

INTERNET AND WEB FEATURES IN E-COMMERCE

The Internet and the Web made e-commerce possible because they brought about an extraordinary expansion of digital services to millions of amateur computer users. The Web makes nearly all of the elements of rich human expression including color, text, images, photos, animations, sound, and video available, creating a unique environment in which to establish a commercial marketplace. Many of the Web's services and features support e-commerce, including:

E-mail	Search Engine	Intelligent Agents (bots)
Instant Messaging (IM)	Online Forum & Chat	Streaming Media
Cookies		

It is interesting as you read along to compare these services to other traditional media such as television, radio, telephone or print media (newspapers, magazines, letters etc). If you do, you will quickly realize how rich the Internet Environment is.

1. E-mail or Electronic Mail:

Since its earliest days, **electronic mail**, or **email**, has been the most used application of the Internet. E-mail uses a series of protocols to enable messages containing text, images, sound, and video clips to be transferred from one Internet user to another. Because of its flexibility and speed, it is now the most popular form of business communication – more popular than the phone, fax or any postal services.

E-mail, for example, can be used as a very effective marketing tool. E-commerce sites can buy e-mail lists from various sources and collate (bring together) them with lists of their current customers to create a targeted advertising message that can be quickly and economically delivered and will produce a creditable response. Email messages include commercial, personal, spam and junk etc.

- **Spam** -- usually refers to advertising e-mails sent out randomly to generated e-mail addresses.
- **Junk e-mails** -- are usually sent from sites which have a record of your e-mail address either because you have signed onto(sites) them using your e-mail as your user id, or because you have ticked the appropriate box(check box) on the web-site allowing them to use your e-mail address in this way.
- **Inbox**-- contains new incoming emails.

- **Sent**-- A copy of messages you send are put into the Sent folder, if the Save to sent box is checked when you compose a message.
- **Drafts**-- A place for storing messages that you haven't finished writing. If you're in the middle of writing a message and need to stop for some reason, click the **Save** button to put it into the Drafts folder.
- **Trash**-- stores email that you have chosen to delete. When you delete email from a folder, it is put into the Trash folder. The messages are not truly deleted until you empty the folder.
- **Attachment** – a file (documents, images, sounds or video clip) inserted within an email message.

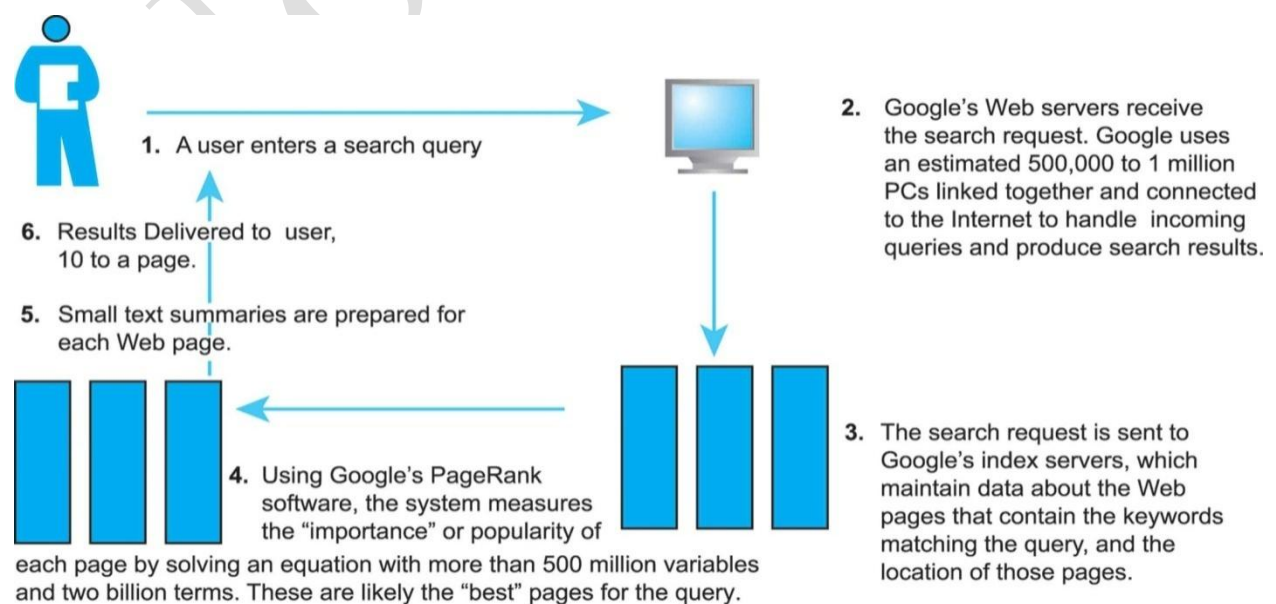
2. **Search Engine** (user web crawlers or spiders also called bots, automated programs):

Identifies web pages that appears to match keywords, also called queries, typed by the user and provides a list of the best matches.

No one knows for sure how many web pages there really are. But obviously with so many web pages, finding web specific pages than can help you or your business, nearly instantly, is an important problem. The question is: how can you find the one or two web pages you really want and need out of the 50 billion (google) indexed web pages? Or Bing 20 billion indexed WebPages.

Search engines (Google, Yahoo, bing, baidu) solve the problem of finding useful information on the web nearly instantly. There are hundreds of different search engines in the world, but the vast majority of the search results are supplied by the top fine providers.

How it works:



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Search Engine Marketing:

Initially, few understood how to make money out of search engines that changed in 2000 when GOTO.com (Later overtrue.com) allowed advertisers to bid for placement on their search engine results, and Google followed suit in 2003 with its **Ad Words** program which allowed advertisers to bid for placement of short text ads on Google search results. The spectacular increase in Internet advertising revenues has helped search engines transform themselves into major shopping tools and created an entire new industry called “search engine marketing.” Search engine marketing has been the fastest – growing form of advertising in the US.

When users enter a search term at Google, MSN Search, Yahoo, or any of the other web sites serviced by these search engines, they receive two types of listing: sponsored links, for which advertisers have paid to be listed (usually at the top of the search results page) and unsponsored “organic” search results. In addition, advertisers can purchase small text ads on the right side of the search results page.

In addition, search engines are extending their services to include maps, satellite images, computer images, email, calendars and group meeting tools. Outside of email, search engines are the most common online daily activity and produce the largest online audiences.

Search engines (Site Own Search) have also become a crucial tool on e-commerce sites, providing a method for customers to quickly locate the product category or a specific product they are looking for.

3. INTELLIGENT AGENTS (BOTS)

Software programs that gathers and/or filters information on a specific topic and then provides a list of results for the user ranked in a number of ways, such as from lowest price to availability or to delivery terms. Intelligent agents were originally invented by computer scientists interested in the development of artificial intelligence (a family of related technologies that attempt to fill computers with human – like intelligence).

Many different types of **intelligent agents** or **software robots** are being used on e-commerce sites. For example, search bots are used to gather and filter information on Altavista.com; shopping bots such as MySimon.com search online retail sites and provide a list of the availability (in inventory or not) and pricing for products. **For instance**, you can use MySimon’s.com shopping bot to search for a Sony digital camera. The bot provides a list of online retailers that carry a particular camera model, as well as report about whether it is in inventory and the price and shipping charges.

Another type of bot, called a **web monitoring bot**, allows you to monitor for updated material on the web, and will e-mail you when a selected site has new or changed information.

News Bots will create custom newspapers or clip articles for you in newspapers around the world. **RSS** (Really simple syndication), is also a kind of automated program that send updates and news to subscribers, and is quickly becoming the most common type of web content monitoring tool.

ChatterBots: INTELLIGENT AGENTS (COMPTUER PROGRAMS) that could converse with a customer over the telephone or the web either in text or voice modes. Some time called remote agents. Chatterbots were programmed to both recognize human speech and to respond with meaningful suggestions or questions. If you call a large bank, credit card provider, or your cell service provider, chances are good you will be encouraged to talk with a chatterbot. They are on duty 24/7, cost very little to operate and can answer many questions of consumers using natural language. Millions of transactions in the United States, Europe and now even in India are handled by chatterbots every day.

TABLE 3.12 TYPES OF WEB BOTS	
TYPE	EXAMPLES
Search bot	Webcrawler.com Altavista.com
Shopping Bot	Shopzilla.com Shopping.com MySimon.com Orbitz.com
Web Monitoring Bot	WebSite-Watcher TimelyWeb.com
News Bot	WebClipping.com
Chatter Bot	Anna (Ikea) Ask Vic (Qantas) Virtual Advisor (Ultralase)

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4. Instant Messaging (IM):

One of the fastest growing forms of online human communication is instant messaging (IM). IM send text messages in real time, one line at a time, unlike e-mail. E-mail messages have a time lag of several seconds to minutes between when messages are sent and received. IM displays lines of text entered on a computer almost instantly. Recipients can then respond immediately to the send the same way, making the communication more like a live conversation.

To use IM, users identify a **buddy** list they want to communicate with, and then enter short text messages that their buddies will receive instantly (if they are online at the time). And although text remains the primary communication mechanism in IM, users can:

- Insert audio clips or photos into their instant messages
- Participate in video conferencing
- Share files

The IM systems are AOL, YAHOO, GOOGLE TALK, SKYPE, MSN etc. Ebuddy.com even you are not installed major IM like (msn, yahoo, etc. on your computer).

Instant messaging has been added to some e-commerce Web sites as a method of accessing customer support personnel.

5. Online Forum & Chat:

An **online forum** (also referred to as a message board, bulletin board, discussion board, discussion group, or simply a board or forum) is a web application that enables internet users to communicate with each other, although not in real time. A forum provides a container for various discussions (or “threads”) started (or posted) by members of the forum and depending on the permissions granted to forum members by the forum’s administrator, enables a person to start a thread and reply to other people’s threads. Most forum software allows more than one forum to be created. The forum administrator typically can edit, delete, move, or otherwise modify any thread on the forum. In forum, member visit the forum to check for new posts. Some forums offer an “e-mail notification” feature that notifies users that a new post of interest to them has been made.

An **online Chat (text, audio, and video)** is a common feature of many Web sites, particularly those that focus on building a community of like-minded users.

EXAMPLE: Typically users log in to a “chat room” where they can communicate in real time. Forum & Chat enables a group of Web site visitors to bond and network and keeps visitors coming back to a site.

6. Streaming Media:

Streaming media enables live web video, music, video, and other large bandwidth files to be sent to users in a variety of ways that enable the user to play back the files.

Although the low bandwidth available during the early days of e-commerce limited the use of audio and video files, today video clips, Flash animations, and photographs are now fairly common on Web sites. Companies use these tools to demonstrate the use of their products, display product features, or simply to create interesting and eye-catching sites to which visitors will return. Audio marketing materials, customer reports, and discussions are also often used on Web sites as e-commerce tools. Streaming video ads are also becoming more commonplace. Sites such as Youtube, MetaCafe, and Google Video have popularized **user – generated** video streaming. Web advertisers increasingly use video to attract viewers. Streaming audio and video segments used in web ads and news stories are perhaps the most frequently used streaming services. As the capacity of the Internet grows streaming media will play an even larger role in e-commerce.

7. Cookies:

Cookies are a very important tool (technique) used by marketers to collect and store information about a user. These small text files are sent to the user's computer so that information from the site will load more quickly the next time they visit. The cookie can contain any information desired by the site designers. More importantly from the e-tailer's perspective, cookies can retain information about the customer such as the number of pages visited, products examined, and other detailed information about a customer's behavior. Cookies enable sites to recognize returning visitors and target specific customers with special offers and marketing messages. Cookies also can pose a threat to consumer privacy, and at times they are bothersome. Many people clear their cookies at the end of every day. Some disable them entirely using tools built into most browsers but maybe site did not opened correctly. Now browsers offer, for example “start private browsing in Mozilla and inprivate browsing in IE 8. Always open your site **inprivate** browsing mode when you are using Internet, to protect your privacy (bank account, debit card numbers etc).

NEW WEB FEATURES AND SERVICES

Today's broadband Internet Infrastructure has greatly expanded the services available, to users. These new capabilities have formed the bases for new business models. Digital content and digital communications are the two areas where innovation is most rapid.

1. BLOG (Weblogs)

A blog, or weblog, is a personal web page that is created by an individual or corporations to communicate with readers. Or A shared on-line journal where people can post diary entries about their personal experiences and hobbies. The act of creating a blog is often referred to as “blogging”. The blog may include a **blog roll** (a collection of links to other blogs). Most blogs allow readers to post comments on the blog entries as well. Blogs are either hosted by a third-party site such as Blogger.com (owned by Google), LiveJournal.com, or wordpress.com or by the user's ISP. In blogging, knowledge of HTML is not required.

Examples: MyBloggerLab.com, smashinghub.com

2. Really Simple Syndication (RSS)

Really Simple Syndication (RSS) program that allows users to have **digital content (along with advertisements), including text, articles, news, blogs and podcast audio/video** files, automatically sent to their computers over the Internet. An RSS aggregator software application that you install on your computer gathers material from the web sites and blogs that you tell it to scan and it brings new information from those sites to you. Most sites you link “Subscribe to RSS feeds”. RSS will display the most recent updates for each channel to which you have subscribed.

Microsoft has included an integrated RSS reader in Vista.

3. Podcasting

An audio or video file that is made available on the Internet for download and playback using a computer or a mobile device such as an iPod. Most podcasts have RSS capability, which can automate the download process for the user. Major advertisers are looking at podcasts as a new advertising channel. Microsoft has included podcast creation tools in Vista.

4. Wikis

A wiki is a web application that allows a user to easily add and edit content on a web page. The term wiki derives from the “wiki wiki” (quick and fast). The most known wiki is Wikipedia, an online encyclopedia that contains over 2 million English – language articles on a variety of topics. The Wikimedia foundation, which operates Wikipedia, also operates a variety of related projects, including Wikibooks - a collection of collaboratively written free textbooks and manuals, Wikinews - a free content news source and wikitionary - a collaborative project to produce a free multilingual dictionary in every language, with definitions, etymologies, pronunciations, quotations, and synonyms.

5. New Audio-Video Services

With the low bandwidth connections of the early Internet, audio and video files were difficult to download and share, but with the huge growth in broadband connections, these files can be easily downloaded.

6. Internet Telephony and Internet Television

VoIP (Voice over Internet Protocol):

IP telephone or VoIP is a protocol that enables users to make calls over the Internet. To make a call, a telephone is connected to a VoIP gateway (Phone Adaptor) and an Internet cable, rather than a phone line, or **a call is made over a computer** (skype etc).

- Examples of VoIP include Skype, Teamspeak, and Ventrilo.

Internet Television (IPTV):

Use high – bandwidth Internet connections to deliver television programming to the home.

7. Video Conferencing

Although video conferencing has been available for years, few have used it due to the cost of video equipment and telephone line rental fees. However, in recent years, Internet – based video conferencing has begun to overtake traditional telephone – based systems. Internet video conferencing is accessible to anyone with a broadband Internet connection and a web camera. The most widely used web conferencing suite of tools is WebEx. VoIP companies such as Skype also provide web conferencing capabilities. Now-a-days, most of the messaging application providers are also providing this facility.