

Dead Trees

A PUBLICATION OF
QUESTIONABLE VALUE FROM
William Blinn
COMMUNICATIONS

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Why can't I print this @#%!! page?

Some printing presses are web presses, but the Web is not a printing press. The computer screen is not a piece of paper. A design cannot serve two masters.

Some of my most frustrating conversations are those in which I try to explain the differences between design done for use on paper and design done for work on the screen. Designers have been working with paper for several hundred years. They can specify a color for paper and ink; the paper and ink will match their specifications. They can specify a typeface, a typeface size, line spacing, columns, and margin width; each of these will be exactly as specified on paper. They can specify a resolution and size for every photograph; each photograph will be reproduced at the exact size specified and within the gamut of the CMYK color model.

Designers have control when the medium is paper and those who have worked with paper and ink for decades often cannot comprehend my words when I tell them "you can't control that on the Web."

The Web is all about giving the user control. Even if you specify a typeface, the user can override your choice. Even if you specify a typeface size or color, the user can override your choices. And if you try to recreate paper on the screen, there's a good chance that the user will be unable to print the page.

The website designer knows that the user will determine: the **browser** (Netscape, Opera, Internet Explorer, Lynx), the computer's **operating system** (Mac OS 8, Unix, Mac OS X, Window 9x, Windows NT, Windows 2000, Windows XP, Linux), the **size of the monitor** in inches (5 through 30 inches, diagonal), the **resolution of the monitor** in pixels (320x240 through 1600x1200), the **number of colors** the monitor will display (16.7 million, 65,000, 256, 16, or 2), the **connection speed** (unbearably slow to incredibly fast), what **typefaces** are present (5 to 5000), and whether **graphics** are displayed. The website designer has absolutely no control over any of these variables, yet each profoundly affects what the user sees.

This is progress?

A good friend of mine likes to grouse about the Web and frequently points out that what he sees as shortcomings of the medium are not progress. "I never have this problem in print!" he thunders. And all I can do is agree. The computer screen may be flat, but that's about the only property it shares with a piece of paper.

When it comes to setting up a website page's layout, the designer has approximately 2.5 choices. Choice 1 creates a framework that is a specific number of pixels wide. Choice 2

allows the content to fill the screen. Choice 2.5 is a wimpy combination of the first two options. Each of these choices has advantages; each has shortcomings.

Creating a framework seems like a good idea, but it immediately creates a serious problem.

Before I describe the problem, let's explore a little more background. The framework size must be specified in pixels, not inches or points. The only measurement that makes sense on a screen is "pixels". The user who owns a 15-inch (diagonal) monitor (about 12x9 inches) with 640x480 resolution will see a 400-pixel-wide graphic as about 7.5 inches across but the person down the hall with a 21-inch (diagonal) monitor (about 17x12 inches) and 1024x768 resolution will see that same 400-pixel-wide graphic as about 6.5 inches across.

That's not much! you say. But consider it this way: That graphic fills more than 60% of the width of the smaller screen and just 38% of the width of the larger screen.

If you're still convinced that's not much of a difference, consider money: Would you rather have 60% of \$1 million or 38% of \$1 million? (If it still doesn't matter, please send me the \$220,000 difference!)

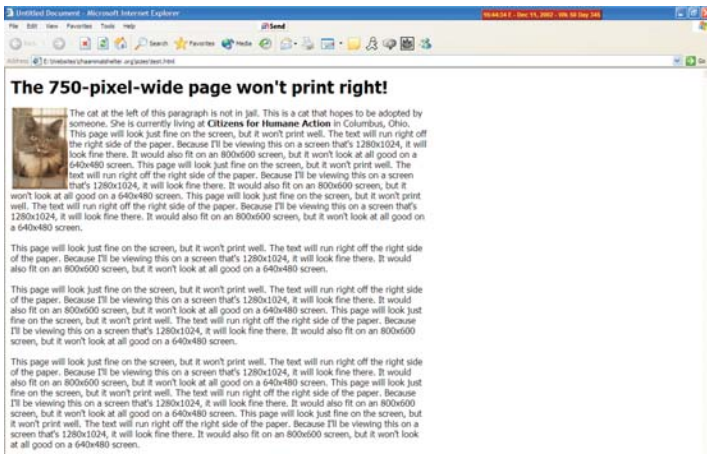
Moving to the next part of the riddle within a puzzle, I should tell you that website log analyses suggest that most computer users who are on the Internet have monitors that have a resolution of at least 800x600 pixels. The number of users who still have 640x480 monitors is under 10%.

That might lead you to believe that a good choice for the framework's width is 800 pixels. And that would be reasonable, except for the fact that some of that space will be taken up by menus, scroll bars, and the like. So we can assume a "safe area" of about 700x600 pixels and if we design a web page with a width of 700 pixels, 4 events will occur:

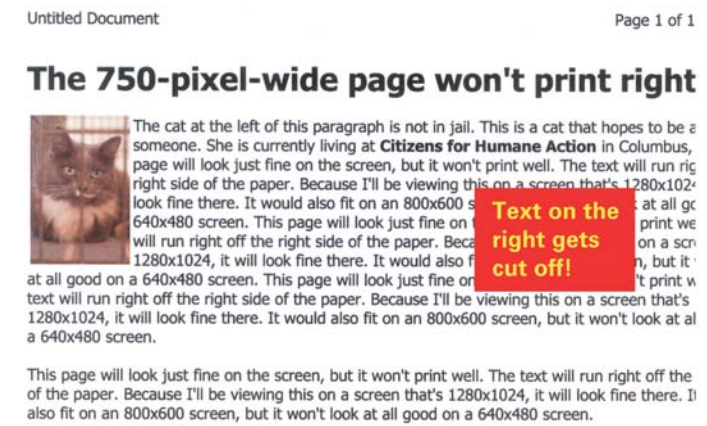
1. The page will look marvelous on an 800x600 monitor.
2. There will be a lot of blank space on a 1024x768 monitor.
3. Users who have 640x480 monitors will have to scroll horizontally to read the page.
4. The page will not print properly.

What the heck is this?

Dead Trees is the William Blinn Communications newsletter. It's published whenever I feel like it, although I generally feel like it when I'm preparing the month's invoices. If you didn't receive an invoice with this newsletter, kindly contact me and we'll rectify that situation. Please note that despite the name, of the publication, I bear no particular animosity toward trees. The name is simply an acknowledgment that paper is made from, well, dead trees.



Note how the text fits on my 1280x1024 screen (above), although with a lot of white space at the right. When I print the page (below), the text at the right side of the page is cut off. This will happen whenever the page is set up with a framework that exceeds about 650 pixels.



Is your head beginning to throb yet?

The printing problem occurs because of the conversion between website measurements (pixels, which are relative) and paper measurements (inches or centimeters, which are absolute). The relative pixel must somehow be related to inches or centimeters and the easy choice is 100 pixels per inch. (You probably don't want to know that the Mac's screen is generally considered to have a resolution of 72 pixels per inch and that the PC's screen is considered to be 96 pixels per inch – so forget that I even mentioned it.) But what this means on paper is that a 700-pixel object should be 7 inches wide, which is enough to overrun a 1-inch margin.


So designers who want to create a website page that will print right must limit the width to about 650 pixels. But that leaves a lot of blank space on the screen.

The solution

Someday computers may work like televisions: A 2-inch portable TV shows exactly the same image as a 10-foot projection TV. But if you've ever looked closely at the fuzzy image on a projection TV, you'll understand why this might not be such a good idea.

The solution for today is this: Design for the screen and, if you want visitors to be able to print copies of the information on your website, provide "printer friendly" pages.

Printer-friendly pages generally omit all graphics and are not presented in a frame or table. The text may appear uncomfortably small and the lines may appear to be unreadably long, particularly on high-resolution monitors. Never fear, though, this page will print properly.

Is there a disadvantage to creating printer-friendly pages? Yes: The cost. 

Trademarks and copyrights

You may already know that I'm the list co-owner of an e-mail based discussion group for editors. Constance, the editor of a dictionary said, "L-Soft International insists that Listserv is a trademark for its software. But it is used so often in the generic sense in conversation, online, etc.—most often people use it as a synonym for mailing list without any awareness of what software they are actually using—that we viewed it as having entered the category of xerox, kleenex, and teleprompter. How do you treat those terms? And is listserv being used to refer to that specific software or is it being used generically?"

My reply: "Xerox is still a registered trademark and should be accorded the appropriate legal respect. Likewise Kleenex, Teleprompter, AND Listserv. If you are not aware of this, you now will be: When a word loses its trademark status, any company can make a product and apply that name to it. Most



companies go to great lengths to protect their trademarks, and rightly so.

"Bayer owned the trademark for 'Aspirin'. The word lost trademark status in the US (not in Canada). Any company can make 'aspirin' in the US. So after Bayer spent a lot of money to develop an awareness of 'Aspirin', the company lost control of the word.

"Encouraging the incorrect usage of a trademark is, in my opinion, irresponsible. It may also attract the unwanted attention of the company's attorney(s).

"Let's say you are a world-famous editor and that you've spent a bundle to register and promote the name 'Constance' as a trademark. Let's say that you have become so famous in your field that people start talking about having their documents 'constanced'. Would you be pleased by this turn of events? Now even lousy editors like me could usurp your name and offer to constance documents.

"A trademark may not be tangible, but it is property. Please don't steal it. Please don't encourage others to steal it."

The same goes for copyrighted material. Copyright law has a "fair use" provision, but beware the limitations. The "golden rule" applies here. 