University of Notre Dame
University of Notre Dame

- Private research university with Catholic character
- Funded in 1842 by Edward F. Sorin, a priest of the Congregation of Holy Cross
- “a powerful force for good”
- Located adjacent to South Bend, Indiana
- Athletic teams known as the “Fighting Irish”
ATHLETICS

Baseball
Basketball
Cross Country
Fencing
Football
Golf
Ice Hockey

Lacrosse
Soccer
Swimming and Diving
Tennis
Indoor Track and Field
Outdoor Track and Field

WOMEN’S

Basketball
Cross Country
Fencing
Golf
Lacrosse
Rowing
Soccer

Softball
Swimming and Diving
Tennis
Indoor Track and Field
Outdoor Track and Field
Volleyball

> und.com
ACHIEVEMENTS/MILESTONES

TOP 25
Notre Dame is rated among the nation’s top 25 institutions of higher learning in surveys conducted by U.S. News & World Report, Forbes, Niche, and others.

NOTRE DAME LAW SCHOOL IS RATED 20TH BY U.S. NEWS & WORLD REPORT.
Notre Dame established the first programs in law, engineering, and architecture at an American Catholic institution of higher learning.

A TOP 10 COLLEGIATE WORKPLACE
Notre Dame has been identified as one of the top 10 collegiate workplaces in the country in a survey by the Chronicle of Higher Education, the leading resource for higher education news and information.

THE MENDOZA COLLEGE OF BUSINESS is ranked No. 2 nationally for its undergraduate program by Bloomberg Businessweek in its 2016 survey of top business programs. The program also is ranked No. 2 by Poets & Quants in its inaugural 2016 survey of top undergraduate business schools.

Faculty in the College of Arts and Letters have earned 61 fellowships from the National Endowment for the Humanities since 1999, more than for any other university in the nation over that time.

FACULTY AND PROGRAM STATISTICS
Notre Dame’s Medieval Institute was the first in the United States, and the University also founded the first publication series dedicated specifically to medieval topics.

INFORMATION TECHNOLOGIES
#1 in the country for NEH Fellowships since 1999

$138 million in record-breaking research awards in FY17

GLOBAL FOOTPRINT

31 Grants
24 Countries
Totaling
$18 Million

CURRENT AWARDS BY SPONSOR
Notre Dame Studios

- Provides technical and staff support for campus multimedia production
- Includes control rooms, studios and editing spaces
- Supports live and pre-produced video programming
- Home to video producers from many departments
Digital Media @Notre Dame

- Frequent use of digital media for education, research, special events, faith-based services, athletic competitions & performances
- Video assets estimated to measure ~2PB at present, and growing
- Assessment project in 2017 recommended CatDV as enterprise video asset management application
- Currently running new project to make CatDV enterprise-ready
What is CatDV

- Media asset management application created by UK-based software company Square Box
- Organize, describe, locate and control media assets such as videos, still images, audio files and PDFs
- Common features include asset ingestion, logging and clipping, metadata management, browse and search, and transcoding
- Integrated with non-linear editing software such as Final Cut Pro and Adobe Premiere
- Operates with tiered storage solutions, keeping track of media assets and their locations
- Already used by departments on campus
Expanding CatDV

- Infrastructure already in place including Spectra Logic T950 Tape Library and 600TB SAN
- Also some CatDV licence + middleware appliance & licence, meeting the needs of current users
- CatDV as enterprise solution requires integration with campus IT infrastructure, additional licence, backup & Disaster Recovery provision and storage
  - Also a business model to support and sustain campus use
  - Service documentation, training and support
- Specific academic use cases still need to be addressed (e.g. psychology)
Hosted Media Management Solution

- Balancing performance, security and redundancy
- Media management application: CatDV
- 3-tiers of storage (via orchestration of BlackPearl)
  - Fast SAN storage to support operational use
  - Secure, cost-effective tape storage to accommodate growth
  - Disaster recovery to avoid catastrophic data loss (Cloud storage)
- 4 copies of assets (2 x original, 1 x mezzanine, 1 x proxy)
  - Standard for content creators
- Desktop Client
- Web Clients
- CatDV Server
- CatDV Worker
- REST API
Archiving and archiving

- archiving (to tape)
  - Moving less active files from spinning disk storage to tape storage
  - Tape Library, tape archive
- Society of American Archivists
  - Archives with capital A: permanent valuable records
  - archives: an organisation dedicated to preserving the documentary heritage of a particular group
- University Archives: collecting, maintaining and preserving official records of UND
archiving to Tape

● Previously
  ○ Manual process moving/restoring files outside CatDV (using Archiware)
  ○ Need to restore and reingest data

● Now
  ○ BlackPearl integrated into CatDV
  ○ Users can directly archive and restore content to/from BlackPearl using CatDV desktop or web client - can schedule jobs
Transcoding using FFmpeg
University Archives

- 240TB digitised material
  - Analogue video & audio, photos, print publications
    70% of AV are sports-related; 6% MarCom
- 140TB born-digital material
  - Athletics, MarCom, Development
- 78,000 items on physical carriers (film, audio, video)
  - All catalogued, 20% - 25% digitised
- Stored in Tape Library (as mounted volumes) via Dternity
- Getting a digital preservation system
Digital Preservation in DAMs

- DAMs in general not designed to support archiving and preservation workflows
  - Checksum - main use case is file de-duplication
  - Metadata - no built-in templates for common metadata schema
  - File formats

Figure 1. The Video Assets Lifecycle
Challenges and way forward

- Still a large amount of content on physical carriers - digitisation based on risk & demand
- Separation of content (historical and operational)
  - Consolidation of discovery and storage?
- Dis-alignment between abundance of data and institutional capacity for long-term archiving and preservation
  - Finished products as historical records do not necessarily support access / re-use
- Retention schedule
- How can IT support records creators and University Archives?
- Collaboration
  - Can CatDV serve DIPs for Archives?
  - Can Archives provide guidelines re. records of enduring value