

A typical government agency Web site contains thousands of pages and links, online transactions, and critical reports. It needs to be accurate, up-to-date, and available 24/7 to a wide audience from many locations using different devices. Unfortunately, the technologies and processes used to establish Web sites have not kept pace with the efficiencies needed to manage them today and into the future.

Much of the problem is due to the fast pace of change. The computer age is a phenomenon of the past half-century, the desktop PC of the past quarter-century, and the Internet just the past decade. Within that time, many ways of creating, storing, and managing information have come and gone (see Figure 1).

Figure 1. Lifespans of Computer Hardware and Word Processors. (from “XML, Information Technology, and Intellectual Capital” presentation at the XML Testbed Project Day on January 25, 2006 by Tim Bray, Director of Web Technologies, Sun Microsystems).

Most Web sites today exhibit similar longevity issues because they are structured with individual files, proprietary databases, or content management systems tied to specific software and hardware.

An XML-based Web site offers a solution because XML is not owned by a specific vendor or dependent on specific hardware or software. It is simply a standard for structuring content (e.g., data, text, images, etc.), and presenting that content in multiple ways (such as Web pages, documents, mobile device displays, etc.). The open-standard, non-proprietary format of XML does not become unusable as technology advances because it is designed for change. It makes it possible to react quickly and reuse content as needed. Organizations using XML realize benefits in **information consistency, data longevity, workflow management** and **productivity**.

“Information outlives technology ... and yet, as of today, too much of our intellectual heritage is tied up in fragile, proprietary, binary word processor files ... XML is the solution.” *Tim Bray, co-inventor of XML and director of Web technologies at Sun Microsystems*

The practical impact can also be seen in some key issues addressed by an XML-based Web site:

- **Accessibility** – Section 508 of the Rehabilitation Act of 1973 and NYS Policy P04-002 require Web sites to be accessible to persons with disabilities, but can be very labor-intensive bringing thousands of non-compliant HTML pages into compliance. XML can ease that burden since Web pages are generated automatically and uniformly. A change in one file can bring dozens or hundreds or even thousands of Web pages into compliance.
- **Enterprise Perspective** – The single-source orientation of XML lends itself to sharing data across an enterprise. Rather than creating another information silo in a Web site, an underlying XML structure makes that Web site available throughout the enterprise.
- **Collaboration and Integration** – Because XML structures information in an open, standard, and sharable format, it allows for easier collaboration and integration within and across organizations. As the use of XML expands, these opportunities will increase and prove more beneficial.
- **Positioning for the future** – The Web is already moving away from the desktop to mobile and wireless devices. New devices require new formats and standards to effectively transmit and display information. As an open specification, XML accommodates any new format or device.