### **Helpful Links**

ETD-db home page: http://scholar.lib.vt.edu/ETD-db/

ETD-db developer home page: http://scholar.lib.vt.edu/ETD-db/developer/

Working demonstration of ETD-db: http://lumiere.lib.vt.edu/ETD-db/

Mysql home page: http://www.mysql.com/

Perl home page: http://www.perl.org/

Perl module archive: http://www.cpan.org/

Apache home page: http://www.apache.org/

Digital Library and Archives home page: http://scholar.lib.vt.edu/

VT ETD collection: http://scholar.lib.vt.edu/theses/

NDLTD home page: http://www.ndltd.org/

A Practical Guide to Establishing and Maintaining a Collection of ETDS



Created March 2000 by Anthony Atkins, Technical Director, Digital Library and Archives

#### About the ETD-db

Virginia Tech began accepting voluntary ETDs as early as 1993. In 1997, there were a few hundred ETDs in our ETD collection .

That year, we began requiring all graduate students to submit their theses and dissertations electronically. Our ETD collection now grows by three or four hundred ETDs *each semester*, and now contains around 2400 ETDs.

To deal with this expanding responsibility, the Digital Library and Archives developed an ETD database (ETD-db) in 1998. The ETD-db is a set of database-oriented scripts and web pages that can be used by authors, graduate school personnel, library staff, and researchers to enter, view, edit, manage, and search ETD metadata and files.

The scripts are written in perl, and use freely available modules to interact with a database server. All of the software used is freely available to academic institutions.

The ETD-db software has been run on various flavors of linux and also Sun's Solaris operating system, and should run on virtually any UNIX or Windows NT system.

Initially developed to meet the needs of the Virginia Tech's University Libraries and Graduate School, the scripts and web pages that make up the ETD-db are now freely available to all NDLTD member institutions at:

http://scholar.lib. vt.edu/ETD-db/developer/

#### Features

- 1. Accessible from major PC, Mac, and UNIX browsers.
- 2. Requires little maintenance and intervention
- 3. Can be accessed 24 hours a day from all over the world.
- 4. Data can be exported for use with existing metadata standards.
- 5. Can update information over the life of an ETD.
- 6. Many freely available tools for generating reports, etc.
- 7. Authors can securely update their materials until their ETD has been approved.
- 8. Can send feedback between authors and reviewers

### Workflow

- 1. Graduate Student enters their final semester.
- 2. Graduate School provides training on preparing and submitting ETDs.
- 3. Student completes and defends their work.
- 4. Student prepares an electronic version of their work.
- 5. Student submits the electronic version of their work to the Graduate School. At this stage, the student enters the majority of the metadata about their work and chooses the level of access to their work.
- 5. Graduate reviewer coordinates paperwork and reviews work for consistency with formatting standards.
- 6. Student makes neccessary changes to satisfy Graduate School requirements.
- 7. Graduate Reviewer approves ETD, either releasing it immediately to the web, or withholding access until a specific release date.
- Library Cataloger adds a record to catalog for webaccessible ETDs. This step does not require any additional delay before ETDs are accessible via the web.
- 9. Graduate Reviewer coordinates release of limited access or withheld ETDs with author after release date arrives.

## For more information, please visit http://scholar.lib.vt.edu/ETD-db/developer/

or contact: Anthony Atkins, Technical Director, Digital Library and Archives University Libraries P.O. Box 90001, Blacksburg, VA 24062-9001 (540) 231-9235 <anthony.atkins@vt.edu> http://scholar.lib.vt.edu/staff/aatkins/

# Requirements

To establish an ETD collection using the ETD-db distribution or following our model, you would need:

- 1. A server running some variant of UNIX. A small collection can be housed on a Pentium or better machine running Linux. A large collection should be run on more powerful equipment.
- 2. At least 20Mb of storage space per ETD. Expect to purchase more storage space over time.
- 3. A programmer with perl, CGI, and basic database experience. Adapting the ETD-db requires at least 80 hours. Software maintenance usually requires less than 10 hours a week.
- 4. Training support for authors. This includes training authors, assisting them during the submission process, and developing web pages to assist authors.

#### **Future Development**

- 1. Continue to improve usability.
- 2. Add interface for advisory committee to view, comment on, and sign off on ETDs.
- 3. Improve installation procedures (makefile, etc.).
- 4. Develop Tools to assist with upgrading existing ETDdb sites to newer versions.
- 5. Improve modularity to assist universities in adapting the ETD-db for their sites.
- 6. Finish implementing language files.
- 7. Integrate support for evolving ETD metadata standards.
- 8. Migrate security over to a session-based system to eliminate cookie problems and insecurities.
- 9. Integrate support for file-level metadata.
- 10. Add an interface to generate statistics and reports.
- 11. Improve and expand bundled search interface to facilitate federated searches.
- 12. Improve compatibility with embedded perl interpreters.