

Recommendations and Action Plan for a Web Development Framework

Web Services Committee Report to the Information Technology Committee

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Executive Summary

Web expenditures are big business on campus, and warrant a centralized strategy and development support framework. The Web Services Committee focused on defining a sustainable web development framework. This framework will enable long-term web services integration, which is essential for the New Business Architecture, campus portal, and to enhance the academic arena. The proposed web development framework has three new organizational components including a Web Council, Web Coordinators group, and Web Technical Unit.

Web Council The Web Council would be appointed by the Information Technology Committee (ITC). The Web Council would:

- Meet regularly to provide continuity in implementing a strategic web development framework, and continue to refine the concepts proposed in this report.
- Provide research and recommendations on policy and funding for the consideration of the ITC.
- Research and recommend content management systems or processes to the ITC.
- Communicate constructively with the web developers to build community across the campus, using an online newsletter similar to UCLA's iCompass <http://www.icompass.ucla.edu/index.htm>
- Represent key stakeholders across the campus.
- Be co-chaired by the Chief Information Officer and another key constituent to be determined.
- Permanently report to the ITC.

Web Technical Unit. We recommend that ITC advocate for funding a small web technical unit be formed that is centrally-funded to act as a technical swat team for web applications, work with Computing Coordinators to build community, and serve as staff to the ongoing UCSC Web Council. A key role of the centrally-funded web organization would be to develop, implement, and support the framework via technical development, training development, and information architecture services. Their focus would be on web expertise, not on content, so their skills would be applied to both academic and administrative areas. They would leverage resources from across the campus. The estimated cost for the first year would be \$300K, plus an undetermined cost for office space renovation (if needed). The small web unit could have, for example, an information architect, programmer/web developer, and administrative specialist/editor.

Web Coordinators Group. We recommend that the Web Council sponsor monthly 1.5 hour web application developer meetings where projects using tools are showcased and developers assist each other. Guest speakers would be sponsored occasionally.

The Web Services Committee has identified five roles that are critical to an effective process for website development: content expert, web developer, information architect, system administrator, and principal officer of the unit. In the first year, the Web Council, Web Coordinators, and Web Technical Unit would contribute to developing processes for:

- Defining the five essential functional roles of the web development framework
- A checklist for official sites, and associated policies
- Training requirements for the staff in web development roles
- Content management
- Standard tools for both static pages and web application development.

We recommend specific actions to accomplish these tasks. We recommend that ITC:

- Appoint the aforementioned ongoing Web Council in June 2002, and that Web Council members represent both functions and organizations.
- Advocate providing new resources for activities such as the Web Coordinators Group and an on-line IT newsletter to build communities.
- Advocate providing new resources for a web technical unit.
- Endorse the definition of "official site" and the Web Council's constructive process for achieving official site status.
- Appoint the Administrative Records Manager to work with UCSC General Counsel to review the Web Policies, Procedures, and Practices (in Appendix 8), and the procedural checklist in Summer 2002.
- Recognize the importance of the roles in the web development framework as a campus standard, and advocate providing the resources (including training) for those in the five web development roles.
- Charge the Web Services Committee (or the new Web Council) to field test these roles on the "official site" checklist pilot this summer.
- Recognize the importance of content management and taxonomy in the web development framework, and endorse the Web Council and Web Technical Unit to research content management systems.
- Advocate providing resources to the Web Services Committee (or the new Web Council) to continue to catalog those middleware, database and other customized tools used at UCSC, and to draft the recommendation process for standardized commercial tools used in static pages.

Committee Charge

UCSC has developed web sites with exemplary form and function. However, the web development tools deployed across the campus are heterogeneous. For UCSC to move to a portal environment, and produce a better, more consistent web presence, we will need to use common tools, have a support model for these tools, and have an oversight and governance model for tool usage. Implementing common tools across campus is a first step towards a portal.

In FY2000-01, the ITC's Web Presence Committee survey showed that UCSC invested \$2.3M for web services emanating from 600 web servers. Over 80% of the expenditure was for labor. In this era of budget reductions, we have an opportunity to focus on using web development tools to optimize web sites in preparation for developing a campus portal. Clearly, web expenditures are big business on campus, and warrant a centralized strategy and development support framework. While the total amount spent on web services may not be reduced below \$2.3M, the quality of information provision can be increased. In 2001, the Web Presence Committee was the first step in web strategy development. The Web Services Committee has continued the work of that first committee, with a focus on defining a sustainable web development framework. This sustainable framework will enable long-term web services integration, which is essential for the New Business Architecture, and for increased efficiencies in the academic arena.

The Web Services Committee is charged to:

1. Define the current and recommended UCSC **web development framework**, including the roles and responsibilities of web developers, content managers, system administrators, information architects, and unit heads.
2. Recommend a **governance/oversight model** to provide leadership and planning.
3. **Identify "official" sites and sources of information at UCSC, and identify a process for identifying future sites.**
4. Identify appropriate **content management** strategies and recommended next steps.
5. Identify **web development tools** currently used at UCSC, and a process for tool adoption.
6. **Recommend next steps** to move toward achieving the web presence vision contained in New Business Architecture, AIS Web module, and other academic or campus web initiatives, including portals.

This report proposes a web development framework, identifies "readiness" issues in that framework, recommends actions to be taken, and resources required. There are four primary sets of customers who will be impacted if the report is implemented:

1. The UCSC academic community (faculty, students, instructional staff)
2. The UCSC administrative community (staff)
3. Visitors to the campus web sites (e.g. prospective students and faculty)
4. The UCSC computing support staff

Current State: A Web Development Framework is Needed

UCSC's first-generation web pages, developed in the mid-1990s, and provided a satisfactory, if not always excellent, roadmap from the top of the site to a variety of UCSC web pages. A redesign of the upper-level pages enhanced the first-generation site. A second-generation redesign of the upper-level web pages, indexing and categorizing sites by audience type, was accomplished almost three years ago. In that same period, a few units' web sites were enhanced, providing a third-generation level of interactivity between web authors and site visitors.

UCSC's web presence, particularly at the deeper levels, is inconsistent in terms of the quality of the pages, the accuracy of the content provided, and the maintenance of that content. In addition, it's becoming increasingly important that UCSC develop a portal option that will enable the campus to "push" information to many audiences, including current students, potential students, alumni, faculty and staff, and others AND enable those users to receive content that is based on their relationship to UCSC. In the fourth generation phase, we envision relationship-based content delivery portals to manage the quality of info that UCSC pushes to potential students, alumni, current students, faculty and staff.

Some of UCSC's web sites are of a very-high quality. They provide users with up-to-date information, have a professional and consistent appearance, and are maintained by units that care about providing their audiences with interesting, informative content.

Others are not of that quality. They provide users with sketchy information; they are not designed with the audience in mind, look unprofessional, and are sporadically maintained. Moreover, a rapid rate of staff turnover, a need for specialized training, and a high degree of disparity among web authoring tools can make it difficult for departments to conform to campus-wide standards.

In addition, UCSC's web presence suffers from a lack of coordination regarding baseline information that should appear on certain sites. For example, shouldn't ALL academic departments have standard links that appear on their sites, even if the web developer chooses not to use a template? Sites at UCSC are created by individual units/departments, with no (or little) regard to how the individual sites fit into the overall UCSC web presence. One important tool for web application developers is a community where they can share ideas, algorithms, code and resources. A critical need here is that web application developers need the time to be able to participate in this community.

The Public Information Office has published UCSC Web Policies and Guidelines, including site standards and templates at <http://www.ucsc.edu/resources/policy.html>. However, these policies are not well known or frequently referenced, perhaps because those who have taken on web development responsibilities are somewhat isolated in their respective departments. Web sites are often developed and maintained within the margins of existing responsibilities and resources. In many departments, administrative assistants develop and post web pages in addition to their busy jobs. Web site support has been carved from small percentages of existing positions, with little new funding. Consequently, web developers and authors may be untrained or insufficiently trained, may not have appropriate support or resources to perform their duties, or receive the oversight and guidance for Web site quality and compliance. In short, we need to "build community" and an organizational framework for optimal web development. Defining the components of a web development framework is the main focus of the committee.

The ITC originally asked the Web Services Committee to focus on web development tools for campus-wide adoption. However, as the Committee delved into the issues, it became clear that the campus needs an effective web development infrastructure before we can effectively deploy and support web tools. This infrastructure will prepare the campus for tool deployment that will in turn facilitate the movement to a web portal with integrated services. The proposed web development framework has several distinct components:

- Policies and procedures for achieving status as UCSC “official” pages
- Defined roles: content expert, web developer, information architect, system administrator, and principal officer of the unit.
- Training curriculum to develop skills needed for each role
- Content management processes, including a content update model, and a common taxonomy
- Suite of tools or systems to enable and support the framework, including a permissions model and an automated backup model and system.
- An ongoing Web Council to oversee the above activities to coordinate web development, to build and facilitate community among web developers, and to make recommendations to ITC for funding and support

Findings and Recommended Actions

Policies and Procedures for Achieving “Official” Page Status

Findings: It is not clear which pages at UCSC officially represent the University and which do not. There is no uniform naming convention for web site urls. There is no guarantee that web sites on UCSC-owned servers are ADA compliant, for example. A site such as <http://porter.ucsc.edu> does not represent Porter College, but in fact is an unofficial site. There is no procedure to ensure that web authors develop campus web pages that adhere to existing web policies posted at <http://www.ucsc.edu/resources/webdev/policies.html>

Lack of process for policy enforcement:

- Makes it difficult for users to find information because UCSC does not have not consistent url naming conventions
- Results in some information that is inconsistent with traditionally published documents, such as the General Catalog
- Results in some web sites that do not clearly articulate the Chancellor’s and Provost’s priorities
- Puts the university at risk for legal action if sites are not ADA compliant

Recommended Actions:

1. We recommend that ITC endorse official site url naming conventions to improve users finding information.

URL naming conventions for official web sites

- Official sites will have urls that conform to a hierarchical (e.g. pio.ucsc.edu) and user-oriented format (e.g. info.ucsc.edu), to make it easier to locate sites. Aliases will ensure that either hierarchical or user focus domain names will work.
 - Url's for official sites will be in two formats, with aliases that resolve. For example, http://ic.ucsc.edu could alias to http://cats.ucsc.edu/ic
 - www.ucsc.edu/xxxx official academic and administrative sites that impact the entire campus
 - Any site with xxx.ucsc.edu is official, except PEOPLE.ucsc.edu
 - The current www2.ucsc.edu/xxx will be phased out. However, that server could be a virtual host with url's conforming to the above two formats.
 - Grandfather in large sites with sub domains and hosts. Distinguish between hosts and sub domains.
 - Allow one year to migrate existing, non-conforming url's to "official site" url's.
 - Designate a review board, including PIO, CATS, academic divisional representatives, BAS, and Student Affairs to review requested url's, and to review checklists for "official sites".
 - Develop an exception process for circumstances when someone needs a name right away, and has a legitimate need.
2. We recommend that ITC endorse the definition of "official site" and the constructive process for achieving official site status. We recommend that ITC appoint a working committee to refine and coordinate the official site approval process.

We recommend that ITC appoint a Web Council to coordinate the official site approval process. Some members of the Web Services Committee have offered to serve on this ongoing working committee. The Web Council would have constructive conversations across the campus to educate unit heads and web developers about available tools, processes, training resources, and community responsibilities for compliance to federal and state regulations.

Official site: An "official" UC Santa Cruz web site is the primary web site for one of the institution's academic and administrative divisions, departments, or units-- or for a specific activity sponsored by a division, department, or unit. As such, the content of an official UCSC web site should comply with all UCSC and UC web policies and practices before it is linked from the campus's main web site (<http://www.ucsc.edu>) or any second-level pages.

Personal sites: Personal web sites are defined as those that are created by UCSC faculty, staff, or students in his or her personal capacity, and not as an employee or academic. Personal web sites are considered "unofficial" and do not represent UCSC. Therefore, materials that are official, such as course materials or administrative information, should not be housed on a personal web site in <http://people.ucsc.edu/~xxxx>

Unit heads or their delegates review official printed documents before publication. Similarly, we recommend that the unit head review the web publication prior to the campus allocating an "official" url for the web site. Principal officers need to have a focused attention on how their departmental web sites promote the message of the University. The checklist for the Official Site would be signed by the unit head to verify that the web site meets standards such as:

- Has requested a url that conforms to official naming conventions
- Identifies who functions as the a) content manager, b) web developer, c) information architect, d) system administrator, and e) unit head. Includes contact information, and who functions in those roles when the primary person(s) are not available
- Includes automated dates for review of content
- Is ADA compliant (passed Bobby or other designated test)
- Has a link to the UCSC home page
- Has content that is consistent with University policies, admissions requirements, graduation requirements, etc.
- Displays an official designation or seal indicating the site is official

We recommend that the Web Council refine this checklist further to determine specific criteria and develop a streamlined process, based on campus discussions with appropriate organizations. In addition to refining the website checklist, we recommend that the Web Council will:

- Review applications for official status
 - Review the web site and make constructive suggestions regarding usability
 - Review information or links to look for consistency with other campus web sites. A primary purpose of the checklist is to create awareness among unit heads and web developers about the benefits of becoming an official site.
2. We recommend that the Administrative Records Officer work with UCSC General Counsel to review the Web Policies, Procedures, and Practices (in Appendix 8), and the procedural checklist.
 3. In the next phase of Web Services, after the procedures for "official" web sites are implemented, we recommend that the Web Council identify authoritative sources of data and information. Authoritative sources would allow a single source of data to be the recognized source. For example, what is the authoritative source of information about the number of ladder-rank faculty on campus?

Resources and Timeline:

1. The checklist can be refined with the existing Web Services Committee (or subset) spending about two hours per week over the summer. A field-tested checklist could be ready in October 2002.
2. Chuck Piotrowski, Administrative Records Manager, could work with UCSC General Counsel to review the "Appendix 8: Web Policies, Procedures and Practices" in summer, and the procedural checklist in late summer.

Additional Information:

See Appendix 8: UCSC Web Policy, Procedures, and Practices, Based on UC San Diego Implementation.

See Appendix 5: Assessment of Web Pages.

Five Functional Roles in Web Development

Finding: In many units, web support has been carved from small percentages of existing positions, with little new funding. Consequently, web developers and authors may be untrained or insufficiently trained, and may not have appropriate support or resources to perform their duties. There is insufficient communications to create awareness about the existing web policies. These developers are often not developers at all.

An underlying theme in much web development here is a lack of understanding of the resources required to effectively develop a web site. This lack of realization is pervasive at all levels:

- The administrative assistant who is asked to publish on the web with no knowledge/training in web publishing
- Staff who put up websites with no content maintenance model
- Others who post websites with no knowledge of ADA compliance or no knowledge of existing UCSC policy guidelines
- Some who post web content that is not properly backed up
- Campus administrators who have not committed adequate and dedicated funds for their web effort

We have identified five roles that are critical to an effective process for website development: content expert, web developer, information architect, system administrator, and principal officer of the unit.

ROLES IN WEB DEVELOPMENT

Functional Role	Responsibilities	Notes	Examples of job titles with skills to effectively fill role
Content Expert	Understands, produces, gathers, collates, and edits the information that is or will be represented on the web. Responsible for timely updates to web content.	There are various levels and sub-roles here including writer, collator, editor, illustrator, etc.	Administrative assistant, writer, editor, graphic artist
Web Developer	Creates the pages and/or systems that the information resides in. Designs the page layout of the site. Creates the templates that the content will go into. No specific knowledge of the content is necessary.	There are various levels here including WYSIWYG web designer, HTML coder, graphic designer, database integrator, etc.	Web programmer, graphic designer, digital publisher, database specialist
Information Architect	Understands the relationships among various parts of the content. Designs the site's information hierarchy and keyword metadata schema. Insures that the site's information hierarchy is consistent with the campus-wide information hierarchy.	Must coordinate with content experts to help understand the content and with the web developer so the user interface corresponds with the information hierarchy.	Librarian, information architect
System Administrator	Builds and maintains the server(s) that the web pages are hosted and developed on. Responsible for the server software, server security, and data backups. No knowledge of the web content, HTML, etc. required.		System administrator, System engineer
Principal officer of the unit	Ensures that unit's web site is consistent with campus goals and message (or at least doesn't contradict them). Ensure that adequate resources exist for web effort and that supervisors of those in various framework roles have time and resources for web development. Responsible for verifying that the web site meets UCSC official standards.		Director, Dean, AVC

Many of the campus web development problems have been caused by the lack of recognition of the roles necessary to establish an effective web presence. Too often a person who should be (by skill set and job description) in the role of system administrator or content expert is responsible for all facets of a unit's web development.

This role-based scheme can be thought of as a complexity-hiding mechanism. The person filling each role only sees the items they are expert in without having to worry about the other parts. This allows people to use and build skills in their areas of core competency without spending time and resources on other roles in the web publishing effort. For example, it should be theoretically possible for a content expert in a unit to see a published web page, notice that something is incorrect on the page, very simply put that page in "editing mode," and make the change immediately. Currently, it is common for the content expert to email a description of the edit or change to the web developer/system administrator.

This role-based scheme is not intended to imply that everyone needs at least five people to publish effectively, but rather that each of the five roles must be effectively filled with someone who has the skills to adequately perform the functions of the role. For example, in a smaller unit the same person could fill the role of system admin and web developer, provided they had the skills to do both. Many units will also find it useful to outsource the provision of one or more of these roles to other units on campus. While in almost every case the content experts should reside in the unit (although an outside editor could be called in), most units don't need their own system administrator and should instead be able to rely on centralized or divisional server hosting services.

The understanding of supervisors for people acting in each of these roles is also crucial. Supervisors need to be aware of the level of resources that it takes to establish and particularly, to maintain current information on the web.

It is clear that for many units it will take some effort over time to migrate to this role-based strategy. Understanding this role-based model should inform allocating resources, writing job descriptions, training required for those filling the roles in web development, and an assessing outsourcing needs.

Information Architect

The role and skill set of the Information Architect is important enough to merit special mention. This is probably one of the most neglected and crucial roles. It is also a difficult role that requires specialized and rare skills. The value of having someone who understands how information relates to other information, and how to organize your content cannot be understated. Many issues concerning user interface, ease of finding information, interoperability with other campus web sites, etc. can be greatly improved by an information architect. However, information architects have a specialized role and are especially needed in the planning phases of projects. Many units may choose to outsource this function, perhaps from a centralized web unit. For more information about the role of information architects, see *Appendix 3: Information Architect*.

Recommended Actions, Resources, and Timeline:

1. We recommend that ITC recognize the importance of the roles in the web development framework as a campus standard, and provide the resources to achieve those goals. *June 2002.*
2. We recommend that the Web Services Committee (or the new Web Council) field-test these roles on the "official site" checklist pilot this summer. *Three staff, 8 hours each, by September 2002.*

Governance and Community: Web Council, Web Coordinators, Web Technical Unit

Finding: Campus-wide governance and training for web service planning and deployment can be characterized as ad hoc and under-resourced. Overall, there is little resource put into developing a strategic framework for web development.

Last year's Web Presence Committee found a substantial amount of resources expended on staffing for web efforts in individual organizational units. There are some under-resourced efforts at campus-wide web coordination. For example:

- The Public Information Office (PIO), which has responsibility for upper-level pages, including the main campus home page, only has .3 FTE for web development. While the PIO has taken responsibility for publishing UCSC Web Policies and Guidelines <http://www.ucsc.edu/resources/policy.html> there is not sufficient resource available for PIO to coordinate or lead web services across the campus.
- Jacques Delsemmes at CATS has developed a list of web masters for Unit web sites at <http://www2.ucsc.edu/cats/sc/groups/webadmin-www.shtml> This list of unit web directories was created so that unit web administrators could easily find their counterparts and help one another.
- Jacques also has developed an email list of all UCSC web administrators who have asked to be included on the list (webadmins@cats.ucsc.edu), but it used very sporadically.
- Aaron Melgares, Natural Sciences, as part of his role in the Computing Coordinators, developed a small catalog of web applications used on campus. However, not many on campus appear to know the list exists. (The Web Tools survey described later in this report is an attempt to revive that effort.)

Recommended Actions, Resources, and Timeline:

1. We recommend that the ITC appoint the aforementioned ongoing Web Council in June 2002. We recommend that committee participants represent both functions and organizations. The organizations would include representatives from:
 - Computing Coordinators
 - Academic Divisions
 - Academic Senate

- General counsel
- Undergraduate and graduate student body
- Library
- Public Information Office
- Chancellor's Administrative Records Office
- Student Affairs
- CATS and BAS (other areas such as Physical Planning and Construction)

To keep the committee to a manageable size, the representatives from the above organizations also would represent the following functions:

- Content expert
- Web developer
- Information architect
- System administrator
- Unit head

Some members of the Web Services Committee want to participate on the ongoing Web Council. In order to be successful, the ongoing committee members would need to allocate a percentage of their positions to the committee.

The ongoing Council would report to the ITC, continue to refine the concepts proposed in this report, constructively communicate with the campus web developers, and provide continuity in implementing a strategic web development framework. The Web Council would provide research and recommendations on policy, including draft policy, for the consideration of the Information Technology Committee. For example, recently there it has been suggested that "UC Santa Cruz" replace "UCSC" in official university communications, to reduce confusion with "USC" and to build market awareness. This is an issue that could be studied by the Web Council. *Request that ITC appoint committee by end of June 2002. Committee members would commit 10% time during the first year, with perhaps 5-10% time in subsequent years. If the committee has about 8 members, this could represent and 80% FTE commitment.*

2. We recommend that the ITC advocate that resources be given for activities to build communities among web developers, content managers, system administrators, and information architects. The activities would be organized by the Web Council and would use some of the decision-making processes currently implemented by Computing Coordinators.
 - We recommend that resources be given for a monthly online newsletter targeted at all campus IT professionals, similar in scope to UCLA's iCompass <http://www.icompass.ucla.edu/index.htm> . Jim Davis, Associate Vice Chancellor for Information Technology, UCLA, uses iCompass as a vehicle to communicate the IT vision of "coordinated autonomy" with all IT professionals at UCLA. IT staff learn about web tools, a variety of training, vendor seminars, new IT campus services, profiles of IT staff, IT job openings on campus, through iCompass. iCompass is pushed out via email and is also available on the web. Printed versions are sent at UCLA, but are not recommended for UCSC.

The Web Council could oversee newsletter, but it would take dedicated staff to produce. The resources required would be determined by the depth and frequency of the newsletter vehicle desired.

- We recommend that the Web Services Committee (or another committee appointed by ITC) sponsor monthly 1.5 hour web application developer meetings where projects using tools are showcased and developers assist each other. Guest speakers would be sponsored occasionally. *5 hours per month, for ongoing staff support to arrange for rooms, take and post agenda and meeting minutes.*
3. We recommend that the ITC consider recommending funding for a small central web services organization. One model to consider would have three staff:
- Information architect
 - Programmer and web developer (with training skills)
 - Administrative specialist with web editing skills

Ideally, these three staff would be centrally-funded, and provide free services to act as a technical swat team for web applications, work with Computing Coordinators to build community, and as staff to the ongoing UCSC Web Council. A key role of the centrally-funded web organization would be to develop, implement, and support the framework via technical development, training, and information architecture services. Their focus would be on web expertise, not on content, so their skills would be applied to both academic and administrative areas. They would leverage resources from across the campus. The estimated cost for the first year would be \$250K for salary and benefits, about \$50K for hardware, software, and miscellaneous supplies and expenses, plus an undetermined cost for office space renovation (if needed).

Content Management

Findings: In the past there has been a tendency by some to publish web content and forget about it. It is clear that this is no longer acceptable because out dated, inaccurate information can easily lead to customer confusion and liability for the University. Content management could mitigate this stale information. However, at UCSC, there are organizational issues that make implementation of a content management system difficult at this time.

What is content management?

The complexity of content management systems can vary widely depending on individual unit needs. All content management systems for the web must have at least the following six features:

- A designated owner for a given piece of content
- The ability to upload content
- The ability to store content
- The ability to download content
- An expiration date for a given piece of content
- A system to find, report, and update, expired content

More advanced content management schemes may include other features such as revision control, posting (publication) control, file locking, workflow management, content keywords (optimally from a standard controlled vocabulary), and other content metadata.

Here are three examples of possible content management systems from various points in the complexity spectrum:

- A complex (expensive), vendor supplied, dedicated content management system.
- A fileserver where each piece of content has an expires date written in an HTML comment in it; ownership is determined implicitly by where in the file hierarchy it is; once a quarter a person manually searches through all content to find and fix expired content.
- A simple distributed content management system consisting of several file servers (possibly across multiple units); each page has two meta tags, one that specifies the expiration date and the other which specifies the content owner. A program periodically crawls the web pages hosted on these servers reading the meta tags and emails the content owners notifying them of expired content.

To understand the differences between content management, electronic document management systems, and knowledge management, please refer to Appendix 2.

Enterprise Content Management Issues at UCSC

Campus Readiness

Is UCSC ready to accept Web content management? It depends. Campus readiness must be evaluated and successful/effective content management will be measured by increased accuracy and overall coherence.

Web content is one component of overall campus communication protocol. Pre-Web historical practices permitted relatively simple central institutional control of the overall image and content of campus print publications targeted to external audiences. Prospective undergraduate and graduate students, and potential new faculty received consistently accurate information polished by professional public information specialists. Central administration directions of how the campus should be presented guided public relations themes. Web content has developed ad-hoc, and its rapid technological pace has encouraged enormous shifts to decentralization of key public information. Enterprise level content management requires addressing this situation and recommending a plan to ensure the Web projected campus image aligns with central administration vision.

Planning for coherent enterprise wide content management requires the four following elements. Each component must be clearly linked to a designated authority:

Policy

Communication policy will establish the institution's message to internal and external audiences. Effective policy must be disseminated from one central authority (Public Information? Vice Provost Information Technology suggested in Provost's March planning letter?). Policies should be developed for broad groups of Web site categories with supporting guidelines. EXAMPLE: Academic Departments/Divisions and Registrar sites publish information for prospective and current students. Their Web content should reflect external audience communication policy guided by campus recruitment efforts. Service Center and other internal administrative sites should reflect policy on internal communications.

Content

Content determines the relationship to communications policy. Web content for units with common functions, such as academic departments, could follow common policy guidelines. For example, academic department sites might publish common content on degrees granted, program requirements, and faculty, enabling prospective students and faculty to quickly seek and find information.

Structure

Organization structure must accommodate web-based information while promoting UC standards. The personnel responsible for Web site structure are frequently technically skilled but unaware of the Web content nuances outside their own unit. Administrative structures must be in alignment with the overall web site purpose to ensure accurate and coherent content. For example, sufficient numbers and level of staffing are required to produce Web content that is accurate, coherent, and aligned with unit and campus policy.

Logistics

Logistics include the clear communication of enterprise level Web policies and identification that this is a top campus priority. Working across organizational units is necessary to provide seamless Web content to both external and internal audiences. For example, enrolled students need easy access to SIS, departmental policies and events, college advising, and financial aid. Promoting campus wide common protocols, standardization of some things, but not others, etc. is necessary to develop seamless user Web interface.

Recommended Action:

We recommend that the Web Council develop a process for ensuring that content on the web is consistent across organizations. The ongoing Web Council should research and recommend one or more campus standards for content management systems and tools. Such systems have the potential to create an infrastructure that would move us towards the vision of integrated web services.

Tools for Web Developers

Findings: There are two types of web developers-- web application developers and "static" website developers. These two groups use different type of tools.

- Web application developers create and maintain web pages that perform a service such as an e-commerce application or an on-line form to register for an account. For most web applications the most significant part is the back end system that drives the application rather than the web page, which is merely an interface to the system. Web forms often characterize web applications.
- Static website developers currently create and maintain the great majority of web pages. These static pages' primary role is to provide information rather than to provide a service per se. Static web pages may not be terribly static at all: they may be updated daily and/or database driven but these back end issues are transparent to the end user. In a static web site, the content on the pages and the organization of that content is key.

Much of the web application development on this campus occurs in silos. Web application developers are often unaware of what their colleagues are doing, what components they could reuse from their

colleagues, and who has already solved similar problems. One important tool for web application developers is a community where they can share ideas, algorithms, code and resources. A critical need here is that web application developers need the time to be able to participate in this community.

Other key tools for web application developers are enterprise level information/transaction services. These include the strong need for an enterprise directory, an enterprise authentication framework, and an API for accessing authoritative sources of standard data (possibly by way of the directory). There are several units on campus that have spent much effort implementing their own versions of these types of services. In the long run, UCSC could save a significant amount of money by centrally funding and providing these core infrastructure services.

Recommended Actions, Resources and Timeline:

1. The Web Services Committee surveyed Computing Coordinators and web developers regarding their tool use (see Appendix 7: Web Tools). A subset of the Web Services Committee (or another committee appointed by ITC) will continue to catalog those middleware, database and other customized tools and their functions. We recommend that this web-based list be expanded and act as a hub for the UCSC web application developer community. *3 hours per month, ongoing.*
2. We recommend that the Web Services Committee (or another committee appointed by ITC) work over the summer to draft the framework tools and training needs for developing static pages. *Two persons, 20 hours each.*

Coordination with other Campus Units, Activities and Committees

While the Web Services Committee was meeting in Winter and Spring, 2002, there were other committees on parallel or at least related paths. Additional studies of web development on campus will need to coordinate with other campus committees, and review their reports. Current activities that we are aware of that require coordination with web services, or the "web development framework" include:

- Electronic Communications Policy implementation (Janine Roeth)
- Information Asset Management (Chuck Piotrowski)
- Systems development principles and guidelines (Eric Goodman)
- Document Management System (Don Calerdine)
- Instructional Technology Review (Bruce Cooperstein)
- Academic Information System (Mark Cianca)
- Student Portal (David Rosen)
- Integrated Instructional Planning Information (Linda Kittle)
- Staff Human Resources Training Development Unit

Appendix 1: Quick Reference to Policies, Guidelines and Reports

Phase I, Inventory Component of the Web Presence Assessment, 2001

http://planning.ucsc.edu/pac/MtgNotes/itc/attach/itc-01-11-08-web-pres_report.pdf

Web Activity Based Costing report

http://planning.ucsc.edu/pac/MtgNotes/itc/attach/itc-01-11-08-abc_report.pdf

UCSC Web Policies and Guidelines

<http://www.ucsc.edu/resources/policy.html>

Policies for Use of UCSC Computing Facilities

<http://www2.ucsc.edu/cats/sc/help/policies/compuse.shtml>

UC Electronic Communications Policy (11/17/2000)

<http://www.ucop.edu/ucophome/policies/ec/>

UC Copyright Matters

<http://www.ucop.edu/ott/crprimr.html>

The Americans with Disabilities Act (ADA) at UCSC

<http://www2.ucsc.edu/ADA>

Appendix 2: Knowledge Management Systems, Enterprise Content Management, Document Management Systems

Enterprise Content Management is the process by which one creates, approves, posts, monitors, updates, removes and archives information on the web. Proper content management ensures that legitimate, authoritative, and correct information is present on the web for users.

By contrast, an **Electronic Document Management System** (EDMS) provides two basic office functions. First, it works as desktop electronic library. In theory, all documents, regardless of format (including email), stored in an electronic repository, indexed for ease of search, assigned a retention period and then are made available for use. Secondly, an EDMS should enable workers to create, edit, route and approve documents without using paper. Maintaining a useful EDMS requires many knowledge workers, that is, people who index the documents (create metadata) and work toward making information easier to find. See <http://www2.ucsc.edu/iam/EDMS/EDMS%20Tips.htm> for more information.

Knowledge Management Systems (KM) have become significant business processes with a host of support tools. In the business world KM was initially used by help desks and other service oriented staff to expedite customer service. Over time, KM was used by business decision makers and tools, like portals, were created to facilitate one's access to diverse electronic knowledge stores.

KM does blend with content management and document management in many ways. The most significant way is that portals must pull in quality information for knowledge seekers. Quality information must be managed with a content manager and the content may be created via an EDMS. While information systems put the onus of asking the right questions on the user of the system, KM systems, correctly implemented, shift that burden to the system itself. An excellent place to learn more about KM is KMWorld: <http://www.kmworld.com>.

Appendix 3: Information Architect

There are many factors in a quality web site design-- technical development, creativity, writing, color balance, organization-- but careful planning is what makes or breaks a site. For smaller web sites, organizing and linking pages can seem obvious just from being familiar with the content. On more complex sites, however, organizing content in a coherent and accessible fashion is more of a challenge.

Over the past few years methods have been developed to meet these organizational challenges. The results of these design methods have been termed "information architecture" to describe information organized for use by specific audiences.

In larger web projects, an "information architect" is responsible for the design and quality of this organization. Information architects can play a role in most of the stages of site development, including requirements, specification, design, evaluation, and testing. As such they often serve as something of a project manager.

Depending on the scale of site development, and thus the level of planning, an information architect should be able to:

- Define the goals for a site, both for the site's audience, and for the overall project. Throughout the project the IA is responsible for ensuring that a site meets these goals. Defining and sticking to overall goals keeps projects on track.
- Define the target audiences and rank them, possibly defining user mental models or personas for unfamiliar audiences. Explicitly defining an audience's needs ensures that design decisions are based upon agreed upon needs, rather than personal preferences.
- Define scenarios or use cases that can be used to create site specifications--descriptions of the "what" and "how" of site functionality. Scenarios and use cases are broken down into specific tasks, or steps to achieving user goals. These become functions the site must provide.
- Create and maintain a content inventory and hierarchy, including defining and labeling content categories. This includes defining controlled vocabularies to describe content, and thesauri to describe term relationships.
- Create wire frames and navigation maps to communication site architecture. These design documents provide a "big picture" view of what will be produced, and how it will function.
- Specify an appropriate navigation system, including labeling, linking, and indexing/searching. A good design ensures that content is placed within a useful and consistent context, providing access to related information.
- Perform heuristic and usability testing. These evaluations ensure usability requirements are met with respect to language, layout and graphics, information design/organization, and the user interface.
- Be an advocate of users' needs throughout all the stages of site development and deployment. Although not a measurable task, no other project member is specifically responsible for taking care of users' needs, which is often the genuine measure of a site's success.

Appendix 4: Computing Coordinator Decision-making Process

The UCSC Computing Coordinator decision-making process for making recommendations to ITC has proven to be an effective process in the past year. A full description of the process is shown on <http://www2.ucsc.edu/coord/decisions.shtml> and includes these essential elements of principles and process:

Principles

- Everyone on the computing coordinators' list should be able to contribute in discussions.
- Everyone who has input valuable to a discussion is encouraged to contribute that input.
- The purpose of coordinator discussions should be to hear and weigh everyone's concerns and points of view and to seek a resolution that considers them all.
- It is acceptable to present as "general consensus" an item that does not receive 100% agreement. For example a resolution that one person or a small group disagrees with can still go forward to the ITC. The person (or group) in disagreement will be encouraged to document their dissent, and this dissent should be presented along with the "general consensus" resolution.
- Anything that is presented to the ITC should deal with impact and cost issues rather than technical issues. While our discussion will of course include technical issues, the summary we present to the ITC should focus on their effects rather than their details.

Process

- An issue is presented for discussion on the coordinators' email list or in a face-to-face meeting.
- Discussion occurs on the list.
- There is discussion in at least one face-to-face coordinator meeting.
- A summary of the discussion resolution is presented to the email list by the topic owner (who is not necessarily Scotty Brookie, Coord rep to ITC, or Eric Goodman, Coord leader).
- Any follow up discussion (focused on clarifying and closing the resolution) occurs on the list.
- Members indicate their concerns (or support) to the topic owner (which may happen on or off the list).
- If the response shows general consensus, the item should be presented at an upcoming ITC meeting, if appropriate. Note that according to the above principles, this may include presenting one or more dissenting views.
- This represents the minimal process Coordinators would follow. Some topics will require extra discussions with the whole group, or work in working/interest groups that is presented back to the main coordinators group.
- We will use a "general consensus" method of coming to agreement. No formal consensus gathering metric (e.g., vote counting) will be used at this time.

Appendix 5: Assessment of Web Pages

Evaluation of web sites includes both objective and subjective methods. Best practices dictate discriminating and setting appropriate expectations for each. Objective criteria include any that can be explicitly identified and decided upon with a reasonable degree of certainty. Subjective criteria include user testing where no specific results of testing are expected, but evaluation is done through the eyes of a representative or affiliated user.

Many resources for criteria of objective evaluations already exist. Technical evaluations include functional, security, performance, scalability and compatibility tests. Software tools are available to automate technical evaluation. Usability evaluations include language, layout, graphics, information architecture and user interface reviews. These evaluations cover ADA accessibility requirements, the W3C's accessibility guidelines, and various design usability criteria. Evaluation criteria should be decided in advance, and pages scored based on compliance. These criteria can be separated into hazard and improvement issues. Hazard issues involve those that present a serious usability constraint for the user and require fixing. Improvement criteria include those that would improve the overall user experience, but do not adversely hinder accessibility.

Subjective evaluations provide necessary insights into website use. Testing validates and provides needed feedback on many web design issues. Testing throughout the design and deployment phases of site development provides a needed outside perspective-- a fresh perspective of the user experiencing the site for the first time. It also improves the judgment of web developers, as their understanding of users broadens, and resolves "religious" debates about design issues.

Resources for objective usability evaluation criteria:

- Department of Justice ADA homepage <http://www.usdoj.gov/crt/ada/adahom1.htm>
- W3C Web Accessibility Guidelines <http://www.w3.org/WAI/> and <http://www.usability.gov/>
- Objective Evaluation of Usability Hazards <http://www.abeleto.com/resources/articles/objective.html>
- Bobby Site Inspection Tool to test ADA compliance <http://bobby.cast.org/>
- Inspection Methods Resources <http://usableweb.com/topics/000606-0-0.html>
- "Quality Web Systems" book <http://www.qualitywebsys.com/>

Resources for subjective user testing:

- Conducting Usability Tests http://usability.gov/methods/usability_testing.html
- User Testing Resources <http://usableweb.com/topics/000878-0-0.html>
- "Don't Make Me Think" book <http://www.sensible.com/>
- Discount Usability for the Web http://www.useit.com/papers/querrilla_hci.html

Appendix 6: Training and Tutorials On-line

The following training and tutorials are linked from the CATS Instructional Computing site at <http://ic.ucsc.edu/docs/tutorials/index.shtml>

Tutorials: Making a Web Page

IC Server Support

- [Redirecting users to your new page](#)
- [Limiting access to files on your course website](#)
- [Adding a hit counter to your course website](#)
- [View Web Server statistics](#)

Resources on HTML

- [NCSA Beginners Guide to HTML](#) - A good starting point for understanding how HTML works.
- [Instructions on the use of absolute and relative URLs](#)- Answers to your frequently asked questions about links
- [Using accented and special characters on the web](#)
- [Webmonkey](#) - HotWired's tutorials on Web authoring, design, programming and more.
- [Web Standards Project](#) - "Fighting for standards in our browsers".
- [Ask Dr. Web](#) - guide for beginners to intermediates on a variety of topics.
- [Intermediate HTML](#) - A guide to some more complex HTML tags.
- [Index dot CSS](#) - Very complete, comprehensive.
- [Index dot HTML](#) - a great reference tool

Resources on CSS (Cascading Style Sheets)

- [Index dot CSS](#) - Very complete, comprehensive resource on CCS

Resources on CGI programming:

- [The Common Gateway Interface](#) - A good CGI intro.
- [Perl.com](#) - straight from the camel's mouth.
- [The CGI Resource Index](#) -large collection of cgi info and scripts

Resources on JavaScript

- [JavaScript Reference Manual](#) - excellent. Covers all topics that are of use.
- [Javascript Tutorial](#) - Javascript basics and ready-to-use scripts.

Resources on PHP

- [PHP.net](#) - The definitive PHP site
- [PHP Resource Index](#) - Over 800 resources in more than 190 categories
- [The PHP WebRing](#) - A directory of PHP related sites
- [PHP Tutorials](#)

Tutorials: Uploading a Web page

- [Access files from a Mac on the campus network](#) (AppleShare)

- [Move files onto the server using a PC](#) (WS_FTP)
- [Move files onto the server using a Mac](#) (Fetch)
- [Use SSH on a PC](#)
- [Use SSH on a Macintosh](#)

Tutorials: Graphics / Scanning

- [Use the scanner connected to the Mac](#)
- [Use the scanner connected to the PC](#)
- [Prepare images for the web](#)
- [Scan text into word-processing format](#) (OmniPage Pro)
- [Convert documents to PDF format with Adobe Distiller](#)
- [How to create an animated GIF](#)

Resources on Graphics:

- [Colors](#) - This palette displays browser-safe colors.
- [Digital Thread](#) - compilation of 'web design' related links, everything from digital type foundries to dhtml.
- ["The Scanning FAQ"](#) - Tips and techniques for image scanning
- [Planet Photoshop](#) - "Web Portal for [Adobe Photoshop](#) Resources and Information".

Tutorials: Multimedia Production

- [Making Flash Animations](#) ([Macromedia Flash](#))
- [Digitizing audio](#) ([SoundEdit](#))
- [Digitizing video](#) ([Adobe Premiere](#))
- [Digitizing video](#) ([iMovie](#))
- [Compressing Digital Video](#) ([Media Cleaner Pro](#))
- [Batch Image Import to Slides](#) ([MS PowerPoint](#))
- [Final CutPro](#) official web site
- [Excellent PowerPoint resource](#) [Florida Gulf Coast University]
- [How to burn your own CD](#)
- [How to burn your own CD on the PC](#)

Miscellaneous

- [Using the Web for Research: Tutorial](#)
- [How Do I](#) - user submitted questions and answers
- [Get help developing course web pages](#)
- [UCSC Computer Literacy tutorial](#) (NetTrail)

Appendix 7: Web Tools Used at UCSC

The Web Services Committee has a Tools Subgroup comprised of Aaron Melgares, David Rosen, and Phillip Stark. There was some concern and reluctance that the purpose of the group was to recommend standard campus tools that would be enforced (Microsoft IIS web server instead of Apache, for example) but the group quickly refocused on reusable, customizable tools used to develop dynamic web sites. In April 2002, the Tools Subgroup asked Computing Coordinators and web application developers to provide information about tools they use to develop web applications for dynamic web sites. They asked these questions regarding CGI and middleware tools, as well as database platforms:

<p style="text-align: center;">Coordinator and Campus Web Application Developers Survey</p> <p><u>CGI/Middleware tools</u></p> <p>What tools do you use to develop web applications? (some examples: FileMaker, PHP, Perl, Cold Fusion):</p> <p><u>Database platform</u></p> <p>What is the back-end data storage for your applications? (some examples: mySQL, FileMaker Pro, MS Access, Oracle):</p> <p>What operating systems do you use for middleware/database servers? For each web application you've developed please provide the following info. If you have multiple applications, sharing just a sample of those you think others on campus might care about would be fine.</p> <p>Name of system: Purpose: Audience/who are users? Level of traffic/use: Number of hours to develop: Resources and staff that were required for development: Who is the primary contact for supporting this system? Could you share this system? If so, what level of support would you be willing to provide? (some examples: I can't/won't share; they can download it but I can't provide any assistance; I can answer a few questions here and there; I'll help if/when I have time; I'm willing to talk to people about what I did)</p>

The survey elicited responses from 11 web developers who support a variety of web tools. The tools inventory will be posted to the web in a searchable format in Summer, 2002.

Appendix 8: UCSC Web Policy, Procedures, and Practices, Based on UC San Diego Document

This document is based on the "UCSD Web Policy, Procedures and Practices" with the following modifications:

- All "UCSD" were replaced with "UCSC"
- Easily identifiable UCSD units, policies or other UCSD-specific references are highlighted in yellow. For example, in the UCSD document, "InfoPath," is a library unit that determines which sites are "official" and receive the official seal.

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UCSC WEB POLICY, PROCEDURES AND PRACTICES

I. INTRODUCTION

UCSC recognizes the important role of the Internet in carrying out the University's mission of teaching, research, patient care, and community service and is committed to protecting freedom of expression on the World Wide Web to the extent consistent with law and applicable University policies. This UCSC Web Policy ("UCSC Policy") describes the applicability of certain laws and University policies, including the University of California ("University") Electronic Communications Policy ("University EC Policy"), to UCSC Web Sites and Pages.

II. DEFINITIONS

The following definitions are used for the purposes of this UCSC Policy only:

- A. An **Authorized User** is a student, staff or academic appointee, or a registered student or support organization of UCSC, or other persons participating in an authorized program of UCSC, or party to a contractual or license relationship with UCSC.
- B. An **Authorizing Party** is the current administrative or academic head of a Unit.
- C. A **Designated UCSC Official** is one of the following:

1. The Department Chair or the Chair's designee in the case of a Web Site Author or Webmaster who is a graduate student or academic appointee;
 2. The individual's supervisor or administrative head of unit, in the case of staff;
 3. The student's College Dean, in the case of an undergraduate;
 4. In other cases, it is the official who authorized the Web site or page as specified in Section III.
- D. **InfoPath** is the official Web site of UCSC. It includes the page at the address of www.UCSC.edu and the subordinate Web Pages that are directly managed by the Software Engineering Department, UCSC Libraries.
- E. A **Link** is a hypermedia connection within a Web page from one site to another on the World Wide Web; Linked means the application of such a connection. A Link is considered a reference point only.
- F. An **Official UCSC Web Site** is the primary UCSC Web Site for a Unit of UCSC, representing the Unit on the World Wide Web. Every Official Web Site is registered with the Software Engineering Department, UCSC Libraries and shall display the UCSC Seal for Official Web Pages.
- G. A **Personal Web Site** is a UCSC Web Site that is created by an Authorized User in his or her personal capacity and not as an employee or academic of UCSC.
- H. A **System Administrator** is an individual charged with management and oversight of UCSC computer systems, specifically of a UCSC Web server.
- I. The **UCSC Seal for Official Web Pages** is a graphic consisting of the UCSC logo and the phrase "Official Web Page of the University of California, Santa Cruz."
- J. A **UCSC Web Site** is any Web Site residing on a UCSC server or other server funded by University budgets, and any Web Site that uses a hostname in the UCSC.edu domain or an Internet Protocol address in the range designated for UCSC.
- K. A **Unit** means a UCSC division, school, academic department, program, administrative department, student, staff, or faculty organization, Center, Institute, Organized Research Unit and any formal group recognized as a UCSC Unit by the Chancellor and the Regents of the University of California.
- L. A **Web Account** is a collection of resources provided to a Web Site Author through a Systems Administrator or Webmaster. This collection may include a unique address, computer access, and disk storage. These resources may be provided subject to express or implied terms and conditions of use, such as limits or quotas, or on a recharge basis.
- M. A **Web Page** is a document on the World Wide Web displayed with a Web browser and related Web technologies.
- N. A **Webmaster** is a person or group responsible for the technical management and oversight of a UCSC Web Site.
- O. A **Web Site** is a collection of related Web Pages under a common webmaster.
- P. A **Web Site Author** is the person or persons who has responsibility for the content of a UCSC Web Site, including making or participating in the decision to put a Link into such UCSC Web Site.

III. PROCEDURES FOR ESTABLISHING A WEB ACCOUNT

. Authorized Users

Only Authorized Users may be allowed under this Policy to be Web Site Authors. Web Site Authors may be required to show verification of their identity to appropriate University officials.

A. Students

Students and registered student organizations may establish a Web Account by contacting UCSC Academic Computing Services (ACS). Accounts are subject to ACS Usage Guidelines.

B. Units

Each unit at UCSC may create UCSC Web Sites. UCSC Web Sites created by or within a Unit shall be updated and maintained by the Unit or a Web Site Author within the Unit.

1. ACS provides Web Accounts and associated services for Units on a recharge basis. Accounts are subject to ACS Usage Guidelines.
2. Each Unit may create one or more Official UCSC Web Sites. Other UCSC Web Sites may be created and maintained which contain UCSC information but which are not designated as Official UCSC Web Sites. Although not registered as Official UCSC Web Sites, some UCSC Web Sites, such as course Web Sites, may in some cases be legally considered to be University business subject to the UCSC student records policy (PPM 160-2), the California Public Records Act, the Federal Copyright Act, this UCSC Policy and other applicable laws and University policies.
3. Subject to Section VI.C., server space for Personal Web Sites may be provided by a Unit in the discretion of its Authorizing Party. A Unit may establish additional policies and guidelines governing the content and style of Personal Web Sites under its jurisdiction, including the right to terminate such Sites on grounds other than as provided in this Policy.

C. Identification

Each UCSC Web Site must display information disclosing the identity of the Web Site Author, including a contact name with email address. If the Site consists of more than one page, such information must appear on at least one page (preferably the main page) of the Site. Web Site Authors shall not employ a false identity (the name or electronic identification of another), but may use a pseudonym (an alternative name for oneself) so long as the pseudonym clearly does not constitute a false identity. Pseudonyms and anonymous communications are permissible as provided in the UC Electronic Communications Policy.

D. Agreement to Terms of Use

Each Web Site Author and Webmaster is bound by the terms of this UCSC Policy that will be posted on InfoPath. Systems Administrators should electronically communicate the URL for this Policy to Web Site Authors and Webmasters periodically. However, any failure to so communicate will not affect the application of this Policy to each Web Site Author and Webmaster.

E. Computer Use Policies

Some Web Site Authors and Webmasters may be signatories to various campus computer use policies, including the [ACS Acceptable Use Policies and Advisories](#) and policies adopted by campus Units; these policies also govern the operation of UCSC Web Sites to which they apply.

IV. **REGISTRATION AS AN OFFICIAL UCSC WEB SITE**

. Eligibility

Only UCSC Web Sites designated by a Unit are eligible to be registered as Official UCSC Web sites.

1. Registration of an Official UCSC Web Site requires completion and submission of a Memorandum of Understanding with the [Software Engineering Department](#), UCSC Libraries, signed by the Authorizing Party. This form is available from the Help page of [InfoPath](#).

A. Effects of Registration

1. Use of UCSC Seal for Official Web Pages

Each Official UCSC Web Site shall display a UCSC Seal for Official Web Pages on its main page. The seal may also appear on other pages of the Official Web Site, at the Webmaster's discretion. The seal shall not be altered by users, and shall not be used in any Web Sites that have not been registered with the [Software Engineering Department](#), UCSC Libraries.

2. Links to UCSC Official Web Sites

- a. As a result of registration by which a UCSC Web Site becomes an Official UCSC Web Site, the [Director of InfoPath](#) is given the authority to determine the locations of links within [InfoPath](#) to the Official UCSC Web Site, in consultation with the Web Site Author or the Webmaster of the Official UCSC Web Site.
- b. The [Director of InfoPath](#) may link from [InfoPath](#) to any UCSC Web Site at the request of the Web Site Author or Webmaster. It is the intention of the [Software Engineering Department](#), UCSC Libraries to Link to any appropriate UCSC Web Site, including support groups, staff associations, campus foundations, alumni associations and student organizations. The [Director of InfoPath](#) may also Link to any relevant non-UCSC site from [InfoPath](#).

V. **UCSC WEB SITES NOT REGISTERED AS OFFICIAL SITES**

. Not Representative

Any UCSC Web Site which is not registered as an Official UCSC Web Site is unofficial, and does not represent UCSC in any way, as more fully described in the Terms and Conditions of Use document Linked to the main page of [InfoPath](#).

A. Appropriate Disclaimers

All UCSC Web Sites, including but not limited to Personal Web Sites, shall avoid the impression that they are representing or making statements on behalf of, or endorsed

by, UCSC, or any Unit of UCSC, unless expressly authorized to do so by an appropriate official at UCSC.

VI. OPERATIONAL REQUIREMENTS AND REGULATIONS

. Purpose

UCSC Web Accounts may be provided by University units or sub-units in support of the teaching, research, and public service mission of the University, and of the administrative functions that support this mission.

A. Non-Competition

UCSC Web Accounts shall not be provided to individuals and/or organizations which are not Authorized Users except where such services support the mission of the University and are either unique or would not be in competition with commercial sources.

B. Personal Use

Authorized Users may use UCSC Web Accounts for incidental personal purposes provided that such use does not: (i) directly or indirectly interfere with the University's operation of electronic communications facilities; (ii) burden the University with noticeable and avoidable incremental cost; or (iii) interfere with the user's employment or other obligations to the University. Personal use is also subject to the provisions of [Section III.C.3](#).

C. Accessibility

All electronic communications intended to accomplish the academic and administrative tasks of the University shall be accessible to users with disabilities in compliance with law and University policies. Alternate accommodations shall conform to law and University policies and guidelines.

D. Use of UC and UCSC Seals and Logos

Use of the University's name is regulated by the State of California Education Code 92000, as implemented by University policy, [UCSC Identity Guidelines and UCSC Policies and Procedures Applying to Student Activities 15.12.10](#). All UCSC Web Sites must comply with these laws and policies concerning the use of the University name, logo, seals, trademarks and other proprietary identifiers.

E. Endorsement

It is a misdemeanor to use the name of the University of California in any way that implies, without advance permission from an appropriate official that the University endorses, supports or is affiliated with any product, service or other organization. Links from a UCSC Web Site to any Web Site not affiliated with UCSC must not

express or imply UCSC's endorsement of the Site's products, services, or statements, with the exception of Links to officially endorsed vendors. A statement to that effect is part of the Terms and Conditions of Use document on [InfoPath](#).

F. Advertising

Units may not accept paid advertising from entities not affiliated with UCSC due to the risk of unrelated business income accruing to the University. Therefore, UCSC Web Sites may not contain such material, except with respect to official University and UCSC activities and programs or with respect to sponsorships approved by the [Vice Chancellor-External Relations](#). It is acceptable to acknowledge sponsorship of UCSC events and programs on UCSC Web Pages provided that such acknowledgment does not advertise a product or service.

G. Other Restrictions

UCSC Web Sites may not be used for: (i) unlawful activities; (ii) commercial purposes not under the auspices of the University; (iii) personal financial gain (except as permitted under applicable academic personnel policies); (iv) personal use inconsistent with [Section VI.C.](#), or (v) uses that violate other University or campus policies or guidelines. The latter include, but are not limited to, policies and guidelines regarding intellectual property and sexual or other forms of harassment ([see Supplement I, Policy References](#)).

H. Disclosure of Confidential and Personal Information

1. UCSC Web Sites shall avoid any unauthorized disclosure of information about students as described by the [University of California Policies Applying to the Disclosure of Information from Student Records \(PPM 160-2\)](#).
2. UCSC Web Sites shall avoid the unauthorized disclosure of information about University employees and other confidential information, as described in the [Information Practices Act and the Legal Requirements on Privacy of and Access to Information, RMP-8](#).
3. UCSC Web Sites containing confidential and/or personal information shall be protected using appropriate access and publication restrictions to protect electronic content. It is recommended that Web Site Authors and Webmasters posting confidential or private information also post notification of relevant restrictions and policies on the same Page or Site.

I. Copyright

Contents of all UCSC Web Sites must follow University policies and procedures regarding copyright. See University of California Policy on Copyright Ownership and UC Policy and Guidelines on the Reproduction of Copyrighted Materials for Teaching and Research. Repeated violations of the Copyright Policies will subject a Web Account to service termination.

1. Permission

When using copyrighted or trademarked material, Web Site Authors and Webmasters are responsible for obtaining appropriate permission from the copyright holder.

2. In compliance with the Digital Millennium Copyright Act, the University reserves the right to suspend or terminate access to University electronic communications systems and services by any user who repeatedly violates copyright law.

J. Additional Applicable Policies

Other policies may also apply to UCSC Web Sites and Web-related activities. All Web Site Authors and Webmasters must make themselves aware of campus policy, and any laws or regulations that apply to electronic publishing and the use of University facilities.

VII. SERVICE RESTRICTIONS

UCSC Web Accounts may be wholly or partially interrupted, suspended, terminated, or limited in accordance with the terms of the Web Account as follows:

. Computer Maintenance

Interruptions in service may occur to some or all Web Accounts when, incident to system upgrades, repair or maintenance, or as a result of an unanticipated failure or disruption of utility or other essential services, the computer system or equipment to support such Web Accounts is not operational.

A. Operating Procedures

Suspension, termination, or limitation of a Web Account may occur as provided in the express or implied operational terms of governing the use of such Web Account, e.g., exhaustion of a computing quota assigned to such account or the exhaustion of funds associated with a recharge service.

B. Temporary Suspension and Termination

1. The appropriate System Administrator or the Web Site Author's Designated UCSC Official may suspend a Web Account, temporarily or permanently:
 0. When there is reliable evidence indicating that a violation of law or of University policies listed in Appendix C of the UC Electronic Communications Policy probably has occurred, or
 1. Where failure to act may result in significant bodily harm, significant property loss or damage, loss of significant evidence of violations of law or University policy, or significant liability to the University or to members of the University community, or
 2. In exceptional cases, where failure to act could seriously hamper the ability of the University to function administratively or to meet its teaching obligations, or

3. When a staff member's employment duties at UCSC no longer require or permit the usage of a Web Account.
2. In any case where such suspension or termination has been initiated by the System Administrator, the action shall be subject to prompt secondary review by the Web Site Author's Designated UCSC Official, if the Web Site Author so requests in writing addressed to such Official.
3. If a service restriction lasts more than ten (10) calendar days, then approval for its continuation must be sought from the appropriate Vice Chancellor by the Designated UCSC Official for that Web Site Author, or
4. Temporary suspension or termination of a Web Account may be imposed in connection with disciplinary proceedings against a Web Site Author conducted pursuant to applicable UCSC procedures pertaining to faculty, staff, and students.
5. In addition to the foregoing, the use of Web Accounts by Web Site Authors other than UCSC faculty, staff and students may be terminated at any time, without advance notice, by the System Administrator providing such service, subject to prompt secondary review by such Web Site Author's Designated UCSC Official, if the Web Site Author so requests in writing addressed to such Official.
6. When a Web Site Author's affiliation with or registration at UCSC is terminated, his or her Account shall be terminated unless it is reassigned by the Designated UCSC Official to another Web Site Author. If the original Web Site Author was also the Webmaster, he or she may continue in that capacity with permission from the Designated UCSC Official.

VIII. RECOURSE FOR ACTIONS TAKEN IN SECTION VII

Any individual seeking review and/or appeal of actions taken under **Section 7** may initiate proceedings for review as follows:

- . For undergraduates and graduate students, under **Section 23.14 of the UCSC Policies & Procedures Applying to Student Activities**.
- A. For academic appointees who are not members of the Academic Senate nor covered by a memorandum of Understanding, under **Section 230-5 of the Policy and Procedure Manual**.
- B. For academic appointees covered by a Memorandum of Understanding, in accordance with the terms of such agreement.
- C. For academic appointees who are members of the Academic Senate, under **Bylaw 230 of the Bylaws of the Santa Cruz Division of the Academic Senate**.
- D. For employees covered by the **Personnel Policies for Staff Members and the Staff Personnel Policies**, under **Policy 70 Complaint Resolution (PPSM)**, **Policy 190 Grievances (APS)** and **Policy 290 Administrative Review (SPP)**, as applicable.
- E. for staff employees covered by a collective bargaining agreement, in accordance with such agreement.

SUPPLEMENT I

POLICY REFERENCES

The following list identifies significant sources used as background in the preparation of this Policy, whether or not they are directly referenced by this Policy. It does not include all federal and state laws and University policies that might apply to web sites. These University policies and laws change from time to time; therefore users of this Policy are encouraged to refer to on-line versions of this and other University policies accessible on the World Wide Web.

I. UNIVERSITY POLICIES AND GUIDELINES

University of California Electronic Communications Policy, November 17 , 2000

II. BUSINESS AND FINANCE BULLETINS

A-56, Academic Support Unit Costing and Billing Guidelines
E-29, Management and Control of University Equipment
BUS-43, Materiel Management
BUS-65, Guidelines for University Mail Services
G-29, Procedures for Investigating Misuse of University Resources
IS-3, Electronic Information Security
RMP-1, University Records Management Program
RMP-2, Records Disposition Program and Procedures
RMP-7, Privacy of and Access to Information Responsibilities
RMP-8, Legal Requirements on Privacy of and Access to Information
RMP-12, Guidelines for Assuring Privacy of Personal Information in Mailing Lists and Telephone Directories

III. PERSONNEL MANUALS AND AGREEMENTS

Academic Personnel Manual
Personnel Policies for Staff Members and Appendix II for Senior Managers
Staff Personnel Policies
Collective Bargaining Contracts (Memoranda of Understanding)
Nondiscrimination and Affirmative Action Policy Regarding Academic and Staff Employment
Policy 70 Complaint Resolution (PPSM)
Policy 190 Grievances (APS)
Policy 290 Administrative Review (SPP), as applicable

IV. OTHER RELATED POLICIES AND GUIDELINES

Academic Computing Services Usage Guidelines
Bylaws of the Santa Cruz Division of the Academic Senate
Campus Access Guidelines for Employee Organizations (Local Time, Place, and Manner Rules)
UC Policies Applying to Campus Activities, Organizations, and Students
University of California Policy and Guidelines on the Reproduction of Copyrighted Materials for Teaching and Research
University of California Policy on Copyright Ownership

Policies and Guidelines Regarding Intellectual Property
Policy on Sexual Harassment and Complaint Resolution Procedures
PPM 230-5 Non-Senate Academic Appointees/Grievances
University of California Policies Applying to the Disclosure of Information from Student Records (PPM 160-2)
University of California Records Disposition Schedules Manual
University Policy on Integrity in Research
UCSC Identity Guidelines (under development)
UCSC Policies and Procedures Applying to Student Activities 15.12.10

V. **STATE OF CALIFORNIA STATUTES**

State of California Information Practices Act of 1977 (Civil Code Section 1798 et seq.)
State of California Public Records Act (Government Code Section 6250 et seq.)
State of California Education Code, Section 67100 et seq.
State of California Education Code 92000
State of California Government Code, Section 11015.5
State of California Penal Code, Section 502

VI. **FEDERAL STATUTES AND REGULATIONS**

Americans with Disabilities Act of 1990
Communications Decency Act of 1996
Copyright Act of 1976
Digital Millennium Copyright Act of 1998
Electronic Communications Privacy Act of 1986
Family Educational Rights and Privacy Act of 1974
Privacy Act of 1974
Section 503 and 504 of the Rehabilitation Act
Telecommunications Act of 1934
Telecommunications Act of 1996
Federal Communications Commission Rules and Regulations

SUPPLEMENT II

**UCSC WEB POLICY
TERMS AND CONDITIONS OF USE**

PLEASE READ THESE TERMS AND CONDITIONS OF USE CAREFULLY BEFORE USING THIS SITE. By using this site and all other Official UCSC Web Sites, referred to as "these sites", you agree to these terms of use. If you do not agree to these terms of use, please do not use this site.

These Sites are owned and operated by UCSC (referred to as "UCSC," "we," "us," or "our" herein). We reserve the right, at our discretion, to change, modify, add, or remove portions of these terms at any time. Please check these terms periodically for changes. Your continued use of these Sites following the posting of changes to these terms (including the UCSC Web Policy) will mean you accept those changes.

OFFICIAL UCSC WEB SITES

Official UCSC Web Sites display the UCSC Seal for Official Web Pages at the bottom of their main page. Only Sites bearing the UCSC Seal for Official Web Pages are Official UCSC Web Sites. All other Sites hosted by UCSC servers are not official, including personal Web Pages of students, faculty, and staff, whether or not they carry a disclaimer. Unofficial Sites do not represent the University in any way. Any content contained or accessible from unofficial Web Sites does not reflect the views of the Regents of the University of California and the Regents do not endorse, warrant, or otherwise take responsibility for the contents of unofficial Web Pages or of any material accessible from unofficial Web Pages.

ENDORSEMENTS

Links from a Web Site located on a UCSC server to any non-University Site do not imply University endorsement of the Site's products or services. References to non-UCSC products, services, or organizations do not imply University endorsement of such products, services, or organizations.

RESTRICTIONS ON USE OF MATERIALS

All trademarks, service marks, and trade names are proprietary to UCSC and the Regents of the University of California, unless noted otherwise. No material from **InfoPath** or any Official UCSC Web Site may be copied, reproduced, republished, uploaded, posted, transmitted, or distributed in any way, without explicit permission, except that you may download one copy of the materials on any single computer for your personal, non-commercial home use only, provided you keep intact all copyright and other proprietary notices. Modification of the materials or use of the materials for any other purpose is a violation of UCSC's copyright and other proprietary rights. For purposes of these terms, the use of any such material on any other Web Site or networked computer environment is prohibited.

Under the Digital Millennium Copyright Act, the University must specify an agent to receive notices of infringement from an owner alleging that a UCSC Web Site is infringing its copyright. UCSC has designated the following agent:

Patrick LeCuyer
Assistant Vice Chancellor
Communications and Technology Services
University of California, Santa Cruz
Santa Cruz, CA 95064
plecuyer@cats.ucsc.edu
831-459-5214

DISCLAIMER

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LIMITATION OF LIABILITY

UNDER NO CIRCUMSTANCES, INCLUDING, BUT NOT LIMITED TO, NEGLIGENCE, SHALL UCSC BE LIABLE FOR ANY SPECIAL OR CONSEQUENTIAL DAMAGES THAT RESULT FROM THE USE OF, OR THE INABILITY TO USE, THE MATERIALS IN THIS SITE, EVEN IF UCSC OR A UCSC AUTHORIZED REPRESENTATIVE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. APPLICABLE LAW MAY NOT ALLOW THE LIMITATION OR EXCLUSION OF LIABILITY OR INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU. IN NO EVENT SHALL UCSC'S TOTAL LIABILITY TO YOU FOR ALL DAMAGES, LOSSES, AND CAUSES OF ACTION (WHETHER IN CONTRACT, TORT (INCLUDING, BUT NOT LIMITED TO, NEGLIGENCE), OR OTHERWISE) EXCEED THE AMOUNT PAID BY YOU, IF ANY, FOR ACCESSING THIS SITE.

SUPPLEMENT III

NOTE: A link will be provided to a new location when the final Web Graphic Identity Guidelines are available.

WEB GRAPHIC IDENTITY GUIDELINES

Working Draft, Sept. 25, 2000

1. Identity Recommendations
2. Policy Requirements
3. Organization/Style
4. Technology Issues
5. Accessibility
6. Copyright
7. Housekeeping

1. IDENTITY RECOMMENDATIONS

1.1 Graphic Identity

The **Marketing Council** is currently developing campuswide guidelines on **UCSC's Graphic Identity**. These guidelines are not yet final. The specific elements of the web graphic identity are still under development. Some elements will be developed in coordination with a graphic designer who is working with the Web Guidelines committee on the redesign of **InfoPath**, UCSC's official web site, and the External Relations page. Changes to this document will be made as appropriate.

1.1.1 Color Palette

The Web Graphic Identity Guidelines include a color palette. The basic color palette was adapted from the print Identity Guidelines color palette and uses web safe colors. This palette may be expanded in the course of the **InfoPath** and External Relations redesign project (see above).

1.1.2 Fonts

The Graphic Identity Guidelines includes a recommendation of fonts to use in UCSC web pages. UCSC Publications plans to investigate site-licensing options so that UCSC web authors can use these fonts easily and inexpensively.

1.1.2.1 Nameplates

A nameplate includes the name of a UCSC unit, and may include the University of California name as well. The nameplate font is Rotis Serif. It is currently available from Adobe. UCSC Publications will create nameplates for department upon request for a small fee. A sample nameplate is available.

1.1.2.2 Headline Fonts

We are not currently recommending a headline font. Departments may choose any headline font they wish that works well with the other fonts and page elements.

1.1.2.3 Body Fonts

The following body fonts are recommended:

Serif: Times, Garamond
Sans Serif: Arial, Helvetica

It is also acceptable to not designate a body font in your web documents to allow text to default to the user's preferred settings.

1.1.3 Page Elements

The Web Guidelines will address recommended page layout and placement of some elements such as the UCSC logo. Page layout and placement will be developed in coordination with a graphic designer who is working with the Web Guidelines committee on the redesign of [InfoPath](#), UCSC's official web site, and the [External Relations page](#). Changes to this document will be made as appropriate. Elements may include buttons, navigation bars, backgrounds, etc. These elements will be made available for web page authors to use if they wish.

1.2 Use of the University Name

1.3 UC and UCSC Seals and Logos

1.3.1 UC Seal

1.3.2 UCSC Seal

1.3.3 UCSC Logo

1.3.4 Other UCSC Logos and Symbols

1.3.5 Official UCSC Web Page Seals (see Section 2.1.2)

1.4 Page Layout and Page Templates

The Web Guidelines committee will be developing page templates that web authors can use to easily put their site together. Templates will be developed in coordination with a graphic designer and will be easy to adapt to the needs of various departments. Use of these templates is voluntary. Departments with more complex web needs may wish to design their own web site using the Identity Guidelines

1.5 Resources

1.5.1 Step by Step Checklist

The checklist will be made after the Graphical Identity guidelines have been agreed upon.

1.5.2 Consulting Services

There are a few departments that provide free and for-hire WWW consulting services.

1.5.2.1 Free Services

1.5.2.1.1 The [Software Engineering Department of the UCSC Libraries](#) provides free consulting to campus units. For more information, contact [Janet Tait, Director, Software Engineering Department at 858-534-6482 or \[webmaster@UCSC.edu\]\(mailto:webmaster@UCSC.edu\)](#).

1.5.2.1.2 [Academic Computing Services' Instructional WWW Development Center \(IWDC\)](#) provides free training and assistance to faculty for help with their course web pages. They provide free advice to anyone, though other services are outlined in [1.5.2.2.1](#). The [IWDC](#) also

exists to consult on the best methods for WWW-course delivery at UCSC, specifically in ACS-managed labs. They can be reached at iwdc@UCSC.edu or 858-822-3315.

1.5.2.1.3 Academic Computing Services offers free web site hosting to all students, staff and faculty that have a Personal (e-mail) or OCE account. In addition, ACS offers free hosting to student organizations registered with SOLO. Academic Affairs Faculty (as well as those who have dual appointments and teach undergraduate courses) may also obtain free hosting for course web sites. For more information, see <http://www-acsc.ucsc.edu> or contact ACS at acs-consult@UCSC.edu or 858-534-4060.

1.5.2.2 For-Hire Consulting Services.

Recharge units begin and discontinue services too often to make including a comprehensive list possible. Currently, the following groups have been identified as providing web publishing consultation, development and/or hosting. 1.5.2.2.1 Academic Computing Services' Instructional WWW Development Center (IWDC), <http://iwdc.ucsc.edu>, offers web development and hosting. They can be reached at iwdc@UCSC.edu or 858-822-3315.

1.5.2.2.2 The Publications Office offers web design services. They can be reached at 858-534-4754 or e-mail publications@UCSC.edu.

1.5.2.2.3 The School of Medicine's Office of Learning Resources provides web design services. They can be reached at 858-534-4139. More information is available at <http://medschool.ucsc.edu/olr/comp/graphics.html>.

1.5.3 Webdev Listserv

The Webdev listserv was established as a shared resource for UCSC web developers, allowing them to easily ask questions of and provide answers to their colleagues. To subscribe to the list send e-mail to listserv@UCSC.edu with body text that reads:
"add e-mail address webdev"
An example might be: "add jdoe@UCSC.edu webdev"

2. POLICY REQUIREMENTS

2.1 Office of the President Web Policy

The Office of the President is currently developing systemwide guidelines called the Electronic Communications Policy. This policy is not yet final. The policies noted in this document are in agreement with the most recent posted version of the OP policy. Changes to this document will be made if necessary after the OP policy is enacted. The current version of the policy is posted at <http://www.ucop.edu/ucophome/policies/ec/>

2.2 Campus Web Policy

The Electronic Information Task Force has been appointed by the Chancellor to develop a web policy for UCSC. This policy is currently in development and is not yet final. Changes to this

document will be made if necessary after the UCSC Web policy is enacted. Here are some of the policy issues covered in the UCSC Web Policy:

2.2.1 Logos and Seals

Use of the University's name is regulated by the State of California Education Code 92000, as implemented by University policy, [UCSC Identity Guidelines and UCSC Policies and Procedures Applying to Student Activities 15.12.10](#).

2.2.2 Official UCSC Web Sites

An Official UCSC Web Site is the primary UCSC Web Site for a unit of UCSC, representing the unit on the World Wide Web. Every Official Web Site is registered with the [UCSC Software Engineering Department of the UCSC Libraries](#) and shall display the UCSC Seal for Official Web Pages.

2.2.3 Copyright Notice

The contents of all electronic publications must follow University policies and procedures regarding copyright.

2.2.4 Contact Person's Name and Address.

Each UCSC Web Site must display information disclosing its ownership, including a contact name with email address.

3. ORGANIZATION/STYLE

3.1 Target Audience and Mission

3.1.1 Before beginning to design your site, first establish the goals of the site and your primary and secondary audiences. Does your site serve faculty, staff, students, prospective students, the public or a combination?

3.1.2 Then determine what organizational structure will best meet the needs of your audiences and allow them to find information quickly.

3.1.3 Assemble the site content that already exists (such as information in existing print publications) and determine what needs to be added and/or what needs to be excluded.

3.1.4 Organize your site based on audience needs rather than on how your office is organized. Make sure to have a rough sketch of how your site will be organized before you begin development.

3.1.5 Make the most important information immediately available to your users at the top levels of your site – don't bury it somewhere so that people have to go searching for it.

3.1.6 If your site is of interest to non-UCSC affiliates, remember to use full names of departments, committees, etc. For example, if listing IR/PS on a prospective students page, you should spell it out the first time you use it, Graduate School of International Relations and Pacific Studies (IR/PS).

3.1.7 Remember that even if your target audience is a select group of people such as a small research lab, people from around the world may find and peruse your site. Do not include any information on your public web site that you do not want publicly disclosed. Assuming that others will have no interest in your site is not enough.

3.2 Navigation

3.2.1 Use a consistent method of navigation throughout all levels of your site. Never strand people on "orphan" pages where they have to use the back button in order to return to the home page.

3.2.2 Offer navigation within long pages to avoid the need for cumbersome scrolling.

3.2.3 Be sure that critical information and navigation tools are located at the top of the page.

3.2.4 An increasing number of Web pages feature the main navigation buttons on the left-hand side of the page, so this is where most users will look first.

3.2.5 Label buttons clearly and do not make something look like a button if it is not.

3.2.6 Offer a site map or table of contents.

3.2.7 If your site is complex, include a search engine so that people can quickly find what they are looking for.

3.2.8 Use frames appropriately if you use them at all. Also refrain from needlessly opening new browser windows – this is confusing and disables the back button. (see section 4.6 for more information on these topics).

3.3 Graphics/Images

3.3.1 The careful use of images and graphics can go a long way to making your pages more inviting and interesting, but be sure to use images that are clear, quick loading and relevant to the text. If necessary, use thumbnail sketches of images and provide links to high-resolution images that can be downloaded. This will prevent the use of graphics from significantly slowing your download time.

3.3.2 Avoid the gratuitous use of the latest technology fads. Most people will visit your site in search of information, not to see a cool, spinning logo.

3.3.3 Avoid the use of continuously running animations, scrolling headlines or flashing text. Most users find these distracting and annoying.

3.3.4 Use icons only when necessary and make sure their design matches the overall tone of the site.

3.4 Responsiveness and Download Time

3.4.1 Remember that many people visiting your site may be using a relatively slow modems (28.8 or 33.6) to access the Internet from home, so keep your download times as short as possible. Users will be less frustrated if they can begin working on at least part of the page while waiting for images etc. to download.

3.4.2 Always provide ALT HTML tags for images so visitors know what images to expect. These are also useful for those who are relying exclusively on text.

3.4.3 Avoid the use of complex tables as these take a long time to download. Instead, divide information into multiple, simpler tables.

3.5 Text

3.5.1 Keep your text lively and succinct with the most important information provided first.

3.5.2 Avoid using UCSC jargon and acronyms that would be unfamiliar to people outside of the university or your field.

3.5.3 Provide URLs within your text to links that will provide more detailed or related information.

3.5.4 Consider breaking text into shorter, integrated pieces that are easier for readers to digest over the Web.

3.6 URLs

3.6.1 Keep URLs as short and simple as possible and try to make them have an obvious relationship to the content. This will make them much easier for people to remember.

3.7 Usability Studies

The best way to determine if your site is correctly designed to meet the needs of your audience is to conduct usability studies. This involves asking people to navigate through your site, watching what pathways they take, and noting any problems. You can find information on usability testing in the Help section of [InfoPath](#).

3.8 List of Links to Other Tip Sheets and Style Guide

Here are some links to other useful style guides and tip sheets:

Yale Web Style Guide (<http://info.med.yale.edu/caim/manual/>)

Webmonkey (<http://www.hotwired.com/webmonkey/>)

Sun's Guide to Web Style (<http://www.sun.com/styleguide/>)

4. TECHNOLOGY ISSUES

4.1 HTML 4.0 Specification

Because of the variation of individual web browsers, it is a good idea to use the HTML 4.0 specification from the W3 Consortium and associated W3 Consortium approved technologies (such as HTML and Cascading Style Sheets) when designing your web pages. Many non-W3C formats (e.g., PDF, Shockwave, etc.) require viewing with either plug-ins or stand-alone applications. Often, these formats cannot be viewed or navigated with standard user agents (including assistive technologies). Avoiding non-W3C and non-standard features (proprietary elements, attributes, properties, and extensions, for example, "BLINK") will tend to make pages more accessible to more people using a wider variety of hardware and software.

Take special care when using vendor-specific HTML editors such as Microsoft Front Page or Netscape Composer. It is a good idea to cross check your pages on several different browsers including a text-only browser.

4.2 Get Your Site Listed In Internet Search Engines

Your Official UCSC Web site will be automatically added to UCSC's search engine when you register it with the Web Technology Office. It is your responsibility to register your site with other search engines including commercial search engines such as Yahoo and Alta Vista. Some search engines may find your site automatically, but many do not. Most search engines have information on how to get your site listed with their search engine on their main page. There are also commercial services that exist that will register your site for you. You can find a list of prominent search engines on the Searching the Internet page of [InfoPath](#).

4.3 Use META Tags To Improve Results In The UCSC Search Engine

You can use META tags on your web page to improve the results of your page coming up in appropriate searches in the UCSC search engine and many commercial search engines. The META tags "keywords" and "description" are most often used for this purpose. "Keyword" allows you to list keywords that describe the content of your site. These words will be weighed more heavily when your page is searched, resulting in your page coming up sooner in a search for these terms. The syntax for keyword is:

META name="keywords" content="word, word, word, word, word phrase, word, word",

For Example:

META name="keywords" content="oceanography, ocean, marine biology, climatology, global change & the ocean, physical oceanography"

"Description" is also useful. It is used in place of the first few lines of text when a search engine returns a description of the sites it found. It describes your site better for people who are searching for it. The syntax for description is:

META name="description" content="text about your site"

For Example:

META name="description" content="Scripps Institution of Oceanography Library web site."

You can find out more about META tags at [Meta Tagging for Search Engines from the Web Developer's Virtual Library](#).

4.4 Organize your content in a clear directory structure.

4.4.1 Try to organize your content in a simple directory structure. Put like items (such as images) in one directory. Try to use shallow directory structures so that URLs do not become long and unwieldy.

Examples of such directories might include:

/images – all graphic files, including .jpeg and .gif files

/cgi-bin – a common placement for script and program files, including .pl and .cgi files

4.4.2 Other directories should be named based on your content. For example, a group of articles on Alumni might be grouped in an /alumni directory.

4.4.3 Don't use spaces in your directory names, and do not mix upper and lower case if possible.

4.5 Domain names and URLs

4.5.1 There are no regulations or standards for naming web sites. Most web sites fall within the domain of UCSC.edu.

4.5.1.1 The most common naming conventions for web sites are "department.UCSC.edu", such as "parking.UCSC.edu" and "www-department.UCSC.edu", such as "www-chancellor.UCSC.edu".

4.5.2 When choosing a URL for one's web site, keep in mind that it should be short and memorable.

4.6 Use frames and new browser windows sparingly Carefully consider your use of frames and new windows and use them where they are most effective.

4.6.1 While it is sometime appropriate to create a frames-based site, remember that this structure makes it difficult for users to link to specific sections of your site.

4.6.2. Use frames for encapsulated presentations of information where it is appropriate. Frames are good for carrying a common presentation forward throughout a site visit and typically are faster in the perceived download and display of information. Frames don't allow bookmarking of pages within the frame site, and inadvertent nesting of frames creates problems with navigation and site display.

4.6.3 If frames are employed, think about using the "NOFRAMES" option and name each frame to facilitate non-visual navigation.

4.6.4 New windows can be somewhat deceiving to the end user if they fully overlay the other open windows. Typically, new windows are good for interrupting an activity to present adjunct information, such as help, instructions, capturing feedback, exploring an option, etc, and then closing to return to previous work.

5. ACCESSIBILITY

5.1 Policy

All electronic publications, to the extent feasible, must be accessible to people with disabilities. These policies apply to all Web Sites intended to accomplish the academic and administrative tasks of the University.

5.2 Tips On Accessibility Based On W3 Consortium Guidelines

Web site creators should follow the recommendations in the W3 Consortium's Web Content Accessibility Guidelines (<http://www.w3.org/TR/WAI-WEBCONTENT/>) as much as possible so that their pages are accessible to users who use assistive technologies. See the Help page of [InfoPath](#) for resources on accessibility issues.

5.3 Accessibility Tips

5.3.1 Design for any browser. Avoid browser-specific technology. Adhere to the HTML 4.0 standard for best results for the most browsers.

5.3.2 Try to employ browser built-in supported technology for vital content (html text, gif images, etc) rather than proprietary formats such as Shockwave and PDF. If you do use proprietary formats, try to provide alternative methods to get the same content.

5.3.3 Avoid using visual representation exclusively. Some of your users may not be able to view visual material. Consider providing a text-based alternative, such as a text description of the content.

5.3.4 Provide alternatives to all materials, such as text alternatives for all images (use ALT tag), appropriate alternatives for all video, audio or multimedia. Provide alternatives for anything requiring a plug-in. Have text navigation alternative for all image maps.

5.3.5 Design for any access speed. Avoid excessively large (file size) pages. Use placeholders for large images (define height and width).

5.3.6 Content should be clear and legible. Use mark-up appropriately, such as the "acronym" and "lang" tags.

5.3.7 Check your pages using a validator for HTML 4.0 and accessibility standards such as Bobby. (<http://www.cast.org/bobby>)

6. COPYRIGHT

6.1 Copyrighted material must include explicit permission from the original author.

6.2 Do not assume you can use pictures/copy without asking, even if the content originated at UCSC and is currently posted on a web page. Publication on the web does not imply that the material is not copyrighted.

6.3 If you are unsure if something is copyrighted, check.

6.4 Identify the University of California on all pages (or at least the main page) for copyright purposes. Example: Copyright © 2000 by the Regents of the University of California. See the copyright notice on the main page of [InfoPath](#) for an example of a longer and more complete statement.

6.5 Additional Copyright Resources On Campus:

6.5.1 [Technology Transfers and Intellectual Property Services \(TTIPS\)](#) can provide information on copyright law, especially protecting your creations. They can be reached at invent@UCSC.edu or 858-534-5815. More information is available at <http://invent.UCSC.edu>

6.5.2 [The Copyright Task Force](#) is a committee comprised of UCSC librarians with an interest in copyright. Susan Jurist, Librarian, is Chair of the committee. She can be reached at sjurist@UCSC.edu or at 858-534-7193. Their site is at <http://gort.UCSC.edu/sj/copyright/>

6.5.3 [The Digital Millennium Copyright Act Designated Agent](#) is Tony Wood, Director of [Academic Computing Services](#). He should be contacted at twood@UCSC.edu or 858-534-4050 if you would like to report a copyright abuse.

6.6 Web Resources On Copyright: The Copyright Crash Course from University of Texas (<http://www.utsystem.edu/ogc/intellectualproperty/cprtindx.htm#top>)

7.0 HOUSEKEEPING

Nothing is more frustrating than visiting a neglected website. Outdated information or missing links on one page can make all other information on the site suspect. To help mitigate problems:

7.1 Include a "last updated" date on each page

7.2 Encourage error reporting by providing contact information and/or a feedback form (further encourage it by promptly acknowledging any feedback you receive).

7.3 Assign departmental "information stewards" to review pages on a regular schedule.

7.4 Develop processes and schedules for updating your site with new information and archiving or deleting information that is no longer timely or useful. <P< A email

7.6 Routinely retest your site for user-friendliness. Make sure it is easy to navigate for all users and that the processes employed function properly and efficiently.

7.7 Backup your site. Maintain an organized and handy back up of all pages and related files on your site.

7.8 Keep your site current. Expect to re-design your site every one to two years.

7.9 When "remodeling" your site, try not to rename or move pages or directories. If you must move one, provide a "redirection" page in the original location. Be sure to notify **InfoPath** and any other linked sites of your new address.