

EVIA Digital Archive Technical Overview



EVIA Digital Archive
DLP Brown Bag:
7 December 2005

EVIA Digital Archive Technical Overview



EVIA Digital Archive
Development Team:
William Cowan
Nick Hansen
Mike Durbin
Tim Tucker

Tools

EVIA Digital Archives



- Video Segmentation and Annotation
- Controlled Vocabulary Maintenance
- Technical Metadata Collection
- Search and Browse Web Interface

Background

EVIA Digital Archive



- Mellon Foundation funded Project
 - Planning Phase 2001 – 2002
 - Development Phase 2003 – 2005
- Pilot Project to digitize video from Ethnomusicologists
 - Extensive use of video for field collecting
 - Desire to preserve this work
 - Provide ability to annotate this work

Project Timeline



- Planning Phase 2001-2002
 - Three meetings bringing together ethnomusicologists, archivists, librarians, IT professionals, video professionals, intellectual property experts
- Development Phase 2003-2005
 - Goal: Build tools and set up infrastructure to digitize, annotate, and provide access to total of 150 hours of video from 15 contributors

Background

EVIA Digital Archive

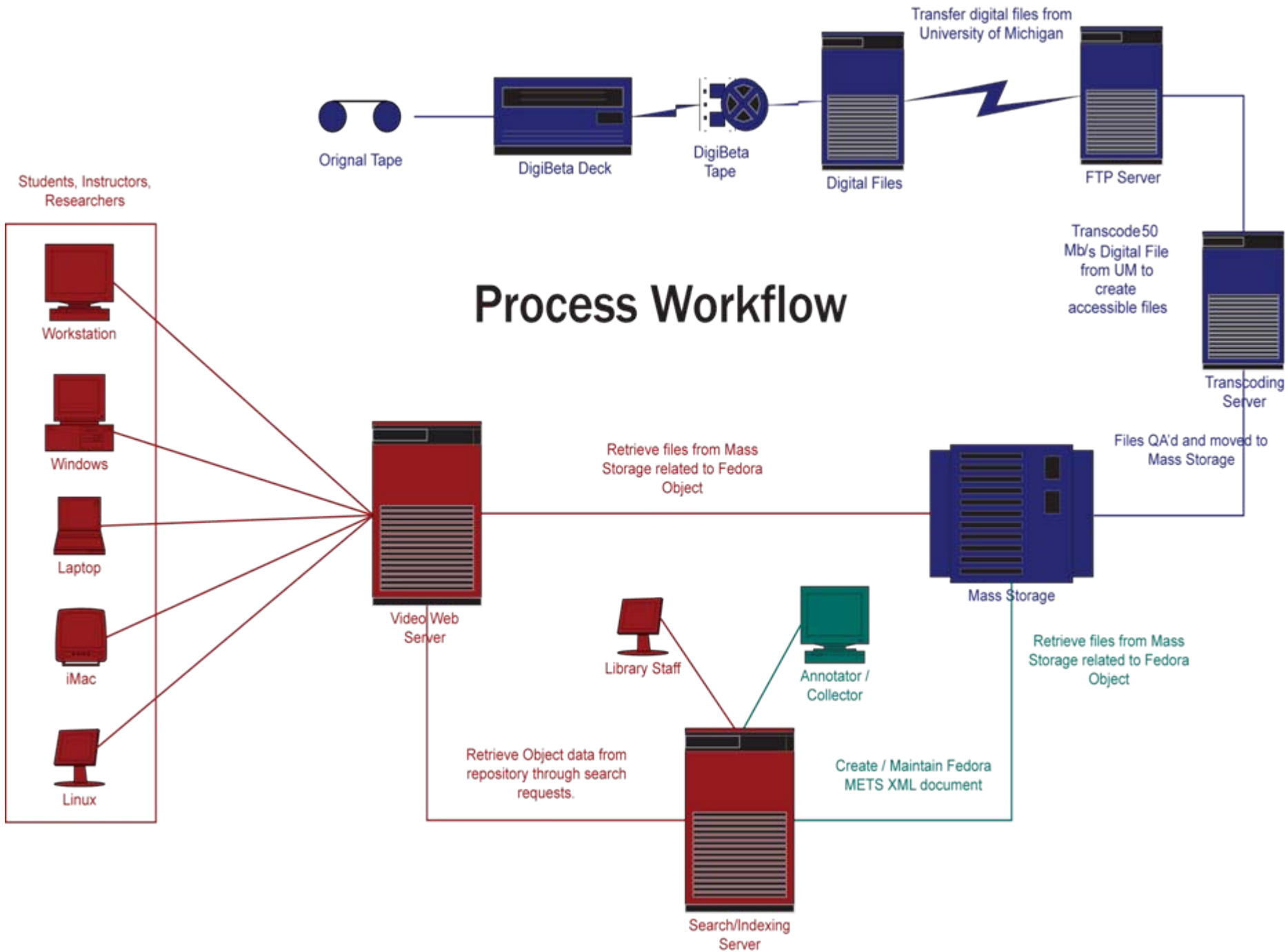


- Partnership between Indiana University and University of Michigan
- University of Michigan – Responsible for digitizing video
- Indiana University – Responsible for Application Development

Units Involved at IU



- Department of Folklore and Ethnomusicology
 - Ruth Stone
- Archives of Traditional Music
 - Daniel Reed, Alan Burdette, Suzanne Mudge, Mike Casey
- Digital Library Program
 - Jon Dunn, Will Cowan, Nick Hansen, Mike Durbin, Jenn Riley
- UITS Digital Media Network Services
 - James McGookey



Creating the Digital Archive



- Original Tape from Contributor– VCR, Digital
- Dub to Digibeta Tape
- Digibeta tape to 50 Mb Mpeg2 Digital File
- 50 Mb Digital File transcoded to digital files used in the video annotation tool
- 50 Mb Digital File stored in MSS
- Digibeta Tape Stored at Archives of Traditional Music
- If collector chooses, original tape may be stored at ATM as well

Creating the Digital Archive

- Some Statistics



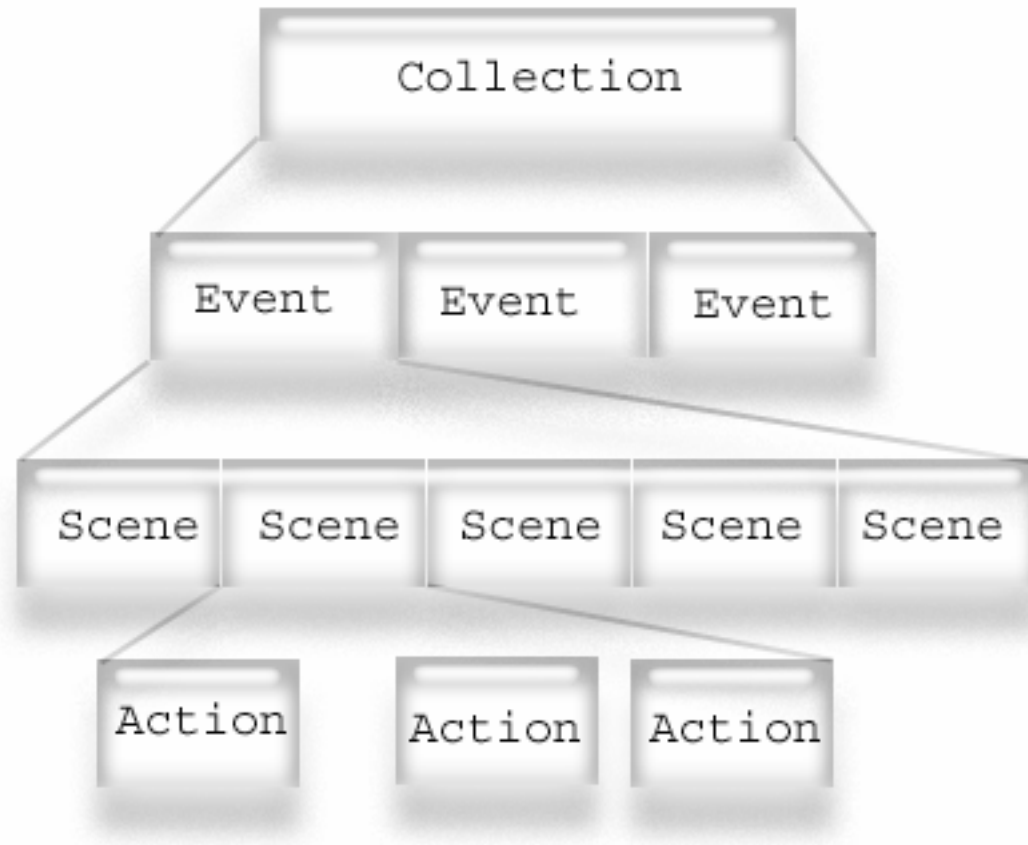
- Size of 50 Mb Digital Master File
 - 10 - 15 gigs per hour of video
 - 100 – 200 gigs per collection
- Effort to create Transcoded File
 - 8 hours per hour of video
 - Includes: dubbing digibeta tape, MPEG2 encoding, checksum generation, transmission and transcoding

EVIA Summer Institute 2004



- June 9 – 19, 2004 at Indiana University
- Collaboration of ethnomusicologists, technicians, programmers, catalogers.
- Contributions of 10 hours of video from 11 ethnomusicologists spanning 4 decades.
- Ethnomusicologists segmented and annotated digital video, participated in workshops, presented their results.

Video Segmentation Hierarchy



EVIA Digital Archive Controlled Vocabulary



- Predefined categories chosen by ethnomusicologists and cataloguers
- Predefined values based on authority sources chosen by cataloguers
- Predefined values stored in tables in Oracle database and available to be selected in annotation application
- As needed, new values would be added by cataloguers during the Summer Institute

EVIA Digital Archive - Standards



- Metadata
 - METS – Metadata Encoding and Transmission Standard
 - MODS – Metadata Object Description Schema
 - AES – Forthcoming Audio Schema for the audio tracks on video
 - AES – Forthcoming Process History Schema for Digital Provenance and History
 - Library of Congress - VMD Schema for Video

Application Development Environment



- Java using Borland JBuilder / Eclipse
- Oracle 9.2 database for Controlled Vocabulary
- Lucene for indexing
- FEDORA Repository
- Applications run in Microsoft Windows
- Search and Browse – current releases of various browsers
- Uses QuickTime and QuickTime for Java

EVIA Digital Archive - Demo



The Portable Ethnomusicological Editing and
Video Segmentation Tool

P E E V S

Search & Browse Interface



- Requirements
 - Search annotations for relevant video segments
 - Browse collections by assigned vocabulary
 - Browse collections by structure/hierarchy
 - All within a Web-based environment
 - With minimal requirements placed on the users' system.

Search & Browse Interface



- Implementation
 - Struts
 - AJAX
 - Quicktime browser plug-in
 - JavaScript / DHTML

Search & Browse Interface



- Struts
 - Provides a robust server-side architecture for
 - Tracking a user's progress through the collection space
 - Modeling the user's session and providing state
 - Dynamically generating views to reflect the current state
 - Fits within the overarching infrastructure and standards of the DLP

Search & Browse Interface



- Browser-based tools
 - HTML + JavaScript + Quicktime plug-in widely available to users—and mostly pre-installed
 - Web-based environment familiar to users
 - AJAX + DHTML allow user to interact with session model without incurring processing costs of full page request / render transaction
 - DHTML provides tools for integrating and extending browser plug-ins with the application display

Search & Browse Interface



- Keyword Search
- Advanced Search
- Results Display / Manage Results
- Video Playback
 - Planned changed to annotation display
 - Planned changes for dock-able components
- <http://bl-ldlp-eviada2.ads.iu.edu:8080/Collections>

Future Developments



- New Search and Browse Interface
- New Thesaurus Tool
- New PEEVS

Video Display



Time:



Stopped | 0:00 / 0:00

Toolbar



Scene Information

Title	Description	Details
Untitled Scene		

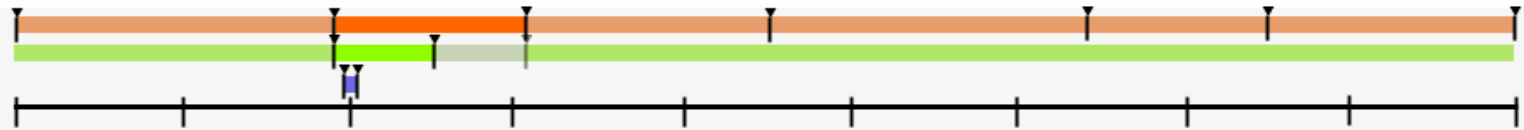
Stopped | 0:00 / 0:00

Collection Hierarchy

Event: Swallow Migration

Scene | Untitled Scene

Event
Scene
Action



For More Information



- Will Cowan: wgcowan@indiana.edu
- Home Page:
 - <http://www.indiana.edu/~eviada/>