



The short story

The automation I propose improves the two key ingredients to website quality and effectiveness: the user-interaction/navigation/user-interface, and the content, while significantly reducing cost and errors.

Interface

Websites (for transactions or content publishing) can have more satisfied customers -- more advertising revenue, more direct sales, and/or more effective customer support -- by tailoring the user experience to the various types of browser/hardware/bandwidth used by customers.

The rich user experience offered by Java, DHTML, and large graphics doesn't work for customers with old, slow, or small devices. Conversely, stripped-down interfaces are less effective.

The solution is to create several distinct user interfaces, and generate them from a database of the site structure. Any change only gets made in one place, so maintenance is cheaper, easier, and more reliable than the way most sites are built.

Content

Customers will be more satisfied if content is tailored to their needs. Websites will be more profitable if content is cheap to create and maintain.

The solution is to separate content from the user-interface design and the site structure, and to use structured content tools such as XML.

When the content is separated from the interface and site structure, it becomes as easy to create typing a memo in a word processor.

Content creators can validate their documents, assuring that the final version from the writer is correct and ready to use on the website without additional conversion expense.

A single document can be used in several ways, targeting different types of users, for example, eliminating the maintenance cost of supporting several similar files.

Structured content can have user-interface elements inserted automatically. For example, one version of a file might need HTML font tags for the font size and typeface, while another version would use stylesheets, and yet another version would be for browsers that do not display different fonts. It would be too expensive to maintain different versions of the source file, but structured content allows scripts **reliably** to insert ui-related elements into the content.



Magnitude of benefit

You can break customers' display devices into three rough categories: cutting edge, mainstream, and behind the curve. Any website that fits into one of these categories is sub-optimal for customers in the other categories. Many websites absolutely exclude lower categories of users. This means that you can improve your optimization by 100 percent or more.

The cost of publishing falls dramatically, too. Publishing and maintenance with this kind of automation costs only 10 to 25 percent as much as with the typical practices in use today.

The ease of publishing allows attention for error checking. Chances are, the number of errors will fall to 10 or 25 percent as well.

An additional benefit is speed. Changes can be made in minutes instead of hours or days.

The ease and reduced cost also allows for new content and user interaction that could not have been done before. You could easily add a 50 percent improvement to the user experience by adding high-value extra features.

Putting that together, you get something like 150% improvement in user experience (not counting fewer errors), for 10 to 25 percent of the publishing and maintenance cost, and take 10 percent or less of the time.