The Issues of Compliance and Interoperability in Integrating Heterogeneous Digital Information Resources: Lessons from the Portal to Texas History

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The Portal to Texas History provides tools that facilitate single-point access to vast and heterogeneous primary source material about Texas History. In order to fulfill this ambitious goal, the Portal project has been developed in multiple phases. In the first phase, we built a technical structure for the Portal services and created standards and best practices guidelines.

To ensure compliance and provide meaningful interoperable queries that improve search and retrieval of web-based resources, UNTL designed and implemented a robust service-oriented architecture. Building an interoperable portal is not just a question of scaling existing techniques. It requires a departure from usual systems that have made search and retrieval cumbersome even for the skilled.

To that end, the central Portal exists as a Linux server, running several Open Source components to effectively manage the Metadata records. The backbone of the system is the Apache web server with customized extensions to handle the XML records. XSLT and PHP scripts implement the front-ends. Master, archival quality files are stored off of the actual Portal in a Xiotech system.

Project Architecture

DIVERSE USER GROUPS
- Researchers
- Historians
- Teachers
- Students
- Children

XSLT Based Custom-Tailored Display Layer

USER INTERFACE

"zebra" Content Search Engine

METADATA RECORDS

A single web-based access point customized to users' requirements.

Allowing compliance with widely used standards to ensure long-term access.

Increasing interoperability options to facilitate collaboration.

Highly Varied Contributors

MAIN PORTAL SERVER

Data Management Tools

Metadata Driven Data Entry Form

COMPLEX AND HETEROGENEOUS RESOURCES
- Text
- Still Images
- Moving Images
- Audio

MASTER ARCHIVE FILES

VARIOUS STAKEHOLDERS AND CONTRIBUTORS
- Libraries
- Museums
- Gov't Agencies
- Private Collections