



DHCC Web Development Project Report

**in cooperation with the
Delaware Health Care
Commission
and the
Delaware
Government
Information Center**

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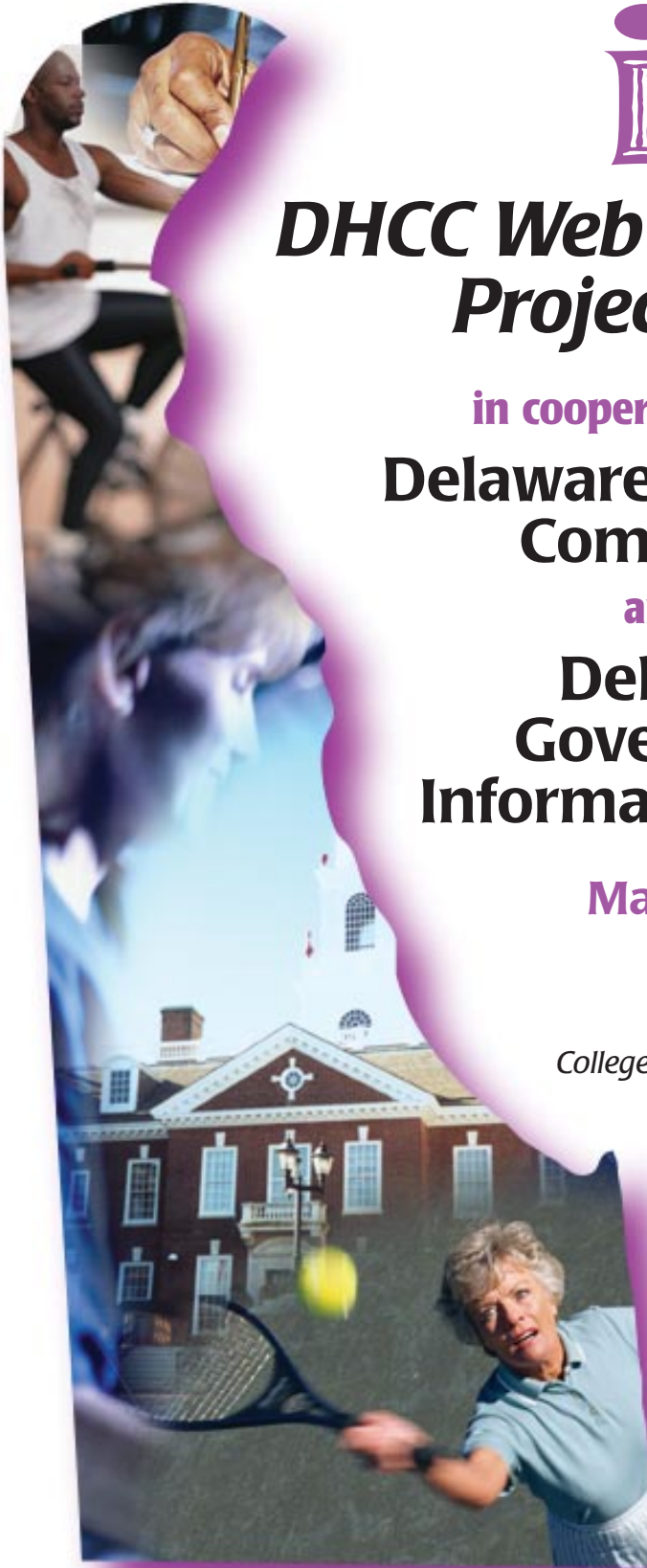
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Executive Summary

Moving traditional state government services online has been a priority of both Governor Carper and Governor Minner's administrations. In 2001, The Delaware Health Care Commission (DHCC) notified the State of Delaware's Government Information Center (GIC) about its desire to refresh its website. GIC then approached the Institute for Public Administration (IPA) in the School of Urban Affairs & Public Policy, College of Human Services, Education & Public Policy at the University of Delaware about the possibility of collaborating with the two state groups in the process. IPA agreed and provided staff (a Policy Specialist) and student support (one graduate student and an undergraduate Public Service Fellow) to lead the project.

Responsibility was shared among the participating agencies. The IPA team worked to familiarize themselves with the DHCC's materials, mission, and goals while team members from DHCC worked very hard to organize their thoughts in preparation for developing content. The IPA team presented the theory behind the state's e-government guidelines and intention-based philosophy. It developed and utilized planning tools (such as worksheets, charts, and presentations—see Appendices) to help DHCC envision its site. These tools increased the agency's ability to contribute and participate in the planning stage, which was essential. Though the IPA team was responsible for designing the site, a page template was created and training given on how to use the template, based on software purchased by DHCC. The ultimate goal was independence (i.e., the agency's ability to actively create pages and maintain its own site after the project concluded). GIC played a helper role throughout the project, pledging technical support and assuring DHCC it would be there to help after the project was completed.

The project kick-off meeting was held on October 1, 2001. The original timeline for this project was four months; however, due to many circumstances beyond IPA's control, the project realistically took more than six months and is still not "complete." Sufficient progress *was* made that the ultimate aim of turning over the site to DHCC for future development and maintenance with GIC's help occurred. GIC was interested in learning whether this team approach would be suitable to "package" for future such projects at the state level. Thus, the project *process* was critical to GIC, not necessarily the outcome. Some of the tools that were developed to facilitate the process proved to be very valuable and worthy of exporting to the state. Even the less effective tools showed promise if modified.

IPA believes that it has demonstrated the potential for this web development process to work again. It was indeed a learning process for all parties involved. IPA's recommendations for future such projects include 1) a more generous timeline—six months, 2) a more active role by the IT (or brokering) agency in helping move the process along, and 3) an intentional effort to stress the commitment of the benefiting agency's web development resources (funding and ongoing staff support) at the outset.

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Introduction: Goals and Objectives

The purpose of this paper is to document the collaborative process among three groups (two state agencies and a consulting non-governmental organization) that was forged to develop an e-government website for one of the participating state agencies. This paper will explore the theoretical framework within which this project was conceptualized and then examine the application of that framework. Ultimately, this document should provide some insights and recommendations that will help the state determine whether this process should be replicated or modeled with other state agencies toward the end of achieving better agency-wide e-government service at the state level.

Moving traditional state government services online has been a priority of both Governor Carper and Governor Minner's administrations. In 2001, The Delaware Health Care Commission (DHCC) notified the State of Delaware's Government Information Center (GIC) about its desire to refresh its website. GIC then approached the Institute for Public Administration (IPA) in the School of Urban Affairs & Public Policy, College of Human Services, Education & Public Policy at the University of Delaware about the possibility of collaborating with the two state groups in the process. DHCC already had a few disconnected subsites that it needed to make more visible but was also looking to update content, appearance, and functionality of its site in keeping with newer state guidelines.

E-government in Delaware is intended to facilitate use of government services without knowledge of the structure of state government. Ideally, putting many time-consuming services (such as waiting in line to renew a business license) online will streamline several important services and save humanpower hours. Consumers expect to receive the same quality and speed of service from their state agencies as they do from their retail outlets (e.g., *Amazon.com*). State agencies are beginning to run their operations more like a business and in order to do so, they need a professional, content-rich web presence that caters to customer intention.

The first section of this document will be theoretical, what issues groups should ponder, steps they should take, and barriers they may encounter in designing and implementing a cohesive e-government initiative. This section is followed by a case study—how this particular collaboration addressed the theoretical issues and concerns, as well as what was learned in the process and what pitfalls should/could be avoided by future groups. Following the case study section is a conclusion section that comprises a project assessment and recommendations for such future collaborations.

I. Theoretical Aspects of Web Development Projects

This section is intended to guide parties interested in collaborating on web development projects. The reader will walk through the two basic stages of the process: *Scope Assessment and Planning*, and *Design and Implementation*. This section will focus on the theoretical aspects of these two stages, posing possible questions to answer, issues to address, and providing the rationale for some of the behind-the-scenes thinking and planning that goes into a successful web initiative.

1. Scope Assessment and Planning

The planning process can predict the success of the overall project. This is an essential step that should be taken very seriously. It may require several meetings among the collaborating groups and considerable homework on the part of individual staff members. Responsibility will be shared by all of the participating agencies: the technical team will need to familiarize themselves with the state agency's materials, mission, and goals for the website, while team members from the state agency will need to work very hard to organize their thoughts and materials so they know exactly what the agency wants and what it can handle. Philosophically, the ultimate goal is independence, so there should be a commitment to planning and cross-fertilization. It will greatly benefit all parties involved if there are tools available to help the agency envision their site. Tools such as worksheets, charts, and presentations increase the agency's ability to contribute and participate in the planning stage, which would be useless without their input. The importance of this step cannot be stressed enough, the project will sink or swim based on the teams' attention and dedication during the scope assessment and planning stage.

An important question for an agency to ask is "what is the purpose of our website (what do we hope to achieve by going online/refreshing our site)?" Possible goals could be to increase efficiency, decrease customer service time on the phone, streamline operations that do not need to be done in person, increase the potential client base, and improve communication with board members and volunteers. This overall purpose should be in keeping with the agency mission and objectives and should keep pace with the state's technology goals.

The Harvard Policy Group on Network-Enables Services and Government, from the John F. Kennedy School of Government produced a document in 2000 called "Eight Imperatives for Leaders in a Networked World." The first imperative, "Focus on How IT Can Reshape Work and Public Sector Strategies" is especially salient for government agencies planning their e-government strategy. The following seven guidelines will help agencies plan to integrate the technology into their work patterns and office environments¹:

1. Develop a personal network of information, advice, and support.

¹ <http://www.ksg.harvard.edu/stratcom/hpg/index.htm>

2. Use the technology in your personal routines.
3. Develop support... do not limit your IT agenda to what you can accomplish internally.
4. Identify how information technology can be used to add value.
5. Build capacity as a learning organization.
6. Pursue investments that scale up: infrastructure, standards, and cross-boundary opportunities.
7. Reorganize work, improve the workflow and the division of labor within your agency.

1.1 E-Government Functionality

The three most basic levels of functionality for websites are *publish*, *interact*, and *transact*. Publishing—or posting—information is the foundation for all websites. Examples of publishing include posting the mission, objectives, and history of the agency, as well as, a list of programs and projects with which the agency is involved. The second level of complexity that should be considered is interactivity; citizens should have the opportunity to communicate with the agency via the website, and the agency should respond. Examples of interaction are e-mail links to the agency, a feedback form, or an information request form that can be filed online. Finally, agencies should consider moving simple transactions online so citizens have an opportunity to transact business via the agency website (see I–1.4). Examples of transaction are permit applications, paying parking tickets, paying taxes, and applying for business licenses.

The National Electronic-Commerce Coordinating Committee (EC3) produced a white paper on E-Government Strategic Planning in 2000, the following points from which are very helpful²:

- Align your e-government plan with your organization’s strategic plan
- Use a “multi-channel service delivery strategy, meaning the same services are available on the web, telephone, or in the office.
- Focus on customer-oriented services
- Standardize internal processes and plan adequately to achieve long-term service delivery goals
- Prioritize services to be put online
- Determine how citizens will access services
- Offer privacy and security if you collect personal information (such as e-mail addresses for mailing lists)
- Be prepared to participate in conversations about new legislation regarding web service delivery (such as records retention, use of digital signatures, and e-payment)

1.2 Target Audience and Clientele

In planning the scope of the website, ample time should be allotted to assessing the needs of the agency, the human resources that can be dedicated to the project, the strengths of

²http://www.ec3.org/InfoCenter/12_Conference_Information/2000_Conference/Documents_Released_in_Vegas/Planning_Document.doc

the agency, and most importantly, the needs of the clients. “Who are the clients?” is a vital question to answer. To do this adequately, the agency needs to think outside itself—to put itself in the shoes of the consumer. This is not an easy task because, as the experts, it is difficult to have any perspective on what people *might want* or *might think* the agency offers. Consider asking family members or friends who are less familiar with the agency’s services, and always remind each other to think outside the box. The website should not be limited to what the agency already does; it should build on existing strengths and offer more services to more people. Revisit the question, “who are the clients?” often to ensure that every aspect of the web strategy is an area of growth and improvement.

When addressing the question, “who are our clients?” the following questions from the EC3 white paper were helpful for us:

- What is it that we do most that can be translated to the web (provide information, answer questions, provide legislative advocacy, mobilize citizens)?
- What are your obligations? Do you have to post meeting dates and minutes?
- Who do you most often deal with? How can you classify the needs and the people who use your services?
- How can your website reduce your workload and streamline your services?

1.3 Resources

The next questions to consider are “what resources are available?” and “what resources do we need?” Existing resources are things like publications, content already posted on the current website or in agency materials, knowledge, experience, and expertise in the field. Some agencies may build their agency around their web presence; others will build their web presence around their agency. Needed resources will be things like training and humanpower to maintain and update the site, time to repurpose publications for the web, and technical needs (e.g., resourcing a designer and programmer, a server, graphics, possibly a database, etc.).

1.4 Streamlining and Redistributing the Workload

The new website should decrease office work in some areas but will likely increase it in others. Adequately plan and prepare for these transformations, because it is certain that some office work will change when the website is launched. Take time to analyze what areas of work can be streamlined. Identify time-consuming tasks and move them to the web to increase efficiency. Examples of tasks that can be moved to the web are: giving directions over the phone, mailing out forms, redirecting callers (e.g., if people think an agency provides criminal justice services when it only analyzes the criminal justice system, its office staff may constantly be redirecting people to the proper information destination), and distributing meeting materials to board members. New areas of work might include things like answering e-mailed questions, cataloging and implementing suggestions made (if there is a “feedback” or “contact us” section), and updating and

maintaining information. Tasks that are unnecessarily time-consuming for clients can be moved to the web as well (e.g. driving to an agency and waiting in line to file forms or applications). A new division of labor, including new tasks, should be considered while brainstorming the goals and scope of service.

1.5 Time Expenditure

Any planning process needs to take into account *time*. How much time will this project take? How long will each stage take, and who will be responsible for which parts? The major aspects of timing to remember are (1) prioritizing and (2) creating and sticking to a timeline. Because certain steps have to take place before others, it is essential to prioritize while in the planning stage. The amount of time invested in the up-front planning can significantly streamline workflow in latter stages. The timeline should be a guide but function as a series of chronological deadlines, because it is easy to get mired in laborious research and planning tasks. Timelines can be flexible, especially if there is not enough time to complete a step, but it should also serve as an impetus to maintain inertia and complete the project on time. Use the timeline as both a reference and a guide.

1.6 Accessibility

One major issue that needs to be addressed in the planning and assessment stage is the issue of accessibility. Accessibility has many forms, and its depth and breadth will be determined by the success of the “who are the clients?” process. Visitors to the site may have sight or hearing impairments and need a text or voice reader. In addition, they may not want to download images because their modem is too slow, use both the mouse and the keyboard, or may not read or speak English. (The potential client base is not all English speaking, therefore, adequately plan to provide services for more potential clients, not just the English speaking ones.) There are many ways to address barriers to accessibility. Begin by exploring other agencies’ websites and see how they handled it, refer to the state’s policy, or seek help from the state unit that handles web accessibility issues. Questions of accuracy and expense should be considered when choosing which route to take.

1.6.1 References

Delaware’s agency website guidelines are available through GIC or online at

http://www.state.de.us/sos/gic/reports/web_guidelines_version_2.0.htm

Massachusetts and Connecticut have undertaken similar tasks and produced guidelines to help guide other states in their web development initiatives. These documents can be downloaded from the following sites:

www.state.ma.us/itd/spg/publications/standards/web-access-std.htm and

www.emac.state.ct.us/access/policies/accesspolicy40.html.

2. Design and Implementation

The design and implementation phase will hinge on the decisions made at the *Scope Assessment and Planning* stage. It is likely that decisions made in the planning stage will

need to be revisited when encountered from a design (real model) perspective. The responsibility for this phase will rest primarily on the technical team, whereas the planning stage is a joint effort among the collaborative agencies.

2.1 Government and Industry Guidelines

When beginning the design phase, there are several government and industry guidelines to be followed. The State of Delaware has three main guidelines for state agencies: “engineer for maximum accessibility, communicate comprehensive, up to the minute information, [and] develop a common look and feel.” A summary of Delaware’s guidelines is available in Appendix A of this document. Delaware’s E-Government Steering Committee developed a comprehensive set of guidelines, which they broke down into three levels of relevance to state agency sites: *required*, *suggested*, and *optional*.

To “engineer for maximum accessibility,” the State has required that 1) the code comply with HTML 4.0, 2) the pages be compatible with special assistive technologies (such as text readers for the visually impaired), and 3) that the site be tested from multiple platforms and with multiple browsers (e.g., with a 14.4K modem and a high-speed connections, and with versions of Internet Explorer and Netscape).

The state requires that in order to “communicate up-to-the minute information,” agencies must provide basic agency information on their website pages and must use web traffic statistics - an internal resource now provided by the Government Information Center (GIC). The guidelines also suggest that web pages bear a time/date stamp and that agencies 1) develop a FAQ section (frequently asked questions), 2) include a web privacy policy stating the agency’s policy on use of information, and 3) encourage its customer service staff to contribute content to the website.

The third norm of State of Delaware agency websites is to “develop a common look and feel,” - to maintain a consistent look throughout the website. Agencies are required to integrate their sites with the *Delaware.gov* web portal and to clearly identify themselves as a unit of state government. However, a unique look is not necessary. The E-Government Steering Committee suggests that agencies use cascading style sheets in the design of their website, as well as consistent headers and footers on each page.

The issue of accessibility, which was touched upon briefly in the preceding section, will need to be fleshed out more fully at this point. Though the federal legislation does not yet apply to state agencies, making the site accessible to all users has legal precedent and should be a priority for the agency and the technical team. The Standards of the Federal Rehabilitation Act [508-29 U.S.C. §794d], which is commonly referred to as “Section 508,” has set the following standards for federal agencies:

“Individuals with disabilities, who are members of the public seeking information or services from a Federal agency, have access to and use of information and data that is comparable to that provided to the public who

are not individuals with disabilities, unless an undue burden would be imposed on the agency.”

There are many resources to assist in the process, but this will require some technical expertise. There are downloadable accessibility-checking plug-ins available and web groups that will scan a site and provide accessibility feedback for a fee.

Macromedia (creators of web-authoring software Dreamweaver—the design software that was used in the case study section) provides an accessibility plug-in and some basic guidelines for making sites accessible to all users. They are:

- Ensure graceful transformation, make mobility within the site smooth, limiting the number of movements necessary (from the mouse or the keyboard, or number of mouse clicks).
- Make content understandable and navigable, content is the main thrust of your website, make it clear and cohesive.
- Most importantly, pursue a simple design to facilitate ease of use.

The most fundamental and efficient way to make a site accessible is through the use of “ALT” tags, code content that will be read aloud for users with electronic readers and will be visible in lieu of the graphic elements to which they correspond. When a user with an electronic reader downloads an image, the “ALT” tag will describe an image using words so that all users can experience the information represented in an image. Another strategy is to create an image-free site or a text-only parallel site, which would mirror the main site.

2.2 Why a Portal?

Many state and local governments that are moving toward e-government services are choosing the portal (or intention-based) approach. What is a portal? According to *webopedia.com*, a web portal is “a website or service that offers a broad array of resources and services, such as e-mail, forums, search engines, and on-line shopping malls.” The portal design is like having a castle with many elegant rooms full of treasures; a visitor can get from room to room in a linear fashion, but that may not be as efficient as choosing to first visit all the rooms that feature gold, then choosing the rooms that feature silver. A portal offers the user many points of entry into a complex website. Depending on the portal options, the user can choose how to enter the site, whether it is by topic, identification of intention (i.e., what the user’s intent is in visiting the site), keyword search, or sitemap. Portals facilitate use by many various users who think and navigate differently.

2.3 Site Structure—Envisioning the Whole

Another important design parameter is the site structure. This is an optimal point to reintroduce the envisioning tools referred to in the *Scope Assessment and Planning* section. The technical team will need to know exactly how content is organized. To do this it needs significant input from the agency, which will probably need some assistance filling in the gaps. Things that seem apparent or simple usually are not. Issues like

internal and external links, flexibility of movement (management of decision options), and logical organization are crucial design features that should be transparent to the user but enhance the user's experience. Though these issues may seem somewhat irrelevant to the agency, the better the agency team understands the concepts, the more "in touch" it will be when it comes to having to maintain the site. Worksheets and charts can help link these concepts together in a meaningful way (see Appendix C, D, and F).

Building a sitemap is a good start. This important task should emanate from the earlier site-visioning steps and should be a joint effort of the agency and technical team. From a sitemap (a diagram showing individual pages in relationship to directories and other pages), the technical team can begin working with confidence, page by page, making intelligent decisions as the site begins to take shape. The more comfortable both the agency and technical team feel with the sitemap, the fewer glitches the technical team should encounter.

2.4 Content Development

Generating content will be the responsibility of the agency, because they are the experts. The technical team should develop a tool for the agency to use to guide them because things like a page title, page subject, page description, meta tags and key words should be included. An example of such a tool is found in Appendix G of this document. Content should be generated for each page of the website. Because users can arrive at a page from a variety of locations, the agency team should be mindful of the many routes to a particular page, meaning "information for librarians" should include information for local librarians, those elsewhere in the state, and those elsewhere in the world.

2.5 Page Structure—Developing a Common Look and Feel

When envisioning the page structure, consider the big-picture aspects of a portal. Pages should be reflective of the family site, show relation to the parent agencies (like the Department of Justice, the Governor's Office, or the State), and should display consistent imagery and text to identify the agency so the user never loses a sense of orientation. Displaying the agency name will allow the designer flexibility to decide whether to repeat terms or drop them because they are in the agency name. For example, the Criminal Justice Council might offer resources for criminal justice practitioners or criminal justice students. It will be sufficient to just say "practitioners" and "students" if the Criminal Justice Council logo or text is displayed on every page. This flexibility should also be maintained with regards to movement around the site. Users should not have to move linearly through the aforementioned castle, rather they should be able to jump from room to room in whatever order they choose and do so with relative ease (i.e., minimal mouse clicks). Features that allow web-like movement should appear on every page, not just on the homepage. This is another case in which using available visual real estate judiciously will direct and help foster the use of a variety of navigational techniques and/or choices on each and every page of the site.

2.5.1 Page Building

This is the phase in which the site is actually constructed. Site structuring leads to the page structure, which naturally leads to the step of page building. Page structuring and

building is more relevant to *Design and Implementation* than *Scope Assessment and Planning*, because the content should drive the design, not the other way around. How a user may move through the site, how the content will be organized, and the physical structuring of the site on the host server is critical to the design of the pages—and, ultimately, how pages are coded.

One way consistent design and navigational utility can be guaranteed is through the use of page templates. Templates also facilitate another goal of the collaborative web building project: the need for self-sufficiency, or the desire to empower an agency to maintain and update its own site. Templates will allow each page to have the same “look and feel” and employ identical functionality. Images will be consistent and maintenance will be simplified; in theory, there should be no difference between the pages created by the technical team and those created/edited by the agency staff.

Another simple way to ease navigation is to maximize the use of space, or “visual real estate.” How much information can fit neatly in the browser frame on a minimum-sized monitor? Ideally, the user will not have to scroll to view the entire homepage and will not often need to scroll on subsequent pages. Eliminating or minimizing non-utilitarian white space helps to maximize visual real estate, as does the use of utilities like pulldown menus or other JavaScript options. These utilities also simplify the user’s actions, the number of clicks or amount of time it takes to get to a desired destination. Templates should be designed with optimal use of visual real estate in mind.

2.5.2 Link-building

Agency websites should be rich with relevant links to other agencies, to parent organizations, and to internal and external resources. Link building will be an integral part in making the agency portal successful, but it also comes with some risks. Will the links take the user to another agency, or to a specific topic within another agency’s page? Will the user be able to get back to the original website? Is there reciprocity with the other state agency sites? In maintaining the website, agency staff must be mindful of the accuracy, relevance, and timeliness of the linked pages. It is frustrating when one clicks on a link that no longer exists, has an outdated web page, or worse (e.g., the link that used to go to information about fibromyalgia takes the user to information about obtaining adult day care). It is important to consider having a disclaimer statement regarding linked pages and sites. The agency should expressly state that they can not be responsible for content posted on other sites. An example of a disclaimer statement can be found in Appendix E of this document.

Links should probably be created as pages are built but may be done as a separate step.

2.5.3 Using Images

Whether or not to use images, and which images to use is a question for the design and implementation phase. Images should be secondary to the content of the site; they should complement and not detract from or overwhelm the content. Some designers may wish to decide early in the process while others may choose to use images as a finishing touch.

In the case of state agencies, it is often difficult to envision the perfect image to reflect what it “does” or the services it provides. The agency staff knows what they “do,” yet the image that reflects the agency’s name, mission, or purpose may not necessarily reflect what they “do.” Images can be misleading, also, because they may imply that the agency provides a direct service when they really conduct research on that service field. Plus, images take longer to load than does text onto the page, which is a good reason why images should be used judiciously. On the other hand, images break up the page and make it easier on the user to quickly process the information. They make a page more visually interesting and make the agency seem more polished and high-tech than a text-only page might.

Remembering these issues, and the accessibility issues raised earlier, will help the teams decide whether or not to use images and which images to use. But, as stated before, content should always drive design, not the other way around, and this applies particularly to the use of images in page design.

If the agency decides that it does wish to use images, there are many resources available. There are groups that post stock images that either the agency or the technical team can purchase; the agency can also take new photographs or use existing photographs or imagery. Two good sources for online stock photography are www.eyewire.com and www.photodisc.com. Resources for images are listed in the webliography at the end of this paper.

2.5.4 Homepage Design

One of the pages that will need particular attention and time is the homepage (may also be referred to as “index page” or site “portal” page). The above items in I–2.5 apply equally to a homepage; the indexing, as well, (see I–2.6) is critical in constructing a good homepage. The homepage, in many ways, beckons to be the first page created. Much like a logo, designers will often place initial emphasis on this critical piece of the puzzle as a way to “set the stage” for or begin to visually pattern what follows within the rest of the site. However, like a good research paper whose summary appears first but is usually the last page crafted, an agency homepage need not be dealt with until well into the page-building phase, as long as both the agency and technical teams have carefully thought through what it should contain and how it should be organized. The sitemap (see I–2.3), if carefully conceived, will provide a good perspective on this. The technical team can then blend the elements of “common look and feel” into a unique page that will become the typical starting point for the vast majority of visitors to the site.

2.6 Indexing

There are important indexing tools to help increase the visibility of a website via search engines and directories. Search engines (or web “spiders”) index text, page titles, and/or meta tag content, follow links, and measure page popularity or relevance.

Make sure that each page has a unique title that is built around the keywords for that page (please refer to web page content template in Appendix G). Use a sentence or two to describe the content of pages. Make sure that the list of keywords does not appear in the

description as such, because that won't help a page gain—and in some cases may effectively hinder—web visibility. When creating meta keyword attributes, only list the most important terms from each page. It is not a good practice to use words that do not appear on a page or repeat words over and over—“spamming.” Keep it short and concise. Most programmers suggest that you do not use the “meta refresh” attribute, because several search engines consider it “spam.” “Splash” pages (initial pages that are rich in design and often include animation and/or audio/video ranging from simple to complex) are interesting visually, but do not help your site maximize discovery potential.

2.7 Training, Developmental Testing, and Launch Planning

Before moving to launch planning, the website should be proofed, checked for accessibility, and subsequently undergo a period of testing in a non-public (“non-live”) setting. In parallel, the agency staff members who will be assigned to maintain the site will need some basic training.

Key staff members should undergo some basic training in page preparation/editing as well as file uploading. In many cases, the persons who will be assigned this task are not the ones who would be interfacing with the public about the agency and its services. Both such individuals (or groups of people) should have had plenty of exposure to and understand the site well enough to answer questions about the information contained therein prior to the official site launch. Therefore, it is vital that the agency take this staffing issue into consideration in its website planning. The technical team may provide some or all of this training and should try to make it as non-technical as possible for those involved.

After site pages have been built, all of the links should be checked to make sure they work and are appropriately marked. The content should be checked for accuracy and consistency, and the agency should make sure the overall content is in keeping with its mission for the site. Grammar and punctuation should be addressed. Spell checking the site is also a must. Spelling and grammatical errors will be magnified once the site is launched, so it is crucial to be diligent in this step. Good editing adds the final polish to the project.

Pages should then be checked to see that they meet the required accessibility standards (see I–2.1). During the initial stages of *Design and Implementation*, the state government's resources can assist in enabling an agency to assure that its pages will meet the state criteria.

In concert with the state's resource team, the agency and technical teams can then begin to plan for the transferring of files to a server (a computer that “serves” pages—i.e., requests for addressed information—over the Internet). Part of launch planning should take into consideration a trial period prior to the actual site launch. This can be done through the use of the state's development server. The site can reside on this server while the agency team checks out the site—how it works, if there are any minor mistakes that need to be corrected, etc. This step will help ensure the success of the site when launched. Beyond that, it's a period during which agency staff who will be assigned to

develop and maintain the site can get “hands on” experience editing and uploading pages, which will not only help them build on whatever training they’ve received up to this point but will also help familiarize them with the agency site.

After testing, the agency head should work with the state’s resource team to plan a launch date. This official launch can take many forms. Publicity will be important. Both clients and other state agencies should be made aware that an agency is putting its newest face on the web. Staffers will then have to be ready to answer questions about the agency’s site, as there might very well be both a period of adjustment for frequent visitors and an influx of new visitors.

II. Application of Theoretical Concepts—A Case Study

This section of the paper will be a case study of one collaborative effort to address the above questions and issues. The content will largely chronicle the events and stages during which the theory presented in the preceding section was addressed. However, as with many projects, the order in which particular theoretical items were addressed does not necessarily mirror that of the preceding section.

Representatives from the Institute for Public Administration (IPA) and members of the Delaware Health Care Commission (DHCC) were initially brought together by the Government Information Center (GIC) head for the purpose of discussing a potential collaborative effort. All parties welcomed the chance to work together.

1. Scope Assessment and Planning

The collaborative teams of DHCC, GIC, and IPA spent about six weeks in the scope assessment and planning phase and then an additional four weeks planning the structure of the site. Over the course of three meetings we struggled with issues of philosophy, goals, client base, and site organization. Between meetings, IPA team members worked to familiarize themselves with DHCC's mission, objectives, programs, projects, reports, publications, and existing websites.

1.1 The Initial Project Meeting

The first meeting was an introductory meeting wherein the teams met to begin building a framework for the project. The IPA team made a presentation to the DHCC team about the fundamentals of the portal approach, using an existing website as an example. Based on the presentation, DHCC decided to use a portal approach in their homepage structure, so that users, who intuitively browse in various ways, would have several site-entry options available. Then the process of defining tasks and responsibilities began. A rough timeline, which would have the project wrapping up in four months, was presented. (This timeframe was optimistic and was based somewhat on IPA's student support allocation for this project.) The IPA and GIC teams then summarized the "State of Delaware's Web Presentation Guidelines for State of Delaware Agencies," its e-government guidelines for web design and development. These guidelines include three levels of priority (*requirements, suggestions, and options*), the summary of which is found in Appendix A of this document. GIC distributed a hardcopy of one of its presentations that detailed the state's guidelines. At this initial meeting the IPA team also presented the DHCC team with a review of the literature on planning agency websites and a review of other health care commission websites.

The major issue with assessing the clientele was getting the agency team to think "outside the box," or to get them to put themselves in the shoes of not only their known but their potential clients. The approach naturally broadens when one considers clients other than the ones that are *expected* to or *assumed* will visit a site. It was a challenge for DHCC to imagine who *might* be visiting the DHCC site and what information they might want.

The IPA team was able to help with this precisely because they were a lot less familiar with DHCC and its services.

Based on initial meeting input from DHCC, the IPA team began creating a site outline draft, which was subsequently e-mailed to DHCC for their team's consideration prior to a second meeting.

1.2 Envisioning Service

One difficulty encountered was defining *provision of service*. DHCC does not provide any direct health care services, rather it redirects people who come looking for health insurance or healthcare resources. While this may not be one of its primary functions, it certainly is a time consuming one. Brainstorming with DHCC about how it can help people find the information it does *not* provide was a very useful task. Another issue was whether DHCC was prepared to deal with health care questions outside the scope of its projects. Privacy is a major issue in the health care industry, and although DHCC is only peripherally involved in the privacy of information with respect to electronic data, the IPA team suggested it would greatly benefit the agency and the community in general if it was prepared to deal with questions about privacy. Had DHCC envisioned its clients only from the “what we do” direction, it would not have considered this very current, heated topic in the field in relation to its website.

1.3 Resources

At the first meeting, we also brainstormed about what resources are available and what we corporately need to purchase or find. The available resources were 1) existing DHCC materials, publications, and reports that have been posted on at least two websites, 2) expertise on health care issues, 3) five DHCC staff, three IPA team members, and 4) technical support from a GIC representative. (Specific software resources are discussed later.) Funding for the collaborative project was arranged by GIC through the Office of the Secretary of State. DHCC also has a library of previous reports that may either be scanned in or converted to portable document format (PDF) for the web. In addition, GIC pledged continued support beyond the actual project completion.

1.4 Streamlining and Redistributing the Workload

One of the major motivations for many agencies going online is to streamline their work or the process clients go through to receive government services. Moving services online for DHCC was a tricky question because it does not provide any direct services. Time-consuming tasks were discussed that would potentially save staff a lot of effort and aggravation. The DHCC team mentioned that people often misunderstand their role and purpose, so they end up spending a lot of time on the phone redirecting people to the appropriate places. If this information were on its webpage, DHCC would not only be providing people with the correct information—helping to move them toward the appropriate location and service (via links to other websites)—but also leaving a positive impression on the public—all with minimal customer-service effort. Other tasks that would save DHCC time and resources are distribution of meeting minutes and materials. Staffers typically mail hard copies of all of the materials to all of their commission, committee, and board members before each meeting. If they post these items on the

website or e-mail the link or the documents via an e-mail list, they will save considerable time and money.

Updating its web presence will also increase the DHCC team's workload in new areas. When they are not on the phone giving directions to their office or telling people where to go to find health insurance, staffers will now be answering e-mailed questions, maintaining lists of people interested in healthcare issues, and maintaining and updating the information on their site. How they plan to do this will be an issue to be addressed during the training and maintenance phase of this document.

1.5 Time Management

Available-versus-dedicated time became a major issue throughout the *Assessment and Planning* stage of DHCC's web development project. In the first meeting, the IPA team laid out a projected timeline. According to this timeline, the project—including planning, building, implementing, and launching—should have taken three to four months; however, as with most ambitious projects, that was not the case. In reality, the entire project took closer to six months. IPA and DHCC teams had the luxury of taking the time to do it right (i.e., no specific deadline); therefore, when the planning process was taking longer than expected, rather than adhere to the timeframe, the group chose to honor the process and let it take its course. This allowed both teams a generous amount of time to research, plan, and write. The fact that business continues while such a project is underway is always a time-management challenge. It was necessary to allow the agency team members time to mull over decisions and to work at their own pace; otherwise they might not have participated as fully, and a project like this cannot be effective without agency input or “buy in.” Up-front investment of serious time and energy on the part of the benefiting agency is a key to success in a collaborative effort such as this.

Indeed, without a sufficient commitment from the benefiting agency, things can bog down. In this case, there were some slowdowns, primarily in being able to schedule meetings and deal with action items in a timely fashion. In addition, it is important to note that many of the concepts, though well presented initially, tended to remain *new* and somewhat “fuzzy” within the minds of the agency staff, occasionally necessitating periodic review. These factors significantly extended the project timetable.

1.6 Meeting Two—Defining Portal Elements

The second meeting between DHCC, GIC, and IPA was held three weeks after the initial planning meeting. This was a “working” meeting, the goal of which was to begin to define and come to agreement on a site structure. For this stage, IPA created a worksheet to help guide DHCC through the visioning process. This tool can be found in Appendix C of this document. The goal of the tool was to help determine the categories of information that would logically be listed under each intention-based portal option. This basic structure would then help determine how many and what specific content pages would need to be developed.

The basic portal options were categorized as 1) *navigational utilities* (like a sitemap, a search tool, and a text-only version of the site), 2) a *client*-based portal (where the user defines his or her status), 3) a *topic*-based portal (where the user chooses a site topic of interest), and 4) a *service*-based portal (including general agency information). Once the major choices within each portal category were agreed upon, DHCC was charged with defining the secondary and tertiary levels of organization. Examples of categories created for the client-based portal are health care professionals, current and prospective medical students, and uninsured Delawareans. Topic-based portal options tended to be broad categories—like access, cost, quality, projects, and publications. The service-based portal would contain the Executive Director or Board Chair’s welcome message, an organizational directory, a link to the agency’s related organizations, and opportunities for the user to interact with DHCC.

2. Design and Implementation

So much of what is considered planning from this point seemed to occur in concert with design. Planning and refinements continued through the next two physical meetings, but the IPA and DHCC teams were in frequent dialogue by e-mail. To maximize use of time, the technical team began designing—albeit structurally—while final decisions were being ironed out with respect to the overall site plan.

2.1 Meeting Three—Site Structure Workshop

The third meeting was held three weeks later. The goals of this meeting were to begin further definition of the site structure (which had been worked on after the second meeting), use the tool created to develop secondary- and tertiary-level content (see Appendix D), and develop a schedule for the remaining stages of the process. (The IPA team had begun envisioning the homepage and a page template, so the use of images and accessibility issues were beginning to be addressed at this point as well.) At this meeting the IPA team introduced the “page content” template that had been created to help provide the parameters the agency would need in order to develop content for each page outlined in the site structure. This template can be found in Appendix G of this document. Basically, it requires content for the subject of the page, the page title, a description of the page content, a list of key words, the actual text to appear on the page, and any relevant associated information (like links to/from other pages).

2.2 Interpreting and Defining Site Structure

Between the third and fourth meetings, DHCC tested this tool, and IPA worked on interpreting DHCC’s proposed site structure. This meant deciding how many independent pages needed to be developed, where each of the pages might be nested structurally, and how they interrelate. For example, each topic in the client-based portal (“Resources for...”) would have a defined index page that would then be linked to pages for each of the categories, as shown on the next page.

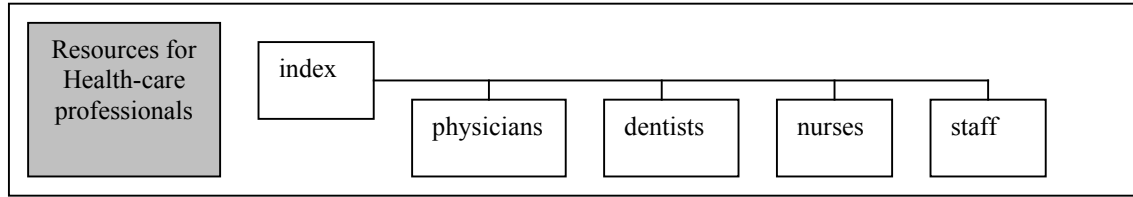


Chart 1. Example of typical structure found within new DHCC site directories

Perhaps the most difficult and most time-consuming part of this phase of the project for the technical team was the interpretation of the site structure worksheets that DHCC had submitted. It became clear, in many instances, that either 1) clarification was needed, 2) DHCC had “missed the mark” in how it envisioned the interrelationship of pages and content, or 3) the IPA team had to invent and propose a retrofit or compromise solution to much of what was functionally unclear.

2.3 Meeting Four—Site Structure Approval

A fourth meeting was held five weeks later. This meeting was ostensibly the “Site Structure Approval” meeting. At this point, the IPA team presented DHCC with what it believed to be a concrete page-and-directory organization of the site, which was essentially a fuller version of the chart above, for agency approval. From this point, the DHCC team was to develop content for each “page” represented therein, with some (unforeseen) exceptions. Because of the desired web-like nature of the site, visitors should be able to arrive at a page from a variety of origins, so the page content had to be broad enough to address the intentions of a variety of visitors.

2.3.1 Customer Interactivity

The service-based portal warranted some attention at this point in the planning stage. What customer services could DHCC improve via the web? Direct e-mail links are customary on good e-government web pages, as are feedback forms. One suggestion the IPA team had for DHCC was to consider a “Stay Informed” option, wherein consumers of health care information could subscribe to one or more e-mail lists to stay informed about DHCC projects, health care legislation in the state, or other health care issues. Options such as this are being used successfully by other Delaware state agencies (e.g., DHSS, DNREC). IPA recommended content for the *Privacy Policy*, *Disclaimer*, *Stay Informed*, and *FAQ* (frequently asked questions) pages. GIC assured DHCC that it was a simple task to accomplish, from a technical standpoint.

2.3.2 Privacy Issues

If DHCC does collect any sort of information, even if they just track site traffic, this will be spelled out in a privacy policy page. Privacy policies are standard practice to inform the user specifically what information is being collected and how it is going to be used. Privacy is a very salient issue in health care, so DHCC has a special responsibility to assure site visitors of anonymity or confidentiality. The text used in the site’s privacy policy page is found in Appendix E of this document.

2.3.3. Site Disclaimer

DHCC also needed to consider a disclaimer statement because its site will be linking to many other websites. Disclaimer statements (see example in Appendix E) generally state that the agency is not responsible for content on other websites. Most importantly, DHCC needed to stress that it does not provide medical advice or diagnoses; people in search of medical advice should consult their doctor or call “911” in an emergency. Before posting their privacy and disclaimer statements, the agency staff consulted GIC to ensure that their statement was appropriate and sufficient for their needs.

2.4 Page Design

Most of the design decisions were made, or the precursor to the decision was made, during the planning and implementation phase. Issues like which images to use, design and functionality of the homepage, etc. were design choices made by the technical team (IPA). For design software, IPA used Macromedia Dreamweaver UltraDev 4.0 for page construction and Adobe Photoshop 6.0 for image creation/manipulation. There are other acceptable options available to State agencies for page authoring (GIC can advise).

2.4.1 Accessibility

The State of Delaware established web presentation guidelines (see Appendix A) that helped determine many items for design. It *requires* that 1) the coding be HTML 4.0-compliant (which Dreamweaver does), 2) the pages be compatible with special assistive technologies, and 3) the site be tested from multiple platforms and with multiple browsers. IPA chose to use meta tags, which is a state guideline *option*, so pages would enjoy a greater visibility via search engines. The State guidelines were very helpful in terms of maximizing accessibility to the site. GIC was also helpful in giving technical support to assist IPA in complying with the guidelines. Accessibility guidelines were largely addressed by using a thoughtfully constructed page template and consistently using “alt” tags where images appear.

2.4.2 Communicating Information

All pages would include basic agency information (postal address, phone, fax, and e-mail). DHCC will also be using web traffic statistics provided by GIC. Both of these items are guideline *requirements*. Site pages were set up to bear a time/date stamp, which is a guideline *suggestion*. Other suggestions IPA and DHCC teams implemented were the development of an FAQ page, as well as web privacy policy and disclaimer statements. DHCC staff, the ones most likely to interface with the public, developed most all content for their own pages.

2.4.3 Common Look and Feel

In order to integrate the DHCC site with the *Delaware.gov* web portal, a guideline *requirement*, both home and subsequent pages utilize the same artwork as appears on the *Delaware.gov* portal page. This serves as a physical link to that portal and visually identifies DHCC as a unit of the State government, another *requirement*. The technical team implemented a simple cascading style sheet and planned a page template (see II-2.5.1 and Appendix H) that takes advantage of server-side include headers and footers, which were *suggestions*. Inherent in the process of crafting a “common look and feel”

are decisions about what to include on every page and how the elements present will enhance user experience.

2.5 Page-Building

The page-building phase was another time-consuming phase of this project. Though the DHCC site was not large when compared to other Delaware agency websites, it did take the technical team time to assemble and carefully think through issues of site hierarchy and page interrelationships “on the fly.” Despite the best efforts of the agency, the technical team, perhaps because of its experience in building sites, were able to do this even in the absence of agency input. The IPA team approached this with caution but did “invent” content for some pages to help ensure the integrity of the site, knowing that the agency could easily make changes to the pages during the developmental testing phase.

Final page-building would be accomplished by the DHCC staff members during the developmental testing phase, i.e., after they had been trained and the site had been turned over to them (see II-2.6 and II-2.8).

2.5.1 Page Template

A page template was created and used to make sure that each page is consistent in design and function. Using the same page template throughout the website ensures a professional and consistent look and feel; there is no mistaking which state agency site is being visited and its relation to the State government.

SPECIFIC FEATURES OF THE DHCC PAGE

For DHCC, IPA chose to design a header that incorporates most of the intention choices offered on the homepage. Identical navigational utilities were designed into the template page headers—*Welcome*, *Directory*, *Related Organizations*, *Helpful Links*, *FAQ*, *Stay Informed*, and *Feedback*. Clicking on the “Delaware Health Care Commission” returns the user to the DHCC homepage, and clicking on the *Delaware.gov* portal logo takes them to the *Delaware.gov* portal, as it likewise does on the homepage. Instead of having the full menu options under *Resources for...*, the user will find a link to a page that includes the full client-based list. Similarly, the *Topics* portion of the header incorporates an expanded jump menu, like the one utilized on the home page, for selecting topics of interest within the site. As well as creating a “common look and feel,” these template design features also aid the user by providing a familiar and web-like navigation environment on each and every page of the site. In addition, a standard footer was incorporated into the template. This footer included the major navigational links found in the header but are HTML text, which helps 1) satisfy an accessibility suggestion—replication of non-text links with text links—and 2) provide appropriate navigational utility at the foot of the page. This basic template “shell” is shown in Appendix H.

Using a template also facilitates agency maintenance of the website. Because each page is already constructed with the same menus, JavaScript commands, and images, all the agency needs to do is add content and concern itself with setting and maintaining links. The page template is relatively simple to use and easy to post and update. The user does not need to be an expert in writing code, especially if he/she uses the same software that was used to create the site (i.e., Dreamweaver). The downside of this strategy is that

templates are designed based on certain planning decisions in concert with the agency input. If the agency has not thought through initial planning decisions well enough or wants the flexibility to make frequent across-the-board changes, the templates may have to be redone or retrofitted, something one would not expect an agency staff member to want to do or be able to do well. The IPA team felt that implementing server-side includes would be one way to minimize the negative effect of any future side-wide change (e.g., the removal or editing of something in the page header).

One issue that arose during the page-building step was that the pages appear differently on different browsers. For example, certain fonts/sizes did not render well on Netscape for PC, despite the use of cascading style sheets. Specifically, Netscape Navigator 4.7 on a PC does not render nine-point Arial text well enough to be clearly legible, though it looks fine on a Mac in Navigator and Microsoft Internet Explorer (IE). Another specific display difficulty encountered was that IE 5.0 on a Mac does not seem to render lines defined by a single pixel with a width of 100%. Further customization of the style sheet seemed to help minimize display anomalies while ensuring design integrity.

2.5.2 Link-building

Link-building for the DHCC site was a major undertaking for several reasons. A lot of its content is already hosted in other DHCC-related sites (like *DHIN.org*, and *delawareuninsured.org*, which are DHCC projects that are maintained by another party off-site). Interestingly enough, despite the fact that the Delaware Uninsured site is a pretty important DHCC subsite, their previous website did not even link to it. *DHIN.org* accesses a library of DHCC materials. Initially the IPA team thought it would be best to simply link to it. Upon further discussions with DHCC about the quantity of publications currently available in digital form and considering the way the *DHIN.org* Digital Library is structured (keyword-search access only), the IPA team felt that it would be more user-friendly to capture the PDF files from *DHIN.org* and post them directly on a DHCC *Publications* page. Another issue we faced in link building was whether to link to another agency's home page, like *FamiliesUSA*, or to link directly to the spot that answers a specific question. Again, in keeping with the principal of getting the user as quickly as possible to the desired information, we chose to link to the precise spot rather than the parent site. This means that, in maintaining the site DHCC must periodically check that these links are still accurate and appropriate.

Again, the IPA technical team drew on its experience and common sense for building the related links that appear on the left column of DHCC's new web pages, often in the absence of input from the agency.

2.5.3 Homepage Design & Images

The IPA team had actually begun working on a homepage draft in concert with defining page template elements. As stated in the theoretical section, designers will often place initial emphasis on this critical piece of the puzzle as a way to "set the stage" for or begin to visually pattern what follows within the rest of the site. This was indeed the case with the DHCC project. GIC suggested that the graphic elements (images) are of secondary importance to the portal structure and content presented. So, despite having prepared and

shared an online draft among the teams, the technical team concentrated more fully on the page template. The IPA team sought to combine colorful images that represented the dental and medical fields, which are the main focus of DHCC's projects and publications. It was the IPA team's goal to only use images on the homepage to break up the text, visually "glue" the parts together, and make the site visually pleasing/inviting while presenting a professional look. Optimizing image file size was also a critical component in making the page work, because file size has a direct bearing on load time.

The first set of medical and dental images chosen sparked a lot of dialogue among the teams about what DHCC actually does, and what the community thinks it does or associates with health care. This may be a common theme among state agencies that might not actually provide direct services but provide information and resources about the industry. After some consideration, DHCC asked IPA to return to the drawing board and select images that 1) reflected more of its relation to State government, 2) incorporated people pursuing healthy lifestyles and 3) connoted a policy-making function. The final homepage design bears a collage that blends an image of Legislative Hall, a woman exercising on a treadmill, a woman playing tennis, and a man on an exercise cycle, and the arms and hands of one signing a document (see Appendix I). Smaller vignettes of some of these images were also incorporated in the page template header (server-side include) to provide an additional visual relationship to the homepage.

Images were purchased from Eyewire (www.eyewire.com). Earlier the technical team had chosen to purchase an entire CD library of images, which would provide the flexibility of choosing more than one image and using the images more than once (under the licensing agreement). The image of Legislative Hall was from an IPA photo archive, taken by an IPA staff member. A list of other image resources can be found in the webliography at the end of this paper.

2.6 Meeting Five—Initial Training Session

The DHCC and GIC teams visited the IPA technical team's worksite to discuss the conclusion of the project collaboration and provide initial training for DHCC staffers, who would be maintaining the site. Initial training focused on building pages, using the page template along with some of the content files DHCC had already submitted.

2.6.1 Instructions Sheet

The IPA team created a 12-step instructions sheet for the process of creating DHCC's site pages from the HTML page template. These instructions were Dreamweaver-specific (see Appendix J); however, it could be applicable with minor adjustments to just about any software used to create this agency's pages. IPA team members first demonstrated the process. (The platforms used happened to be Macintosh G3 and G4, respectively.) Staff members from DHCC were then given hands-on experience while IPA team members supervised.

2.6.2 Developmental Testing

Another important decision that was made was to take advantage of a pre-launch trial period by loading the site onto the State developmental server. This trial period would

enable DHCC staff to 1) complete any outstanding page-building, 2) make necessary edits, 3) become more familiar with the site, 4) take advantage of pre-launch time to gain more experience with new software, and 5) begin interacting with GIC on a practical level. The GIC team is well positioned to help shepherd DHCC through this phase.

2.7 Server Form Handling

There were a few pages for which the technical team needed to rely on GIC to handle, post-project. The GIC team provided some sample coding for pages where certain server functions would be required (*Search, Stay Informed, Feedback*, etc.). The IPA technical team created the basic forms, and DHCC would collaborate with GIC during the developmental testing phase to finalize the functionality of these pages.

2.8 Site Transfer

The final portion of this project involved the transfer of site files from IPA to DHCC, so that the developmental phase could begin. Site files were transferred onto removable media (a Zip disk) and physically delivered to the agency. GIC then worked with DHCC to accommodate the uploading of these files from a local drive at DHCC to the state developmental server (see II-2.6.2) and, subsequently, to a permanent (i.e., “live”) position on the publicly viewable state server (*state.de.us*).

Conclusion

This section will provide salient information for the state, that is, experiential feedback on the teaming process during this project. It includes the IPA team's analysis of the web development project, including, third party brokerage, issues of communication, and a general assessment. Following these analyses will be a section discussing recommendations for future such collaborations.

Project Assessment

The following are the comments of the technical team (IPA).

Piloting the Partnering Process

This project was IPA's initial foray into e-government assistance at the state level. There was no historical precedent at IPA on which to draw. The IPA team came to the table with a good working knowledge of the concepts reflected in the state's Web Presentation Guidelines (see Appendix A), though we were "green" when it came to areas like creating HTML that is accessible through "special assistive devices" and browsers other than Netscape Navigator and Microsoft Internet Explorer. Knowing the critical need for "alt" tags in making pages more accessible helped guide the design toward a more lean framework (not graphics-heavy).

Lacking Familiarity with Agency

One of the big handicaps IPA had to work with from the beginning was having to learn about DHCC from a no-knowledge starting point. Had we had a much better idea of the "overall picture" of this agency and how the specifics related to the whole, time could have been saved. On the other hand, not knowing anything about the agency actually helped the technical team provide a more objective look at the process. Not having a vast knowledge of health care or the DHCC's activities placed IPA at an advantage in outlining the site structure. As earlier discussed, it is difficult to get a group to think "outside the box" with respect to their own organization. While the DHCC team could easily envision their current services, this same familiarity hampered them from thinking what they could potentially do or who their potential visitors might be. However, the IPA team's *inexperience* with this topic proved to be an asset. As an outsider to health care policy, IPA was able to envision how DHCC could expand its site or pose questions that new visitors to the site might raise.

Using Approvals for Benchmarking

Stage-by-stage approval was the strategy employed to gently move the recipient agency through the process. What was assumed, perhaps mistakenly in some cases, was that if a certain stage had been approved, the technical team would be able to move forward with a great degree of confidence. Unfortunately, well into the site-definition phase and even into the page-building phase, what became clear was that DHCC had either not prepared well enough or that we (IPA) had not done a good enough job up-front of making concepts clear and demonstrating how early decisions affect later ones in the process.

Educating the Agency

The process of educating the agency staff on how to approach the redesign of its website was a challenge, perhaps the biggest and most important of all in a project such as this. The IPA team came in with plenty of experience in helping organize, define, and create more easily navigable websites. Teaching what is involved in this process to those whose primary job functions are not closely related took time and, at times, repetitive explanation. Concepts like “portals,” “intention-based design,” etc. can be difficult to grasp if the agency is merely looking to get current information out there, which may very well have been the case with DHCC. The brief presentations we offered and examples we showed DHCC during our initial meeting were valuable means of introducing these foreign concepts. Over the course of the project, it became clear that the recipient agency’s team either did not fully understand some of these concepts or had not been able to adequately integrate them into their thinking when it came to content development (see next paragraph for related comment). For example, DHCC team was able to easily provide content for pages relating to the organizational hierarchy that was most familiar to them (e.g., DIMER loan repayment program) but hard-pressed to come up with content for “Resources for...” pages (e.g., Stakeholders), a portal that represents the trend toward intention-based usage. This proved to be a real stumbling block to completing the site. The IPA team believes this resulted from the agency’s difficulty in thinking “outside the box.”

Considering an Alternative Language

The subject of a non-English language option was brought up early in the planning discussions. DHCC decided that this was not something they were ready to deal with in this phase of redevelopment. GIC and IPA team representatives had subsequent conversations about a simple way state agencies that do not offer specific citizen services could handle this. For example, the agency could construct one good page in Spanish that would act as both a language disclaimer page as well as a courtesy page for the growing Hispanic population in Delaware. It would redirect them to appropriate Spanish-language contacts off-site but within the state portal. GIC should follow up on this with DHCC, because it is a value-added feature for a segment of the Delaware citizenry.

Communicating Among Teams

In any venture, communication is key, and this collaboration was no different. Frequent communication was necessary among all three involved parties. Without adequate communication, the project would have been destined to fail. Again, as with most projects, it was often difficult to maintain an ideal level of communication. DHCC, IPA, and GIC tried to maintain consistent communication between meetings, whether through e-mail or phone calls. Most often, this communication could be described as “one way communication”—voice mail messages were left instead of directly speaking to the other party, and e-mail messages often went unanswered for some time. When we *were* able to converse with a DHCC or GIC team member or send a simple e-mail request or question, the communication was very productive. However, as other business activities took precedence, it became easy to push the web development project further back. This lack

of timely communication was a contributing factor in the extension of the project timeline.

Evaluating the Timeframe

The timeline originally proposed for the project was three-and-a-half months. While three-and-a-half months sounded feasible in theory, in actuality, this timeframe was far too short. Issues that had not been taken into consideration arose, which stunted the project's progression. In addition, there was no way to maintain a constant workflow; rather, the workload fluctuated from day to day. As mentioned earlier in the case study section, regular business continued while the project was underway, also extending the timeline. In working on this project, the IPA team also had to take into consideration its support from two student workers. The students were only involved on a part-time basis and often their schedules were not in concert with the project workload. All things considered, a six-month start-to-finish project duration seems more reasonable.

Maintaining Momentum

The involved parties were also subject to "losing steam" throughout the project. At the onset of the project, during the planning stage, each party was ambitious and pledged a high level of enthusiasm. Unfortunately, as the project progressed, it was hard to maintain the same level of enthusiasm. Specifically, the DHCC team did not seem to possess their earlier excitement or interest. After the initial influx of web content forms, it became a task in and of itself to encourage the delivery of additional content. This was rather frustrating for the IPA team, which would have preferred a more proactive stance from the benefitting agency. Later pages had to be created by the IPA team without any input from DHCC in order to build the previously agreed upon website structure. Without a detailed knowledge of health care or DHCC's projects, this was somewhat uneasy for IPA; however, it was necessary to move toward completion of the project. Certainly IPA, too, even as the lead team, had difficulty maintaining focus when the workflow slowed.

Utilizing Planning Tools

Planning tools, such as the site structure worksheets and the site maps, were vital aides. The site-structure worksheets were especially helpful during the planning stages while the teams were still outlining the site. However, IPA was less than pleased with the functionality of these site-structure worksheets (Appendix D). While they were assets in the process, their form proved to be a bit inflexible. Discussing the site plan can be a daunting task; these tools enabled both parties to better understand the site-building concepts involved. Utilizing these tools also allowed for a smoother transition from the planning stage to the implementation stage. The development of a sitemap (Appendix F) was equally beneficial, though perhaps more so for the technical team. Having a sitemap as a reference while building pages was a definite advantage. The site diagrams (e.g., Appendix F2) at various stages of the project were also very valuable to the agency, as they presented a visual look at the proposed/approved structure. During training, the technical team developed a 12-step procedure (Appendix J) for agency staff to use when building pages using the HTML site page template. It was specific to the Dreamweaver software used for this site but was very effective during training and afterwards.

Developing and Using Templates

The page-content template (Appendix G) created for the agency was perhaps the most successful of the tools used in the project, as well as being the most beneficial to the technical team's page-building effort. It provided an easy-to-use way the agency could provide the technical team with the information needed on each site page. In terms of staff training, the simple HTML page template (Appendix H1) that was created (and off of which the technical team started as a foundation for page-building) provided a simple basis for introducing the minimal HTML knowledge necessary to combine with basic word processing skills.

Building Site Pages

Page-building became tedious only when IPA lacked helpful information from the DHCC team; some of the content in the site pages (e.g., relevant links) reflects the IPA team's careful thought about the subject and the potential audience.

Training the Agency Staff

The training session for agency staff at the technical team's workstations seemed fairly successful, though another session would have been advantageous. During a follow-up session, at the agency site, the IPA team would have helped with file transfer protocol (FTP) and an introduction to the software's management features, including an accessibility-checking plug-in utility. This responsibility was assumed by GIC at the point where the teams decided to move the site to the state development server to finalize and test it.

Transferring the Site

Turning the site over to the GIC team in an unfinished state was troublesome to the IPA team. Though it enabled the agency to take hands-on responsibility, the IPA team wished to have been able to deliver a "finished product," as was originally anticipated.

Recommendations

Though this project was a "test balloon," in many respects, for each of the three teams involved, important lessons were learned, particularly by the IPA team.

One of those lessons was that the gears of state government tend to move slowly and are definitely not constrained by external schedules or demands. The first recommendation that IPA would make is to generously add a couple months to the project timeframe. A six-month, start-to-finish timeframe is much more realistic, given the importance of the theoretical foundation that needs to become part of a recipient agency's *modus operandi* regarding its website. At the outset, more attention should be paid to developing in the recipient agency a clearer understanding of the intention-based approach and more of an internal commitment to the project in all its detail. This should help avoid some of the pitfalls that were experienced halfway into this project.

Another recommendation is that the brokering IT team play a more significant role in helping to move the process along. While the IPA team recognizes that it has to be the

proactive group in this type of project, it could have benefited more from the political clout of a group whose objective was to model “a new way” agencies might begin to approach and implement some of the state web guidelines. IPA realizes that this project occurred in the midst of some critical organizational changes at the state level that may have played havoc with GIC’s ability to “get their hands dirty” in this regard.

A final recommendation, and perhaps the most important, includes the decisions a recipient agency makes about funding and staffing for its website redevelopment and maintenance. IPA sees a critical link between the support, in both funding and staffing, of website redevelopment/maintenance and the ultimate success of the website. Knowledgeable and dedicated agency staff persons are the keys to making an agency site work. This resourcing, of course, can take a multiplicity of forms, but it’s extremely important to consider these issues prior to launching an effort like this. An agency has to ask itself, “are we in this for the long haul, or is it just something we feel we have to get done.” Long-term vision and support is needed to make the most of the web as a vehicle for successful e-government.

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Appendix A: Highlights of the State of Delaware’s E-Government Steering Committee’s Web Presentation Guidelines

from *State of Delaware Web Presentation Guidelines for State of Delaware Agencies (Version 2.0) Draft*

1. Executive Order 9, § 4(a)

“The [e-Government Steering] Committee shall ... promulgate a comprehensive, uniform set of standards for state agencies dealing with the issues of technology architecture, privacy, accessibility, and content with respect to Internet-based technologies. Agencies shall adhere to the standards developed by the Committee in implementing new Internet content and applications.”

2. Overview p. 3 requirements for agency web pages

- a. **Engineer for maximum accessibility**
 - compliance with HTML 4.0 (required)
 - compatible with special assistive technologies (required)
 - test from multiple platforms and browsers (required)
 - use Meta Tags (option)
- b. **Communicate comprehensive, up-to-the-minute information**
begin with analysis of clients to be served
 - provide basic information about the agency (required)
 - time/date stamp web pages (suggested)
 - use web traffic statistics resource provided by the state (required)
 - develop FAQ (suggested)
 - include web privacy policy (suggested)
 - encourage customer service personnel to contribute content (suggested)
- c. **Develop common look and feel**
 - integrate with *Delaware.gov* web portal (required)
 - clear identification agency as a unit of state government (required)
 - use cascading style sheets (suggested)
 - use headers and footers on each page for ease of navigation (suggested)
 - unique look is not necessary (suggested)

Appendix B1: Initial Web Project Tasks Outline

1. Initial meeting (IPA, DHCC, GIC)

DHCC team works on visioning their site, based on what they gleaned from this initial meeting

2. Follow-up meeting/correspondence (DHCC, IPA, GIC)

listen and respond to DHCC's site vision, focus on any needs and concerns, further clarify any philosophical issues and/or shortcut problems

3. Sitemap meeting (DHCC, IPA)

review and come to consensus on general site structure and identify specifics (IPA team will subsequently diagram site and send draft to DHCC)

4. Sitemap approval e-mail (DHCC, IPA)

approve draft of site structure and specific site elements

DHCC works in parallel to create content and generate/collect desired photographs and/or graphics

5. Content meeting(s) (DHCC, IPA)

discuss and review provided content, linking strategies, page positioning, photography or graphics, etc.

DHCC OKs initiation of design drafts (all site-structure issues to have been resolved)

6. Design drafts (IPA, GIC)

create homepage and page templates

7. E-service strategy meeting (DHCC, GIC, IPA)

discuss/plan course of action for any online services needed

8. Design draft meeting (IPA, DHCC, GIC)

discuss and either approve or go back and refine

DHCC OKs design of homepage and template

9. Page-Building phase (IPA)

begin building pages from content supplied using page template

10. Site launch planning and training/support assessment meeting (GIC, DHCC, IPA)

discuss issues and logistics for turning over files, uploading and announcing new site; discuss training, software support, and site maintenance issues, present template usage tutorial to DHCC

11. Compile draft documenting the process (IPA)

prepare process document from notes taken during process

Appendix B2: Revised Web Project Tasks Outline

1. Initial meeting (IPA, DHCC, GIC)

DHCC works on visioning their site, based on what they gleaned from this initial meeting

2. Follow-up meeting/correspondence (DHCC, IPA, GIC)

listen and respond to DHCC's site vision, focus on any needs and concerns, further clarify any philosophical issues and/or shortcut problems

3. Sitemap meeting (DHCC, IPA)

review and come to consensus on general site structure and identify specifics (IPA team will subsequently diagram site and send draft to DHCC)

4. Sitemap approval e-mail (DHCC, IPA)

approve draft of site structure and specific site elements
DHCC works in parallel to create content

5. Design drafts (IPA, GIC)

create homepage and build page template shell
DHCC OKs design of homepage and template (all site-structure issues to have been resolved)

6. Page-Building phase (IPA)

begin building pages from content supplied using page template

7. E-service strategy meeting, if necessary (DHCC, GIC, IPA)

discuss/plan course of action for any online services needed

8. Site launch planning and training/support assessment meeting (GIC, DHCC, IPA)

discuss issues and logistics for turning over files, uploading to state development server, and software support; present template usage tutorial to DHCC staff

9. Documenting the process (IPA) and completing the project (GIC, DHCC, IPA)

prepare process document; complete page building, transfer site to DHCC

Appendix C2: Sample Approved Outline from Project

DHCC Site Structure Proposal (outline)

1. Delaware.gov Web portal navigational ID (required)
2. Navigational utilities
 - **sitemap** (a given)
 - **search** (a given)
 - **text-only** (a given)
 - **unit contact info** (required)
 - **jump menu** (see below)
 - **en Español** (still to be considered)
3. Client-based portal ("Resources for...")

Health Care Professionals
Stakeholders
Uninsured Delawareans
Researchers
Policy Makers
Current & Prospective Health Care Students
Commissioners, Board & Committee Members
4. Topic-based portal ("Topics")

Access									
Cost									
Quality									
Jump Menu	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Research</td> <td>Projects</td> </tr> <tr> <td>Education</td> <td>Publications</td> </tr> <tr> <td>Policy</td> <td>Workforce Development</td> </tr> <tr> <td>Privacy</td> <td>HIPAA</td> </tr> </table>	Research	Projects	Education	Publications	Policy	Workforce Development	Privacy	HIPAA
Research	Projects								
Education	Publications								
Policy	Workforce Development								
Privacy	HIPAA								
5. Service-based portal

Welcome
Directory
Related Organizations (DIMER, DIDER, DHIN)
Helpful Links
FAQ
Stay Informed...
Feedback

NOTES

Assumed in the homepage plan and construction is a temporary area for a news or event-related feature. This would be handled in a way that is visually different from the portal options and very easy to change as needed.

Under "Service-based Portal," the "Directory" link would go to a page from which one could access contact information for the following:

- **committee members**
- **commissioners**
- **board members**
- **staff**

Remember that this is inherently different than similar options under the "Client-based Portal" in that those options are for those who fit in those categories as clients.

We'll work with Mark Headd to flesh out exactly what the portal header for *Delaware.gov* needs to look like and include.

Please make comments below:

Site Structure Approval

fax to
Mark Deshon
at
302-631-3488

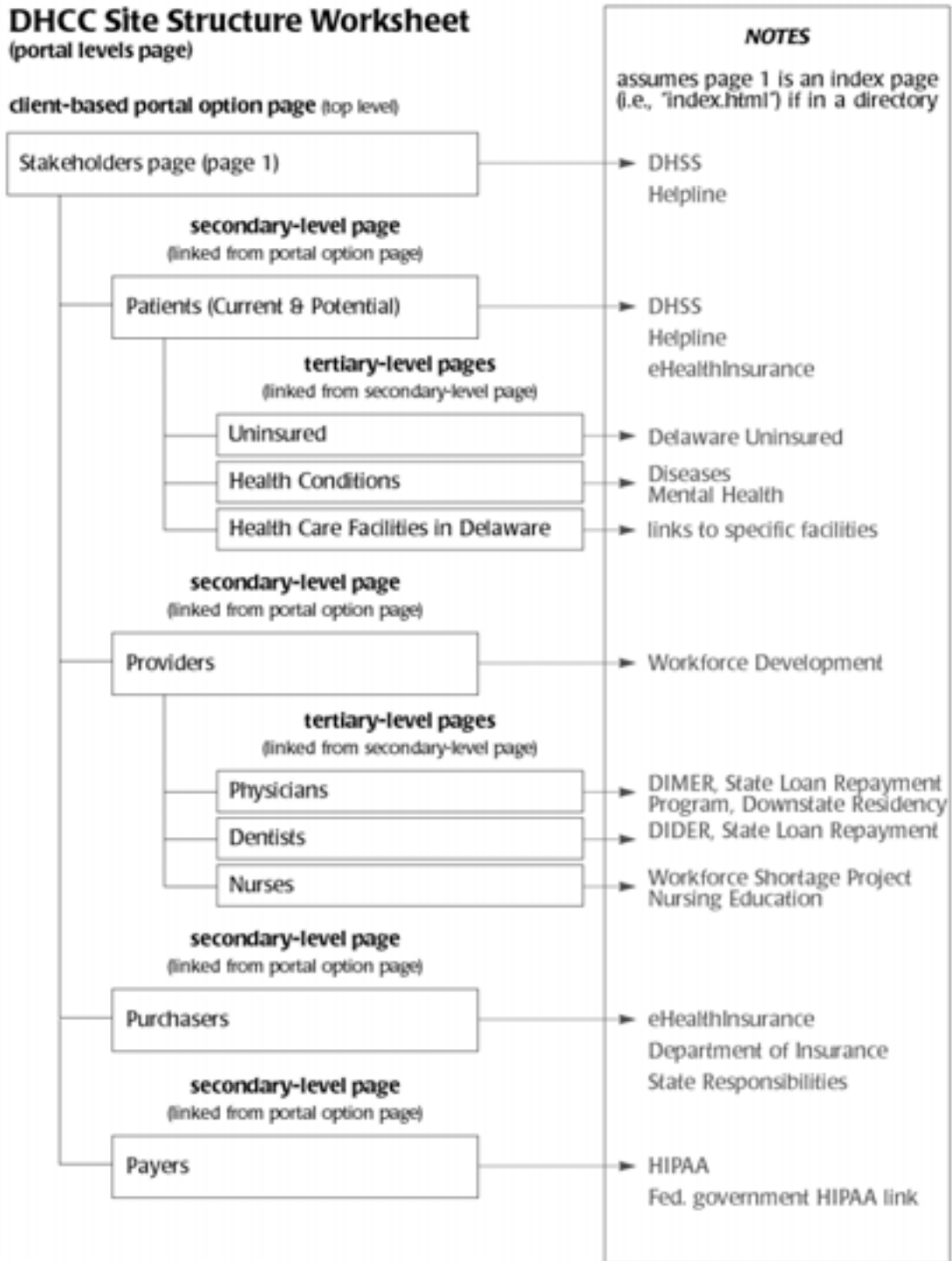
- approved as is
- need to discuss further

Paula E. King
authorized signature
Nov. 7, 2001
date

Appendix D1: Site Structure Worksheet 2—Secondary and Tertiary Levels

DHCC Site Structure Worksheet (portal levels page)	NOTES
_____ portal option (top level) <div style="border: 1px solid black; height: 40px; width: 100%;"></div>	
secondary-level page (linked from portal option page) <div style="border: 1px solid black; height: 40px; width: 100%;"></div>	
tertiary-level pages (linked from secondary-level page) <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	
secondary-level page (linked from portal option page) <div style="border: 1px solid black; height: 40px; width: 100%;"></div>	
tertiary-level pages (linked from secondary-level page) <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	
secondary-level page (linked from portal option page) <div style="border: 1px solid black; height: 40px; width: 100%;"></div>	
tertiary-level pages (linked from secondary-level page) <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	

Appendix D2: Sample Completed Worksheet from Project



Appendix E: Example of Privacy Policy and Disclaimer Statements

Commitment to Privacy

DHCC is actively involved in initiatives to protect the privacy of personal health information in the digital environment. When you browse any of the DHCC websites, you do so anonymously. DHCC does not collect or track personal information about its visitors. Generic information such as number of hits and routes through the site are tracked, but this information is used in the aggregate to help DHCC improve their customer service by making the information easier to locate and use.

If you send e-mail to DHCC, voluntarily choose to sign up for one of DHCC's "stay informed" e-mail lists, or otherwise provide information through personal communication with DHCC, your information will be kept confidential in accordance with state and federal law. Your information will not be disclosed, sold, transferred or shared and will be kept in a secure environment unless required by law.

This privacy policy is subject to change, please check here for updates.

Disclaimer

The Delaware Health Care Commission (DHCC) provides this web portal as a public service. Information presented in this web portal is collected, maintained and provided for the convenience of the user. DHCC makes every effort to ensure that this information is correct and updated; however, they do not certify the information that originates from third parties. DHCC is not responsible for the reliability or content of websites linked to this site, nor does it endorse any content, products, or services mentioned on this or third-party sites.

This site does not provide medical advice. The information on this site is designed to help visitors find information but does not substitute for professional medical advice. Please see your physician for diagnoses and treatment or call 911 if you think you may have a medical emergency.

Appendix F1: Sample Sitemap from Project

DHCC Sitemap Organization and Corresponding File Locations

privacy policy (/dhcc/privacy.htm)	disclaimer (/dhcc/disclaimer.htm)
Topics	Resources for...
Access Cost Quality (/dhcc/topics/access.htm, cost.htm, quality.htm)	Health Care Professionals (/dhcc/resourcesfor/hcp/index.htm)
Research (/dhcc/topics/research.htm)	Physicians (.../hcp/physicians.htm)
Education (/dhcc/topics/education.htm)	Dentists (.../hcp/dentists.htm)
Medical (/dhcc/related_orgs/dimer/education.htm)	Nurses (.../hcp/nurses.htm)
DIMER (/dhcc/related_orgs/dimer/index.htm)	Physician Office Manager & Staff (.../hcp/staff.htm)
Relationship with Jefferson & PCOM (.../schools.htm)	DHIN (/dhcc/related_orgs/dhin/index.htm)
Scholarship Program (.../scholarship.htm)	Privacy (.../dhin/privacy.htm)
Loan Repayment Program (.../loan.htm)	HIPAA (.../dhin/hipaa.htm)
Downstate Residency Program (.../residency.htm)	Stakeholders (/dhcc/resourcesfor/stakeholders/index.htm)
Dental (/dhcc/related_orgs/dider/education.htm)	Patients (.../stakeholders/patients.htm)
DIDER (/dhcc/related_orgs/dider/index.htm)	Providers (.../stakeholders/providers.htm)
Loan Repayment Program (.../loan.htm)	Purchasers (.../stakeholders/purchasers.htm)
Residency Program at Christiana Care (.../residency.htm)	Payers (.../stakeholders/payers.htm)
Nursing (/dhcc/nurses/education.htm)	Uninsured Delawareans (/dhcc/resourcesfor/uninsured/index.htm)
Tracks (/dhcc/nurses/tracks.htm)	How Can I Obtain Insurance? (/dhcc/uninsured/obtain.htm)
Programs in Delaware (/dhcc/nurses/programs.htm)	Department of Insurance Links (/dhcc/uninsured/doi_links.htm)
Student Funding Opportunities (/dhcc/nurses/funding.htm)	DHIN Links (/dhcc/uninsured/dhin_links.htm)
Policy (/dhcc/topics/policy.htm)	Uninsured Action Plan (/dhcc/uninsured/uap.htm)
Uninsured Action Plan (/dhcc/uninsured/uap.htm)	State Planning (/dhcc/uninsured/planning.htm)
State Planning (/dhcc/uninsured/planning.htm)	Community Health Care Access Plan (/dhcc/uninsured/chap.htm)
Community Health Care Access Plan (/dhcc/uninsured/chap.htm)	Eligibility (/dhcc/uninsured/eligibility.htm)
Eligibility (/dhcc/uninsured/eligibility.htm)	Safety Net (/dhcc/uninsured/safetynet.htm)
Safety Net (/dhcc/uninsured/safetynet.htm)	Researchers (/dhcc/resourcesfor/researchers.htm)
Workforce Development (/dhcc/topics/workforce.htm)	Funding (/dhcc/resourcesfor/researchers_funding.htm)
Physicians (/dhcc/related_orgs/dimer/workforce.htm)	Potential Projects (/dhcc/resourcesfor/researchers_potential.htm)
Dentists (/dhcc/related_orgs/dider/workforce.htm)	Policy Makers (/dhcc/resourcesfor/policymakers.htm)
Nurses (/dhcc/nurses/index.htm)	State (/dhcc/resourcesfor/policymakers_state.htm)
Health Conditions (/dhcc/topics/health.htm)	Federal (/dhcc/resourcesfor/policymakers_federal.htm)
Diseases (/dhcc/topics/health_diseases.htm)	Current & Prospective Health Care Students (/dhcc/resourcesfor/students/index.htm)
Mental (/dhcc/topics/health_mental.htm)	Current (.../students/current.htm)
Privacy (/dhcc/topics/privacy.htm)	Medical (.../students/current_medical.htm)
Projects (/dhcc/projects/index.htm)	Dental (.../students/current_dental.htm)
Publications (/dhcc/publications/index.htm)	Nursing (.../students/current_nursing.htm)
Workforce Development (/dhcc/topics/workforce.htm)	Prospective (.../students/prospective.htm)
Physicians (/dhcc/related_orgs/dimer/workforce.htm)	Medical (.../students/prospective_medical.htm)
Dentists (/dhcc/related_orgs/dider/workforce.htm)	Dental (.../students/prospective_dental.htm)
Nurses (/dhcc/nurses/index.htm)	Nursing (.../students/prospective_nursing.htm)
HIPAA (/dhcc/related_orgs/dhin/hipaa.htm)	Commissioners, Board & Committee Members (/dhcc/resourcesfor/members.htm)
Site Services	Site Utilities
Welcome (/dhcc/about/index.htm)	Text-only Homepage (/dhcc/text.htm)
About DHCC (/dhcc/about/about.htm)	Search DHCC's Site (/dhcc/search.htm)
News from DHCC (/dhcc/news.htm)	Helpful Links (/dhcc/links.htm)
Directory (/dhcc/directory/index.htm)	Stay Informed (/dhcc/subscribe.htm)
DHCC Staff (/dhcc/directory/staff.htm)	Feedback (/dhcc/feedback.htm)
Where is DHCC? (/dhcc/directory/where.htm)	Web-related (/dhcc/feedback_web.htm)
Commissions, Boards, and Committees (.../members/index.htm)	Health-Care-related (/dhcc/feedback_healthcare.htm)
Delaware Health Care Facilities (/dhcc/directory/facilities.htm)	
Frequently Asked Questions (/dhcc/faq.htm)	

Appendix G1: Web Page Content Template

Page Subject (What is this page about?)

Page Title (a short, appropriately descriptive title)

Page Description (a single sentence summarizing content, utilizing relevant key words or phrases)

Key Words (a string of page-content key words, each separated by a comma)

Page Content (actual text to appear on page)

Relevant Associated Information (and/or links to/from other pages--indicate Page Title)

Appendix G2: Sample Content Page from Project

Page Subject

Information about the Health Insurance Portability and Accountability Act (HIPAA)

Page Title

The Health Insurance Portability and Accountability Act (HIPAA)

Page Description

The Health Insurance Portability and Accountability Act (HIPAA) is comprised of many provisions regarding privacy and confidentiality issues, security, and electronic transactions and transmissions of medical records/patient data.

Key Words

HIPAA, HIPPA, Kennedy-Kassebaum, bill, privacy, transaction, code, sets, insurance, portable, portability, act, law, administrative, simplification, electronic, data, transfer, medical, patient, records, information, EDI, E.D.I., standards, confidentiality, security, comply, compliance, identifier, claims, attachment, implementation, interchange, accountability, penalties, penalty, identifiable, disclosure, non-compliance, civil, criminal

Page Content

The Health Insurance Portability and Accountability Act of 1996 (Public Law 104-191) was signed into law on August 21, 1996. A portion of the Act is designed to protect health insurance coverage for workers and their families when they change or lose their jobs.

A crucial section of HIPAA is the Administrative Simplification provisions. This sections intended purpose is to reduce costs and administrative burdens by standardizing and electronically transmitting many of the administrative and financial transactions that are currently carried out manually on paper.

The Administrative Simplification also includes sub-sections on the privacy and security of patient data that mandate standards in safeguards for physical storage, maintenance, transmission, and access to individual health information. With few exceptions, confidentiality will be required with regards to medical records and other individually identifiable health information used or disclosed and in any form, whether electronically, on paper, or orally. Virtually all health care organizations including physician offices, insurance companies, and health care support organizations will be required to comply. Non-compliance with the provisions of Administrative Simplification regulations will result in stiff civil and criminal penalties.

Other sections of HIPAA will mandate the use of unique identifiers for providers, health plans, employers and patients. The Act provides separate sections on each, but all the various identifiers are expected to comprise nine- or ten-digit numerals assigned to the individual provider, health plan, employer or patient.

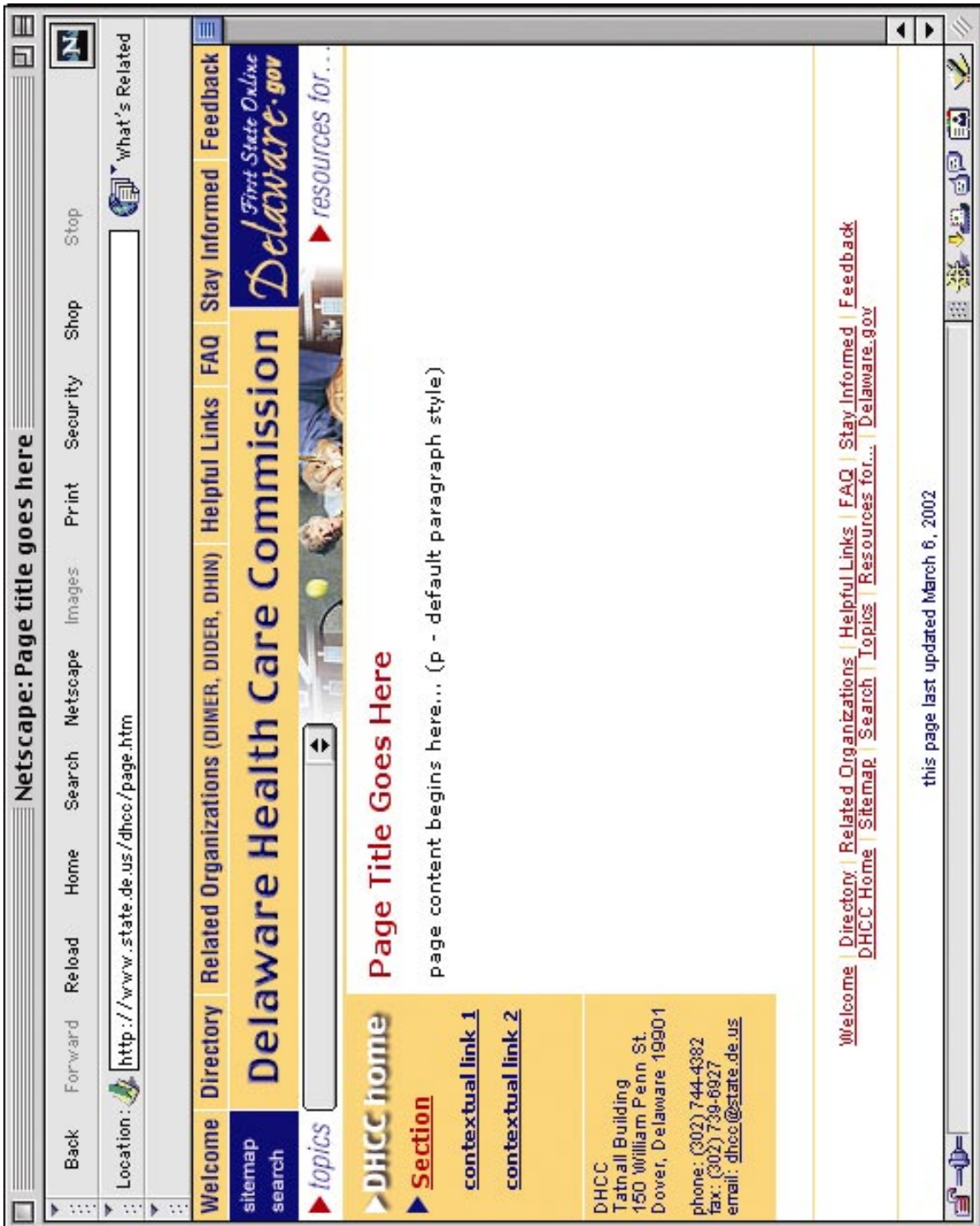
The Delaware Health Information Network (DHIN), under the auspices of the Delaware Health Care Commission (DHCC), has designated a Kent County hotline number for your questions regarding HIPAA. Please leave your message or question on the voice mailbox at 302/744-4380. A person qualified to answer your question will return your call as quickly as possible.

For links to further information visit the Delaware Health Information Network HIPAA Corner at... (also link to Privacy page)

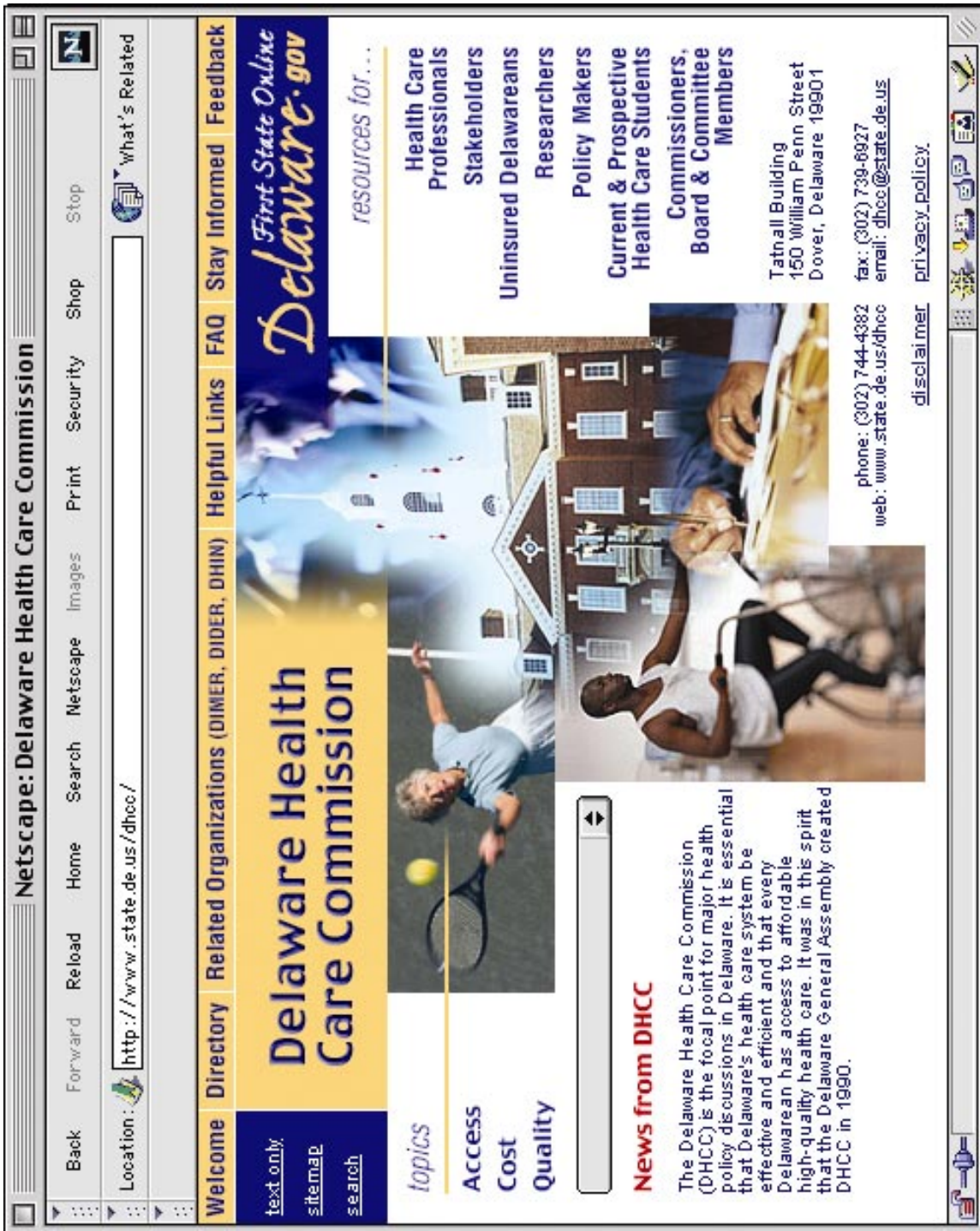
Relevant Associated Information

<http://www.dhin.org/hipaa.htm>

Appendix H: Sample HTML Page Template from Project



Appendix I: Project Final Homepage



Appendix J: DHCC Page-Building Instructions Sheet

12 Steps for Producing HTML Pages from the DHCC Template Page

Step 1: Find the page template (“page.htm”) and open it.

Step 2: Immediately do a “Save as,” using the filename that it will have. Save the page in its appropriate location within the site. After having saved the file, note that the top bar will display the new filename and its path within the root directory (i.e., path/filename.htm).

Step 3: Open the corresponding web content file.

Step 4: Copy the text in the “page title” section of the web content file and paste it into the title window of the HTML file.

Step 5: Next click on the icon in the upper left corner of the page window that looks like left and right facing arrows (<>), which is the “code view.” Scroll all the way to the top. Here you’ll see meta tag lines. In the web content page, copy the “page description” text. Go back to the HTML code. Find the “description” meta tag and where it reads ‘content=’’, paste between the two quotation marks.

Step 6: Then on the web content page, copy the “keywords” text. Go back to the HTML code. Find the “keywords” meta tag and where it reads ‘content=’’, paste between the two quotation marks.

Step 7: After that has been completed, click on the third icon in the upper left corner of the page window, which is the “design view.” Scroll to the top of page. Now you should be looking at the HTML page again.

Step 8: Return to the web content file. Go to the page content section, select and copy all of the text. On the HTML page, select the entire second line (the default paragraph style for DHCC pages) and paste.

Step 9: Now you will need to format the content by 1) selectively introducing paragraph returns to visually separate text and 2) formatting the text using the properties window. (Do not use all capital letters.)

To format the page title that will appear on the page, scroll over the page title (if it is not there, input or copy it in). Then, go to the properties window and choose “Heading 1” from the “Format” pulldown menu. Subheads should similarly be styled as “Heading 2.” Text may selectively be made **bold**. (Do not use italics.)

Step 10: After the page content is formatted, determine if there are any logical links to be created within the page content area. If there are, scroll over the content that is to

become a link. In the properties window, place the cursor in the “Link” text-input field and carefully type the URL*.

Step 11: The next step is to customize the links on the yellow column to the left of the content area.

- If this is a page located at a root level of your site (i.e., not in a directory), first place your cursor on the blue arrow just to the left of the word “Section.” Select it by clicking on it and then hit the “delete” key. Next, go back and select (scroll over) the word “Section.” Click on the “code view” icon (<>) at the upper left corner of the page window. Within the code, the word “Section” should already be highlighted. (If your lines of code are numbered, note on what line number the text that is highlighted is located.) Select this entire line of code (and ONLY this line—everything between the <h2> and </h2> tags) and remove by hitting the “delete” key.
- If this page resides within a directory (site section), scroll over the red word “Section” and give it the name of the directory within which it is located. Then check the URL* for this link (filename should be “index.htm”).

Each contextual link should then be highlighted and typed over with brief verbage (about one to five words) descriptive of what page would appear after clicking on the link. (Caution: Do not copy text from another location into this spot, as some important coding will be lost.) Next, carefully type in the URL* as was described above for each of the contextual links. If there are fewer than three contextual links, simply delete the extra placeholders. If there are more than three contextual links, simply copy one of the placeholders by scrolling over it, copying, hitting a return, and then pasting. Repeat above procedure for defining and linking to content-relevant pages/sites.

Step 12: Then save. (Actually, saving frequently throughout this process is a good idea!)

*If linking to a page on DHCC site, use a **relative** addressing scheme as follows—
“/dhcc/section/filename.htm” (or “filename.htm” if in the same directory). If linking to a page on another site, use **absolute** addressing (i.e., include “http://domainname/path/filename”).

Webliography

State of Delaware Web Presentation Guidelines for State of Delaware Agencies

www.state.de.us/sos/gic/reports/web_guidelines_version_2.0.htm

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usability.gov

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www.cmac.state.ct.us/access/policies/accesspolicy40.html

Online Dictionary for Computer and Internet Technology

www.webopedia.com

Online Stock Photography Resources

www.eyewire.com

www.photodisc.com

Online Clipart, Photos, Fonts, Webart

www.arttoday.com

www.artexplosion.com/mainus/products/arm

State Portal

www.delaware.gov

Institute for Public Administration

www.ipa.udel.edu

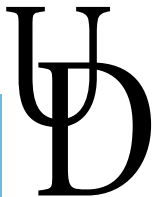


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