"Digital Futures"

Supporting the Life Cycle of Academic Digital Resources at Georgia Tech

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What Academic Digital Resources?

- **Examples**
  GT-produced intellectual output from education & research programs:

  - ☐ Course syllabi
  - ☐ Student portfolios
  - ☐ Faculty portfolios
  - ☐ Recorded lectures and notes
  - ☐ Lecture Series materials
  - ☐ Student notes
  - ☐ Data sets
  - ☐ Multimedia simulations, visualizations, and models
  - ☐ Textual documents, i.e. reports, papers, notes
  - ☐ Digital learning modules
  - ☐ Digitally captured classroom interactions / other live events
  - ☐ Software programs developed for instructional purposes
  - ☐ Other cognitive tools in digital form
  - ☐ Digitized archival collections
  - ☐ Student publications and other works

Academic Digital Resources

Review of transformational initiatives underway

1) <u>Digital Initiatives</u> – Repository & Digital Collections-building

☐ SMARTech, GT's institutional repository
http://SMARTech.gatech.edu

☐ e-Theses and dissertations http://etd.gatech.edu

☐ Digital collections
http://www.library.gatech.edu/archives/digital_collections.html

Academic Digital Resources

Review of transformational initiatives underway

2) <u>Digital Preservation</u>

☐ **<u>MetaArchive Preservation Network</u>**   <u>http://metaarchive.org</u>
<u>http://smartech.gatech.edu:8282/dspace/handle/1853/7287</u>

- **Decentralized Approach** (question the "one copy at one institution" approach)

- **Built on LOCKSS** (supports "distributed digital replication" approach). Peer-to-peer network architecture, each node communicates with each other to replicate content. Minimum of six nodes

- **Dark Archive** (preservation with no public access. High accessibility equals high costs)

- **Automated format migration tools**

- **Low Cost** (Designed for minimal expense, low barriers to adoption for medium-sized insts.)

- **Flexible, adaptable multi-institutional model**

- **LC / NDIIPP partnership<u>…</u>** (1 of 8 initial)

Academic Digital Resources

Summary: Initiatives underway

- Repository

- Collections

- Preservation (distributed digital network)

What else do we need?

Academic Digital Resources

- **Answer:**
  Support "Life Cycle" of academic digital resources

1) Creation
   - ☐ Creating / converting content for faculty and students

2) Integration
   - ☐ Manage LMS systems and integrate content into them

3) Storage & Retrieval
   - ☐ More repositories and repository development

4) **"Strategic Management"**
   - ☐ …of the Life Cycle of academic digital resources

Academic Digital Resources

Examples of future transformational initiatives

Life Cycle of Digital Resources: Understanding & Managing it

- **"Digital Stewardship" Program** (Library, CETL, DLPE, OIT, Academic units)

    - University commitment to use, re-use, and maintain academic digital information and learning resources used in the academic enterprise
    - Identify GT digital resources produced & used by its academic enterprise
    - Recommend criteria for selecting digital resources for which GT will and will not take responsibility for maintaining
    - Establish infrastructure: organizational, technology, policy, financial
    - Identify "steering group" to develop and monitor this program and plan

Digital Stewardship

- **<u>Digital stewardship</u>**

   ...is the process of managing digital objects for continuing access and use over significant periods of time. It is an outcome of the organization's successful day-to-day management of its digital resources

<u>**Program components:**</u>

- <u>Task certain GT staff positions</u> with roles and particular functions in a digital stewardship program. Define these roles and develop policies to guide these staff roles and functions

- <u>Design an integrated technological architecture</u> taking into account the life cycle of digital resources

- <u>Education for faculty, staff, and students</u> in the basic concepts and challenges in digital stewardship, and training in information management practices that will contribute to the ongoing availability of digital objects

Academic Digital Resources

Examples of future transformational initiatives

- **Creation / Conversion of Digital Resources:**

- **Digital Media Services**   (Library, OIT)

    "the storefront to faculty and student services"

    - ☐ Content production and scanning services
    - ☐ Copyright and intellectual property services
    - ☐ Electronic publishing services
    - ☐ Instructional content services (i.e. content integration with courseware)
    - ☐ Media and format migration services
    - ☐ Web design, development, and usability assessment services

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Cornell DCAPS   FM

UTKL DMS

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Digital Resources and Learning

- Integrate resources with digital learning environments and address support needed for a **Core** Campus Function:

Student Learning

- **Learning Management Systems Support** (CETL, Library, OIT)

  - ☐ Charge: develop, manage, support use of LMS' at GT
  - ☐ Lead policy and vision where LMS's / courseware are concerned
  - ☐ Coordinate efforts of campus groups developing/supporting LMS's
  - ☐ Support a range of LMS's
  - ☐ Support content integration (information/learning resources) into LMS's
  - ☐ Seek a new organizational and service model for LMSS unit
    --A Hybrid model, shared by CETL / Library / OIT?   (Duke CIT)   Utah TACC

Managing Digital Resources

- **More Storage and Retrieval** (More Repositories)

  - ☐ **SMARTech, GT's Institutional Repository** (Library)

    Digital intellectual output, communications, instructional materials

  - ☐ **GT Digital Asset Management System** (GTDAMS) (DLPE, ECE, OIT, Library)

    Digitally captured courses, other live events (w/ streaming video/audio)

  - ☐ **Student Portfolio System** (Student Services, OIT EIS)   Duke portfolios

More Repositories

- Need collaborative design processes (i.e. repositories)
- Library has <u>deep expertise</u> to offer in areas like:

  ☐ Metadata
    - Needs standard, more robust forms. i.e. METS <u>METS</u> <u>premis</u>

  ☐ Preservation
    - Tape back ups are unreliable and passé

  ☐ User interface design & usability assessment
    - Library exp. with User Insight, Inc. <u>UI</u> <u>GTL site</u>

  ☐ Searching strategies and technologies <u>info lit</u>

  ☐ Training and instruction <u>GTL</u>

Where do we go from here?

- ***Let's Talk… a lot!***

- …about academic digital resources

- …about Digital Stewardship (we need a "Steering Group")

- …about Life Cycle mgmt. of academic digital resources

- …about the services / service units needed to provide support

- …and let's COLLABORATE to resolve issues and advance GT!