

Chasing (and Catching) the Electronic Train: The Aerobic World of Web Policy

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Abstract

New technologies for delivering information electronically tend to be embraced by organizations before the policy implications are clear. The challenge is to keep the tools from driving policy without letting the policy derail effective use of the tools. This presentation describes how two organizations are keeping pace. At the Savannah River Site, web pages developed for external release are considered to be public release information and are evaluated against guidelines and standards developed at the site. Pacific Northwest National Laboratory has had a similar process in place for nearly two years, but new tools - such as webcasting, web-based surveys, desktop videoconferencing - are now being evaluated within this policy framework.

Part I: Savannah River Site

The Process -- SRS goes from coal-fired to diesel powered engine

At the Savannah River Site, the STI review and approval process includes a review for both public and OSTI-reportable information. WSRC-generated web pages that are published to the internet via the SRS external server are considered public release and, therefore, go through the appropriate reviews and approvals prior to being uploaded to the server and linked to/from the site's top-level pages.

The initial review evaluates the web page against a set of guidelines that include suggestions for general design ideas, as well as some specific development do's and don'ts. The majority of these criteria were developed as a result of a benchmarking exercise accomplished by the STI group in early 1996. Most of the design suggestions came from the excellent program in place at the Pacific Northwest National Laboratory (PNNL). The SRS guidelines are available on the site intranet, but their existence and location are not widely published and they are not yet enforced by procedure.

Within the last year, a team was formed for the purpose of updating the appearance of the SRS external web pages. This team consisted of DOE-SR and contractor personnel. When considering modifications, the team focused primarily on end-user needs and promoting new site missions. The external site was successfully updated and published in

January of this year. This project led to the realization that published standards for the development of web pages are a necessity.

Currently, WSRC is in the process of changing the guidelines initially developed by STI to site-wide standards. A team of information managers and professionals from across the site have taken on the responsibility of developing and applying these standards to both externally and internally published web pages.

The Review -- Purchasing a ticket and having it validated

The initial step in the review process includes uploading the page(s) to an internal development/testing server and testing the behavior of the page and its links through a browser. Once the page(s) are verified to be functional, the URL is provided to the rest of the information reviewers in the process and the remainder of the reviews take place electronically. Having the reviews take place electronically enables the reviewers to see how the page will look and how it will fit into the overall scheme of the SRS external web presence. The review process includes reviews for classification, patent, technical, and export control issues, as well as a review from the public relations standpoint by both WSRC and DOE public relations professionals.

Once the web page(s) are approved for release to the public, they are uploaded to another internal server from which they are automatically posted to the external server across the firewall. Automatic postings from the mirror server to the external server take place approximately once each hour. This is an improvement over the former posting time-frame of once per day. The upload process for placing web pages on the internal servers, and ultimately the external server, is managed by STI personnel. This ensures that the web pages have received the necessary and appropriate reviews and approvals. In addition, DOE-SR Information Management and Technology Division personnel regularly monitor all SRS external web pages for technical content and to ensure the appropriate representation of the site.

Summary -- Freight train to passenger train

Overall, SRS has a good process in place, but it is still a slow-moving train. The review process will be helped greatly by the development of web page publishing standards. This effort will also help to start 'laying track' for the development of guidelines and standards for the utilization of other newly developed and emerging technologies. As mentioned earlier, WSRC utilized PNNL's web-publishing standards and procedures for upgrading to a more efficient type of engine for web-publishing administration. Let's see where their journey is taking them now.

Part II: Pacific Northwest National Laboratory

No time to watch the scenery!

The first official PNNL policy on 'Electronic Communication' was issued in June 1996 (Novak 1997) and formed the basis for managing our public web sites. We knew that, because of our Lab's distributed web publishing environment and the staff's interest in new technologies, the policy would need to evolve over time. But we had hoped to be able to relax for a little while before the train picked up speed. No such luck!

On the bright side, the requirements we had established did not go 'out of date'; we had grounded our initial policy in a number of fundamental principles that still hold true, regardless of changing web fashions or advancing technology. But web technology has gone well beyond static HTML pages with embedded .gif files and linked .pdf files.

Hitchin' a ride

When we agreed that our web policy needed to be updated to accommodate new tools and capabilities, we tried to find analogs in existing requirements for other communication products rather than start from scratch. We've found that this approach makes it much easier to explain and gain acceptance of a new policy. Here are a couple of examples:

Electronic surveys. The Laboratory recently purchased an electronic survey tool that can be either distributed via e-mail or hosted on a web site. The product consists of software for a server and five clients. Four of the clients belong to PNNL organizations that send frequent internal surveys (Human Resources, for example). Electronic Communications manages the server and has one of the client licenses, and offers electronic survey services to the rest of the Laboratory. Our goal from a policy perspective was to define the responsibilities of staff who develop surveys and those who distribute or publish them, but at the same time not devise a procedure so bureaucratic that the tool would seem too cumbersome to use.

It seemed to us that a survey is essentially a form of correspondence, and so we have drafted a policy that is based on existing policies for external correspondence:

- ❑ Ensure that the survey serves a business purpose related to the originator's work with the Laboratory.
- ❑ If sending a survey to all PNNL staff, first send a draft of the survey to the Organizational Communications Department for review and approval. State why the survey should be sent to all staff.
- ❑ Provide a point of contact or identify the organization conducting the survey.

Webcasting. Traditional web sites are an example of 'pull' technology; that is, the user has to actively seek them and 'pull' the information in. New tools are available that allow web developers to 'push' content to subscribers (it's somewhat like a listserv for the web). These

web sites are often referred to as “channels” like those on a TV set. PNNL staff would like to use this technology to deliver dynamic content to their colleagues and clients.

Our policy perspective is that web channels are essentially web sites and must conform to the same requirements. We’ve been looking into the possibility of implementing this technology on our top-level internal page, offering not only our own channels but also those of other Laboratory organizations that meet PNNL requirements. Primary among these requirements is that the content serve a business purpose that is related to the originator’s work with the Laboratory, and that the content be appropriately reviewed and approved before release.

Video and audio delivered via the web, whether prerecorded or live, likewise would be subject to the applicable existing policies.

The train needs an operations manual

Even for the simplest web sites, the Netscape versus Microsoft browser wars and the HTML 4.0 standard are forcing us to reconsider our need for more specific requirements. While we have entered into this policy area with no small amount of trepidation, we can no longer be content with prescribing *what* goes on a web page, we now have to specify *how* the coding itself is used.

The growing use of web authoring tools is, unfortunately, making it easier to produce poorly coded web pages than ever before. And, because maintenance of web pages is often not a high budget priority, it is very likely that these pages will break standards employed by the browsers become more demanding. The objective of our initial policy was to protect the Laboratory’s reputation and intellectual property without stifling the web developers’ creativity; the technical standards we add to our policy will emphasize coding stability and ease of maintenance.

The addition of coding standards will also support and facilitate the use of PNNL’s new visual identity. The print products suite is scheduled for official release in April. We have been working on a web version; once that’s final we’ll develop templates so that new public web sites can be created and maintained easily. Our intent is to keep the number of required visual elements to a minimum and to be fairly flexible about their placement, so that those who wish to customize can do so.

Another important reason for adopting some coding standards is that the web is becoming the medium of choice for delivering scientific and technical information (STI) to the public. In order for search tools to yield optimal results, it’s vital not only that the HTML code be correct and parsable but also that the appropriate meta-tags be used. The example below is part of the source code for the web site we developed for the Fast Flux Test Facility:

```
<title>Fast Flux Test Facility (FFTF)</title>
<meta name="description" content="Welcome to the web site for the Fast Flux
Test Facility, the U.S. Department of Energy's 400-megawatt test reactor. On
this web site you'll find information about the FFTF's history, features, and
capabilities. You'll be able to read the technical documents that the
Department of Energy will use to help make a decision about the FFTF's future,
and you'll be able to provide us with your opinions and suggestions.">
<meta name="keywords" value="FFTF, tritium, isotope, medical isotopes, fast
flux">
```

This information took very little time to add, but it has greatly improved the site's position in the results returned by the major search engines. Meta-tags will become even more important as OSTI moves from a repository to a pointer organization, expecting that each DOE site will deliver its own STI via the web; OSTI will provide users with a search tool that will rely heavily on a uniform set of metadata.

Summary -- This train don't pull no sleepers

It's very challenging to create a policy for web publishing that's practical and effective; it's impossible to create one that won't require frequent updating. But seldom is policy writing so interesting! The key to a successful web policy is to be sure that the team who develops it strikes a balance between those whose main concern is to prevent derailment and those who want to see how fast -and how far - the train can go.

References

Novak, P. L. 1997. "Setting the Standards for Web Publishing at a National Laboratory." PNNL-SA-28549, presented at the Department of Energy InForum 97 conference, May 7-8, 1997, Oak Ridge Tennessee. Pacific Northwest National Laboratory, Richland, WA.