ETD Implementation

The Two Virginias and Their Strategies for Successfully Requiring the Electronic Submission of Theses and Dissertations

What is the situation?
- Universities generate substantial basic and applied research
- Documented in theses and dissertations
- Only some research revealed in scholarly journal articles
- Traditional theses and dissertations unused

What is the long-term vision?
- ETDs are rich hypermedia works
- Graduate education more effective; and students more productive
- Universities publish university research
- Faster and better knowledge and technology transfer

What are we doing?
- Improving content and availability with technology
- Educating future scholars to publish effectively using digital libraries
- Helping students be more creative in their scholarship
- Providing easy and widely available access to information
# ETD Implementation Tour

- **VA Tech**
- **WVU**

## ETDs in the NDLTD

<table>
<thead>
<tr>
<th>#</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>Air University</td>
</tr>
<tr>
<td>41</td>
<td>Australian DT Group</td>
</tr>
<tr>
<td>2</td>
<td>Concordia University</td>
</tr>
<tr>
<td>50</td>
<td>Dissertationen (German)</td>
</tr>
<tr>
<td>4032</td>
<td>MIT (scanning project)</td>
</tr>
<tr>
<td>87</td>
<td>North Carolina St. U.</td>
</tr>
<tr>
<td>10</td>
<td>Pennsylvania St. U.</td>
</tr>
<tr>
<td>24</td>
<td>Rhodes U. (South Africa)</td>
</tr>
<tr>
<td>57</td>
<td>University of Florida</td>
</tr>
<tr>
<td>8</td>
<td>University of Maine</td>
</tr>
<tr>
<td>9</td>
<td>U. of Tennessee, Memphis</td>
</tr>
<tr>
<td>3</td>
<td>U. of Texas, Austin</td>
</tr>
<tr>
<td>17</td>
<td>U. of Virginia</td>
</tr>
<tr>
<td>23</td>
<td>U. of Waterloo</td>
</tr>
<tr>
<td>2360</td>
<td>Virginia Tech</td>
</tr>
<tr>
<td>485</td>
<td>West Virginia U.</td>
</tr>
</tbody>
</table>

**T = 7255**

## Support Elements Necessary for Successful Implementation

- Top level administrators
- Graduate School
- University Library
- Faculty
- Students
How to Achieve Support

- Information technology implementation
- Recruit implementation team
- Develop networking
- Educate
- Promote and publicize
- Engage discussion
- Design careful planning
- Build support infrastructure
- Set reasonable timeline for implementation

Va Tech Team Collaboration

- Graduate School
- University Libraries
- ETD Task Force
- Faculty: Governance, concerns, VT Advisory Committee, FDI

Status of ETDs at Virginia Tech: Graduate School

- Jan. 1, 1997 began requiring ETDs
- Training workshops for graduate students
- Approval form for advisors and committees
- All ETDs reviewed by Graduate School staff

VT ETD requirement: an outcome of faculty governance

- DRSCAP
  – Degree Requirements, Standards, Criteria, and Academic Policies Committee
- CGS&P
  – Commission on Graduate Studies and Policies
DRSCAP Concerns
♦ Allow voluntary submissions with incentives prior to Jan. 1, 1997 requirement
♦ Establish university oversight committee
♦ Publicize the requirement widely
♦ Avoid significant burdens on departments

Other faculty concerns
♦ Participation in decision-making lacking
♦ Notification of requirement not broad enough
♦ Harmful to future scholars

Status of ETDs at Virginia Tech: Library
♦ Students submit via Web; Graduate School approves
♦ Held in secure directory if unavailable for patent/proprietary reasons
♦ Immediately available to university or world on Web
♦ Available through online library catalogs within 1-2 weeks
♦ Accessible by author or department and searchable using UltraSeek (OpenText, freeWAIS)
♦ Submission software: http://scholar.lib.vt.edu/ETD-db/

WVU Team Collaboration
- Office of the Provost
- Office of Graduate Education (decentralized graduate programs)
- ETD Task Force
- Academic Computing
- University Libraries (Library ETD Implementation Team)
- Faculty Senate, Council of Deans
- OIT Advisory Committee
ETD Usage at Virginia Tech

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total requests</td>
<td>37,171</td>
<td>220,752</td>
<td>532,093</td>
<td>1,090,113</td>
</tr>
<tr>
<td>Daily requests</td>
<td>102</td>
<td>586</td>
<td>1,457</td>
<td>3,016</td>
</tr>
<tr>
<td>ETD requests</td>
<td>4,600</td>
<td>74,028</td>
<td>300,673</td>
<td>671,981</td>
</tr>
<tr>
<td>Abstract req.</td>
<td>25,829</td>
<td>109,420</td>
<td>210,833</td>
<td>217,796</td>
</tr>
<tr>
<td>Hosts served</td>
<td>9,015</td>
<td>22,885</td>
<td>35,593</td>
<td>77,062</td>
</tr>
</tbody>
</table>

WVU ETD Web Distribution Type:
- 1998-1999
  - World: 56%
  - Campus-Only: 41%
  - Patent: 3%

Web Distribution of WVU ETDs:
- 1999-2000
  - World: 53%
  - Campus-Only: 42%
  - Patent: 2%
  - Campus-Encrypted: 3%

VT ETDs: AVAILABILITY
- Unrestricted: 53%
- University-only: 25%
- Withheld: 19%
- Mixed access: 3%
International Use of VT ETDs

WVU ETD Web Information

Page Accesses

Costs and Benefits

WVU
Virginia Tech
Collection Maintenance

- WVU Academic Computing
  - Server and maintenance: (.3 fte; existing personnel utilized) Dell 20 GB hard drive, Windows NT OS, initial programming, archiving routine
- VT Digital Library and Archives
  - Server: Sun Enterprise 250, 384 Mb RAM, running Solaris 2.7, 9 Gb; Apache Web server

Education

- WVU Workshops / Consultants:
  - 1.0 fte; rotates among 4 consultants existing personnel utilized
- ETD Document Preparation and Conversion
  - Many students need lack basic word processing and multimedia skills
- ETD Program Overview and Submission Process (University Libraries)
  - Many students complained initially, now accepted and exploring new formats
  - Web Information Page Accesses

Virginia Tech Digital Library and Archives

- Supporting ETDs at a Typical University Library
- Staffing
  - Programmer, student, faculty liaison
- Software (Tony’s session tomorrow)
  - Free or home-grown and free to NDLTD

WVU Libraries / Technical Services Division

- Submissions
  - 1.0 fte; existing personnel utilized: Technical Consultant and occasional backup (equivalent to submission & review by graduate school)
- Cataloging
  - 1.5 fte; existing personnel utilized:
    - Cataloging Librarian, Library Technical Assistant
  - Cost reductions for binding, handling, etc: $6.00/dissertation unit; Library formally subsidized _ of cost; current savings of at least $1,000 annually. Handling: no book processing required (labor intensive)
ETD Cost Savings at Virginia Tech

- 3000 paper copies/year no longer stored and shipped from Graduate School to Library
- 166 ft. shelf space per year in Library
  - No binding, shelving, circulating, etc.
- No additional equipment or staff necessary
  - $65,000US projected library start-up costs: staff, equipment, software

Students

- WVU:
  - Master’s Theses: $55.00 submission fee (covers UMI submission and $10 archiving fee); copyright fee of $45.00 is optional; Doctoral Dissertation: $65.00 submission fee (covers UMI submission and $10 archiving fee); copyright fee of $45.00 is optional

Libraries / Public Services Division

WVU and VT

- Reference / Document Delivery:
  - Existing personnel utilized; minimal impact; required initial training, augmented use of electronic delivery & copy services

Students

- Virginia Tech
  - Master’s Theses: $20 archiving fee is required; copyright fee of $45.00 is optional;
  - Doctoral Dissertation: $65.00 submission fee covers UMI submission; $20 archiving fee is also required; copyright fee of $45.00 is optional

Students

- WVU:
  - Master’s Theses: $55.00 submission fee (covers UMI submission and $10 archiving fee); copyright fee of $45.00 is optional; Doctoral Dissertation: $65.00 submission fee (covers UMI submission and $10 archiving fee); copyright fee of $45.00 is optional

Libraries / Public Services Division

WVU and VT

- Reference / Document Delivery:
  - Existing personnel utilized; minimal impact; required initial training, augmented use of electronic delivery & copy services

Students

- Virginia Tech
  - Master’s Theses: $20 archiving fee is required; copyright fee of $45.00 is optional;
  - Doctoral Dissertation: $65.00 submission fee covers UMI submission; $20 archiving fee is also required; copyright fee of $45.00 is optional
Realities of Digital Publishing

- Student Publishing Concerns
  - Dissent from History Department students
- How have publishers reacted to articles from ETDs?
- University Tenure Systems and Digital Publishing
  - Is digital publishing being recognized for basis of granting tenure and promotion to university faculty?

Positive Outcomes from Implementation

- WVU
  - Heightened sense of awareness on campus of the profound effects of information technology
  - Rapid Technology Transfer:
    - Transforming West Virginia’s economy
    - Providing research access to the world
- Va Tech
  - Heightened sense of awareness on campus of the profound effects of information technology

NDLTD’s Role

- Provide Implementation Support
- Networking University Communities
- Federated Searching
- Consortium Research and Development: Commitment to the Future
- What should its role be in the future?

Epilogue: the Continuing Dream

- *Excerpt from “Changing Landscape”*
ETD Web Resources

- Virginia Tech
  - http://scholar.lib.vt.edu/theses
  - http://etd.vt.edu
  - http://www.ndltd.org
- West Virginia University
  - http://www.wvu.edu/~thesis/
  - http://www.libraries.wvu.edu/theses/index.htm
  - http://www.libraries.wvu.edu/thesis.htm

ETD Contacts

- Gail McMillan, Virginia Tech
gailmac@vt.edu
- John H. Hagen, West Virginia University
  Jhagen2@wvu.edu

Presented at the Third International Symposium on Electronic Theses and Dissertations
University of South Florida
March 16, 2000