The Evolution and Devolution of the University Webmaster Role

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Abstract

The role of university webmaster emerged in the early 1990s and has undergone a series of rapid changes concomitant with the increasing importance of the university website as the public face of the university and the interface to a range of university services. This paper describes the evolution of the webmaster role from that of a curiosity-driven technological innovator to an all-powerful system administrator controlling server setup and maintenance, site architecture, site design, writing, marking up and authorisation of content, scripting and user support. The paper then explores the subsequent devolution of the webmaster role as it grew too big for one person to handle. The role shifted away from a technology towards content, focussing on collating and marking up content and writing policy and guidelines for web authors. This shift from system administration to content administration has led to a shift of the webmaster role to that of manager of a team of web content providers, web developers, graphic designers and user experience specialists housed in an information technology division, library, or media and publishing unit. However with the advent of portals, web applications and web interfaces to databases and other corporate software, the definition of a university website and the role of university webmaster is becoming problematic or perhaps even irrelevant. The confusion about the role of websites and webmasters is in a large part due to the relative recency of the web as a publishing medium, the lag-time for senior executive to endorse web strategies for university-wide information dissemination, the inevitable inertia in large institutions to provide appropriate infrastructure support for new strategic directions and the fact that web and internet technology is a rapidly moving target.

Introduction

Although it is difficult for incoming tertiary students to comprehend, the World Wide Web is actually very new. The current tertiary intake was in kindergarten when the web was first proposed in 1990. By the time they were entering primary school in 1992, there were only 50 webservers but after the first graphical web browsers appeared in 1993, web content and web audience for that content increased rapidly. By the end of 1995, as the current tertiary cohort was in the middle years of primary school, the corporate sector began to grasp the potential of the web for marketing and ecommerce, and growth exploded dramatically (see [HREF5]). There is now a strong expectation that a broad range of corporate, educational and community information can be found on the web. Twelve years after the birth of the web, the Google footer claims to be searching 4,285,199,774 web pages [HREF6].
However, despite the current popularity of the web and the fact that incoming tertiary students don't remember life without the web, there are very few webmasters with more than 10 years experience and none with more than 12. People with high levels of web expertise are either comparatively young or have come from another discipline. Although the strategic importance of the web continues to increase, webmasters are rarely positioned within the organisation to provide direct input to university strategic plans and to influence decisions on implementation, maintenance and support for web-based services.

This paper will describe the ad-hoc development of the webmaster role over the past 12 years and explore the ongoing webmaster role in the current university context.

**Webmaster as Innovator**

The first websites were made by people with access to the internet, some technical skills and an interest in sharing knowledge. Webmasters generally had little or no institutional support for their work but conversely and importantly, had little or no institutional interference. Their websites were generally seen as harmless curiosities if they were seen at all. The role of webmaster was not recognised as a proper role but these enthusiastic innovators had a focus on information-dissemination and communication thereby encouraging and inspiring others to provide content for the web. Soon, the web concept had spread to people without the means or technical skill to install and maintain their own webserver or even to load their content onto someone else's webserver.

**Webmaster as Sysadmin**

As websites and the web publishing community grew, unix system administrators (sysadmins) provided access to webservers by virtue of the fact that website creators generally needed an account on a unix server to load their web content. Often the sysadmin would not themselves be particularly interested in the webserver or website other than the fact that the webserver software was housed on "their machine" and needed their cooperation in order to be setup and maintained. The sysadmin effectively controlled who had access to webserver, where they could put content, what form the content could take, navigational structure of the website, and the availability of website interactivity via CGI scripts. By virtue of this total control, sysadmins effectively became the all powerful webmaster. Because sysadmins generated the directory structure for at least the top levels of the webserver tree, the defacto information architecture for websites was based on arbitrary account-based directory structures and file permissions (logical from the system administration perspective) rather than on topics (logical from the content provider and / or audience perspective). People put content where they were permitted rather where it might best fit in terms of subject matter, and there was little effort to make URLs meaningful, consistent or easily memorable.

In general, there was no institutional recognition of, or support for the webmaster role, and web content providers were at the mercy of the sysadmin / webmaster with little or no recourse if they could not get the access or technical support they required. The webmaster role was seen as predominantly technical in nature and this technical
orientation tended to ensure that management did not strive to understand the emerging importance of the web as it was outside their domain of expertise.

Webmaster as Marker-Upper

Around 1996, the web started to become recognised as more than just a plaything for geeks. At about this time, the corporate sector began embracing the web, and more people wanted to put content on the web without the overhead of having to learn HTML. Corporate interest in the web slowly began to alert media and publications areas of the university to the potential of the web for marketing. As the first WYSIWYG HTML editors began to appear, people making web pages no longer needed to have technical competence. Content providers could provide content in the format of their choice and non-technical administrative people could be employed to "mark up" this content for their area's website. In this scenario, the marker-upper converted existing documents into "web format" and placed them on the website, but without much concept of authoring standards, audience, or how one piece of content might relate to another. As the marker-upper became the person interacting with web content providers and the sysadmin returned to providing backend services, the orientation of webmaster began to shift from technical issues to content administration.

Webmaster as Hobbyist

With the advent of widely-available WYSIWYG HTML editors, easy-to-use drawing programs and HTML conversion utilities, and gui-based ftp tools, anyone could make web pages without knowing HTML or graphic design or arcane unix commands. Once they had appropriate accounts, hobbyists could bypass the marker-upper and sysadmin to create their own websites and publish content with no editorial process, no quality assurance and no other constraints. Web content proliferated.

Webmaster as Policy Enforcer

After the initial enthusiasm for the web calmed down, enough time elapsed for web content to become outdated and for the original content publishers to have lost interest in the web or moved on to other projects without establishing any process for managing their web detritus. The webmaster started to become responsible for authorising content and maintaining websites according to emerging web guidelines and policies whether they were webmaster by virtue of their sysadmin role or their role in marking-up web content. Rarely was the webmaster someone with sufficient authority or organisational experience to understand the potential ramifications of this authorisation and policy role for example with respect to legal status and currency of supplied information, copyright issues, privacy issues and accessibility issues. Moreover as interest in the web spread beyond academia to the commercial world and websites became more visible, web content started to draw the interest and attention of senior management. In addition to the role of the web in marketing and communications, the possibility of using the web to deliver low-cost education to new and existing markets sounded not only attractive but financially necessary to survive in a global context.
Webmaster as Manager

As the size and complexity of university websites grew and interactivity was increasingly supported by backend applications, the webmaster's role was distributed across a team of server administrators, site information architects, web page and user interface designers, web developers (scripters, programmers), database designers, business analysts and customer service staff who provided services to people publishing information on the web. The university webmaster was the manager of this team and started to emerge as the person providing strategic direction to the web presence of the university rather than being directly involved in production services. The webmaster was also responsible for liaison with webmasters of university subsites but generally had no authority over subsite webmasters who may or may not have any of the skillset required by the role, nor any support, training or recognition for the role from their local area. This ad hoc and unmanaged growth of university websites left it unclear as to who was responsible for (or indeed empowered to act on) overall site information architecture, subsite navigation relative to overall site navigation, the design of site content for target web audiences and the support and training of web staff across the university.

Role of a University Webmaster

In the context of webmaster as manager, two different models seem to have emerged for the webmaster and webteam within a university. In one model, the webmaster reports to an information technology division manager who in turn reports to senior management. Such a web group is generally responsible for webserver and website maintenance, but probably not for information architecture, visual identity or content. In the second model, the webmaster and webteam are housed in the media and publications area of the university, report to senior management via the media and publications management and are responsible for visual identity and content and possibly the information architecture of the website, but probably not the webserver and technical aspects of the site.

As the website has rapidly become a preferred interface to university information for both external and internal (student and staff) audiences, university management require strong web policy to protect their brand and their content. But as websites become more complex, managers are less able to understand the myriad technical issues surrounding web policy and webmasters are not sufficiently senior within organisations to provide informed advice where it is needed. Many web experts within universities are relatively young or from non-traditional backgrounds or in non-technical roles so that managers are often unaware of expertise available to them. Compounding the problem further, people with technical expertise are often not sufficiently skilled in communication or business process to express their input appropriately or to evaluate technical issues within a broader university context. Management often seeks advice about web and online services from external consultants with little university experience because they do not have the capacity to seek out and evaluate the in-house expertise available to them.
Issues facing university web managers

The importance and complexity of university websites is growing more rapidly than the management infrastructure and allocation of resources required to support them. However, just as websites and web teams are finally gaining recognition and support for the role they perform, a university's web presence is increasingly determined by content management systems, learning management systems and web interfaces to corporate administrative systems delivered via personalised portals. Much of the web content provided by universities is now access-restricted via username and password so that the user experience of a website is hard to ascertain or to generalise. The university website is increasingly becoming a gateway to the corporate information repository where content is dependent on the user's relationship with the university (visitor, student, staff, alumnus). Large university websites typically contain hundreds of thousands of static pages, dynamic web pages generated from corporate databases (eg course handbook pages and the like), in addition to open or restricted course websites for an increasing range of online course materials. Web content management and preparation of content for different media and different systems is a huge problem, and although content management systems and learning management systems appear to provide a technical solution, content management is not inherently a technical problem and needs to be addressed at a deeper institutional level.

In the emerging web-application-dominated, portalised university web environment, the concept of university website and webmaster needs further evaluation. Indeed, given the way in which much of a university's web content is generated and accessed, the concept of website is becoming blurred and it is questionable whether the role of webmaster is still meaningful beyond being the standard contact email address for website issues that are not handled in any other way.

Hypertext References

HREF1  http://wisebytes.net/
HREF2  http://www.mdhsonline.unimelb.edu.au/
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