FrontPage Retirement: An analysis of viable options

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Introduction

This report provides a rationale as to why WordPress was chosen to replace FrontPage for standalone faculty websites. This rationale is grounded in two major assumptions.

1. DE will continue to support stand alone faculty websites for faculty who will not be able to use FrontPage as a result of the ITS rollout of Windows 7.
2. These faculty websites will be open to anyone on the internet and do not require Camosun credentials to access.

Web Design vs. Web Publishing

The world of website creation has changed drastically in the past 10 years as the web evolves and matures. In the past, users who designed websites were often the same people who published the content to that website. This is no longer the case. While designing a website has become a much more complex process, publishing content to the web has become easier.

As a result, different tools have evolved to recognize this distinction in roles between web designers and web publishers. While traditional web design applications (such as Adobe Dreamweaver and Microsoft's Expression Editor) have become more complex to meet the expanding needs of professional web designers and developers , new platforms for publishing content (often referred to as Content Management Systems or CMS's) have emerged. Broadly speaking, these two classes of tools can be referred to as **Web Design Applications**, and **Web Publishing Applications**. The distinctions between these two classes of applications are outlined below.

Web Design Applications

The primary audience for web design applications are professional web developers. Web design applications are designed to facilitate the development of websites by allowing their users to control the five major areas of website design:

1. Content – refers to the text, documents, images and other multimedia elements of a website.
2. Usability – refers to the navigation and consistency of site elements used on a website.
3. Appearance – refers to the control of typography, colours, icons and other visual elements of the site.
4. Structure – refers to how the site pages are organized and maintained on a site
5. Technical – refers to how the site interacts with web servers and databases

As a result, these applications are typically complex to recognize the needs of the contemporary web designer to manage all aspects of a website, using not only HTML, but also advanced languages such as CSS, JavaScript, and server side programming languages such as PHP. So, while web design applications can be used to manage the content of a website, they are also designed to manage the usability, appearance, structure, and technical requirements

of maintaining a website. For example, ensuring consistency in look and feel of the website from page to page is manually controlled by the user. Additionally, ensuring the internal navigation of a site remains consistent is also manually done by the user.

Web design applications are often desktop based, meaning that the editing of a website can only be done from a single location where the software is installed. The workflow for web design applications involves users designing standalone web pages in a desktop application, which is then uploaded to a web server. This upload is done primarily using FTP (file transfer protocol), WebDAV, or mapped drive folders (if on a local network).

Examples of web design applications include: Adobe Dreamweaver, Microsoft's Expression Engine, Aptana, eXe Editor.

Web Publishing Applications

The primary audience for web publishing applications are users who need to publish content to the web. Very little understanding of the technical nature of how websites are constructed and operate is required to use web publishing applications. These tools are designed to facilitate the content publishing process as opposed to the website design and development process.

Web publishing applications are often referred to as Content Management Systems (CMS). Of the five aspects of web design mention above (Content, Usability, Appearance, Structure and Technical), web publishing applications are focused first and foremost on the content, although users do have limited control over the appearance and usability of their site. Design consistency is enforced by the application, and navigation within the site is controlled by the application.

Maintenance of content using a web publishing application is usually done through a web browser, meaning a website can be updated from any computer with a web browser and internet access. The workflow for web publishing applications involves users opening a web browser, logging onto a secure website, and editing or uploading content using web interfaces.

Examples of web publishing applications include: WordPress, Drupal, Joomla, and Active CM.

The Hybrid Option: SharePoint

A third option combines both design tools and publishing tools. This is the case with Microsoft SharePoint. With SharePoint, the web publishing application is the SharePoint application, while the web design application is SharePoint Designer. Web content publishers use SharePoint to manage content, while designers use SharePoint Designer to create sophisticated templates to control the look, feel and functionality of SharePoint created websites.

Other Considerations

This section provides and overview of other major considerations in the analysis of a FrontPage replacement tool.

Web Servers

Both web design applications and web publishing applications require a web server, which is the machine that serves up web pages and web content to the internet audience. The role of the web server, and how web designers or content publishers interact with the web server, is different for web design applications than it is for web publishing applications. Generally speaking, users using web design applications require a higher level of technical knowledge on how a web server works than do users of web publishing applications.

Required knowledge of web design principles

Generally speaking, a higher level of knowledge of web design principles is required for users of web design applications than those users who use web publishing applications. Users of web design applications require an understanding of issues such as:

- Designing for multiple platforms, screen resolutions and devices.
- Understanding of graphic design principles.
- Understanding of information architecture design and usability.
- Understanding advanced technical concepts required for web design (i.e. the difference between root relative and document relative linking).

While knowledge of these issues is helpful when using web publishing applications, they are not required.

ITS technical constraints and requirements for publicly facing websites

A public facing website is defined as a website available to anyone on the internet without requiring log on credentials.

For web server infrastructure, IT Services has indicated that their preferred server infrastructure for publicly facing websites is the LAMP (Linux, Apache, MySQL and PHP) stack. Therefore, any publicly facing website project at Camosun must adhere to this basic technical infrastructure requirement. This requirement eliminates Sharepoint as an option for faculty websites as there is no desire on the part of ITS to open up Sharepoint sites as public facing websites.

Preparing faculty for Desire2Learn

By using a web publishing tool as opposed to a web design tool, DE gains the benefit of preparing faculty to move to Desire2Learn by conceptually preparing them to use a web browser as the primary tool for managing and administering a web presence. In my experience, users have a difficult time making the conceptual leap from managing content using a desktop application to managing content using a web interface. The use of a web publishing tool that is, itself, web based prepares faculty who wish to make the leap from a standalone website to Desire2Learn.

Recommendation: Web Publishing Application as FrontPage replacement

In order to use web design tools, users must have an above average understanding of web design principles, website architecture, and use tools that have numerous options not relevant to their primary task of publishing content. In addition, web design tools and the hybrid tool

under consideration (SharePoint) require a technical infrastructure, primarily based on the need for open access websites, that IT Services does not wish to support. Additionally, the primary purpose of faculty websites is the publishing of content and not the design of websites. While in the past web design tools used to be required for publishing web content, this is no longer the case, nor is it recommended as the added complexity of using these types of tools will overwhelm our faculty. **For these reasons, a web publishing application (or CMS) is the recommended tool for faculty websites.** Neither web design applications nor hybrid tools are recommended for use for faculty websites, and as a result, were not further analyzed.

Analysis of Web Publishing Applications (CMS)

This section examines the specific web publishing applications analyzed, and the rational behind choosing WordPress.

Overview of major platforms

There are dozens of web publishing platforms that meet the technical infrastructure requirements (LAMP) of IT Services (http://en.wikipedia.org/wiki/List_of_content_management_systems#PHP). Of the possible options, three were chosen based on the level of support and use within higher education. These three were WordPress, Drupal and Joomla.

Joomla was eliminated when it was discovered that it could not support multiple websites under a single instance. In other words, each faculty would require having their own instance of Joomla running, which would be an administrative nightmare.

Drupal, while currently in use at Camosun, faced a similar obstacle in that it required quite a bit of work to maintain multiple websites under a single instance.

WordPress

In addition to the reasons why we choose a web application platform over a web design platform, the specific reasons why WordPress was chosen over other options include:

- WordPress supports multiple websites under a single instance of WordPress.
- WordPress integrates with the current Camosun authentication server, which means faculty do not require additional credentials but can continue using their existing Camosun credentials to administer their website.
- WordPress has widespread support from the educational community as a web publishing platform, with over 180 institutions in North America using it in various capacities (https://spreadsheets.google.com/ccc?key=0AnN5FWMlt7YEdDR4cEVVMHpwRDB3N3BpN0g1eVZqblE&hl=en#gid=0), including instances at higher education in British Columbia including UBC, UNBC, Emily Carr, TRU, and BCcampus.
- IT Services has indicated their willingness to support the use of WordPress as a replacement platform for FrontPage.

Conclusion

In this report, I outlined the two classes of contemporary web tools available to us; web design applications and web publishing applications, and outlined the major differences between the two classes of applications. This was followed by a technical examination of the infrastructure requirements of the different application classes, and the technical constraints given to use by IT Services. A brief overview of the level of knowledge required by users in order to create and publish content using web design applications was also discussed, followed by the recommendation that FrontPage be replaced by a web publishing application as opposed to a web design application. Finally, this report concluded with an analysis of three web publishing platforms considered, and a rationale as to why WordPress was chosen.