

# Essential Elements of Web Design

by Iain Ard mac an Bhaire

## Architecture

When developing your site's architecture, or underlying structure, forget for a moment the name of the medium we are working on. For best usability, by yourself and your visitors, don't think "web", think "tree". The branches of a tree may be a bit interwoven in places, but they are not a tangled mess.

It can be tempting when starting out a site, particularly while your content base is still small, to dump everything into a single directory. After all, you can link everything together and organize it 'on the page'. However, as your site grows you will likely find this more and more difficult to manage.

Directories (also called folders) are your friends. Use them to organize your content into meaningful categories. This will help both you and your visitors locate content more easily, and it will help you to manage your site with much less headache. Really.

For example, if your content is divided into bite-sized chunks it is easier for you to go through and more easily locate which files are new, which files have been deleted and which files have been moved – which means that it is easier to track down dead links and broken images. It also lets you keep your file names simple since there aren't as many files competing for something unique (in fact, you'll probably have a LOT more files named 'index', and that's okay).

It also gives you cleaner and easier to remember URLs, which makes navigation easier for your users. I mean, which looks easier to use and remember?

- [www.aethelmearc.org/seneschal.php](http://www.aethelmearc.org/seneschal.php)
- [www.aethelmearc.org/seneschal/](http://www.aethelmearc.org/seneschal/)

And that's a simple example. Obviously file names can get much more out of hand if they are all in one place and have to remain unique than if you can give them simpler names inside their respective sub-directories.

- [www.aethelmearc.org/seneschalreport/action.php](http://www.aethelmearc.org/seneschalreport/action.php)
- [www.aethelmearc.org/seneschalreportaction.php](http://www.aethelmearc.org/seneschalreportaction.php)

Additionally, organizing your content can make life easier for technical reasons. If you have appropriate sub-directories you may be able to map these to subdomains. Or, you might find that you have a user that needs access to a subset of your space - for example, a Chronicler that is uploading your online newsletters. You can give them localized FTP access to the directory that the newsletters are supposed to go in, rather than the whole website.

You might also have applications or scripts running on your site that utilize similar resources. It is easier to have them each in their own paths rather than having to rename many similar files.

## Layout

There are a number of "standard" layouts typically used for websites. Many of us have seen the navigation-bar-down-the-left-hand-side-title-along-the-top model, or the navigation-along-the-top-row model, probably two of the most common. Note, however, that "layout" and "navigation" are not synonymous – though navigation is one of the most important elements of your layout. It is more accurate to say that "layout" and "usability" are closely inter-related.

A well laid out webpage is one where things are easy for your visitors to find. This is truly where "user-friendliness" comes into play during the development process. Examine where items will be placed on a page: is that where the user (visitor) is most likely to look for it? How will the page "flow"? The majority of your audience (particularly in the US) will, instinctively, read your webpage from left to right, from top to bottom – so keep that in mind. Will your layout fit onto most user's screens, or will it end up

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scrolling? While it is okay to make users scroll down occasionally to keep reading something (though it is nice to avoid that too, when you can), try to make sure that you NEVER make them scroll to the right. This is cumbersome and will be irritating to most of your visitors. Particularly never make them scroll to the right for a navigation element or something that you really want them to see – many visitors simply won't bother. While older screen sizes were about 640x480 (then subtract a bit more for the browser window), 800x600 or larger is most common now.

You will likely discover as you are laying out your various navigation elements that they tend to correspond nicely to the framework you've already developed. Material that merits its own directory in your site's architecture probably merits its own link in your layout/navigation.

Developing a layout 'template' to use throughout your site will also help tremendously, not only to maintain a consistent "feel" for your visitors (so that they know they are still on your site), but also so that they know where things are, because they are in the same place from page to page, and can get around quickly. The template defines all of your layout elements, and then all you need to do is insert the content in the right place(s). If you have access to CGI, PHP or ColdFusion your templates may even be separate files that are maintained independent of your content (and also makes for really easy changes to your overall layout later, when needed).

Your best tactic when developing your layout is to first determine all of the items that are going to be a part of it. This will probably include various navigation elements, titles or headers, and other design elements that you want to include. Once you've collected them all you can figure out how to best place them all onto the page in a way that makes sense. This is kinda like a jigsaw puzzle, except that there are a lot more ways that it can be put together. Try to keep your layout from too closely resembling a puzzle though, and being too complicated for users to utilize.

As you are placing items, think of how they relate to other items and consider placing them near each other. If a visitor is looking for something in particular they are more likely to find it that way. They will also get a better idea of how the material on your site is divided up and this will make further navigation more intuitive for them.

As you are designing your navigation tree, keep in mind the "three click rule". For best usability, a visitor should be able to get from almost any place on your site to any other place on your site in three jumps or less.

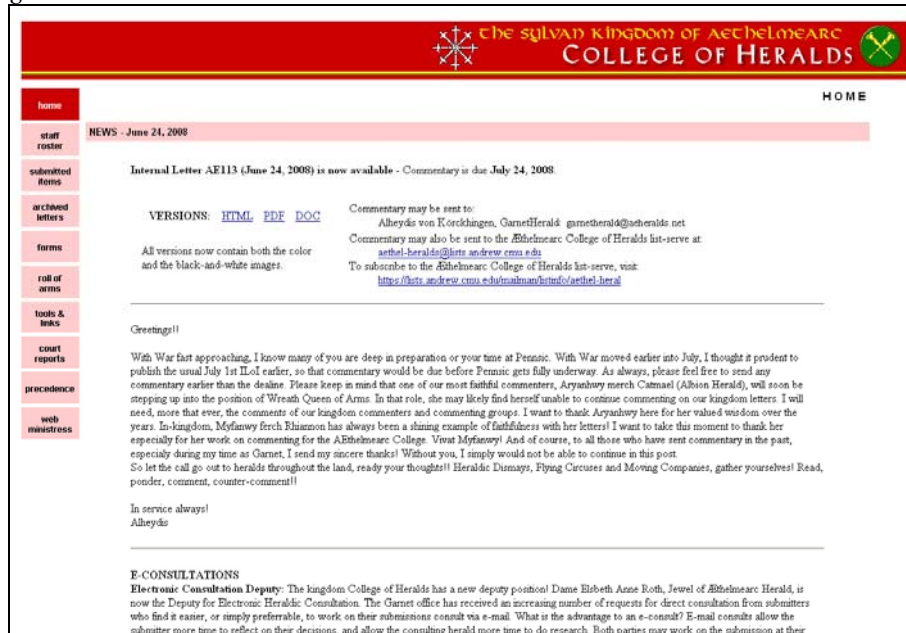
All that said, there are a handful of tried-and-true layouts that you've probably seen many times before. You've seen them before because they follow good design rules and have proven their user-friendliness over and over again. Feel free to use these – you don't need to re-invent the wheel, particularly if you don't have a background in human interface engineering and countless hours to devote to focus groups and user trial panels. Besides, by using a common format, your visitors will already have an idea of where to look to find things.

What follows are some of the most common page layouts on the web and some notes about them.

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Left hand navigation:



You have probably noticed that there are a LOT of websites that use the format of placing most, if not all, of the links down the left-hand side. Or maybe you haven't – since it is so common you might never have thought about it.

Sites that utilize this format take advantage of the fact that visitors tend to read from left to right and, more importantly, that browsers build pages that way. You could place all of your navigation on the right hand side, but you would have to be a little trickier about it and could never be sure how the rest of the page displayed due to the variety of screen resolutions (and thus space you'll have to the left) out there. In short, left hand navigation is easy to for you to code and easy for your visitors to use.

In this format, the logo or header is often along the top, much as we see in this example. This is a topic of much greater variation though. In some cases, like we have here, a whole title bar, or header, is present. Other times, a smaller logo may simply make an appearance at the top of the navigation column allowing content to migrate up quite a bit.

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*Top navigation:*



Just as common is the layout in which your navigation elements reside in a row along the top of the page. This is almost always used in conjunction with a header of some sort. Fancy versions of this may spawn a drop-down menu from each of the navigation links.

This type of layout is taking advantage of the fact that your visitors will read from top to bottom and, again, the browser builds the page that way so this is also pretty easy to set up.

In contrast to the previous design, it really doesn't invert well – in other words, putting your navigation along the bottom of the page is not as often your best tactic. In such a location it is harder for your visitors to find and use (sometimes having to scroll down to see and click). I would only recommend such a design on a page that is either always very short (so it will never ever scroll) AND which you expect your visitors will actually be reading entirely (remember, most people only scan web pages for the info they're searching for).

### *Combinations:*

Obviously, if you are feeling adventurous, you can combine elements of each of these basic layouts. Maybe some of your persistent navigation elements remain along the top, while section navigation along the side changes depending on where you are (as one common example). Many variations are possible.

There are a couple of ways to enforce your layout once you've come up with it: either through the use of tables, or with style sheets. You can also use frames, but this introduces its own challenges. To go into either delves into code, which I am happy to discuss, but is a bit outside the scope I am aiming for in this class.

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## Design

Fairly integral to your layout, is your design. I use the term ‘design’ to refer to more of the visual and graphical elements of your overall “look-and-feel”, while ‘layout’ is more of the technical bits. If you were laying out something for print, layout is your grid where you can figure out how everything fits on a page while design is the specifics of what each of those elements is. You can figure out much of your layout without having finalized your design, but it may be that quite a few of your design elements need to be included in your layout. Sometimes your design vision may influence how you develop your layout from the get-go. In other words, there is often some collaboration between these two pieces.

The first thing that you will want to consider is your use of colour. People react subconsciously to colours – but without going into market psychology, try to develop your palette so that it relates to your material. In the context of the SCA, this may mean that you work with the colours present on your group’s arms. As with your layout, use these colours throughout to create a uniform experience for your visitors. There are few things more discordant to a user than having the screen change colours with every click of their mouse – they’ll start to think that they’ve left your site and headed off to someplace else!

When choosing your colours make sure that they work with each other. Don’t hurt your visitor’s eyes with clashing colours or hard-to-read text. In fact, at its most basic, colour theory isn’t too different from the rules of heraldry: you need to make sure that overlapping layers have proper visual contrast. Of course, we use a wider palette than heralds can, so we get to play a bit looser with these rules. We get to play with saturation (light vs dark) as well as hues (the gradation of colour from one into the next along the spectrum). In general, you will want to consider:

- Dark over light, and vice versa (though dark over light is regarded as more readable)
- “Warm” colours (red, orange, yellow) vs “cool” colours (green, blue, purple)
- Heraldic “tinctures” – ‘metals’ (yellow, white) vs ‘tinctures’ (red, green, blue, purple, black) – also tend to work okay.

If you want to delve more into colour theory there is a lot of information available. You will start by finding a colour wheel and examining which colours are complementary, analogous, contrasting, etc. This is determined by their positions relative to each other making it a very handy tool.



Now that you’ve considered your use of colours, don’t forget to consider your use of “whitespace”. Whitespace is the amount of space, or padding, that you leave around elements on your page. A certain amount is necessary to promote readability. After all, if everything is crammed together it gets difficult for the eye to parse it into individual entities. If you think about it, even text in general is like this. There need to be breaks between words or it gets really hard to understand what something says. Periods separate sentences to show that a thought is complete, and paragraph breaks help indicate to us that there is a pause in a thought chain. These items also promote readability, not just to the thoughts themselves, but to give the eye some room to process. These rules apply to web pages too, and sometimes even more so when there are a variety of graphical elements that need to be parsed and distinguished. In other words, don’t forget to leave some visual padding in your layout and/or your design.

Part of your readability will also come through your use of typefaces. This is a function of both your chosen font as well as your font size. Some fonts are easier on the eye than others. Some are bigger than others by default. Some do really weird things when you make them smaller or larger. Keep these things in mind and be kind to your visitors. Some people will recommend that you use Arial, Helvetica, or at least a Sans Serif style font on web pages. They are certainly some of the easiest for people to read, and they scale well. Of course, most of us are also quite familiar with Times New Roman (and many browsers default to it) but this and other Serif fonts don’t tend to scale quite as well. In general, it is best to pick a fairly neutral font, and common one as well (or people that don’t have it on their computer simply won’t see it) for the majority of the text on your website. Save the fancy text for some of your key

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elements (headers, navigation, etc) and place them in graphics so that they are sure to come across. Don't use too many different fonts (two is a good maximum number) or it will start to distract your visitors.

Speaking of graphics, chances are that you want to include some in your website. Some of the key elements of your design are probably graphics that you have made or found. When using images there are a couple of things that you can keep in mind to optimize performance and thus be a little kinder to your visitors (particularly those without high-speed internet connections).

The first thing you can do is simply in your HTML code, and it is as simple as defining the 'height' and 'width' attributes in your image tag. When you do this the browser knows how much space to set aside for the image as it loads and can keep on rendering the rest of the page around that and not hold everything else up.

The second thing you can do is optimize your image itself. The best optimization requires some experience with a tool like Adobe Photoshop, but there are some basic things that even a novice user can usually figure out. For starters, make sure that the size of the image (height and width) isn't any bigger than what you actually need on the page. You can shrink your file size just by shrinking the image to the size that you actually need. After that you might look into the file resolution. A lot of photographs are saved at a much higher resolution than is rendered on-screen. You can cut the resolution to 72 dpi without most people noticing any loss of quality. You will find that the resolution and image size tend to be related, so reducing the resolution shrinks your image too unless you resample the image. Not all graphics programs have this capability, so you might want to change your resolution first or you might end up with an itty-bitty image. Lastly, if you are feeling adventurous you can constrain the palette information saved with the image. JPEGs always carry around a 256 colour palette, but if you save something as a GIF you can usually save a smaller palette that only includes the colours used in the image. Of course, this only really optimizes the image if you have a limited palette. So, in other words, you will find JPEGs best for photographs since they tend to have a lot of colours, while GIFs might be best for some of the design graphics on your website. If you have to use a really large image, you might consider cutting it into smaller pieces and reconstituting them in a table so that each of the smaller parts can load a little quicker.

### **Content Development**

Now you've got a really snazzy website, but it's no good if you don't have useful content. Don't forget that the purpose of most websites (and probably yours) is to disseminate information. Keep the information on-topic and in easily digestible chunks. Divide it up into logical pieces and present it in the most closely related section of your site.

If you don't have a gift for writing, consider enlisting the help of your other local officers – your Chronicler in particular is probably well-versed in writing things, but other officers can be responsible to providing the content for their own related parts of the website.

### **A Note on Technology**

Keep in mind not every visitor to your website will have the latest plug-ins or support every browser-based feature. Some visitors may even have JavaScript disabled. Or reject cookies by default. It is best to not rely on the most up-to-date features or software releases for your website to display, and especially to work, properly.

This doesn't mean you shouldn't use it, but don't make it required for your core functionality. If a visitor can't see any navigation links because they are in a Flash script, then they cannot use your site. If they cannot see a fancy animation because JavaScript is disabled, that's probably okay. Use your best judgment.