CDRS Services has experienced substantial growth in staff and as a result there has been in 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
- 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
  o Hired and supervised GRA, Sunshin Lee
  o Developed bibliographic and geographic information modules
  o FishTraits 1.2 released and fully functional
  o Project highlighted in a Roanoke Times report on VT Libraries
• VTWISE: VTechWorks Integrated Search Engine
  o Indexed >400,000 DLA web pages
  o Created Collection Crawl Cycle to gain insight into administrative interface, and request and implement user feedback for the public interface design.
  o Collections were crawled, parsed and ingested using definitions, plugins and parsing scripts created for our collections and committed to the Apache Software Foundation
  o 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 in collaboration calls for DSpace Future, Fedora Future, and DPN etc., investigated the possible next step for VTechWorks infrastructure
• Participated in 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

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
  o 4,678,930 hits
  o 2,863,064 pages requested, up 7%
  o 17,544 distinct files requested, up 6%
  o 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
- 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


“Mutant Superheroes, Contained Chaos, and Smelly Pets: Library Innovation through Imaginary Anarchy,” ACRL proceedings. Gilbertson


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.

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
“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)
"So Much Science, So Little Time." ALA Midwinter, Seattle. Hall (w/Larsen, Moderators)
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
  o Graduate Student Panel: Lindblad
  o Open Access 101: McMillan (w/Young)
  o Knowledge Drive: Lindblad, Hall, et al.
• Posters
  o “Building Port: Research Commons”, DH2013. Lindblad (with Pencek, Brooks)
  o “Changes to GRAD 5124,” VLA: Lindblad (w/Miller, Stovall)
  o “FishTraits Version 2: Integrating Ecological, Biogeographical and Bibliographic Information,” JCDL: Xie
  o “Repurposing Existing Digital Resources and Smoothing Interdisciplinary Communication: Environmental Policy Collection Development.” ASIST, Baltimore. Hall (w/Alemneh, Phillips)
  o “The Citizen Science Challenge: Engaging University Students in Science Outside the Classroom”, SLA, Lindblad (with Scripa)
  o “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
• Appalanche 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
  o Faculty Affairs: Hall, Lindblad
  o Mentoring Committee: McMillan
  o Travel and Research Committee, Lindblad, Xie
• Marketing Committee: Lindblad
• Open Access Subvention Fund: McMillan
• Search Committees
  o Associate Director of Learning and Outreach: Gilbertson
  o Research Environments Librarian, Research Data Librarian, Web Developer: Hall, Lindblad
  o 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
- 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
- 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  Paul Mather, Systems Administrator
Jay Chen, Systems Analyst  Gail McMillan, Director of Digital Research
Keith Gilbertson, Digital Technologies and Scholarship Services
  Development Librarian  Kimberli Weeks, Technical Director
Nathan Hall, VTechworks Librarian  Jane Wills, Administrative Assistant
Anne Lawrence, Online Editor  Zhiwu Xie, Senior Digital Technologies
Purdom Lindblad, Digital Humanities Development Librarian
  Librarian

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