

Why digital theses and dissertations? How can you get started?

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Michigan Graduate Deans Meeting
October 11, 2001

10-02-01

What can a digital thesis or dissertation (TD) look like?

It can have the appearance of a paper document

It can contain thumbnail pages and links to aid navigation

It can have a unique layout

It can have photomicrographs

It can contain a simulation

It can contain a video clip

It can contain sound

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Why is moving to digital submission important?

- ◆ Paper TDs are under utilized
- ◆ Scanned paper documents are costly to store and less effective than original digital documents
- ◆ Students need to know how to prepare and use digital documents
- ◆ Students need tools to share knowledge more effectively
- ◆ Your university's research and scholarship can be more widely shared

What is the goal for digital thesis and dissertation submission?

Have graduate students become information literate and have the research and scholarship produced by research universities be more effectively communicated and more widely shared among scholars regardless of their ability to pay.

- ◆ By providing training opportunities for graduate students to improve information literacy
- ◆ By having all the TDs produced by research universities available through an integrated world wide library system

What is the status of digital TDs now?

- ◆ 100+ universities world wide
- ◆ VT, ETSU, LSU(02), NTSU(02), UGA(02), WVU and UT Austin (01) require submission
- ◆ Florida, Iowa, Kentucky, NCSU, Ohio St., UT-Memphis, UVA, Waterloo, WPI, WSU have collections
- ◆ 37 US institutions have projects
- ◆ More than 160 persons from 32 states and 15 countries attended 2001 ETD workshop
- ◆ 3500 digital TDs at VT, 1000 at WVU, 8K WW

How did we get to this point?

- ◆ Approved by VT governance in 1996
- ◆ Digital TDs first required by VT in 1997
- ◆ Interest in adoption has been worldwide
- ◆ National ETD workshops since 1998

How can your institution start adopting digital TDs?

- ◆ Organize a planning/implementation team
 - ◆ Graduate School
 - ◆ Library
 - ◆ Information Technology
- ◆ Adapt Virginia Tech solution
- ◆ Adopt a parallel system
 - ◆ Build interest and consensus
 - ◆ Start trial/allow optional submission

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How are TDs managed at Virginia Tech?

Digital TDs are:

- ◆ Produced using standard word processing packages
- ◆ Delivered as portable document format (PDF) files
- ◆ Reviewed by the Graduate School
- ◆ Cataloged and archived by the library
- ◆ Downloaded by UMI from the library server

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How is the VT Graduate School involved in the process?

- ◆ A Graduate School requirement effective January 1, 1997
- ◆ Student training workshops since Spring 1996
- ◆ Special ETD approval form
- ◆ Graduate School reviews all ETDs for format
- ◆ Graduate School helps student correct errors before cataloging
- ◆ Over 3500 ETDs submitted

How are paper TDs used?

- Virginia Tech theses submitted 1990 - 1994, combined average circulation per copy is 2.24/yr
- Virginia Tech dissertations submitted 1990 - 1994, combined average circulation per copy is 3.2/yr

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How are digital TDs used?

	1996	1997	1998	1999	2000
Total requests	37,171	247,537	465,974	1,190,113	1,894,510
Daily requests	102	685	1,722	3,016	5,176
ETD requests	4,600	72,854	244,987	671,981	734,807
Abstract req.	25,829	112,633	177,647	217,796	320,273
Hosts served	9,015	22,725	28,022	35,593	105,632

Combined average circulation per copy is 650/yr
compared to 2-3 for paper

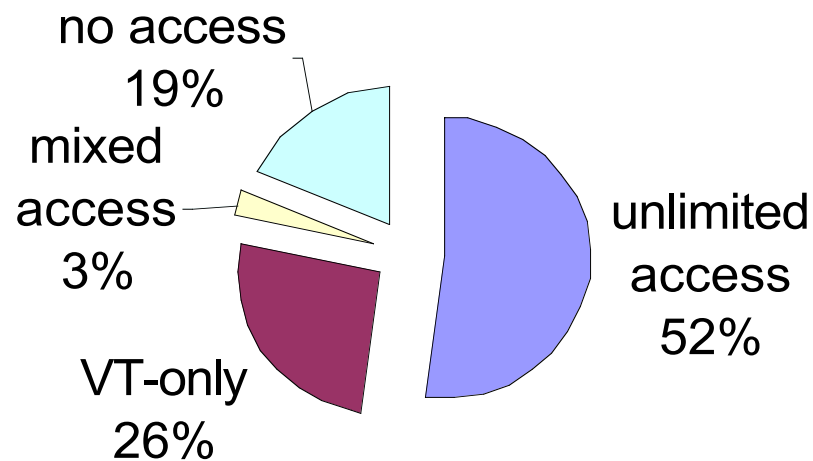
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Five most accessed VT theses and dissertations

- ◆ 25,982 Industrial & Systems Engineering 1998 Ph. D. Park, T. Network Design and Analysis Problems in Telecommunication...
- ◆ 16,814 Chemistry 1997 Ph. D. Rosas-Garcia, V. Towards the Design of Carnitine Acyltransferase Inhibitors: Modeling the Conformational ...
- ◆ 16,592 Engineering Mechanics 1998 Ph. D. Janajreh, I. Wavelet Analysis of Extreme Wind Loads on Low-Rise Structures
- ◆ 16,038 Electrical & Computer Engineering 1998 M.S. Cheung, T. 2GHz W-CDMA Radio Transceiver
- ◆ 15,903 Materials Science & Engineering 1999 Ph. D. Giunta, R. Durability of Polyimide/Titanium Adhesive Bonds: An Interphase...

Access to VT theses and dissertations

VT ETDs



What are the costs/savings at VT?

- ◆ Graduate School no longer processes, stores and ships to the library 3000 copies of paper TDs/year
- ◆ Library no longer binds, shelves, and circulates 3000 copies of TDs/year
- ◆ 166 ft of shelf space saved/year by the library (based on 2000 1 inch TDs/year)
- ◆ VT used existing equipment in the Scholarly Communications Project to support the ETD project
- ◆ Library start-up costs for staff, hardware and software from from a zero-base estimate: \$65,000 (<http://scholar.lib.vt.edu/theses/>)

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Challenges to Creating and Sustaining Digital TD Collections

- ◆ Making information literacy an expectation of graduate (and undergraduate) education
- ◆ Informing graduate students and faculty of their responsibilities associated with use of copyrighted work in ETDs
- ◆ Informing students and faculty of their rights as holders of copyright to ETDs and other original work
- ◆ Changing the attitudes of publishers about publishing manuscripts derived from ETDs
- ◆ Establishing a preservation system for electronic documents which is accepted to be as dependable as paper or microfilm

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Help Available to Others

- ◆ WWW site with information you might need
- ◆ Free automated submission system
- ◆ Student guidelines, training materials, FAQ's, PR info
- ◆ Multimedia educational materials
- ◆ On site visits from the ETD team
- ◆ Workshops for pilot institutions

Concluding Thoughts

- ◆ Implementation is slower than expected
 - still a text mentality among many faculty and graduate deans
 - incoming graduate students plan around ETDs
- ◆ If you build it they will come
 - access exceeded expectations
 - disappointing that 20% are inaccessible
- ◆ No longer experimental
 - surprising increase in the number and diversity of NDLTID institutions implementing ETDs
- ◆ Remarkable increase in exposure of graduate student research

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VT ETD Team

Ed Fox - Computer Science

John Eaton - Graduate School

Gail McMillan - Library

<http://etd.vt.edu/>

<http://www.ndltd.org>

<http://www.theses.org/>

<http://scholar.lib.vt.edu/theses/>

Slides at <http://scholar.lib.vt.edu/theses/presentations/Eaton.pdf>

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- ◆ Air University, Maxwell AFB, AL
- ◆ Baylor University
- ◆ Brigham Young University
- ◆ California Inst of Technology
- ◆ Clemson University
- ◆ College of William and Mary
- ◆ Concordia University (Illinois)
- ◆ East Carolina University
- ◆ East Tennessee State University
- ◆ Florida Institute of Technology
- ◆ Florida International University
- ◆ George Washington University
- ◆ Louisiana State University
- ◆ Marshal University
- ◆ Massachusetts Inst of Technology
- ◆ Miami University of Ohio
- ◆ Michigan Tech
- ◆ Mississippi State University
- ◆ Naval Postgraduate School,
- ◆ North Carolina State University
- ◆ Pennsylvania State University
- ◆ Regis University
- ◆ Rochester Institute of Technology
- ◆ University of Colo Hlth Sci Center
- ◆ University of Florida
- ◆ University of Georgia
- ◆ University of Hawaii at Manoa
- ◆ University of Iowa
- ◆ University of Kentucky
- ◆ University of Maine
- ◆ University of North Texas
- ◆ University of Oklahoma
- ◆ University of South Florida
- ◆ University of Tennessee, Knoxville
- ◆ University of Tennessee, Memphis
- ◆ University of Texas at Austin
- ◆ University of Virginia
- ◆ University of Wisconsin, Madison
- ◆ Vanderbilt University
- ◆ Virginia Commonwealth University
- ◆ Virginia Tech
- ◆ West Virginia University
- ◆ Western Michigan University
- ◆ Worcester Polytechnic Institute