieroglyphs**.

The software supports a wide variety of uploaded media files, and allows image galleries and thumbnails to be generated with relative ease. There is also support for **Exif metadata**. MediaWiki operates the **Wikimedia Commons**, one of the largest **free content** media archives.

For WYSIWYG editing, **VisualEditor** is available to use in MediaWiki which simplifying editing process for editors and has been bundled since MediaWiki 1.35.[93] Other extensions exist for handling WYSIWYG editing to different degrees.[94]

Database

[**edit**]



A schematic of the MediaWiki database structure

MediaWiki can use either the **MySQL/MariaDB**, **PostgreSQL** or **SQLite relational database management system**. Support for **Oracle Database** and **Microsoft SQL Server** has been dropped since MediaWiki 1.34.[95] A MediaWiki database contains several dozen **tables**, including a page table that contains page titles, page ids, and other metadata;[96] and a revision table to which is added a new row every time an edit is made, containing the page id, a brief textual summary of the change performed, the user name of the article editor (or its IP address the case of an unregistered user) and a timestamp.[97][98]

In a 4½ year period prior to 2008, the MediaWiki database had 170 **schema** versions.[99] Possibly the largest schema change was done in 2005 with MediaWiki 1.5, when the storage of metadata was separated from that of content, to improve performance flexibility. When this upgrade was applied to Wikipedia, the site was locked for editing, and the schema was converted

to the new version in about 22 hours. Some software enhancement proposals, such as a proposal to allow sections of articles to be watched via watchlist, have been rejected because the necessary schema changes would have required excessive Wikipedia downtime.^[100]

Performance and storage

^[edit]

Because it is used to run one of the highest-traffic sites on the Web, Wikipedia, MediaWiki's performance and **scalability** have been highly optimized.^[101] MediaWiki supports **Squid**, **load-balanced** database replication, client-side caching, **memcached** or table-based caching for frequently accessed processing of query results, a simple static file cache, feature-reduced operation, revision compression, and a job queue for database operations. MediaWiki developers have attempted to optimize the software by avoiding expensive algorithms, database queries, etc., caching every result that is expensive and has temporal locality of reference, and focusing on the hot spots in the code through **profiling**.^[102]

MediaWiki code is designed to allow for data to be written to a read-write database and read from read-only databases, although the read-write database can be used for some read operations if the read-only databases are not yet up to date. **Metadata**, such as article revision history, article relations (links, categories etc.), user accounts and settings can be stored in core databases and cached; the actual revision text, being more rarely used, can be stored as append-only **blobs** in external storage. The software is suitable for the operation of large-scale **wiki farms** such as **Wikimedia**, which had about 800 wikis as of August 2011. However, MediaWiki comes with no built-in GUI to manage such installations.

Empirical evidence shows most revisions in MediaWiki databases tend to differ only slightly from previous revisions. Therefore, subsequent revisions of an article can be concatenated and then compressed, achieving very high **data compression ratios** of up to 100x.^[102]

For more information on the architecture, such as how it stores wikitext and assembles a page, see **External links**.

Limitations

^[edit]

The parser serves as the *de facto* standard for the MediaWiki syntax, as no formal syntax has been defined. Due to this lack of a formal definition, it has been difficult to create **WYSIWYG** editors for MediaWiki, although several WYSIWYG extensions do exist, including the popular **VisualEditor**.

MediaWiki is not designed to be a suitable replacement for dedicated **online forum** or blogging software,^[103] although extensions do exist to allow for both of these.^{[104][105]}

It is common for new MediaWiki users to make certain mistakes, such as forgetting to sign posts with four tildes (~~~~),^[106] or manually entering a plaintext signature,^[107] due to unfamiliarity with the idiosyncratic particulars involved in communication on MediaWiki discussion pages. On the other hand, the format of these discussion pages has been cited as a strength by one educator, who stated that it provides more fine-grain capabilities for discussion than traditional threaded discussion forums. For example, instead of 'replying' to an entire message, the participant in a discussion can create a hyperlink to a new wiki page on any word from the original page. Discussions are easier to follow since the content is available via hyperlinked wiki page, rather than a series of reply messages on a traditional threaded discussion forum. However, except in few cases, students were not using this capability, possibly because of their familiarity with the traditional linear discussion style and a lack of guidance on how to make the content more 'link-rich'.^[108]

MediaWiki by default has little support for the creation of dynamically assembled documents, or pages that aggregate data from other pages. Some research has been done on enabling such features directly within MediaWiki.^[109] The **Semantic MediaWiki** extension provides these features. It is not in use on Wikipedia, but in more than 1,600 other MediaWiki installations.^[110] The Wikibase Repository and Wikibase Repository client are however implemented in **Wikidata** and **Wikipedia** respectively, and to some extent provides **semantic web** features, and linking of centrally stored data to infoboxes in various Wikipedia articles.

Upgrading MediaWiki is usually fully automated, requiring no changes to the site content or template programming. Historically troubles have been encountered when upgrading from significantly older versions.^[111]

Security

^[edit]

MediaWiki developers have enacted security standards, both for core code and extensions.^[112] **SQL queries** and HTML output are usually done through wrapper functions that handle validation, escaping, filtering for prevention of **cross-site scripting** and **SQL injection**.^[113] Many security issues have had to be patched after a MediaWiki version release,^[114] and accordingly MediaWiki.org states, "The most important security step you can take is to keep your software up to date" by subscribing to the announcement **mailing list** and installing security updates that are announced.^[115]

Support

^[edit]

Support for MediaWiki users consists of:

- MediaWiki.org, including the Support Desk.
- An official mailing list, Mediawiki-l.

- Several books have been written about MediaWiki administration,[116] including some free online books.[117][118]

License

[edit]

MediaWiki is free and open-source and is distributed under the terms of the [GNU General Public License](#) version 2 or any later version. Its documentation, located at its official website at www.mediawiki.org, is released under the [Creative Commons BY-SA 4.0](#) license, with a set of help pages intended to be freely copied into fresh wiki installations and/or distributed with MediaWiki software in the [public domain](#) instead to eliminate legal issues for wikis with other licenses.[119][120] MediaWiki's development has generally favored the use of [open-source media formats](#).[121]

Development

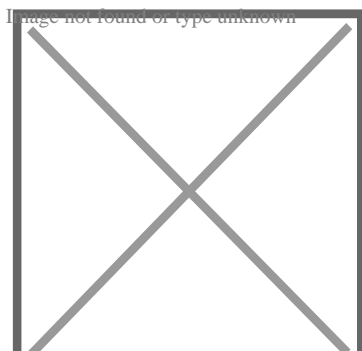
[edit]

MediaWiki has an active volunteer community for development and maintenance. MediaWiki developers are spread around the world, though with a majority in the United States and Europe. Face-to-face meetings and programming sessions for MediaWiki developers have been held once or several times a year since 2004.[122]

Anyone can submit [patches](#) to the project's [Git/Gerrit repository](#).[123] There are also paid programmers who primarily develop projects for the [Wikimedia Foundation](#). MediaWiki developers participate in the [Google Summer of Code](#) by facilitating the assignment of mentors to students wishing to work on MediaWiki core and extension projects.[124] During the year prior to November 2012, there were about two hundred developers who had committed changes to the MediaWiki core or extensions.[125] Major MediaWiki releases are generated approximately every six months by taking snapshots of the development branch, which is kept continuously in a runnable state;[126] [minor releases](#), or [point releases](#), are issued as needed to correct [bugs](#) (especially security problems). MediaWiki is developed on a [continuous integration](#) development model, in which software changes are pushed live to Wikimedia sites on regular basis.[126] MediaWiki also has a public [bug](#) tracker, phabricator.wikimedia.org, which runs [Phabricator](#). The site is also used for [feature](#) and [enhancement](#) requests.

History

[edit]



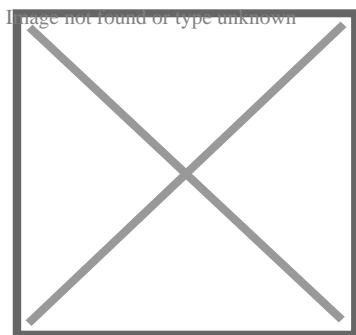
Magnus Manske in 2012

When Wikipedia was launched in January 2001, it ran on an existing **wiki software** system, **UseModWiki**. UseModWiki is written in the **Perl** programming language, and stores all wiki pages in text (**.txt**) files. This software soon proved to be limiting, in both functionality and performance. In mid-2001, **Magnus Manske**—a developer and student at the **University of Cologne**, as well as a **Wikipedia editor**—began working on new software that would replace UseModWiki, specifically designed for use by Wikipedia. This software was written in the **PHP** scripting language, and stored all of its information in a **MySQL** database. The new software was largely developed by August 24, 2001, and a test wiki for it was established shortly thereafter.

The first full implementation of this software was the new **Meta Wikipedia** on November 9, 2001. There was a desire to have it implemented immediately on the English-language Wikipedia.^[127] However, Manske was apprehensive about any potential **bugs** harming the nascent website during the period of the final exams he had to complete immediately prior to Christmas;^[128] this led to the launch on the English-language Wikipedia being delayed until January 25, 2002. The software was then, gradually, deployed on all the Wikipedia language sites of that time. This software was referred to as "the PHP script" and as "phase II", with the name "phase I", retroactively given to the use of UseModWiki.

Increasing usage soon caused load problems to arise again, and soon after, another rewrite of the software began; this time being done by **Lee Daniel Crocker**, which became known as "phase III". This new software was also written in PHP, with a MySQL backend, and kept the basic interface of the phase II software, but with the added functionality of a wider **scalability**. The "phase III" software went live on Wikipedia in July 2002.

The **Wikimedia Foundation** was announced on June 20, 2003. In July, Wikipedia contributor Daniel Mayer suggested the name "MediaWiki" for the software, as a play on "Wikimedia".^[129] The MediaWiki name was gradually phased in, beginning in August 2003. The name has frequently caused confusion due to its (intentional) similarity to the "Wikimedia" name (which itself is similar to "Wikipedia").^[130] The first version of MediaWiki, 1.1, was released in December 2003.



MediaWiki logo until April 1, 2021

The old **product logo** was created by **Erik Möller**, using a flower photograph taken by **Florence Nibart-Devouard**, and was originally submitted to the logo contest for a new **Wikipedia logo**, held from July 20 to August 27, 2003.^{[131][132]} The logo came in third place, and was chosen to

represent MediaWiki rather than Wikipedia, with the second place logo being used for the Wikimedia Foundation.[133] The double square brackets ([[]]) symbolize the **syntax** MediaWiki uses for creating **hyperlinks** to other wiki pages; while the **sunflower** represents the diversity of content on Wikipedia, its constant growth, and the wilderness.[134]

Later, Brooke Vibber, the **chief technical officer** of the **Wikimedia Foundation**,^[135] took up the role of **release manager**.^[136]^[101]

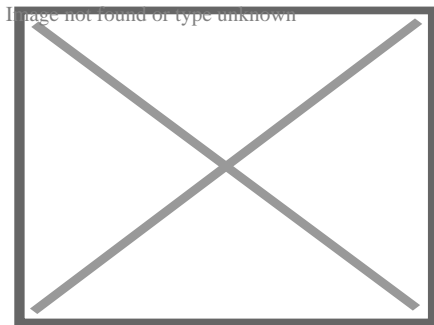
Major milestones in MediaWiki's development have included: the **categorization system** (2004); **parser** functions, (2006); **Flagged Revisions**, (2008);^[68] the "*ResourceLoader*", a delivery system for **CSS** and **JavaScript** (2011);^[137] and the **VisualEditor**, a "what you see is what you get" (**WYSIWYG**) editing platform (2013).^[138]

The contest of designing a new logo was initiated on June 22, 2020, as the old logo was a bitmap image and had "high details", leading to problems when rendering at high and low resolutions, respectively. After two rounds of voting, the new and current MediaWiki logo designed by **Serhio Magpie** was selected on October 24, 2020, and officially adopted on April 1, 2021.^[139]

Sites using MediaWiki

^[edit]

See also: **Category:MediaWiki websites**



Fandom also makes use of MediaWiki.

MediaWiki's most famous use has been in **Wikipedia** and, to a lesser degree, the Wikimedia Foundation's other projects. **Fandom**, a **wiki hosting service** formerly known as Wikia, runs on MediaWiki. Other public wikis that run on MediaWiki include **wikiHow** and **SNPedia**. **WikiLeaks** began as a MediaWiki-based site, but is no longer a wiki.

A number of alternative wiki encyclopedias to Wikipedia run on MediaWiki, including **Citizendium**, **Metapedia**, **Scholarpedia** and **Conservapedia**. MediaWiki is also used internally by a large number of companies, including **Novell** and **Intel**.^[140]^[141]

Notable usages of MediaWiki within governments include **Intellipedia**, used by the **United States Intelligence Community**, **Diplopedia**, used by the **United States Department of State**, and milWiki, a part of **milSuite** used by the **United States Department of Defense**. **United Nations** agencies such as the **United Nations Development Programme** and **INSTRAW** chose to implement their

wikis using MediaWiki, because "this software runs Wikipedia and is therefore guaranteed to be thoroughly tested, will continue to be developed well into the future, and future technicians on these wikis will be more likely to have exposure to MediaWiki than any other wiki software."^[142]

The [Free Software Foundation](#) uses MediaWiki to implement the [LibrePlanet](#) site.^[143]

Comparison to other online collaboration software

^[edit]

Main article: [Comparison of wiki software](#)

Users of online [collaboration software](#) are familiar with MediaWiki's functions and layout due to its noted use on Wikipedia. A 2006 overview of social software in academia observed that "Compared to other wikis, MediaWiki is also fairly aesthetically pleasing, though simple, and has an easily customized side menu and [stylesheet](#)."^[144] However, in one assessment in 2006, [Confluence](#) was deemed to be a superior product due to its very usable API and ability to better support multiple wikis.^[76]

A 2009 study at the [University of Hong Kong](#) compared [TWiki](#) to MediaWiki. The authors noted that TWiki has been considered as a collaborative tool for the development of educational papers and technical projects, whereas MediaWiki's most noted use is on Wikipedia. Although both platforms allow discussion and tracking of progress, TWiki has a "Report" part that MediaWiki lacks. Students perceived MediaWiki as being easier to use and more enjoyable than TWiki. When asked whether they recommended using MediaWiki for [knowledge management](#) course group project, 15 out of 16 respondents expressed their preference for MediaWiki giving answers of great certainty, such as "of course", "for sure".^[145] TWiki and MediaWiki both have flexible plug-in architecture.^[146]

A 2009 study that compared students' experience with MediaWiki to that with [Google Docs](#) found that students gave the latter a much higher rating on user-friendly layout.^[147]

A 2021 study conducted by the [Brazilian Nuclear Engineering Institute](#) compared a MediaWiki-based [knowledge management system](#) against two others that were based on [DSpace](#) and [Open Journal Systems](#), respectively.^[148] It highlighted ease of use as an advantage of the MediaWiki-based system, noting that because the Wikimedia Foundation had been developing MediaWiki for a site aimed at the general public (Wikipedia), "its user interface was designed to be more user-friendly from start, and has received large user feedback over a long time", in contrast to DSpace's and OJS's focus on niche audiences.^[148]

See also

^[edit]

-  not found or type unknown [Free and open-source software portal](#)

- [List of content management systems](#)
- [List of wiki software](#)
- [BlueSpice](#)
- [Semantic MediaWiki](#)
- [XOWA](#) – for viewing Wikipedia and other wikis offline
- [PHP](#) – a programming language that powers MediaWiki

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External links

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MediaWiki at Wikipedia's **sister projects**

-  not found or type unknown **Definitions** from Wiktionary
-  not found or type unknown **Media** from Commons

-  **Quotations** from Wikiquote
-  **Textbooks** from Wikibooks
-  **Resources** from Wikiversity
-  **Data** from Wikidata
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Wikipedia

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- Censorship
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- Criticism
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- Lee Daniel Crocker
- Florence Devouard
- Sue Gardner
- David Gerard
- James Heilman
- Maryana Iskander
- Dariusz Jemielniak
- Rebecca MacKinnon
- Katherine Maher
- Magnus Manske
- Erik Möller
- Jason Moore
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- Steven Pruitt
- Annie Rauwerda
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- Death
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- *Viola angustifolia*
- *Wikipedia Monument*

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Content use	<ul style="list-style-type: none"> ○ DBpedia ○ Depths of Wikipedia ○ Google and Wikipedia ○ Health information ○ Kiwix ○ Science information ○ Wikipedia-based education
Related	<ul style="list-style-type: none"> ○ <i>The Iraq War: A Historiography of Wikipedia Changelogs</i> ○ LGBTQ and Wikipedia ○ <i>Magna Carta (An Embroidery)</i> ○ People imprisoned for editing Wikipedia ○ Print Wikipedia ○ Wiki rabbit hole ○ Wikimedia Foundation ○ Wikimedia movement ○ Wikipedia for World Heritage ○ Wikipedia in India ○ Wikiracing ○ List of online encyclopedias ○ List of wikis

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Java

- Confluence
- Jive
- Traction TeamPage
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- Wiki.js

Perl

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- ikiwiki
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- WikiBase

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- Federated Wiki
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 - Haskell

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Wikimedia Foundation

Projects ○ Wikipedia community (Wikipedians)

Current

- Maryana Iskander
- Lisa Seitz-Gruwell
- Dariusz Jemielniak
- Rebecca MacKinnon
- Raju Narisetti
- Rosie Stephenson-Goodknight
- Esra'a Al Shafei
- Jimmy Wales

People

- Hampton Lintorn-Catlin
- Danese Cooper
- Bishakha Datta
- Florence Devouard
- Oscar van Dillen
- Sue Gardner
- Arnon Geshuri
- Mike Godwin
- Aaron Halfaker
- James Heilman
- Guy Kawasaki
- Patricio Lorente
- Katherine Maher
- Erik Möller
- Larry Sanger
- María Sefidari
- Lila Tretikov
- Luis Villa

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 - Wikisource
 - Wikispecies
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 - Litigation
 - Monkey selfie copyright dispute
 - *Wikimedia Foundation v. NSA*
 - Knowledge Engine
- Related**
 - *The Signpost*
 - *Wikipedia Monument*
 - Wikimedian of the Year
 - Tides Foundation
 - Artificial intelligence in Wikimedia projects
 - Google and Wikipedia
 - Wikipedia for World Heritage

Authority control databases Image not found or type unknown [Edit this at Wikidata](#)

International	<ul style="list-style-type: none">VIAFFAST
National	<ul style="list-style-type: none">Germany
	<ul style="list-style-type: none">United States
	<ul style="list-style-type: none">France
	<ul style="list-style-type: none">BnF data
	<ul style="list-style-type: none">Israel
Other	
	<ul style="list-style-type: none">IdRef

About Web syndication

Web syndication is making [content](#) available from one website to other sites. Most commonly, websites are made available to provide either summaries or full renditions of a website's recently added content. The term may also describe other kinds of content [licensing](#) for reuse.

Motivation

[\[edit\]](#)

For the subscribing sites, syndication is an effective way of adding greater depth and immediacy of information to their pages, making them more attractive to users. For the provider site, syndication increases exposure. This generates new traffic for the provider site—making syndication an easy and relatively cheap, or even free, form of advertisement.

Content syndication has become an effective strategy for link building, as [search engine optimization](#) has become an increasingly important topic among website owners and online marketers. Links embedded within the syndicated content are typically optimized around anchor terms that will point an optimized ^{[\[clarification needed\]](#)} link back to the website that the content author is trying to promote. These links tell the algorithms of the search engines that the website being linked to is an authority for the keyword that is being used as the anchor text. However the rollout of [Google Panda](#)'s algorithm may not reflect this authority in its [SERP](#) rankings based on quality scores generated by the sites linking to the authority.

The prevalence of web syndication is also of note to [online marketers](#), since web surfers are becoming increasingly wary of providing personal information for marketing materials (such as

signing up for a [newsletter](#)) and expect the ability to subscribe to a feed instead. Although the format could be anything transported over [HTTP](#), such as [HTML](#) or [JavaScript](#), it is more commonly [XML](#). [Web syndication formats](#) include [RSS](#), [Atom](#),^[1] and [JSON Feed](#).

History

[\[edit\]](#)

Main article: [History of web syndication technology](#)

Syndication first arose in earlier media such as [print](#), [radio](#), and [television](#), allowing content creators to reach a wider audience. In the case of radio, the United States Federal government proposed a syndicate in 1924 so that the country's executives could quickly and efficiently reach the entire population.^[2] In the case of television, it is often said that "Syndication is where the real money is."^[3] Additionally, syndication accounts for the bulk of TV programming.^[4]

One predecessor of web syndication is the [Meta Content Framework](#) (MCF), developed in 1996 by [Ramanathan V. Guha](#) and others in [Apple Computer](#)'s Advanced Technology Group.^[5]

Today, millions of online publishers, including newspapers, commercial websites, and blogs, distribute their news headlines, product offers, and blog postings in the news feed.

As a commercial model

[\[edit\]](#)

Conventional syndication businesses such as [Reuters](#) and [Associated Press](#) thrive on the internet by offering their content to media partners on a subscription basis,^[6] using business models established in earlier media forms.

Commercial web syndication can be categorized in three ways:

- by *business models*
- by *types of content*
- by *methods for selecting distribution partners*

Commercial web syndication involves partnerships between content producers and distribution outlets. There are different structures of partnership agreements. One such structure is [licensing](#) content, in which distribution partners pay a fee to the content creators for the right to publish the content. Another structure is ad-supported content, in which publishers share revenues derived from advertising on syndicated content with that content's producer. A third structure is free, or barter syndication, in which no currency changes hands between publishers and content producers. This requires the content producers to generate revenue from another source, such as embedded advertising or subscriptions. Alternatively, they could distribute content without remuneration. Typically, those who create and distribute content free are promotional entities, vanity publishers, or government entities.

Types of content syndicated include [RSS](#) or [Atom](#) Feeds and full content. With RSS feeds, headlines, summaries, and sometimes a modified version of the original full content is displayed on users' feed readers. With full content, the entire content—which might be text, audio, video, applications/widgets, or [user-generated content](#)—appears unaltered on the publisher's site.

There are two methods for selecting distribution partners. The content creator can hand-pick syndication partners based on specific criteria, such as the size or quality of their audiences. Alternatively, the content creator can allow publisher sites or users to opt into carrying the content through an automated system. Some of these automated "content marketplace" systems involve careful screening of potential publishers by the content creator to ensure that the material does not end up in an inappropriate environment.

Just as syndication is a source of profit for TV producers and radio producers, it also functions to maximize profit for Internet content producers. As the Internet has increased in size^[7] it has become increasingly difficult for content producers to aggregate a sufficiently large audience to support the creation of high-quality content. Syndication enables content creators to [amortize](#) the cost of producing content by licensing it across multiple publishers or by maximizing the distribution of advertising-supported content. A potential drawback for content creators, however, is that they can lose control over the presentation of their content when they syndicate it to other parties.

Distribution partners benefit by receiving content either at a discounted price, or free. One potential drawback for publishers, however, is that because the content is duplicated at other publisher sites, they cannot have an "exclusive" on the content.

For users, the fact that syndication enables the production and maintenance of content allows them to find and consume content on the Internet. One potential drawback for them is that they may run into duplicate content, which could be an annoyance.

E-commerce

[\[edit\]](#)

See also: [E-commerce](#)

Web syndication has been used to distribute product content such as feature descriptions, images, and specifications. As manufacturers are regarded as authorities and most sales are not achieved on manufacturer websites, manufacturers allow retailers or dealers to publish the information on their sites. Through syndication, manufacturers may pass relevant information to [channel partners](#).^[8] Such web syndication has been shown to increase sales.^[9]

Web syndication has also been found effective as a [search engine optimization](#) technique.^[10]

See also

[\[edit\]](#)

- [RSS](#)
- [Atom \(web standard\)](#)
- [Broadcast syndication](#)
- [Content delivery platform](#)
- [Feed icon](#)
- [hAtom](#)
- [List of comic strip syndicates](#)
- [List of streaming media systems](#)
- [Print syndication](#)
- [Protection of Broadcasts and Broadcasting Organizations Treaty](#)
- [Push technology](#)
- [Software as a service](#)
- [Usenet](#)


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[\[edit\]](#)

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10. [^] How to Increase Your Search Ranking [Fresh Business Thinking](#)

External links

[\[edit\]](#)

-  [Media related to **Web syndication** at Wikimedia Commons](#)
- [v](#)
- [t](#)
- [e](#)

Web syndication

History

Bloggging

Podcasting

Vlogging

Web syndication technology

Types

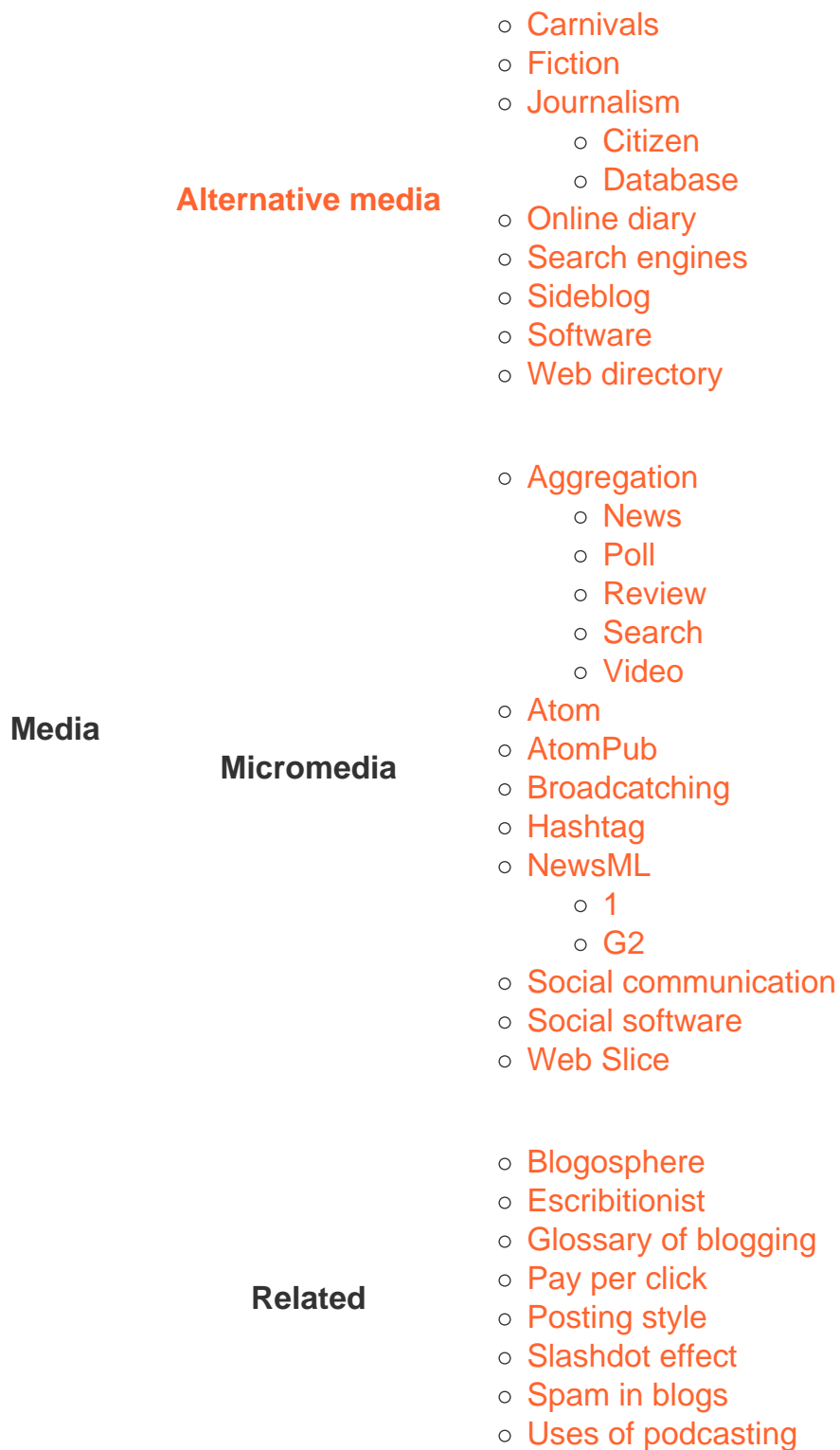
- Art
- Bloggernacle
- Classical music
- Corporate
- Dream diary
- Edublog
- Electronic journal
- Fake
- Family
- Fashion
- Food
- Health
- Law
- Lifelog
- MP3
- News
- Photoblog
- Police
- Political
- Project
- Reverse
- Travel
- Warblog

Technology	General	<ul style="list-style-type: none"> ○ BitTorrent ○ Feed URI scheme
	Features	<ul style="list-style-type: none"> ○ Linkback ○ Permalink ○ Ping ○ Pingback ○ Reblogging ○ Refback ○ Rollback ○ Trackback
	Mechanism	<ul style="list-style-type: none"> ○ Thread ○ Geotagging ○ RSS enclosure ○ Synchronization
	Memetics	<ul style="list-style-type: none"> ○ Atom feed ○ Data feed ○ Photofeed ○ Product feed ○ RDF feed ○ Web feed
	RSS	<ul style="list-style-type: none"> ○ GeoRSS ○ MRSS ○ RSS TV
	Social	<ul style="list-style-type: none"> ○ Inter-process communication ○ Mashup ○ Referencing ○ RSS editor ○ RSS tracking ○ Streaming media
	Standard	<ul style="list-style-type: none"> ○ OPML ○ RSS Advisory Board ○ Usenet ○ World Wide Web ○ XBEL ○ XOXO

- Audio podcast
- Enhanced podcast
- Mobilecast
- Narrowcasting
- Peercasting
- Screencast
- Slidecasting
- Videocast
- Webcomic
- Webtoon
- Web series

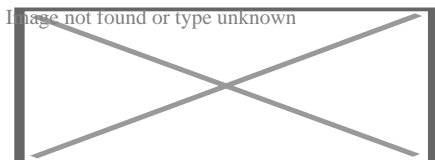
Form

- Anonymous blogging
- Collaborative blog
- Columnist
- Instant messaging
- Liveblogging
- Microblog
- Mobile blogging
- Spam blog
- Video blogging
- Motovlogging



About Domain name

This article is about domain names in the Internet. For other uses, see [Domain \(disambiguation\)](#).



An annotated example of a domain name

In the [Internet](#), a **domain name** is a [string](#) that identifies a realm of administrative autonomy, authority or control. Domain names are often used to identify services provided through the Internet, such as [websites](#), [email](#) services and more. Domain names are used in various networking contexts and for application-specific naming and addressing purposes. In general, a domain name identifies a [network domain](#) or an [Internet Protocol](#) (IP) resource, such as a personal computer used to access the Internet, or a server computer.

Domain names are formed by the rules and procedures of the [Domain Name System](#) (DNS). Any name registered in the DNS is a domain name. Domain names are organized in subordinate levels ([subdomains](#)) of the [DNS root](#) domain, which is nameless. The first-level set of domain names are the [top-level domains](#) (TLDs), including the [generic top-level domains](#) (gTLDs), such as the prominent domains [com](#), [info](#), [net](#), [edu](#), and [org](#), and the [country code top-level domains](#) (ccTLDs). Below these top-level domains in the DNS hierarchy are the second-level and third-level domain names that are typically open for reservation by end-users who wish to connect local area networks to the Internet, create other publicly accessible Internet resources or run websites, such as "wikipedia.org". The registration of a second- or third-level domain name is usually administered by a [domain name registrar](#) who sell its services to the public.

A [fully qualified domain name](#) (FQDN) is a domain name that is completely specified with all labels in the hierarchy of the DNS, having no parts omitted. Traditionally a FQDN ends in a dot (.) to denote the top of the DNS tree.^[1] Labels in the Domain Name System are [case-insensitive](#), and may therefore be written in any desired capitalization method, but most commonly domain names are written in lowercase in technical contexts.^[2] A [hostname](#) is a domain name that has at least one associated [IP address](#).

Purpose

[\[edit\]](#)

Domain names serve to identify Internet resources, such as computers, networks, and services, with a text-based label that is easier to memorize than the numerical addresses used in the Internet protocols. A domain name may represent entire collections of such resources or individual instances. Individual Internet host computers use domain names as host identifiers,

also called **hostnames**. The term *hostname* is also used for the leaf labels in the domain name system, usually without further subordinate domain name space. Hostnames appear as a component in **Uniform Resource Locators** (URLs) for Internet resources such as **websites** (e.g., en.wikipedia.org).

Domain names are also used as simple identification labels to indicate ownership or control of a resource. Such examples are the realm identifiers used in the **Session Initiation Protocol** (SIP), the **Domain Keys** used to verify DNS domains in **e-mail** systems, and in many other **Uniform Resource Identifiers** (URIs).

An important function of domain names is to provide easily recognizable and memorable names to numerically **addressed** Internet resources. This abstraction allows any resource to be moved to a different physical location in the address topology of the network, globally or locally in an **intranet**. Such a move usually requires changing the IP address of a resource and the corresponding translation of this IP address to and from its domain name.

Domain names are used to establish a unique identity. Organizations can choose a domain name that corresponds to their name, helping Internet users to reach them easily.

A generic domain is a name that defines a general category, rather than a specific or personal instance, for example, the name of an industry, rather than a company name. Some examples of generic names are *books.com*, *music.com*, and *travel.info*. Companies have created brands based on generic names, and such generic domain names may be valuable.^[3]

Domain names are often simply referred to as *domains* and domain name registrants are frequently referred to as *domain owners*, although domain name registration with a registrar does not confer any legal ownership of the domain name, only an exclusive right of use for a particular duration of time. The use of domain names in commerce may subject them to **trademark law**.

History

^[edit]

Main article: **List of the oldest currently registered Internet domain names**

The practice of using a simple memorable abstraction of a host's numerical address on a computer network dates back to the **ARPANET** era, before the advent of today's commercial Internet. In the early network, each computer on the network retrieved the hosts file (*host.txt*) from a computer at SRI (now **SRI International**),^{[4][5]} which mapped computer hostnames to numerical addresses. The rapid growth of the network made it impossible to maintain a centrally organized hostname registry and in 1983 the Domain Name System was introduced on the ARPANET and published by the **Internet Engineering Task Force** as RFC 882 and RFC 883.

The following table shows the first five **.com** domains with the dates of their registration:^[6]

Domain name	Registration date
-------------	-------------------

symbolics.com	15 March 1985
bbn.com	24 April 1985
think.com	24 May 1985
mcc.com	11 July 1985
dec.com	30 September 1985

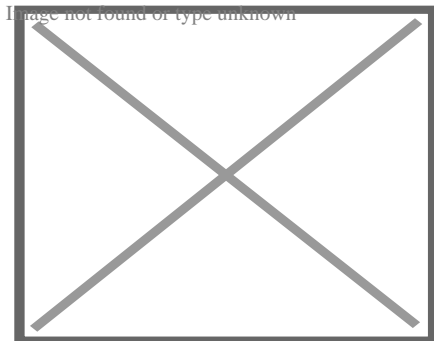
and the first five .edu domains:[7]

Domain name Registration date

berkeley.edu	24 April 1985
cmu.edu	24 April 1985
purdue.edu	24 April 1985
rice.edu	24 April 1985
ucla.edu	24 April 1985

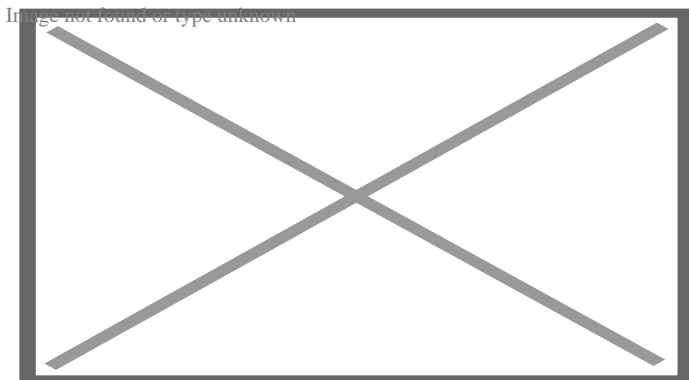
Domain name space

[edit]



The hierarchical domain name system, organized into zones, each served by domain name servers

Today, the **Internet Corporation for Assigned Names and Numbers** (ICANN) manages the top-level development and architecture of the Internet domain name space. It authorizes **domain name registrars**, through which domain names may be registered and reassigned.



The hierarchy of labels in a fully qualified domain name

The domain name space consists of a **tree** of domain names. Each node in the tree holds information associated with the domain name. The tree sub-divides into *zones* beginning at the **DNS root zone**.

Domain name syntax

[[edit](#)]

A domain name consists of one or more parts, technically called *labels*, that are conventionally concatenated, and delimited by dots, such as **example.com**.

- The right-most label conveys the **top-level domain**; for example, the domain name **www.example.com** belongs to the top-level domain **com**.
- The hierarchy of domains descends from the right to the left label in the name; each label to the left specifies a subdivision, or **subdomain** of the domain to the right. For example: the label **example** specifies a node **example.com** as a subdomain of the **com** domain, and **www** is a label to create **www.example.com**, a subdomain of **example.com**. Each label may contain from 1 to 63 **octets**. The empty label is reserved for the root node and when fully qualified is expressed as the empty label terminated by a **dot**. The full domain name may not exceed a total length of 253 ASCII characters in its textual representation.[8]
- A **hostname** is a domain name that has at least one associated IP address. For example, the domain names **www.example.com** and **example.com** are also hostnames, whereas the **com** domain is not. However, other top-level domains, particularly **country code top-level domains**, may indeed have an IP address, and if so, they are also hostnames.
- Hostnames impose restrictions on the characters allowed in the corresponding domain name. A valid hostname is also a valid domain name, but a valid domain name may not necessarily be valid as a hostname.

Top-level domains

[[edit](#)]

When the Domain Name System was devised in the 1980s, the domain name space was divided into two main groups of domains.[9] The **country code top-level domains** (ccTLD) were primarily based on the two-character territory codes of **ISO-3166** country abbreviations. In addition, a group of seven **generic top-level domains** (gTLD) was implemented which represented a set of categories of names and multi-organizations.[10] These were the domains **gov**, **edu**, **com**, **mil**, **org**, **net**, and **int**. These two types of **top-level domains** (TLDs) are the highest level of domain

names of the Internet. Top-level domains form the **DNS root zone** of the hierarchical **Domain Name System**. Every domain name ends with a top-level domain label.

During the growth of the Internet, it became desirable to create additional generic top-level domains. As of October 2009, 21 generic top-level domains and 250 two-letter country-code top-level domains existed.^[11] In addition, the **ARPA** domain serves technical purposes in the infrastructure of the Domain Name System.

During the 32nd International Public ICANN Meeting in Paris in 2008,[12] ICANN started a new process of TLD naming policy to take a "significant step forward on the introduction of new generic top-level domains." This program envisions the availability of many new or already proposed domains, as well as a new application and implementation process.[13] Observers believed that the new rules could result in hundreds of new top-level domains to be registered.[14] In 2012, the program commenced, and received 1930 applications.[15] By 2016, the milestone of 1000 live gTLD was reached.

The **Internet Assigned Numbers Authority** (IANA) maintains an annotated list of top-level domains in the **DNS root zone** database.[16]

For special purposes, such as network testing, documentation, and other applications, IANA also reserves a set of special-use domain names.^[17] This list contains domain names such as **example**, **local**, **localhost**, and **test**. Other top-level domain names containing trade marks are registered for corporate use. Cases include brands such as **BMW**, **Google**, and **Canon**.^[18]

Second-level and lower level domains

[edit]

Below the top-level domains in the domain name hierarchy are the **second-level domain** (SLD) names. These are the names directly to the left of .com, .net, and the other top-level domains. As an example, in the domain *example.co.uk*, *co* is the second-level domain.

Next are third-level domains, which are written immediately to the left of a second-level domain. There can be fourth- and fifth-level domains, and so on, with virtually no limitation. Each label is separated by a **full stop** (dot). An example of an operational domain name with four levels of domain labels is *sos.state.oh.us*. 'sos' is said to be a sub-domain of 'state.oh.us', and 'state' a sub-domain of 'oh.us', etc. In general, **subdomains** are domains subordinate to their parent domain. An example of very deep levels of subdomain ordering are the IPv6 reverse resolution DNS zones, e.g., 1.0.ip6.arpa, which is the reverse DNS resolution domain name for the IP address of a loopback interface, or the localhost name.

Second-level (or lower-level, depending on the established parent hierarchy) domain names are often created based on the name of a company (e.g., *bbc.co.uk*), product or service (e.g. *hotmail*

.com). Below these levels, the next domain name component has been used to designate a particular host server. Therefore, *ftp.example.com* might be an FTP server, *www.example.com* would be a **World Wide Web** server, and *mail.example.com* could be an email server, each intended to perform only the implied function. Modern technology allows multiple physical servers with either different (cf. **load balancing**) or even identical addresses (cf. **anycast**) to serve a single hostname or domain name, or multiple domain names to be served by a single computer. The latter is very popular in **Web hosting service** centers, where service providers host the websites of many organizations on just a few servers.

The hierarchical **DNS labels** or components of domain names are separated in a fully qualified name by the **full stop** (dot, .).

Internationalized domain names

[**edit**]

Main article: **Internationalized domain name**

The character set allowed in the Domain Name System is based on **ASCII** and does not allow the representation of names and words of many languages in their native scripts or alphabets. **ICANN** approved the **Internationalized domain name** (IDNA) system, which maps **Unicode** strings used in application user interfaces into the valid DNS character set by an encoding called **Punycode**. For example, københavn.eu is mapped to xn--kbenhavn-54a.eu. Many **registries** have adopted IDNA.

Domain name registration

[**edit**]

History

[**edit**]

The first commercial Internet domain name, in the TLD *com*, was registered on 15 March 1985 in the name **symbolics.com** by Symbolics Inc., a computer systems firm in Cambridge, Massachusetts.

By 1992, fewer than 15,000 *com* domains had been registered.

In the first quarter of 2015, 294 million domain names had been registered.^[19] A large fraction of them are in the *com* TLD, which as of December 21, 2014, had 115.6 million domain names,^[20] including 11.9 million online business and e-commerce sites, 4.3 million entertainment sites, 3.1

million finance related sites, and 1.8 million sports sites.^[21] As of July 15, 2012, the *com* TLD had more registrations than all of the ccTLDs combined.^[22]

As of December 31, 2023, 359.8 million domain names had been registered.^[23]

Administration

[\[edit\]](#)

The right to use a domain name is delegated by **domain name registrars**, which are accredited by the **Internet Corporation for Assigned Names and Numbers** (ICANN), the organization charged with overseeing the name and number systems of the Internet. In addition to ICANN, each top-level domain (TLD) is maintained and serviced technically by an administrative organization operating a registry. A registry is responsible for maintaining the database of names registered within the TLD it administers. The registry receives registration information from each domain name registrar authorized to assign names in the corresponding TLD and publishes the information using a special service, the **WHOIS** protocol.

Registries and registrars usually charge an annual fee for the service of delegating a domain name to a user and providing a default set of name servers. Often, this transaction is termed a sale or lease of the domain name, and the registrant may sometimes be called an "owner", but no such legal relationship is actually associated with the transaction, only the exclusive right to use the domain name. More correctly, authorized users are known as "registrants" or as "domain holders".

ICANN publishes the complete list of TLD registries and domain name registrars. Registrant information associated with domain names is maintained in an online database accessible with the WHOIS protocol. For most of the 250 **country code top-level domains** (ccTLDs), the domain registries maintain the WHOIS (Registrant, name servers, expiration dates, etc.) information.

Some domain name registries, often called *network information centers* (NIC), also function as registrars to end-users. The major generic top-level domain registries, such as for the *com*, *net*, *org*, *info* domains and others, use a registry-registrar model consisting of hundreds of domain name registrars (see lists at ICANN^[24] or VeriSign).^[25] In this method of management, the registry only manages the domain name database and the relationship with the registrars. The *registrants* (users of a domain name) are customers of the registrar, in some cases through additional layers of resellers.

There are also a few other **alternative DNS root** providers that try to compete or complement ICANN's role of domain name administration, however, most of them failed to receive wide recognition, and thus domain names offered by those alternative roots cannot be used universally on most other internet-connecting machines without additional dedicated configurations.

Technical requirements and process

[[edit](#)]

In the process of registering a domain name and maintaining authority over the new name space created, registrars use several key pieces of information connected with a domain:

- *Administrative contact.* A registrant usually designates an administrative contact to manage the domain name. The administrative contact usually has the highest level of control over a domain. Management functions delegated to the administrative contacts may include management of all business information, such as name of record, postal address, and contact information of the official registrant of the domain and the obligation to conform to the requirements of the domain registry in order to retain the right to use a domain name. Furthermore, the administrative contact installs additional contact information for technical and billing functions.
- *Technical contact.* The technical contact manages the name servers of a domain name. The functions of a technical contact include assuring conformance of the configurations of the domain name with the requirements of the domain registry, maintaining the domain zone records, and providing continuous functionality of the name servers (that leads to the accessibility of the domain name).
- *Billing contact.* The party responsible for receiving billing invoices from the **domain name registrar** and paying applicable fees.
- *Name servers.* Most registrars provide two or more name servers as part of the registration service. However, a registrant may specify its own **authoritative name servers** to host a domain's resource records. The registrar's policies govern the number of servers and the type of server information required. Some providers require a hostname and the corresponding IP address or just the hostname, which must be resolvable either in the new domain, or exist elsewhere. Based on traditional requirements (RFC 1034), typically a minimum of two servers is required.

A domain name consists of one or more labels, each of which is formed from the set of ASCII letters, digits, and hyphens (a–z, A–Z, 0–9, -), but not starting or ending with a hyphen. The labels are case-insensitive; for example, 'label' is equivalent to 'Label' or 'LABEL'. In the textual representation of a domain name, the labels are separated by a **full stop** (period).

Business models

[[edit](#)]

Domain names are often seen in analogy to **real estate** in that domain names are foundations on which a website can be built, and the highest *quality* domain names, like sought-after real estate, tend to carry significant value, usually due to their online brand-building potential, use in advertising, **search engine optimization**, and many other criteria.

A few companies have offered low-cost, below-cost or even free domain registration with a variety of models adopted to recoup the costs to the provider. These usually require that domains be hosted on their website within a framework or portal that includes advertising wrapped around the domain holder's content, revenue from which allows the provider to recoup the costs. Domain registrations were free of charge when the DNS was new. A domain holder may provide an infinite number of **subdomains** in their domain. For example, the owner of *example.org* could provide subdomains such as *foo.example.org* and *foo.bar.example.org* to interested parties.

Many desirable domain names are already assigned and users must search for other acceptable names, using Web-based search features, or **WHOIS** and **dig** operating system tools. Many registrars have implemented **domain name suggestion** tools which search domain name databases and suggest available alternative domain names related to keywords provided by the user.

Resale of domain names

[[edit](#)]

Main article: [List of most expensive domain names](#)

The business of resale of registered domain names is known as the **domain aftermarket**. Various factors influence the perceived value or market value of a domain name. Most of the high-prize domain sales are carried out privately.^[26] Also, it is called confidential domain acquiring or anonymous domain acquiring.^[27]

Domain name confusion

[[edit](#)]

Intercapping is often used to emphasize the meaning of a domain name, because DNS names are not case-sensitive. Some names may be misinterpreted in certain uses of capitalization. For example: *Who Represents*, a database of artists and agents, chose *whorepresents.com*,^[28] which can be misread. In such situations, the proper meaning may be clarified by placement of hyphens when registering a domain name. For instance, **Experts Exchange**, a programmers' discussion site, used *expertsexchange.com*, but changed its domain name to *experts-exchange.com*.^[29]

Uses in website hosting

[[edit](#)]

The domain name is a component of a **uniform resource locator** (URL) used to access **websites**, for example:

- URL: `http://www.example.net/index.html`
- Top-level domain: `net`
- Second-level domain: `example`
- Hostname: `www`

A domain name may point to multiple **IP addresses** to provide server redundancy for the services offered, a feature that is used to manage the traffic of large, popular websites.

Web hosting services, on the other hand, run servers that are typically assigned only one or a few addresses while serving websites for many domains, a technique referred to as **virtual web hosting**. Such IP address overloading requires that each request identifies the domain name being referenced, for instance by using the **HTTP request header field** *Host:*, or **Server Name Indication**.

Abuse and regulation

[[edit](#)]

Critics often claim abuse of administrative power over domain names. Particularly noteworthy was the VeriSign **Site Finder** system which redirected all unregistered .com and .net domains to a VeriSign webpage. For example, at a public meeting with **VeriSign** to air technical concerns about **Site Finder**,^[30] numerous people, active in the **IETF** and other technical bodies, explained how they were surprised by VeriSign's changing the fundamental behavior of a major component of Internet infrastructure, not having obtained the customary consensus. Site Finder, at first, assumed every Internet query was for a website, and it monetized queries for incorrect domain names, taking the user to VeriSign's search site. Other applications, such as many implementations of email, treat a lack of response to a domain name query as an indication that the domain does not exist, and that the message can be treated as undeliverable. The original VeriSign implementation broke this assumption for mail, because it would always resolve an erroneous domain name to that of Site Finder. While VeriSign later changed Site Finder's behaviour with regard to email, there was still widespread protest about VeriSign's action being more in its financial interest than in the interest of the Internet infrastructure component for which VeriSign was the steward.

Despite widespread criticism, VeriSign only reluctantly removed it after the **Internet Corporation for Assigned Names and Numbers** (ICANN) threatened to revoke its contract to administer the root name servers. ICANN published the extensive set of letters exchanged, committee reports, and ICANN decisions.^[31]

There is also significant disquiet regarding the United States Government's political influence over ICANN. This was a significant issue in the attempt to create a **.xxx top-level domain** and sparked greater interest in **alternative DNS roots** that would be beyond the control of any single country.^[32]

Additionally, there are numerous accusations of **domain name front running**, whereby registrars, when given whois queries, automatically register the domain name for themselves. Network Solutions has been accused of this.^[33]

Truth in Domain Names Act

[[edit](#)]

In the United States, the **Truth in Domain Names Act** of 2003, in combination with the **PROTECT Act of 2003**, forbids the use of a misleading domain name with the intention of attracting Internet users into visiting **Internet pornography** sites.

The Truth in Domain Names Act follows the more general **Anticybersquatting Consumer Protection Act** passed in 1999 aimed at preventing **typosquatting** and deceptive use of names and trademarks in domain names.

Seizures

[[edit](#)]

- Seizure notices
[absolute poker.com](#)

○
Image not found or type unknown

[absolute poker.com](#)
[channelsurfing.net](#)

○
Image not found or type unknown

[channelsurfing.net](#)

libertyreserve.com

In the early 21st century, the US Department of Justice (DOJ) pursued the **seizure** of domain names, based on the legal theory that domain names constitute property used to engage in criminal activity, and thus are subject to **forfeiture**. For example, in the seizure of the domain name of a gambling website, the DOJ referenced **18 U.S.C. § 981** and **18 U.S.C. § 1955(d)**.^{[34][1]} In 2013 the US government seized **Liberty Reserve**, citing **18 U.S.C. § 982(a)(1)**.^[35]

○
Image not found or type unknown

libertyreserve.com

The U.S. Congress passed the **Combating Online Infringement and Counterfeits Act** in 2010. Consumer Electronics Association vice president Michael Petricone was worried that seizure was a *blunt instrument* that could harm legitimate businesses.^{[36][37]} After a joint operation on February 15, 2011, the DOJ and the Department of Homeland Security claimed to have seized ten domains of websites involved in advertising and distributing child pornography, but also mistakenly seized the domain name of a large DNS provider, temporarily replacing 84,000 websites with seizure notices.^[38]

In the **United Kingdom**, the **Police Intellectual Property Crime Unit** (PIPCU) has been attempting to seize domain names from registrars without court orders.^[39]

Suspensions

[[edit](#)]

PIPCU and other UK law enforcement organisations make domain suspension requests to **Nominet** which they process on the basis of breach of terms and conditions. Around 16,000 domains are suspended annually, and about 80% of the requests originate from PIPCU.^[40]

Property rights

[[edit](#)]

Because of the economic value it represents, the **European Court of Human Rights** has ruled that the exclusive right to a domain name is protected as property under article 1 of Protocol 1 to the **European Convention on Human Rights**.^[41]

IDN variants

[[edit](#)]

ICANN Business Constituency (BC) has spent decades trying to make IDN variants work at the second level, and in the last several years at the top level. Domain name variants are domain names recognized in different character encodings, like a single domain presented in **traditional Chinese** and **simplified Chinese**. It is an **Internationalization and localization** problem. Under Domain Name Variants, the different encodings of the domain name (in simplified and traditional Chinese) would resolve to the same host.^{[42][43]}

According to **John Levine**, an expert on Internet related topics, "Unfortunately, variants don't work. The problem isn't putting them in the DNS, it's that once they're in the DNS, they don't work anywhere else."^[42]

Fictitious domain name

[\[edit\]](#)

A *fictitious domain name* is a domain name used in a work of fiction or popular culture to refer to a domain that does not actually exist, often with invalid or unofficial **top-level domains** such as ".web", a usage exactly analogous to the dummy **555 telephone number prefix** used in film and other media. The canonical fictitious domain name is "**example.com**", specifically set aside by IANA in RFC 2606 for such use, along with the .*example* TLD.

Domain names used in works of fiction have often been registered in the DNS, either by their creators or by **cybersquatters** attempting to profit from it. This phenomenon prompted **NBC** to purchase the domain name **Hornymanatee.com** after talk-show host **Conan O'Brien** spoke the name while ad-libbing on **his show**. O'Brien subsequently created a website based on the concept and used it as a **running gag** on the show.^[44] Companies whose works have used fictitious domain names have also employed firms such as **MarkMonitor** to park fictional domain names in order to prevent misuse by third parties.^[45]

Misspelled domain names

[\[edit\]](#)



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Misspelled domain names, also known as **typosquatting** or **URL hijacking**, are domain names that are intentionally or unintentionally misspelled versions of popular or well-known domain names. The goal of misspelled domain names is to capitalize on internet users who accidentally type in a misspelled domain name, and are then redirected to a different website.

Misspelled domain names are often used for malicious purposes, such as **phishing** scams or distributing **malware**. In some cases, the owners of misspelled domain names may also attempt to sell the domain names to the owners of the legitimate domain names, or to individuals or organizations who are interested in capitalizing on the traffic generated by internet users who

accidentally type in the misspelled domain names.

To avoid being caught by a misspelled domain name, internet users should be careful to type in domain names correctly, and should avoid clicking on links that appear suspicious or unfamiliar. Additionally, individuals and organizations who own popular or well-known domain names should consider registering common misspellings of their domain names in order to prevent others from using them for malicious purposes.

Domain name spoofing

[edit]

The term **Domain name spoofing** (or simply though less accurately, **Domain spoofing**) is used generically to describe one or more of a class of **phishing** attacks that depend on falsifying or misrepresenting an internet domain name.[46][47] These are designed to persuade unsuspecting users into visiting a web site other than that intended, or opening an email that is not in reality from the address shown (or apparently shown).[48] Although website and email spoofing attacks are more widely known, any service that relies on **domain name resolution** may be compromised.

Types

[edit]

There are a number of better-known types of domain spoofing:

- **Typosquatting**, also called "URL hijacking", a "sting site", or a "fake URL", is a form of **cybersquatting**, and possibly **brandjacking** which relies on mistakes such as **typos** made by Internet users when inputting a **website address** into a **web browser** or composing an **email address**. Should a user accidentally enter an incorrect domain name, they may be led to any URL (including an alternative website owned by a cybersquatter).[49]

The typosquatter's **URL** will usually be one of five kinds, all *similar to* the victim site address:

- A common misspelling, or foreign language spelling, of the intended site
 - A misspelling based on a typographical error
 - A plural of a singular domain name
 - A different **top-level domain**: (i.e. .com instead of .org)
 - An abuse of the **Country Code Top-Level Domain** (ccTLD) (.cm, .co, or .om instead of .com)
- **IDN homograph attack**. This type of attack depends on registering a domain name that is similar to the 'target' domain, differing from it only because its spelling includes one or more characters that come from a different alphabet but look the same to the naked eye. For example, the **Cyrillic**, **Latin**, and **Greek** alphabets each have their own letter **Α**, each of

which has its own binary **code point**. Turkish has a **dotless letter i** (`İ`) that may not be perceived as different from the ASCII letter `i`. Most web browsers warn of 'mixed alphabet' domain names,^{[50][51][52][53]} Other services, such as email applications, may not provide the same protection. Reputable **top level domain** and **country code domain** registrars will not accept applications to register a deceptive name but this policy cannot be presumed to be infallible.

- **DNS spoofing** – Cyberattack using corrupt DNS data
- **Website spoofing** – Creating a website, as a hoax, with the intention of misleading readers
- **Email spoofing** – Creating email spam or phishing messages with a forged sender identity or address

Risk mitigation

[\[edit\]](#)

- **Domain Name System Security Extensions** – Suite of IETF specifications
- **Sender Policy Framework** – Simple email-validation system designed to detect email spoofing
- **DMARC** – System to prevent email fraud ("Domain-based Message Authentication, Reporting and Conformance")
- **DomainKeys Identified Mail** – Email authentication method designed to detect email spoofing
- **Public key certificate** – Electronic document used to prove the ownership of a public key (SSL certificate)

Legitimate technologies that may be subverted

[\[edit\]](#)

- **URL redirection** – Technique for making a Web page available under more than one URL address
- **Domain fronting** – Technique for Internet censorship circumvention

See also

[\[edit\]](#)

- **Domain hack**
- **Domain hijacking**
- **Domain name registrar**

- [Domain name speculation](#)
- [Domain name warehousing](#)
- [Domain registration](#)
- [Domain tasting](#)
- [Geodomain](#)
- [List of Internet top-level domains](#)
- [Reverse domain hijacking](#)
- [Reverse domain name notation](#)

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- UDRP, Uniform Domain-Name Dispute-Resolution Policy
- Special use domain names

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Website management

- Web hosting**
 - Clustered
 - Peer-to-peer
 - Self-hosting
 - Virtual
- Web analytics**
 - Click analytics
 - Mobile web analytics
 - Web tracking
 - Click tracking

Concepts

- Overselling
- Web document
- Web content
- Web content lifecycle
- Web server
- Web cache
- Webmaster
- Website governance

Web hosting control panels (comparison)

- AlternC
- cPanel
- DirectAdmin
- Domain Technologie Control
- Froxlor
- i-MSCP
- InterWorx
- ISPConfig
- Ispmanager
- Kloxo
- Plesk
- Usermin
- Webmin

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- auDA
- DNS Belgium
- CentralNic
- CIRA
- CNNIC
- CZ.NIC
- DENIC
- EURid
- Freenom
- GoDaddy
- Google Domains
- Identity Digital
- IPM
- JPRS
- KISA
- NIC México
- Nominet
- PIR
- Tucows
- Verisign

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Frequently Asked Questions

How do I find the best SEO company in Sydney?

To find the best SEO company in Sydney, look for a provider with a proven track record of success, transparent reporting, and a clear understanding of your business's goals. Check reviews, case studies, and client testimonials to ensure you are choosing a reputable partner.

What is the difference between local SEO and general SEO?

General SEO focuses on improving a website's visibility on a broader scale, often targeting national or international audiences. Local SEO, on the other hand, zeroes in on geographic areas, helping businesses attract nearby customers through local keywords, directory listings, and Google My Business optimization.

What should I expect from SEO agencies in Sydney?

SEO agencies in Sydney typically offer comprehensive services such as keyword research, technical audits, on-page and off-page optimization, content creation, and performance tracking. Their goal is to increase your site's search engine rankings and drive more targeted traffic to your website.

Why is keyword research important for SEO?

Keyword research helps identify the terms and phrases that potential customers are using to search for products or services. By targeting these keywords in your content, you can improve your visibility in search engine results, attract more qualified leads, and drive higher conversion rates.

What sets SEO specialists in Sydney apart?

SEO specialists in Sydney often have deep expertise in the local market. They understand the competitive landscape, know which keywords resonate with Sydney-based audiences, and are skilled at optimizing websites to rank well in local search results.

What is SEO?

SEO, or search engine optimisation, is the practice of improving a website's visibility on search engines like Google. It involves optimizing various elements of a site such as keywords, content, meta tags, and technical structure to help it rank higher in search results.

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