



HTML5: Coming in 2022 (or Maybe in 2012)

IF YOU PAY ANY ATTENTION TO THE LANGUAGE THAT RUNS THE WEB (HTML) YOU PROBABLY KNOW THAT A LOT OF PEOPLE, INCLUDING ME, THOUGHT THAT THE FUTURE WOULD BE XHTML. THE GOAL WAS TO MAKE HTML MORE LIKE XML AND TO MAKE IT MORE COMPLIANT WITH STANDARDS THAN IS HTML. A BADLY WRITTEN XHTML PAGE WOULD SIMPLY NOT BE RENDERED BY A BROWSER. THAT DECISION HAD THE POTENTIAL TO BREAK MILLIONS OF PAGES.

All that has changed and the next new version of the HTML standard will be HTML5. It's scheduled to be released as a standard in 2022 so many people assume that they have a lot of time to wait.

Not so! Even though the HTML5 standard is a work in progress and the specification isn't slated to reach "recommended" status until 2022, companies such as Microsoft, Apple, and Google have quickly adopted stable portions of the HTML5 standard that are supported by the latest versions of current browsers.

Around 2000, the W3C (Worldwide Web Consortium) began advancing XHTML 2.0. HTML5's history goes back to a 2004 program by Adobe on "Web Applications and Compound Documents." About that time developers from Opera, Mozilla, and Apple decided XHTML was the wrong solution and created a group to promote a backwards-compatible standard. The W3C rejected the proposal but the developers continued working on what they considered to be a better idea by forming WHATWG, the Web Hypertext Application Technology Working Group.

In 2006, the W3C realized that XHTML 2.0 was a bad idea and decided to support what eventually became HTML5. WHATWG and the W3C continue to work together, separately, and

sometimes in opposition to each other but the specification is moving forward.

Don't Wait Until 2022

YOU DON'T NEED TO WAIT. SOME PARTS OF THE HTML5 SPECIFICATION ARE READY NOW. OTHER PARTS WILL BE COMPLETED OVER THE NEXT FEW YEARS. ALTHOUGH THE W3C'S RECOMMENDATION MAY NOT BE RELEASED UNTIL 2022, BROWSERS WILL SUPPORT MUCH OF THE CODE LONG BEFORE THAT. MANY OF THE FEATURES ARE SUPPORTED RIGHT NOW BY ALL BROWSERS EXCEPT MICROSOFT'S AND EVEN INTERNET EXPLORER COMPLIES WITH MANY OF THE STANDARDS AS OF IE 9, THE CURRENT VERSION.

Browser manufacturers are typically several years ahead of the W3C. The browsers support new technologies and, several years later, those technologies are addressed in W3C standards. That will certainly be the case with HTML5. Starting around 2009, interest in HTML5 became red hot with Apple and Google pushing hard for support of standards that were (and still are) under development. As a result, most browsers already have some support for the new standard.

The "final draft" was published for comment in 2010, so although the entire HTML5 specifica-

tion isn't complete, some parts of it are currently being used.

Even though my primary website (TechByter Worldwide) has used XHTML Transitional specifications for the past couple of years (you'll see `<!DOCTYPE html PUBLIC "-//W3C/DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">` at the top of each page of code) most of the pages on my site wouldn't pass XHTML Strict specifications. That's now OK.

You can thank one of the more standards-compliant browser companies (Opera) for making enough fuss that the push to XHTML was dropped, at least for now.

What that means is that your website is safe even if it uses HTML 4 or HTML 3.2. But it doesn't mean that you should be complacent about updating the site to HTML5.

The future is HTML5 and the specification document is currently hovering around 1000 pages. Fortunately, about two thirds of those pages tell the people who write browsers how the browsers should render code—even when the code is badly written. The other third is for people like me who write Web pages.

The annual TechByter Worldwide website redesign will go live in January 2012 and I expect

to use HTML5 at that time. I'll need to make that decision by mid October at the latest and the decision will be based on how well the current crop of browsers support the HTML5 features that I'll want to use. In fact Internet Explorer 9, Chrome 13, Firefox 6, and Opera 11.5 all do a reasonably good job with the new standard.

Deciding When to Change

NOT ALL EARLIER BROWSER VERSIONS (PARTICULARLY INTERNET EXPLORER) WILL FARE SO WELL, THOUGH, AND THAT HAS TO BE PART OF THE DECISION BECAUSE SOME PEOPLE FAIL TO UPDATE THEIR BROWSERS DESPITE THE SECURITY DANGERS OF NOT DOING SO.

Analyzing browser use needs to be part of this decision for anyone who operates a website.

TechByter readers are pretty good about keeping browsers updated. More than 90% of site visitors use browsers that will adequately render an HTML5 page right now:

- IE 9 (good support): 7%.
- IE 8 (acceptable support): 11%.
- IE all others (poor support or no support): 9%.
- Firefox 5 or 6 (good support): 20%.
- Firefox 4 (adequate support): 2%.
- Firefox pre-4 (forget about it): less than 5%.
- Netscape (no support): below 0.1 percent.
- Opera 9 or higher (good support): 2%
- Chrome 11 through 15 (good support): 11%

- Safari 5 or 6 (adequate support): 5%
- Various mobile devices (support): 20%.

Browsers with at least *adequate* support are in use by about 80% of TechByter readers.

If you notice that the browsers listed here add up to only about 92%, that's because the remaining 8% are antique browsers such as Chrome 2, Safari 1, Opera 3, Firefox 2, and Internet Explorer 3. If you're still using one of those, do yourself a favor and upgrade to a new browser.

In most browsers HTML5 should (note the presence of the weasel word) degrade gracefully, which means that you might not see the site as I intended it to be seen but it won't break your browser and it will be readable. Ω

Defragmenting Windows 7 Drives

SOME PEOPLE SAY THAT THERE'S NO LONGER A NEED TO RUN A DISK DEFRAGMENTER ON A WINDOWS 7 COMPUTER AND OTHERS SAY THAT WINDOWS 7 DISKS BECOME FRAGMENTED THE SAME WAY THEY DID UNDER EARLIER VERSIONS OF WINDOWS. AS IT TURNS OUT, BOTH OF THOSE POINTS OF VIEW ARE CORRECT.

There is no longer a need to run a separate disk defragmenter: That's true because Windows includes its own disk defragmenter. It's also true because disk drives are now so large that fragmentation doesn't occur as quickly as in the past.

Disks still become fragmented: That's true because of the way files are written to disk drives.

To run the Windows 7 defragmenter, click the Start Menu and type "defrag". You'll see 2 options:

- **Disk Defragmenter**—This is the one you want. It has a graphical user interface so that you can see what's happening.
- **Defrag**—This is a command-line executable. If you use the shell provided by cmd.exe or PowerShell, you may want to use this.

A fragmented disk is a slow disk. If the read-write head needs to move many times in the process of fetching data, the process will be slower than if the process could read the entire file at once. Microsoft's Steven Sinofsky notes that processors have become dramatically faster but disk data-transfer speeds have increased modestly.

"Within the storage and memory hierarchy comprising the hardware pipeline between the hard disk and CPU, hard disks are relatively slower and have relatively higher latency. Read/write times from and to a hard disk are measured in milliseconds (typically, 2-5 ms)—which sounds quite fast until compared to a 2GHz CPU that can compute data in less than 10 nanoseconds (on average), once the data is in the L1 memory cache of the processor."

Defragmenting the disk won't turn a slow computer into a fast computer but it helps. Microsoft has licensed defragmentation technology from the Diskkeeper Corporation and it's turned on by default. It's scheduled to run once a week in the middle of the night. Your computer might not be on then so you may want to consider scheduling the process to run at a time when the computer is on but you don't expect to be using it.

Sinofsky points out that the built-in defragmenter has improved considerably over the past decade: "In Windows XP, defragmentation had

to be a user-initiated (manual) activity. It could not be scheduled. Windows Vista added the capability to schedule defragmentation—however, only one volume could be defragmented at any given time. Windows 7 removes this restriction [and] multiple volumes can now be defragmented in parallel with no more waiting for one volume to be defragmented before initiating the same operation on some other volume!"

If you're a Windows user, check to be sure that the defragmenter is set up to examine all drives on your computer and that it's scheduled to run at a reasonable time. Ω

