Using Open Source Software to Develop and Deliver a Digital Video Library

Leanne Strum, Ph.D.
Regent University Library
Virginia Beach, VA
Topics

• Introduction
• Background
• File management & distribution
• Key Issues & Challenges
• Project Implementation
• Future Considerations
• Questions???

Introduction

• VIVA Task Force on Multimedia Collections
• Regent University Library
VIVA Task Force on Multimedia Collections

*Established to provide secure, reliable online access to VIVA multimedia collection for VIVA member institutions.*

Regent University Library

- Virginia Beach, VA
- Private University
  - Population Served
    - Graduate and undergraduate programs
    - 3400 FTE
- Part of the Virtual Libraries of Virginia (VIVA) -- Privates

Background

- PBS Collection
- VIVA Task Force Charge
The VIVA PBS streaming video collection includes:
- 498 full-length documentaries representing over 500 hours of video.
- documentaries by Ken Burns and series such as *American Experience* and *Frontline*.

The collection covers a broad range of disciplines in the humanities, arts, social sciences and sciences.
- The collection is particularly strong in American history and American studies.
- This is the first major multimedia collection licensed by VIVA.

**Task Force Charge**
- Forum for exchanging information
- Develop expertise among the members
- Develop recommendations
  - On technical specifications and technical support
  - On cataloging, organizing and preserving digital collections
  - On distribution models and access control
Task Force Charge…
- Identify human resources, technology investments and organizational structures
- Develop recommendations for user support
- Consider service integration issues – develop recommendations on how to integrate multimedia content with existing library services and campus learning environments.

File Management & Distribution
- Scenarios
  – VIVA licenses, vendor hosts
  – VIVA purchases and centrally hosts
  – VIVA out sources hosting to members

Key Issues
- Hosting (Local or Off-site)
- Format(s)
- Encoding
- Access Control/Authentication
- Cataloging, Database Management and Resource Discovery
Challenges

• PBS Videos can be offered only through network distribution by streaming only.
  – Downloading of videos prohibited
  – No hard copy substitute
• Programs distributed in their entirety.
• Distribution limited to “authorized users.”
• Distribution protected by electronic ID and password.

Challenges …

• Inform users of license and copyright law restrictions on program use
• Users may not perform programs for any purpose involving an admissions fee or indirect profit.

Source: VIVA Task Force Committee (3/20/06)

Project Implementation

• Goal
• Hosting
• Open Source Software: Encoding
• Open Source Software: User Interface
• Open Source Software: Access Control / Authentication
• Cataloging Issues
Goal
Provide secure, reliable online access to VIVA multimedia collection for VIVA member institutions.
— VIVA

Provide secure, reliable online access to Regent multimedia collections for our students, staff, and faculty.
— Regent University Library

Hosting
• Two options for accessing the video
  1. joining the InCommon federation and installing Shibboleth software to use the VIVA streaming service, or
  2. setting up a secure server on a VIVA member campus and hosting the video under the terms of the license.

Our Media Server
• Server: HP duel Xeon 2.4GHz with 2GB RAM with a RAID level 5 disk array with 2TB of usable space
• Operating System: MS Windows Server 2003, Service Pack 1
• Web Server: Apache 2.0.54 (Win 32)
• PHP 5.0.4
• MySQL 4.1.11 -nt
Open Source Software: Encoding

- Windows Media Format
  - Software used: Sorenson Squeeze $$

- Quicktime Format
  - Received from VIVA
    1. Quicktime mp4 300kbit/sec and the size is (400x300)
    2. Quicktime mp4 800kbit/sec and the size is (512x384)

Open Source Software: User Interface

- Joomla! 1.0.8 Stable
  Joomla! is a free, open source content management system for publishing content on the World Wide Web and intranets.
  - Use a component called mosMedia 1.0.8
    - Media database
    - Media template from JoomlArt

Open Source Software: Access Control/Authentication

- Ran a Script called Idaphack9
  - To recognize pop3 as an authenticator
  - Our POP is based on LDAP
  - All of our content is flagged for registered users only.
Cataloging Issues

- Cataloging records have been created for each of the individual program episodes.
- Records are in MARC format and were designed to represent items in streaming media format.
- Records comply with OCLC guidelines on cataloging streaming media.

What do the Catalog Records Include?

- Catalog records include
  - basic bibliographic information,
  - production information and credits,
  - a URL to link to the video,
  - a brief description of the video program,
  - a root file name for the video file,
  - notes on access restrictions & requirements and when available,
  - a link to sources of additional information on the PBS web site.

- Example: [http://library.regent.edu/record=b1550908~S0](http://library.regent.edu/record=b1550908~S0)
Future Considerations

- Shibboleth
- JOOMLA Updates

Federation

- A federation is a group of organizations which have established a trust relationship and agreed to share resources and services under the terms of that relationship. The trust relationship is governed by a policies, practices and protocols.

Shibboleth

- Shibboleth is an Internet2 technology for providing secure, private, single sign-on access to federated resources and services.
InCommon

- InCommon is the primary federation supporting single sign-on federated access to research and educational resources and services in the US.

Joomla Updates

- Upgraded to Joomla! 1.5.6
- Seyret Video Component Pro for Joomla 1.5.6

Demonstration

Regent University Library
Digital Collections Library
Credits
Dr. Ralph Alberico, Director, James Madison University & Chair of the VIVA Task Force Committee on Multimedia Collections
Mark Zillges, Systems Manager, Regent University Library
Members of the VIVA Task Force Committee on Multimedia Collections

Questions???

The End