

Center for Digital Research and Scholarship Services

Annual Report 2012/2013

CDRS Services has experienced substantial growth in staff and as a result there has been a tremendous increase in our activities. Legacy DLA systems continued to flourish and VTechWorks grew in terms of items, collections, and innovative new services. The major migration of legacy systems began with the transition of ETD deposits directly into VTechWorks from the Graduate School. 700 scanned theses and dissertations were added as well as 800 ejournal articles. We initiated our first ejournal using OJS--the beginning of increased library publishing activities, and we began formalizing some long-time practices, beginning with our first three MOUs. CDRS Services staff were thoroughly engaged in professional development—staying current with relevant initiatives through extensive participation in internal learning opportunities (e.g., FDI), external activities such as Rare Book School, and conference attendance. We also shared our expertise through a record number of consultations, collaborations, and teaching sessions.

Grant Awards

- Amazon Teaching Grant. \$3000 worth of Amazon Web Services usage credit: Xie
- IBM Academic Skills Cloud. Free usage of up to 20 cloud instances on the IBM Smart Cloud Enterprise: Xie
- ICAT grant to evaluate extensive vinyl collection: Lindblad (w/Campbell, Penning, Wilson)
- NEH Muslim Journeys Grant, Lindblad (w/M. Hall, Nardine, Scripa)
- VT Provost's Faculty Mentoring Grant, Lindblad

Grants, Ongoing

- IMLS Lifecycle Management of ETDs: contributed to review and editing of all guidelines ([out for review](#)); researched and wrote "Guide to ETD Program Planning and Cost Estimation," discussed at Library Reading Group, which included Graduate School representatives; contributed to workshop planning; participated in focus group at Texas ETD conference: McMillan
- NEH Chronicles in Preservation: extended through April 2014; tested harvesting using BagIt; generated PREMIS metadata: Brittle, McMillan, Weeks
- NEH Digging into Data: virtual brown bags and grant planning: Lindblad, Xie

Consulting

- Brittle: Py4Grads
- Gilbertson: Computer Sciences classes
- Hall, Lindblad, Xie: Data Management Plans
- Lindblad: Center for Innovation in Learning, Lord Byron society
- McMillan: grant proposals: Doris Duke Charitable Foundation "Quest Visual Theatre," NEH "Chronicles Advocacy Program," ICAT SEAD "Academic Visibility Demonstration Project," ICPSR "Economic Realities of Digital Preservation and Curation" and "ETD Research Data Project"
- Xie: grant proposals: NSF Advancing Digitization of Biological Collections, NIJ Research on Firearms and Violence, NEH Digging into Data, NEH Digital Humanities

Digital Initiatives

- CATH evaluation and sustainability planning; Lord Byron and his Times w/CS5604 students; Embedded Archival Context
- Digital Humanities awareness: day-long on-campus interactions and ScaleUp presentation by Dr. Andrew Stauffer, Director of NINES (Networked Infrastructure for 19th Century eScholarship)

- Distributed Digital Preservation: Contributed staff time to the maintenance and development of the Conspectus Tool due to staffing vacancy at MetaArchive Cooperative
- Port: Research Commons established (mission, philosophy, and goals): fosters exploration and proto-typing within a ‘digital sandbox’: centralized GIS Help Desk, webinars, Py4Grads, promotional video and logo developed

Memoranda of Understanding

- John Jackson, University Relations, for *VT News Archives*
- Kelly Parkes, editor, *Journal of Research in Music Performance*
- Edward M. Reeve, Council on Technology and Engineering Teacher Education, *Yearbooks*

CDRS R&D

- FishTraits
 - Hired and supervised GRA, Sunshin Lee
 - Developed bibliographic and geographic information modules
 - FishTraits 1.2 released and fully functional
 - Project highlighted in a [Roanoke Times report on VT Libraries](#)
- [VTWISE](#): VTechWorks Integrated Search Engine
 - Indexed >400,000 DLA web pages
 - Created Collection Crawl Cycle to gain insight into administrative interface, and request and implement user feedback for the public interface design.
 - Collections were crawled, parsed and ingested using definitions, plugins and parsing scripts [created for our collections and committed to the Apache Software Foundation](#)
 - Resulting in GA, Kiran Chitturi [invitation to become an Apache Nutch PCM Committer](#)
- Redmine Project Management: Weeks, manager; 5 projects, 10 sub-projects, 2 code repositories

VTECHWORKS

- 3,763 items added
- 947,600 items accessed (up from 225,097 in the previous period)
- 1,141,834 files downloaded (up from 445,56 in the previous period)

Collections Added

- [Center for Autism Research collection](#)
- [Computer Science Seminar Series](#)
- [Computer Science Technical Reports](#), circa 1000
- Council on Technology and Engineering Teacher Education [Yearbooks](#) (60)
- [VT ETDs](#), 2013
- [Virginia Cooperative Extension](#)
- [VT News](#), 2003-2005
- [Virginia Water Resources Center](#)

Innovations

- [Coded inline video playing](#)
- Enabled video playback on mobile devices
- Activated inline display of VT News articles
- [Added closed caption support](#)

VTW R&D

- Researched software architecture for preserving and hosting research data and metadata

- Participated the collaboration calls for DSpace Future, Fedora Future, and DPN etc., investigated the possible next step for VTechWorks infrastructure
- Participated the DuraSpace Summit.
- Initiated collaboration talks with related universities and transition to Fedora Future
- Began Fedora Future code review
- Developed ETD ingest: Coordinated workflow with Graduate School and adapted to VT Software Technologies Laboratory requirements to add ETDs beginning 2013
- Developed EZID service: Negotiated with CDL for VT contract to assign DOIs; drafted policies, announced to the university community through VT News and [library web](#).

Migrating Legacy Systems

- Developed MDID 3 to migrate hosted Art/Architecture Luna Insight: MDID development server fully functional; tested small data set ingest; tested multiple Luna exports.
- ETD metadata in ETD-db cleaned in order to facilitate migration to VTechWorks, e.g., edited 67,226 advisor names, added advisor names to circa 1000 BTDs, etc.
- Image deduplication and validation: Resolved 2,947 items that had jpg only master images, 40,829 items had either tiff or jpeg or both and 16,065 items had archival master image (tiff or jpeg), to prepare for migration from ImageBase to VTechWorks
- Researched and developed migration plans to VTechWorks
- Rectified security breaches: due to out-dated code. <http://lumiere.lib.vt.edu/surveys/> DLA Survey Database: evaluated 51 surveys, removed 182,747 spammed responses and 11,257 related sessions. Documented resolution. Spec.lib.vt.edu and scholar.lib.vt.edu had rouge php files.

EJOURNALS

- **Added** 826 articles in 44 issues
- **Upgraded** 107 HTML articles in 11 issues to meet ADA standards
- **Initiated** OJS and began hosting *Journal of Research in Music Performance*
- **Surveyed** 87 previous and current editors about their possible interest in OJS. 26 editors representing 14 journals responded
- **Statistics** <http://scholar.lib.vt.edu/stats/ej-total-current.html>
 - 4,678,930 hits
 - 2,863,064 pages requested, up 7%
 - 17,544 distinct files requested, up 6%
 - 1,133,750 unique visitors, up 20%
- **Enhanced** metadata to improve web discovery by LibX, Zotero, and Summon, and the like, and simultaneously resolved issues such as duplicate files, missing links, missing issues, and made PDFs searchable through OCR.

Employee of the Week: added 33 profiles.

ETDs

- Released 399 ETDs to open access that had been restricted or embargoed
- Ingested 713 scanned theses and dissertations
- Completed rewrite of ETD-db 2.0 in Ruby on Rails, using Redis and PostgreSQL for storage. RESTful interface, AJAX support. User-entered fields are validated against vocabularies, automatically release of restricted ETDs to public access; administrators have web interface to manage fields without writing new code
- ETD baseline-survey: drafted and conducted survey, and analyzed data, proposed presentation at US ETD conference, accepted
- Surveyed academic science journal editors' regarding their attitudes and publication policies for open access

ImageBase: 3,613,426 pages visited last calendar year

Provided 154 image files to patrons for a variety of uses, including ESPN football commercial, *Documenting Intimate Matters: Primary Sources for a History of Sexuality in America* by Thomas Foster, various VT buildings, exhibitions, publications, and

- VPI president Thomas Nelson Conrad (lh110) for *Civil War Spies* by Craig Sodaro
- K-brick by Anna Keichline (sc16) for Virginia Standards of Learning
- I. J. Good, faculty (VTA0001), for a cryptology book by Polish Scientific Publishers PWN
- Women having dinner at a quilting bee (ep301) for a cookbook to honor women in ministry
- nw200409071539 and nw200411041333 for the Canadian Air Brake Club
- Eleanore Petterson (IAWA) image (K-brick) for *ASPIRE* magazine



Notable Personnel Activities

- Award: Nathan Hall, ALA Emerging Leader
- Faculty reappointed: Keith Gilbertson, Nathan Hall, Zhiwu Xie
- Interviewed: Gail McMillan for “Out in the Open: The Research Library as Digital Curator at Virginia Tech,” in [College & Undergraduate Libraries](#)
- Invitations: VT Proposal Development Institute: Keith Gilbertson, Zhiwu Xie
- New hires: Collin Brittle, systems engineer; Jay Chen, systems analyst
- Officer: Anne Lawrence, LSA President

Publications

[“Do Open Access ETDs Diminish Publishing Opportunities in the Social Sciences and Humanities? Findings from a 2011 Survey of Academic Publishers.”](#) *C&RL*. Accepted: March 2012, preprint online. McMillan et al.

[“Mutant Superheroes, Contained Chaos, and Smelly Pets: Library Innovation through Imaginary Anarchy.”](#) *ACRL proceedings*. Gilbertson

[“Promoting Universal Knowledge for All: Open Access Week 2012 at Virginia Tech.”](#) Hall, Lindblad, et al. *Virginia Libraries*, 59:2 (April/June 2013)

Altmetrics: “FERPA and Student Work: Considerations for Electronic Theses and Dissertations,” 351 downloads from [DigitalCommons@CalPoly](#), 148 “views” in [VTechWorks](#) as of May 13 [originally published in *DLib Magazine*, Jan./Feb. 2010] McMillan

Presentations

“19th Century Southwest Virginia as seen through the Diary, Recipes, and Correspondence of Nannie (Ann Godwin) Figgat,” McMillan and Jean Robbins for the Fincastle Chapter of the UDC, Nov. 3; Montgomery-Floyd Regional Library Friends, April 20; Peacock-Harper Culinary History Friends, with Exec. Chef Billie Raper at the Hotel Roanoke, April 26.

[“Do Open Access ETDs Effect Publishing Opportunities in the Sciences? Preliminary Findings from the 2012 Survey of Academic Journal Editors.”](#) Library Scholar Spotlight (TREC Preview), Sept. 4;

- 15th International ETD Symposium, Sept. 17, Peru; CNI Dec. 10 [lead to a *Chronicle of Higher Education* article, [Putting Dissertation Online Isn't an Obstacle to Print Publication, Surveys Find](#), Jennifer Howard, Dec. 12.] McMillan
- "ETD-db: Today; ETD-db 2.0: Tomorrow," 15th International ETD Symposium, Sept. 13. McMillan
- "Educational Resource Repositories to Aid Teaching at VT," CIDER Panel at the Pedagogy in Practice Seminar. Hall, McMillan. Oct. 17. (w/Fox, Shaffer)
- ["Facilitate Cross-Repository Big Data Discovery and Reuse."](#) Research Data Management Implementation Workshop, Princeton. Xie
- "Model Language for Research Data Management Policies." ASERL/SURA, Hall (w/Mann, Corey, Wilson)
- "Mutant Superheroes, Contained Chaos, and Smelly Pets: Library Innovation through Imaginary Anarchy," ACRL, Indianapolis. Gilbertson
- "Peacock-Harper Culinary History Collection" at Remembering the Miller & Rhodes Tea Room Program, Roanoke Country Club, Oct. 26. McMillan
- "Preserving ETDs: NDLTD & MetaArchive Collaboration," US ETD Conference, June 13; 15th International ETD Symposium, Lima, Peru, Sept. 13. McMillan
- ["Publishers say YES to ETDs! The 2011 NDLTD Publishers' Survey."](#) US ETD Conference, Boston, June 14, Boston. McMillan
- "So Much Science, So Little Time." ALA Midwinter, Seattle. Hall (w/Larsen, Moderators)
- Technical Report on the GALILEO Knowledge Repository, GALILEO Knowledge Repository Symposium, Atlanta. Gilbertson
- Virtual tour of VT's Digital Library and Archives for the Library and Information Science faculty at the Shreemati Nathibai Damodar Thackersey Women's University, Mumbai, India. McMillan
- Open Access Week
 - Graduate Student Panel: Lindblad
 - [Open Access 101](#): McMillan (w/Young)
 - Knowledge Drive: Lindblad, Hall, et al.
 - Posters
 - "Building Port: Research Commons", DH2013. Lindblad (with Pencek, Brooks)
 - "Changes to GRAD 5124," VLA: Lindblad (w/Miller, Stovall)
 - "Developing Teaching Proficiencies for New Instructors Through a Learning Community," VT CIDER Conference on Pedagogy: Lawrence (w/Barb, Gilmore, Hall, et al.)
 - "FishTraits Version 2: Integrating Ecological, Biogeographical and Bibliographic Information," JCDL: Xie
 - ["Model for Developing Data Management Policy Language."](#) Research Data Access & Preservation Summit, Baltimore. Hall (w/Mann, Corey, Wilson)
 - ["Repurposing Existing Digital Resources and Smoothing Interdisciplinary Communication: Environmental Policy Collection Development."](#) ASIST, Baltimore. Hall (w/Alemneh, Phillips)
 - "The Citizen Science Challenge: Engaging University Students in Science Outside the Classroom". SLA, Lindblad (with Scripa)
 - "The Institutional Repository's Role in Managing Research Data," NDSA: Xie

Teaching

- BMVS 5714: ETDs and Copyright: McMillan (w/Austin)
- COS 4324/5984: Copyright and Fair Use: McMillan
- ENGL 1106: Information Literacy (x3): Lawrence
- GRAD 5124, Library Research Skills for English Literature: Lindblad
- Citizen Science Challenge, West Ambler Johnson Residence Hall: Lindblad
- Library Research Skills (x30), primarily for upper-level English courses: Lindblad
- Faculty Development Institute
- Introduction to VTechWorks (x4): Hall

- Open Access and Copyright Primer: Young and McMillan
- Research Data Management: An Implementation Primer: Xie
- Research Data Management: How to Write a Data Management Plan (x4): Hall

VT/UVa Data Management Bootcamp

- DMPTool for Data Management Plans: Hall
- File Formats and Transformation: Xie
- Organizing Data: Xie

eResearch Topics for University Libraries

- [Altmetrics](#): McMillan
- Ejournal Publishing: Lawrence, McMillan, and Kelly Parkes
- [Introduction to Open Access and Copyright](#): Young and McMillan
- Py4Grads: Python for Graduate Students, Brittle, Oiger
- Scripting and Version Control: Xie

Mentoring: Gilbertson mentored Chris McCarty, undergraduate in computer engineering

Training: scanning: USGS aerial photographs, Extension publications, Rotor Dynamics Lab technical reports, Hall. “Going Google Roadshow,” Weeks provided Mac support for the library.

Service to the University

- 32 for 32: Gilbertson
- Association of Chinese Students and Scholars: Xie
- Center for Autism Research: Gilbertson
- CTRnet Advisory Board: McMillan, Lindblad
- Data Management Bootcamp Planning Group: Hall, Lindblad, McMillan, Xie
- Open Access Subvention Fund: McMillan [see accompanying report]
- Open Access Week Planning Team: Hall, Lindblad, McMillan, Weeks
- Virginia Tech Intellectual Property Board, Audit Committee: McMillan

Service to the Library

- Appalache Event Committee: Weeks
- Climate Survey Task Force: Lawrence, Weeks
- Cyberinfrastructure Governance Group for Locally Generated Digital Content: McMillan
- Diversity Task Force: Weeks
- eLearning Hub: Lindblad
- eResearch Hub: Hall, Lawrence, Lindblad, Xie
- Library Faculty Association
 - Faculty Affairs: Hall, Lindblad
 - Mentoring Committee: McMillan
 - Travel and Research Committee, Lindblad, Xie
- Marketing Committee: Lindblad
- Open Access Subvention Fund: McMillan
- Search Committees
 - Associate Director of Learning and Outreach: Gilbertson
 - Research Environments Librarian, Research Data Librarian, Web Developer: Hall, Lindblad
 - Software Engineer: McMillan (chair), Weeks, Xie
- Web Team: Lawrence

Professional Participation

- Association for Information Science and Technology (ASIST): Hall
- Association of College and Research Libraries (ACRL): Gilbertson, Hall, McMillan
 - ACRL-STS, Hot Topics discussion Group: Hall, co-chair
- Association of Computers and the Humanities (ACH), Lindblad
- American Library Association, Hall, McMillan
- Association of Southeastern Research Libraries (ASERL) IT/Digital Initiatives Interest Group: McMillan
- ASERL/SURA Research Data Management Group: Hall, chair
- Byron Society of America: Lindblad
- CTRNet Advisory Board: Lindblad, McMillan
- Library Publishing Coalition, Governance Committee: McMillan
- MetaArchive Cooperative, Steering Committee, Content Committee: McMillan
- Networked Digital Library of Theses and Dissertations (NDLTD) Steering Committee, Proposal reviewer for annual conferences: McMillan
- NISO Resource Sync Technical committee: Xie
- National Digital Stewardship Alliance (NDSA): Geospatial Subgroup: Xie; Content Committee and News, Media, and Journalism Team: McMillan
- Special Libraries Association: Lindblad
- US Electronic Theses and Dissertations Conference, VT UL Gold Sponsor: McMillan

Conferences Attended

- ACRL, Indianapolis: Gilbertson
- Amazon Summit, New York: Xie
- Autism Research Center Conference, Virginia Tech: Gilbertson
- Coalition for Networked Information, San Antonio and Washington, DC (x2): McMillan
- Conference on Information and Knowledge Management, San Francisco: Xie
- Digital Humanities Symposium, George Washington University: Lindblad, Gilbertson
- DuraSpace Summit, Baltimore: Xie
- GALILEO Knowledge Repository Symposium, Atlanta: Gilbertson
- International Symposium on Electronic Theses and Dissertations, Lima, Peru: McMillan
- Joint Conference on Digital Library, Indianapolis: Hall, Xie
- Library Information Technology Association Conference, Louisville: Gilbertson
- National Digital Stewardship Alliance, Washington, DC: McMillan, Xie
- NISO Resource Sync Technical Meeting, Denver:
- Open Repositories, Prince Edward Island: Gilbertson
- Research Data Management Implementation workshop, Washington, DC: Xie
- US ETD Conference, Boston: McMillan

On behalf of Digital Research and Scholarship Services

Collin Brittle, Systems Engineer

Jay Chen, Systems Analyst

Keith Gilbertson, Digital Technologies
Development Librarian

Nathan Hall, VTechworks Librarian

Anne Lawrence, Online Editor

Purdom Lindblad, Digital Humanities
Librarian

Students: Kiran Chitturi, Noha ElSherbiny, Sunshin Lee, Sarah Ryan, Pavithra Sekhar, Matthew Wilt

Paul Mather, Systems Administrator

Gail McMillan, Director of Digital Research
and Scholarship Services

Kimberli Weeks, Technical Director

Jane Wills, Administrative Assistant

Zhiwu Xie, Senior Digital Technologies
Development Librarian