

# A Statewide Community of Trust: An RUcore Implementation using Shibboleth and XACML

---

## The Fourth International Conference on Open Repositories

Georgia Institute of Technology  
Atlanta, Georgia  
May 18 - 21, 2009

Ronald C. Jantz, et al  
Rutgers University Libraries

# Topics for Today

---

- The Network and the RUcore Framework
- Authentication and Authorization Architecture
- Application scenarios
- Continuing Developments

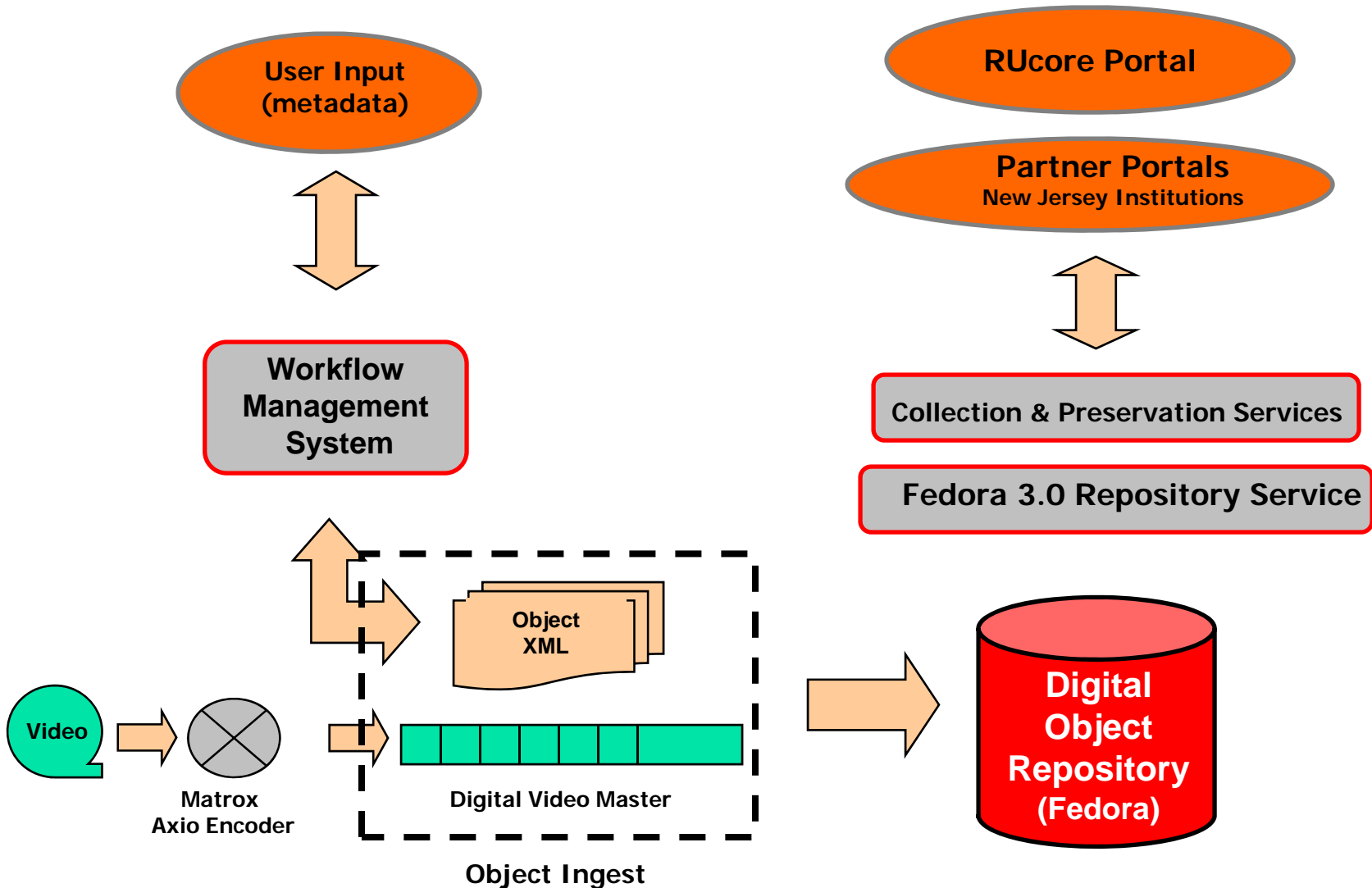
# NJVid – A Statewide Video Network

## (Based on RUcore)

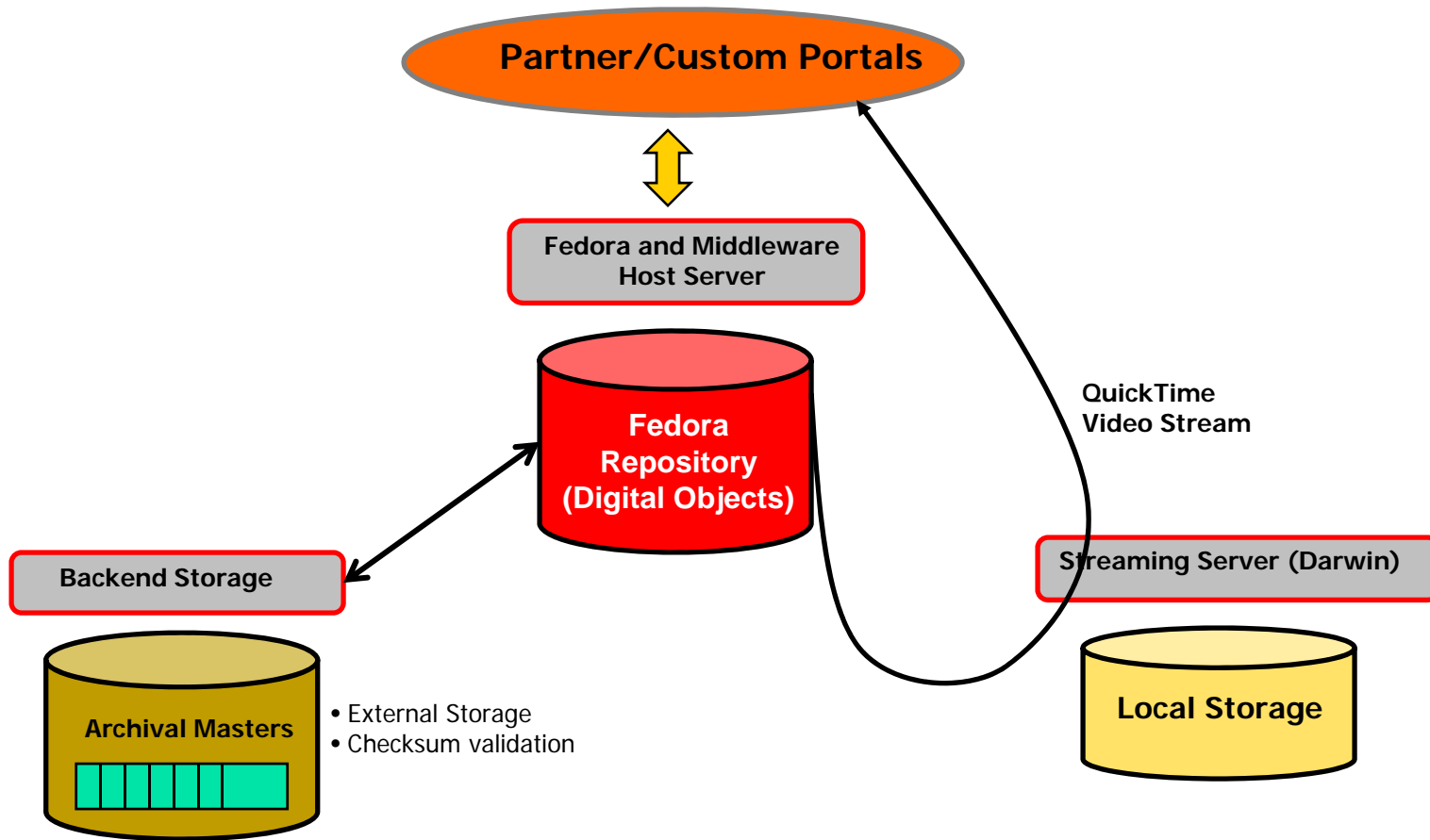
---

- A digital video network
  - An IMLS grant-funded project
  - Will support over 600 New Jersey institutions (academic, K12, & cultural heritage)
- Three types of video collections
  - Video Commons – publicly available videos
  - Commercial videos available through educational consortia
  - Lectures on demand – customized annotations of videos
- Technical platforms based on RUcore and Fedora

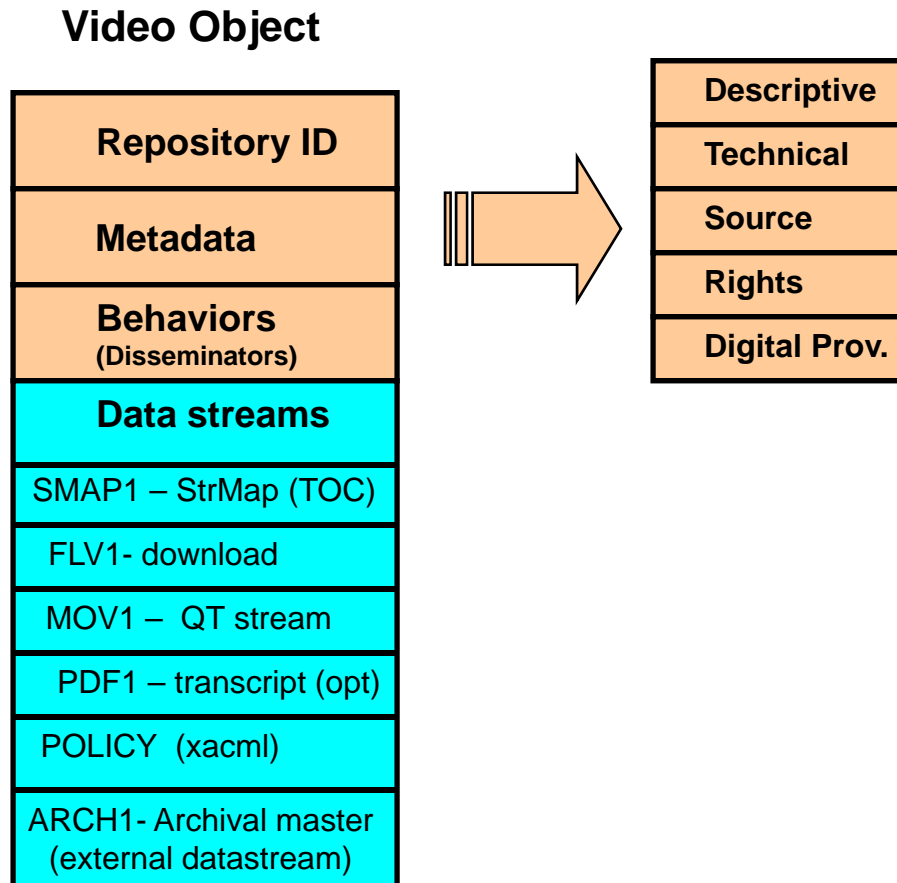
# RUcore Architecture



# RUcore Storage & Server Architecture



# The Video Digital Object and Policies



# Managing the Community of Trust

---

- The Shibboleth Federation is managed by NJEDge, New Jersey's Higher Education Network
  - Shibboleth provides the solution for managing users at cooperating institutions
- For the statewide video network (NJVid)
  - The service provider (NJVid) relies on the identity provider (the institution) to supply attributes about the user
  - Shibboleth securely transfers attributes to the service provider
- For the Goal of "No Organization Left Behind"
  - NJEDge provides a centralized proxy LDAP server to . . .
  - Support smaller institutions without directory services

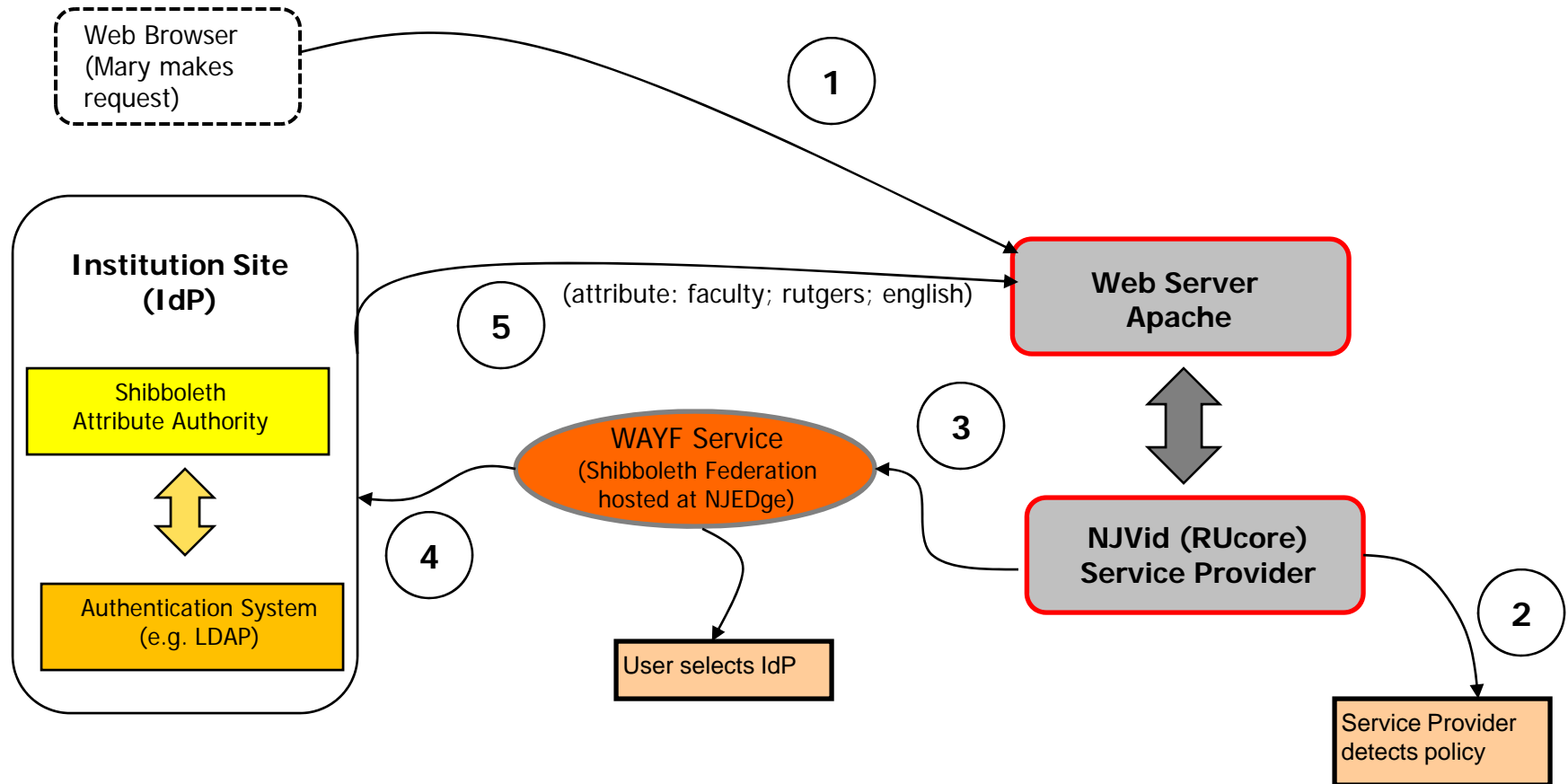
# Licensed Videos and XACML Policies

---

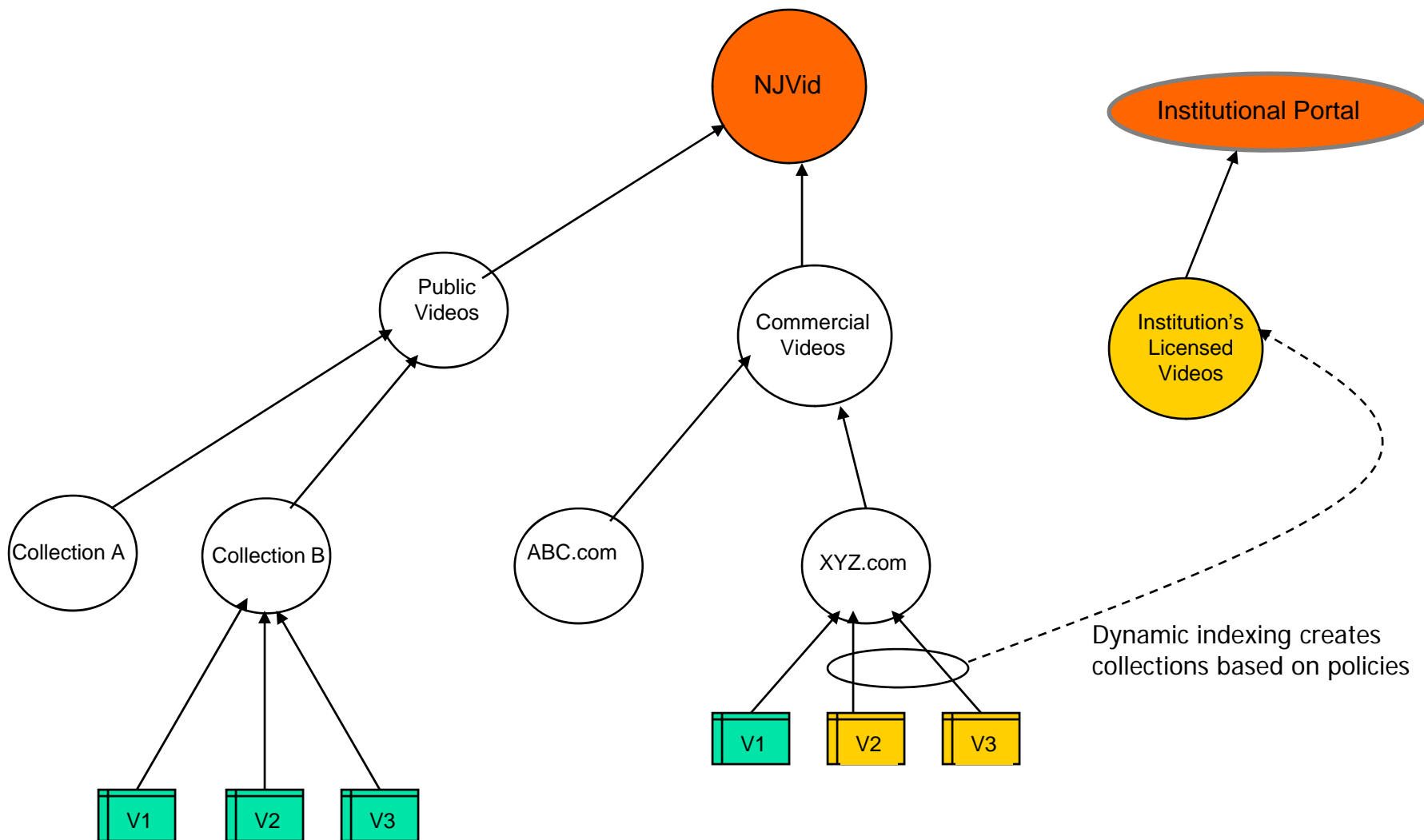
- There are multiple commercial vendors of videos
  - Each video object requires a unique xacml policy containing the licensing institutions and the authorized roles
  - Access is granted based on institutional affiliation and role (i.e. member, faculty, student, etc.)
- On ingest, the license manager (using WMS) creates the appropriate xacml policy datastream and rights event.



# The Service Provider (NJVid), Identity Provider (the Institution), and the Federation



# The Collection Architecture & Licensed Videos



# Further Developments

---

- Delivery of Video
  - Annotation of videos
  - Streaming Flash
  - See publicly available videos: <http://rucore.libraries.rutgers.edu/video/>
- Extending the State-wide Network
  - Serve as an IR for state institutions
  - Content to include ETDs and Data
- Moving Ahead with Open-source
  - OpenWMS and OpenETD
  - See <http://rucore.libraries.rutgers.edu/open/>

- 
- Thanks for listening.
  
  - Questions?
  
  - Many Contributors to this Work
    - Grace Agnew – Assoc. University Librarian, Rutgers University Libraries
    - Isaiah Beard – Digital Curator, Rutgers University Libraries
    - Charles Hedrick, Benn Oshrin – OIT, Rutgers University
    - Sujay Daniel - NJEDge
    - Software Architecture Group – Rutgers University Libraries

# Video Specifications

---

- Archival master is uncompressed AVI
- Streaming protocol is QuickTime H.264
- 29.9 frames/second, 640 x 480 resolution, data rate from 384 – 512 kb/sec
- Delivery to user as QuickTime or Flash (progressive download)