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# **The Future of Graphic Design: Designing for the World Wide Web.**

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## **Intro**

The world's communication system is increasingly becoming digital. Today, terms such as e-mail, GUI, URL, the Net, and the World Wide Web are appearing in everyday conversation. People ask if you are 'wired'. Wired? Yes, today you need to be wired - hooked up to the internet - to keep up with today's information. E-mail has become the choice for personal communication. People are now found on the internet. Corporations, publications, and resources are now accessible via the World Wide Web. Graphic designers are going to be playing a major role as society evolves towards digital the medium. The medium of choice for information of all kinds is becoming the internet, or, more specifically, the World Wide Web.

## **What is the World Wide Web?**

The World Wide Web is a specific part of the Internet. It, unlike the rest of the Internet, is able to handle not only text, but images, sounds, movies, animation, and, most importantly, hypertext. The internet, as a whole, now has a population of at least 30 million people and this number is growing rapidly. Instant world-wide access to 2 to 30 million people is what makes the internet so incredible (Steyer-Coyne, 64).

The internet was born during the 1960s. At the time, The US Military was the largest user of computers in the country. These computers, however, were large and quite expensive. Because of this, the Military networked these computers through the phone lines in order to maximize their combined abilities. Not only did this create a more efficient use of the computers, but the network effectively made itself invulnerable to foreign attack. If one part of the network was destroyed, a message would simply find an alternative route to its final destination.

This network, the Internet, evolved slowly. Educational institutions and scientists began using it to share information, but for the majority of people, the internet was a complicated system of computers. During the early 1980s other networks began operating. These included public ones such as Bitnet and Usenet, as well as commercial networks such as Compuserve and America Online. The Internet, however, was still limited to the few individuals who had a knowledgeable understanding of computer systems.

It wasn't until the late 1980s that the Internet finally reached a growth explosion. Within the last 5

years the internet has expanded into a world-wide network of information. A data stream the equivalent to the Library of Congress circles the globe every couple of minutes through its wires (Stucker, 72). As the internet's role to the government and Universities decline, Corporations and the public are jumping on (Digelow, 160).

The World Wide Web, or Web for short, is a relatively new part of the internet. It started a little over two years ago at CERN, a physics research lab located in Switzerland. As mentioned before, its tremendous growth is due much to its ability to handle not only text, but also sound, movies, animation, and hypermedia. Hypermedia, or hypertext, is the essence of the Web. It is the tool used to navigate through the Web by allowing the Web user to jump from one subject to another related subject. If a user was reading an article on earthquakes in California, they might jump to a page on earthquakes in Los Angeles. By clicking on the word Los Angeles, they might jump to a page on sight-seeing in Los Angeles. This page may mention that surfing is popular out there. The viewer can then click on the word surfing and jump to yet another page entirely on the subject of surfing. This arrangement of linked words makes the Web a vast network of information that is relatively effortless to navigate through. By clicking on a word, you can be instantly connected to a site on the other side of the world. The subject of hypermedia will be further discussed in detail later.

### **The World Wide Web's impact on communication and publishing**

How is communication via the Web different than traditional print, television, or radio? There are many unique benefits to using the Web. The first, and most obvious, is the ability to combine the different media - text, sound and video - into one medium. For example, a student doing research on birds decides to search for some information on the Web. The student can read about birds in a text document, listen to bird calls, watch a quicktime movie of migrating birds, and see an animation of a bird in flight. They then can jump to another other related article, do a Web search for every document on the subject of birds, or download information directly to their disk. All of this can be done at one work station.

Another benefit of the Web is its interactive capabilities. The Web user now plays an active role in the information. For example, the student doing research on the bird may come across a simulation of a bird in flight. The student may then be able to modify certain factors such as wing span, speed, etc... and then view the end results. In this way, the student is now able to interactively modify the information to suit their own personal needs.

Businesses have been quick to catch on to these and other benefits of using the Web. Everyone from local small businesses to the multi-national corporations such as IBM, Volvo, and Disney have a location on the web. The Web provides instant access to millions of people - 24 hours a day! The interactive abilities of the Web allow these businesses to reach the public personally. Many companies implement on-line surveys and questionnaires -



*Zima is just one of the thousands of corporations found on the World Wide Web*

thereby finding information on each individual consumer. Many companies also allow you to order products such as music, books, and even pizza directly over the Web.

## The Graphic Designers Role

The traditional role of the Graphic designer is now being broadened with the popularity of the Web. With all of this new information being created for the Web, someone needs to design it. Some of what has traditionally been printed in the past is now being put on-line. Corporate literature, advertising, and even electronic magazines (e-zines) are now being produced entirely on the Web. This, by no means, is the end of print, but a larger part of the designers work will be geared towards the electronic medium.

Computers are nothing new to graphic designers. Until recently, however, computers have mainly been used as high powered X-actos - simply a tool to help create the final printed piece (Saffo, 30). The designer now has to perceive the computer as a medium in itself. "The future of design lies in working with information that remains alive and interactive in digital form (Saffo, 30)." This creates a rethinking of traditional print design methods.

Today, unfortunately, a large part of the Web is being created by computer programmers. They understand the technology, but are not adept at the design. Because of this, much of the current Web is poorly designed and awkward to use.

## How to design for the web.

Creating a web site is, technically, fairly easy. First, a computer that is connected to the Web is used as a server. This computer becomes the Web site's home, or its Universal Resource Locator (URL), which is simply its World Wide Web address (Stucker, 77). A web browser such as Mosaic or Netscape is needed to view documents on the Web. The browser is simply a translator that interprets the HTML document, finds the necessary text and images, and then displays it on the screen. Once this is set up, the designer takes over (Wolf).

Successful Design for the Web should consist of these four objectives (Cotton):

The first is being able to utilize the multiple media for which each does best. The designer is no longer restricted to just one medium (a printed page, signage, etc+) The designer can now combine imagery with text as well as incorporate sound, video, and animation. One must decide if it would be more effective to show a picture of an object, write about it, or maybe show a video of it. The designer must not only consider the design of the page, but also how practical it is for use on the Web. An image takes longer to download than text, video takes longer than images, and so on.

Secondly, a virtual grid must be made. This is similar to a grid used in printed magazines. This gives the Web pages unity and allows for easier interaction.

The third task is to create coherent and user friendly controls to navigate the Web site with. The user is no longer simply flipping pages as in a book. To navigate through the Web site, a series of on screen controls needs to be devised. A common approach to this problem is the use of virtual buttons or simple icons. They usually appear in the same location on each page and allow the web user to easily scroll through sections. In addition, there is usually a button that sends the user back to the sites home page. The home page is the first page a viewer sees when they enter a Web site. This page usually contains a description of the location, a table of contents, or access to a list of what's available at the site.

The fourth task is to have enough knowledge of hypermedia to design functionally and aesthetically, and also optimize the use of the technology. To design for the web, one must understand hypertext and Hypermedia.

The term hypermedia was created by Ted Nelson in the 1970s. Hypermedia refers to non-linear information. A traditional novel is linear information. The reader starts at the beginning and reads through all of the information to the end. The information is read even if the reader deems it as unnecessary (Herrick).

In comparison, a newspaper is closer to non-linear information. The reader can scan through the headlines jumping from section to section. If something looks interesting, the viewer can decide to read the article, or maybe look at the accompanying photograph. In this way, the viewer can selectively choose what he or she wants to know. Ted Nelson envisioned a similar type of media. The viewer would find information and then be able to jump to related articles and information as necessary. He predicted a system that would instantly locate any related information through a vast network of sources. Today's hypertext does just that.

HTML (HyperText Markup Language) is the computer language used to write pages for the World Wide Web. It is used to tell the computer where to place the images, text, and other elements, as well as

WHAT'S NEW

INTERNET DIRECTORY

WHAT'S COOL

Yahoo

World Wide Web Servers

Virtual Tourist

*These are typical Hypertext words. In this case they are being used as a contents table.*

create Hypertext links to other pages or Web sites. The fact that it is a computer language may intimidate designers. However, HTML is surprisingly easy to learn. Many tutorials and manuals on HTML can be found right on the Web and the average person can easily grasp the language within a couple of hours (National Center...). After designing the page, links can then be made using key words. These words are typically identified with underlines or color. When the user clicks on this word, they are then routed to a different page or site via their URL. The designer must decide which words to link and where they should be linked to.

"A designer using hypermedia is an information architect. The designer is responsible for coordinating all of the components of the media into an environment that the user can explore at will (Cotton)."

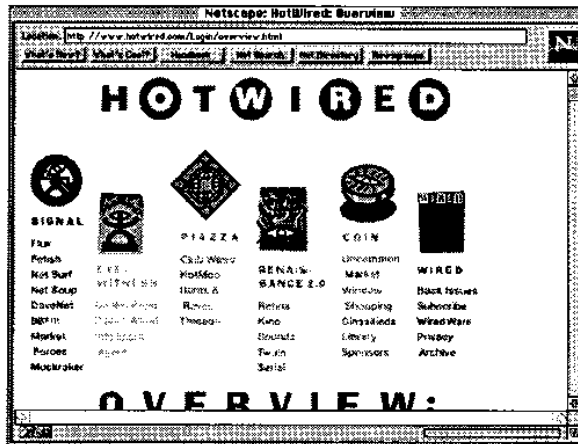
## Sample Web Sites:

### Hotwired

With all of the new technological information the Web has created, it has spawned a new publication: Wired magazine. Wired magazine is the forum for today's technology and design. The magazine was the brainchild of graphic designers Barbara Kuhr and John Plunkett (Plunkett + Kuhr Design), who have worked on such projects as signage for the Louvre's Pyramid entrance. They started using Macintoshes early in their careers. They soon realized that much of the design process could be accom-

plished via a modem and the internet. They have since relocated to Utah and have been telecommuting ever since. This background in computers and the Internet gave them the knowledge and motivation to develop Wired.

Wired, of course, is published as a printed medium. The next obvious direction for Plunkett + Kuhr was to go on-line with the publication. However, instead of merely translating the print version of Wired onto the Web, they decided to create a completely original publication made specifically for the Web. The outcome of this decision created Hotwired.



*Hotwired's contents page shows their use of simplified, icon graphics used to navigate through the site.*

Hotwired became one of the first e-zines to publish original work on a regular basis.

Since Hotwired's debut two years ago, it has become the model for web based publication and design (Graves, 34). Plunkett + Kuhr have successfully incorporated the content of their e-zine into a layout that takes full advantage of the Web's format.

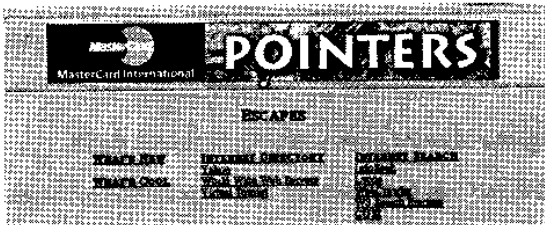
Hotwired's president, Andrew Anker, comments on the web format as being "a new medium with a new aesthetic." Plunkett + Kuhr had to develop new graphic rules, tools, and traditions (Graves, 34). One of the most noticeable rules that they noticed was the fact that the viewer has the final say in the design of the Web pages. They can change the font, size of the text, background color, and other formatting elements. Instead of trying to fight this "self design" Plunkett + Kuhr decided to make this an integral part of the publication. They formatted some text into narrow columns and placed the graphics where they wanted them - but much of the text formatting is actually up to the viewer. Hotwired even provides an option that allows the subscriber to selectively choose a format to the pages that they would like to see when they enter the site. The fact that the end user has a certain amount of control over the design is one of the more difficult differences of Web design that a designer must get used to.

The design of Hotwired has evolved in the opposite direction that the printed Wired took. Wired's design was heavy on layered, full page graphics - making it as visually complex as possible. This works great for print, but when applied to the Web, the files become extremely large making downloading and

access times excruciatingly long. Instead, Hotwired needed to be as simple as possible, yet still be graphic (Graves, 36).

Plunkett + Kuhr decided that the final layout of Hotwired would consist of five sections: "Signal" (news from the digital revolution), "Eyewitness" (reports from around the world), "Renaissance 2.0" (Kinetic arts), "Piazza" (real-time talk), and "Coin" (classifieds). They then went to illustrator Max Kisman to design the icons for the different sections. Instead of the popular machine-like, beveled-edged "buttons" most web pages were using, they opted for hand drawn icons to show that there was human design behind the work. They kept the icons simple, using broad shapes and limiting their color palette to 8 bright colors. Not only did this create a very airy layout, but it also made access times much faster. This is very important. If a person tires from waiting for pages to download, they may end up simply clicking off Hotwired and going to a different Web site (Graves, 36).

The success of Wired and Hotwired, has attracted several sponsors to advertise on-line. These sponsors include AT&T, Club Med, IBM, MCI, and Volvo. These sponsors are helping Hotwired finance the magazine. Advertising on the web, however, has brought additional new challenges. One cannot



*This ad layout, with the bar at the top of the page, was duplicated from Hotwired's format.*

simply convert a print ad onto the Web. A person downloading an article does not want to wait five minutes only to find that half of the page is filled with an ad. Also, since a viewer might jump to a different location halfway through an article, it made little sense to place the ad at the bottom of the page.

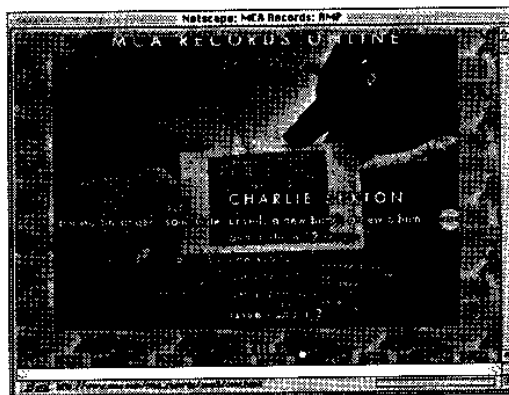
Plunkett + Kuhr's solution was to place a thin bar across the top of the Web pages. This bar typically shows the name and logo of the company that is sponsoring the page along with a "teaser" line - trying to convince the viewer to click on their ad. Once the viewer clicks on the bar, they are transported to a full page ad. From there, the viewer can either click on the Sponsors home page or return to the story. This style of advertising has since been imitated throughout the Web (Graves, 40).

## Amp

Amp is another e-zine located on the Web. It is MCA Record's on-line music magazine. MCA wanted "the magazines content rather than the interface to inspire excitement (Harper, 1)." To accom-

plish this, they hired graphic designer David High. David's portfolio was full of print layouts that combined stunning photography with original type handling, but he was inexperienced at designing for the web. Instead of changing his style of designing to fit Web pages, he simply continued to design his layouts his traditional way using Photoshop. These layouts were then converted to Web formats by MCA.

David took a slightly different approach to the design of Amp than Hotwired's approach of allowing their viewers to have control over the final design. Instead, he created pages using his traditional methods of combining photography and text, taking advantage of the monitors capabilities to display vibrant, phosphorescent tones (Harper,2). The pictures incorporated the text within them, thereby preventing the user from changing the text formats. These pages were then used as home pages, content pages, story intros, and backgrounds. The stories themselves were left in their text format, free for the viewer to alter.



*Amp's design is very visual - several layers of text and images creates a very exciting layout.*

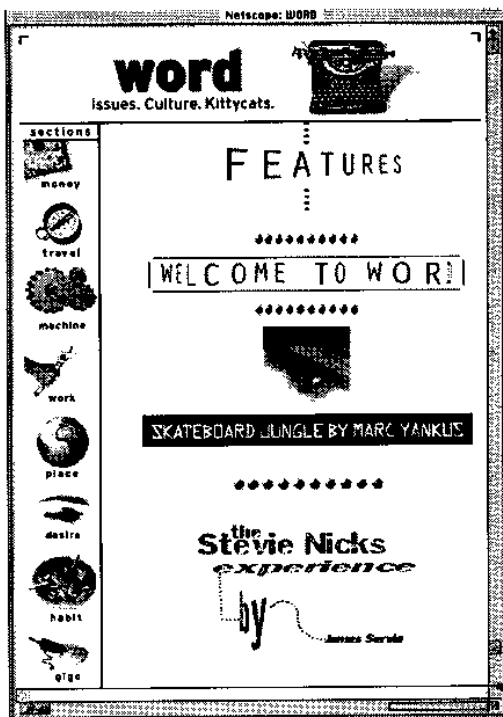
High designed simple, round icons to navigate through the magazine. This simple design allowed for them to contrast with the visually busy pages he designed. The incorporation of High's fresh page design and the Webs ability to include video and sound clips from MCA's artists made the Web the perfect medium for Amp (Harper, 3).

## Word

Word is an elegantly designed, contemporary e-zine that discusses music, art, fads and other current topics. Jaime Levy is the designer of the publication and has many of her students at NYU contribute (Levy). The design of Word has the feel of an actual magazine. It has sections that are familiar to print magazines, such as a table of contents and letters to the editor, and articles are arranged in a friendly page-by-page layout.

This page-by-page layout is what is refreshingly unique about Word. Unlike many Web pages where the graphic for the story is simply followed by a large body of gray text, Word's pages incorpo-

rate large images with "pages" of text. An article may contain 10 - 20 of these individually designed "pages" that the reader can flip through - much like a magazine. The reader can read the entire article without losing interest with the new images and design on each page. This is unlike the many other Web pages where you are forced to scroll through a large screen of text.



*This is the home page for Word. Stylized graphics are used as links to other sections while a listing of feature articles appear next to it.*

Another approach that was taken was to use larger type. This may seem trivial, but the simple concept of using larger text makes reading the story on a monitor surprisingly less strenuous for the eyes and much more enjoyable.

Word also uses tasteful animation in many of the layouts. Instead of obvious, self-indulgent animation sequences, they went for a subtle approach - perhaps a rotating title or a moving icon. This approach maintains the visual emphasis on the entire layout and makes for some elegant surprises.

Word has also taken full advantage of the interactive abilities of the Web. Most of the articles contain a discussion forum. After reading an article, the reader can then join these discussions and give their comments. These discussion groups then become a constantly evolving part of the articles.

Instead of placing sponsors ads on the pages of the articles, Word has instead created a "sponsor" page. This page, gives an overview of all the advertisers which include such firms as Zima, Mastercard, and Sprint. This page will then take you to the various sponsors home pages.

As a final incentive to make return visits to Word's pages, the masthead, along with other areas, change upon every return. While these changes are subtle, it makes for a fresh, friendly welcome. It also prevents the magazine from becoming stale after one has visited.

Word has upheld a strong design that would work equally well on print while also incorporating the Web's unique abilities into a perfect blend of design and content.

## **What's ahead**

The World Wide Web, only two years old, is still in its infancy. While there is broad innovations and concepts being applied to the Web, there are still several limitations that will have to be worked out. The first of which is speed. Until modems and phone lines are updated to faster speeds, there will be definite restrictions on the file sizes of the Web pages. HTML language is also, for the most part, fairly primitive. There is only a limited number of layout options that HTML can allow for. The final limitation is resolution. Most web pages are only capable of displaying 72 dots per inch. This is a far cry from the high resolution that print offers. This also limits the amount of information that can be displayed on the screen at one time.

These limitations, of course, will be overcome with time. Until then, however, the growth of the Web provides an unlimited opportunity for graphic designers. As the Web improves, there will be more and more people and businesses moving much of their publications onto the World Wide Web and someone will still be needed to design them!

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