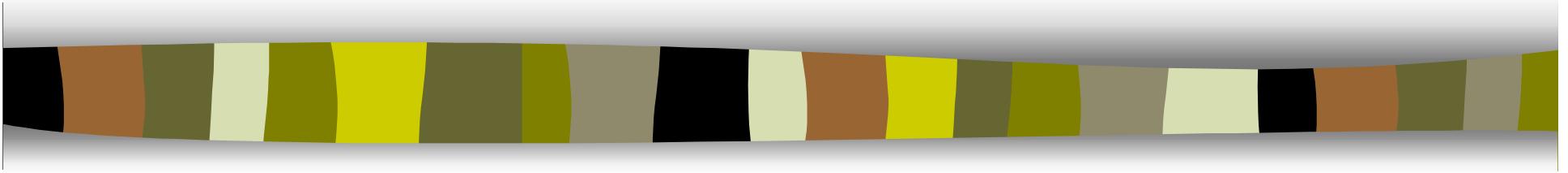


# Access to EResources: Theses Come out of the Attic



Gail McMillan

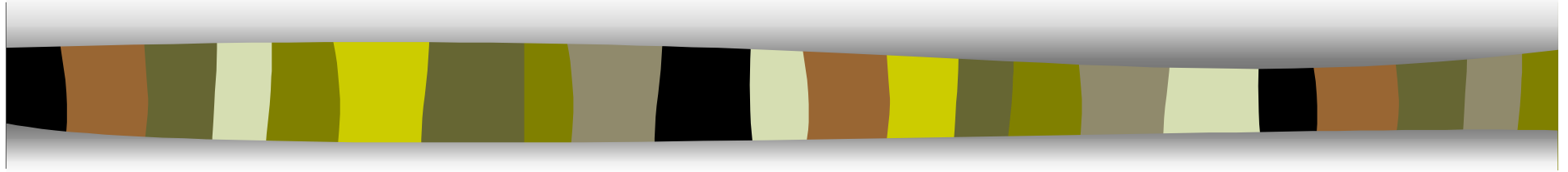
[Digital Library and Archives](#), University Libraries

Virginia Polytechnic Institute and State University

Virginia Library Association

Oct. 19, 2001

# Contemporary Turkish Coffeehouse Design Based on Historic Traditions



Timur Oral

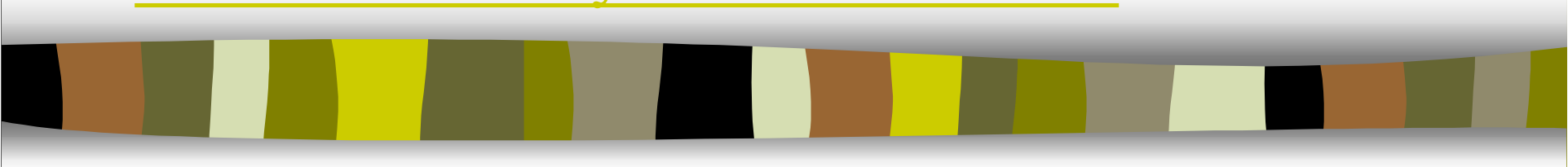
MS, Interior Design

College of Human Resources and Education

April 1997

<http://scholar.lib.vt.edu/theses/available/etd-2227102539751141/>

All the King's Horses:  
Delta Wing Leading-Edge Vortex System  
Undergoing Vortex Breakdown:  
A Contribution to its Characterization and  
Control under Dynamic Conditions



Norman Schaeffler

PhD, Engineering Mechanics

College of Engineering

April 1998

<http://scholar.lib.vt.edu/theses/available/etd-32498-21232/>



## The long-term vision for ETDs?

- Faster and better information transfer
- 400,000 masters and PhD candidates annually exposed to e-publishing
- ETDs become rich hypermedia works
- Graduate education is more effective, students are more productive
- Universities publish their scholarship



# What is Virginia Tech doing?

- Using computer-based technology to improve the content and availability of theses and dissertations
- Educating future scholars to publish electronically and effectively use digital libraries



## Why ETDs?

- Help graduate students learn about e-publishing and digital libraries
- Apply that knowledge to research, build, submit ETDs
- Empower students to convey richer message through use of multimedia
- Improve graduate education through more effective sharing of information
- Timely availability of university's unlock intellectual property
- Libraries improve services and resources, save money and space



# Why digital submission?

- Students gain hands-on experience
  - preparing electronic works
  - using tools to share information effectively
- Scanned documents are costly to store, less effective than original digital documents



# ETDs: Library Goals

- Improve library services
  - Better turn-around time
  - Always available
- Reduce work
  - Catalog from etext
  - Eliminate handling: mailing to UMI, bindery prep, check-out, check-in, reshelving, etc.
- Save space





## How are ETDs managed at VT?

- Produced using standard word processors
- Submitted online, usually as portable document format (PDF) files
- Reviewed by the Graduate School
- Cataloged and archived by the library
- Downloaded by UMI from the library server



## What is the Graduate School's role?

- Student training workshops
- Helps student correct errors before final approval
- Reviews all ETDs for format
  - More than 3577 approved as of Oct. 13, 2001
- ETD approval form



# What is the Library's role?

- Education and training
  - how to turn Word into PDF
  - copyright
- Liaison for readers to authors, advisors
- Programming
  - Processes, notifications, availability
- Server
  - Submission, archiving, access



# Electronic Theses/Dissertations

- Benefits
- Concerns
- Possibilities



## Benefits of ETDs include:

- Increased access
  - Low margin, high use
  - Online vs. circulation of copies
- Cost savings
  - Students and libraries
- Preparation for the future



# Benefits: Increased Access

## ■ Low margin, high use

- Incorporate ETDs with other digital library activities
  - EJournals, EReserve, ImageBase (digital images)
  - Additional equipment, staff may not be necessary
- May use VT programs, scripts, etc.
  - <http://scholar.lib.vt.edu/ETD-db/>

## ■ Online vs. circulation of copies

- Access statistics
- Circulation statistics



Paper theses and dissertations are relatively inaccessible and under utilized.

- 1996-1999: ETD circulated 270/yr
- 1990-1994: paper TD circulated 2-3/yr
  - VT theses submitted 1990-94: combined average circulation was 2.24/yr per copy
  - VT dissertations submitted 1990-94: combined average circulation was 3.2/yr per copy

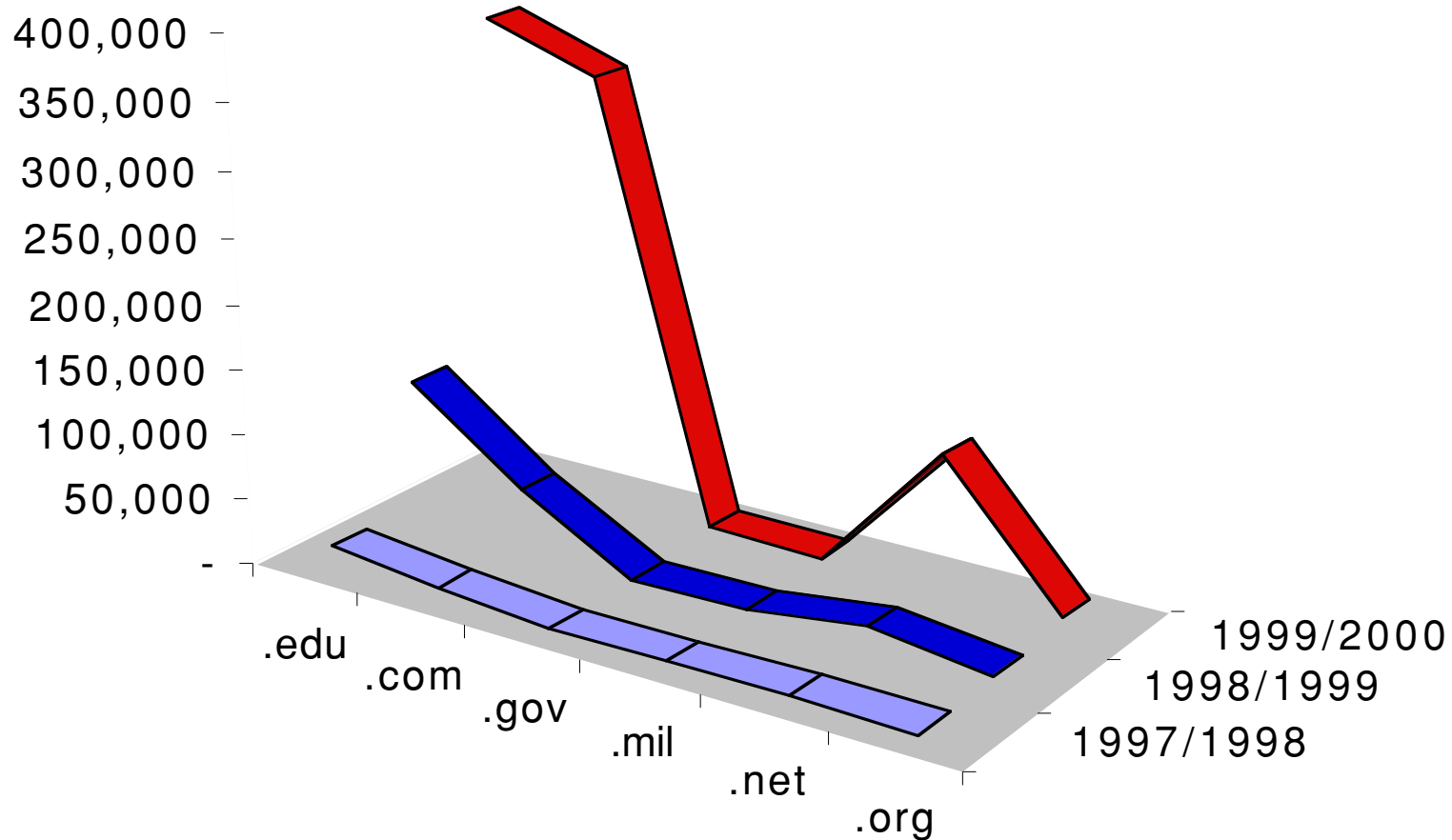


# Are ETDs used?

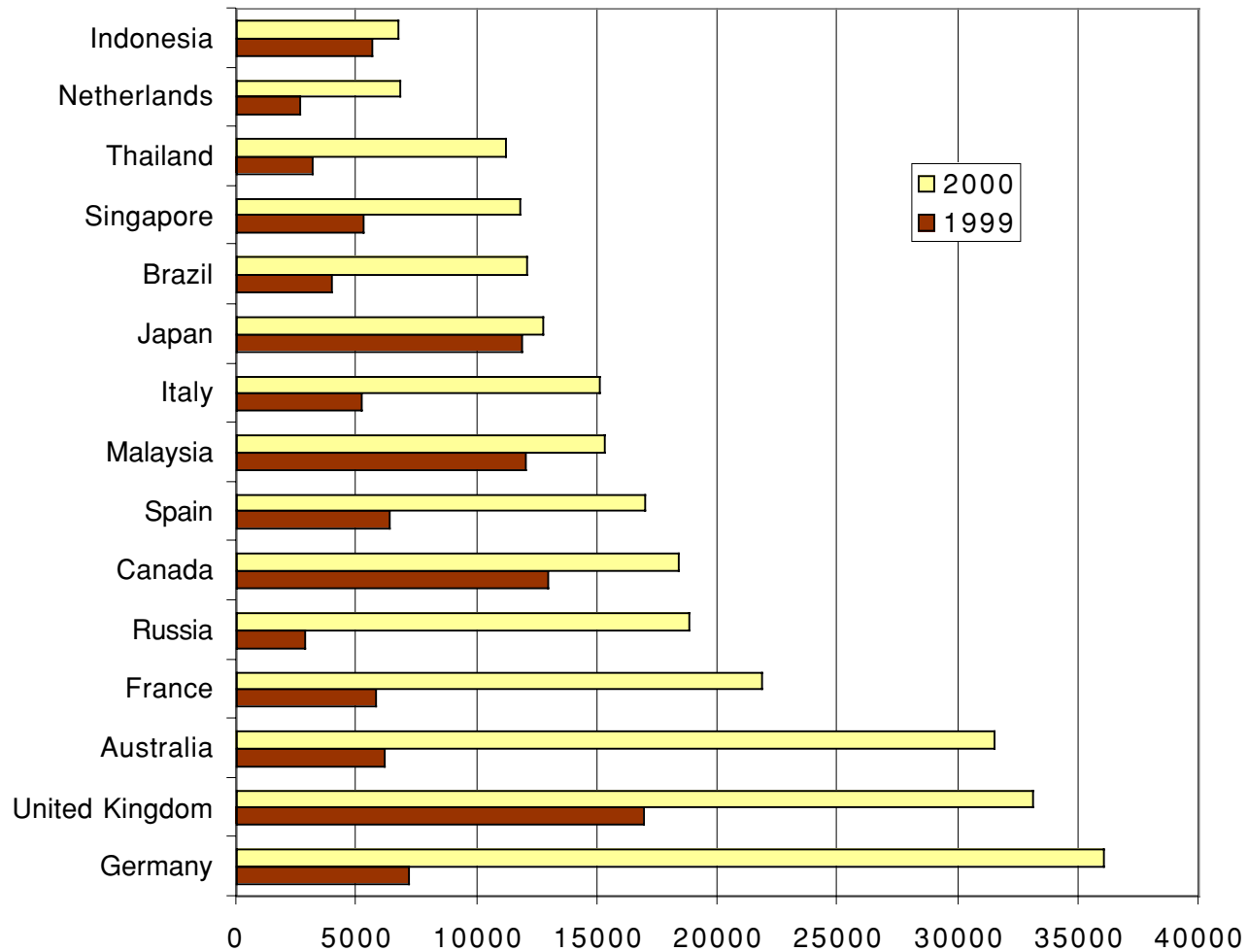
	1997	1998	1999	2000
Total requests	247,537	465,974	1,190,113	1,894,510
Daily requests	685	1,722	3,016	5,176
ETD requests	72,854	244,987	671,981	734,807
Abstract requests	112,633	177,647	217,796	320,273
Hosts served	22,725	28,022	35,593	105,632



# Libraries Serve more ETD Users



# International Use of ETDs





# Concerns about ETDs

- Financing ETD initiative
- Future publication
- Archiving
- Inaccessible ETDs
- Broken links



# Financial Concerns

- At VT: start-up costs = \$0
  - On-hand staff, equipment, software, freeware
- From zero base: estimate \$65,000
  - \$24,000 STAFF (part time)
  - \$36,000 EQUIPMENT
  - \$15,000 SOFTWARE
  - <http://scholar.lib.vt.edu/theses/data/setup.html>



## Costs/Savings at VT

- Graduate School stopped shipping 3000 copies of paper TDs/year to the library
- Library stopped handling (binding, shelving, circulating, etc.) 3000 copies of TDs/year
- 166 ft of shelf space saved/year by the library



# Cost Savings: Students

- Eliminate copying charges
  - \$.07/page photocopies
  - \$35/ream rag paper
  - Software
    - Campus computer labs
    - Purchase: \$25 - \$90



# ETDs and Publishing

- Authors have ambitious publication plans
  - 85%: articles, proceedings, chapters, books, etc.
- 43% of surveyed alumni responding have published
- How many encountered resistance from publishers because ETD was online?  
**Zero.**



# Concerns: Future publications

## ■ Publisher surveys

- No evidence of prejudice
  - 2000: Joan Dalton, U Windsor
  - 2001: Nan Seamans, VT

## ■ Alumni surveys (1999, 2000)

- No evidence of prejudice against publishing from ETDs





# ETDs and Publishers

- Early controversies waning slowly
  - American Chemical Society
  - Elsevier
  - IEEE Computer Society, Assoc. of Computing Machinery
  - Entomological Society of America
  - Kluwer
- Transfer all authors' rights?
  - Many publishers will share if asked



# Concerns about ETDs

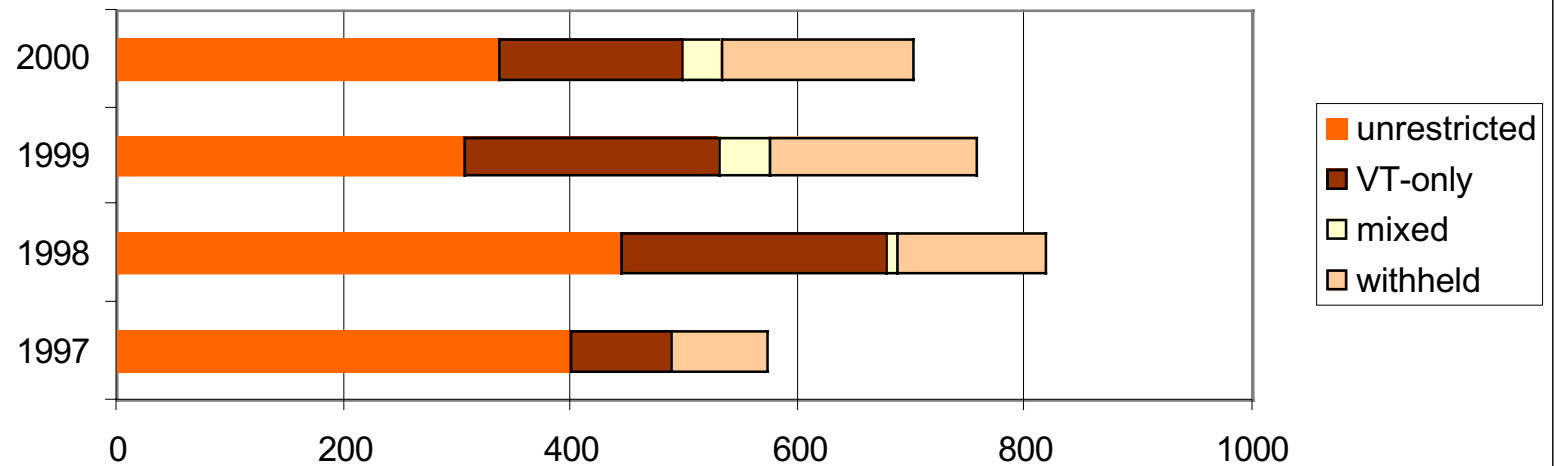
## ■ Inaccessible ETDs

- Patents pending
- Future publication status

## ■ Broken links

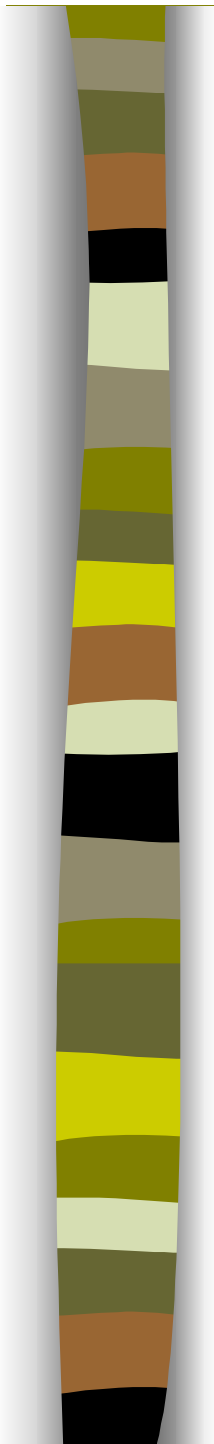
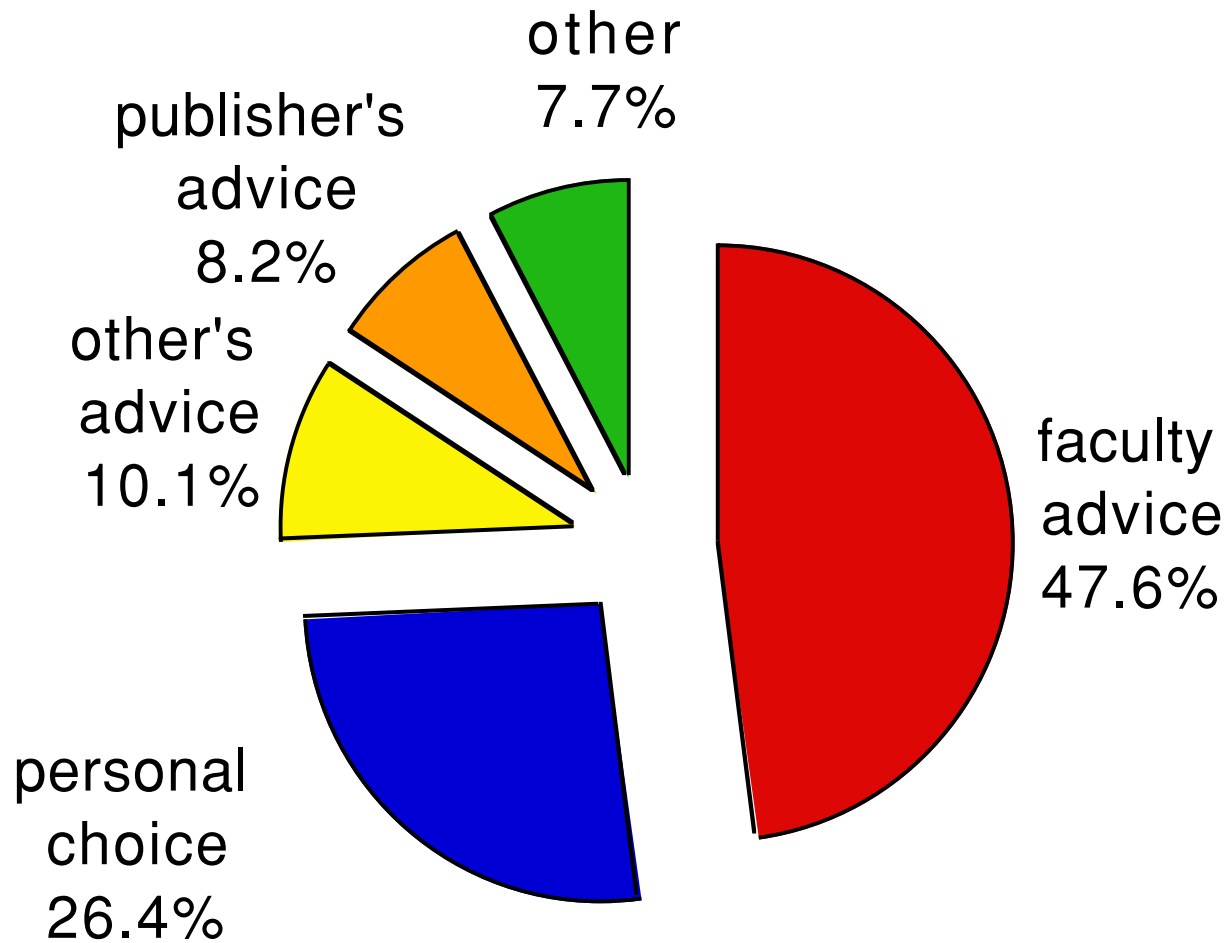
- Quality of work remains
  - Similar to out-of-print articles
  - Media standards

# What are VT ETD authors making available?



	1997	1998	1999	2000
withheld	83	131	183	170
mixed	0	9	44	35
VT-only	89	233	224	161
unrestricted	400	445	307	336

# Why Graduate Students Restrict Access



an end to the 'other' in landscape  
architecture: poststructural theory and  
universal design



David Orens

Master of Landscape Architecture

College of Architecture and Urban Planning

April 1997

<http://scholar.lib.vt.edu/theses/available/etd-4220121649751351/>



# Concerns: Archiving

- VT: no paper copies
  - Standard media
  - PDF
    - An open source program
    - Ejournals, government documents, etc.
  - Frequent backups, multiple locations
  - <http://scholar.lib.vt.edu/theses/archive.html>
- UMI: traditional microfilming
- VTLS: metadata records, links
- NDLTD: mirroring



## Ensuring Access to VT ETDs

- Every 15 minutes back-ups made of newest, not-yet-approved submissions
- Hourly back-ups of newly approved ETDs
- Weekly back-ups of entire ETD collection
- Multiple copies stored on-site and off-site



# Challenges to Creating and Sustaining ETD Collections

- Copyright
  - Fair use or permission
  - Authors' rights
- Attitudes about publishing
  - Reclaim university research and scholarship
- Accepted and dependable as paper or microfilm





# Lessons from ETDs

- Implementation of new formats slower than expected
  - still text oriented (faculty influence)
  - new graduate students can plan for ETDs
- Requiring institutions slower/few than expected
- If you build it, it will get used.
  - access exceeded expectations
  - disappointing that 20% are inaccessible
- No longer experimental
  - surprising increase in number and diversity of ND/LTD institutions implementing ETDs
- Remarkable increase in exposure to graduate student research done at Virginia Tech



## What is the status of ETDs now?

- 105 universities world wide
- Required at: VT, WVU, ETSU, UNo.Tex., UT Austin, NCSU, (LSU spring 2002); U Hong Kong
- 53 US institutions have projects
- 3597 ETDs at VT, 1050 at WVU