



Streamlining ETD Processing at the University of Iowa Libraries using Trello Board

For ALCTS Technical Services Workflow Efficiency Interest Group
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#alamw16

Acknowledge

ETD Processing using Trello Board is a collaboration effort from team members across Cataloging and Metadata Department at the University of Iowa Libraries.

It is the support of all members of ETD Processing Team that enables the tracking of complex workflows for ETDs being processed efficiently.

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Overview

- ETDs at the University of Iowa (UI)
- ETD Workflow at UI Libraries
- ETD Processing using Trello Board
 - Workflow Tracking for IRO and OCLC Upload using Lists and Cards
 - Progress Tracking using Labels, Checklists, Due Date, and Subscribe
- Adoption of Trello Board
- References

ETDs at the University of Iowa

- Electronic submission required for doctoral dissertations and master's theses through UMI/ProQuest ETD website, excluding MFA theses since fall 2009;
- Embargos allowed for up 24 months;
- Candidate may request ETD restricted to UI campus community;
- Available in Iowa Research Online (IRO) powered by bepress, Primo Discovery Service, Library Catalog, OCLC WorldCat, and OAI-PMH service;
- 4,636 papers in IRO, 3.3 million total downloads, and 1.1 million downloads in 2015



Real-time Readership of ETDs Worldwide in Iowa Research Online (IRO)

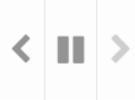
ir.uiowa.edu/etd/

Home > ETD

THESES AND DISSERTATIONS

Reader from: Las Vegas, Nevada, United States

Nationalism and state legitimation in contemporary China
Benjamin Joseph Darr



Real-time Readership

18
Downloads since
4:02:30 PM

</> Embed



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4,636 Total Papers	3,391,953 Total Downloads	1,120,131 Downloads in the past year
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ETD Workflows

Project
Stakeholders

- Graduate College
- ProQuest/UMI
- bepress
- Digital Studio (Libraries)
- Preservation (Libraries)
- Cataloging and Metadata (Libraries)

ETD Workflows At Graduate College

- Complete ETD registration and submission form
- Populate some fields from graduate college data (e.g. form of name, degree awarded)
- Require both scientific/scholarly abstract and public abstract to appear as pages in manuscript except MFA and DMA
- Select publishing option
- Maximum file size: 1 000 MB
- Upload PDF of a dissertation/thesis and supplements into ProQuest/UMI website
- Confirm copyright permission

ETD

Workflows

UMI/ProQuest

- Maintain clearinghouse for theses and dissertations
- Create XML markup
- Store ETDs and their XML metadata
- Deposit ETDs and individual XML files with metadata from Online Submission Form into a FTP server. Each ETD is in separate zip file

ETD Workflows

bepress

- Provide Digital Commons platform, a high availability hosted service that utilizes a distributed file system for content upload and delivery worldwide
- Support recommended and customized metadata fields, and Dublin Core for ETDs: ETD-MS (NDLTD), OAI_DC, OAI_DCQ

ETD Workflows

File Preparation in Digital Studio and Preservation

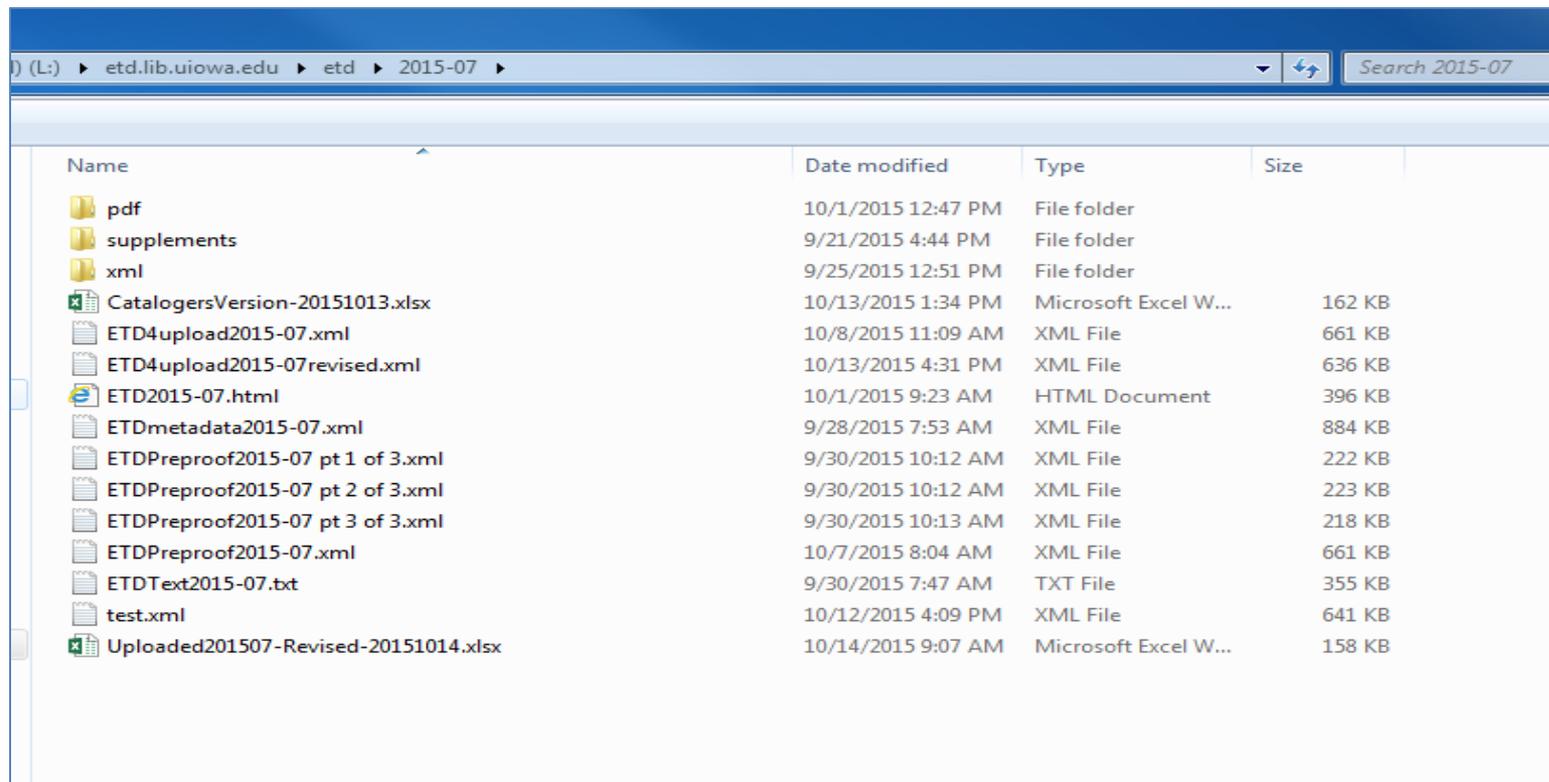
- Make file folders for PDF and XML by year and month in new ETD folder
- Unzip and copy files in FTP server into ETD folder and its subfolders
- Optimize all PDFs over 10,000 KB into a separate folder for large files
- Create XSL conversion files
- Copy files in new ETD folders to dim/dark storage for digital preservation

ETD Workflows

IRO Upload in Cataloging and Metadata Dept.

- Join, convert & cleanup ProQuest individual XML files into a single XML file for bepress ETD Preproof file
- Convert ETD Preproof file into HTML for access to PDFs
- Split ETD Preproof file into three XML files for copy editing
- Edit Preproof files in XML by three copy catalogers (name, title, advisor, pagination, illustration, references, etc.)
- Combine revised ETD Preproof files into a single xml file named ETD4Upload
- Review ETD4Upload and upload it along with supplements into IRO

Sample ETD Files for IRO Upload



The screenshot shows a Windows File Explorer window with the address bar set to (L:) > etd.lib.uiowa.edu > etd > 2015-07 >. The search bar contains "Search 2015-07". The main area displays a list of files and folders with columns for Name, Date modified, Type, and Size.

Name	Date modified	Type	Size
pdf	10/1/2015 12:47 PM	File folder	
supplements	9/21/2015 4:44 PM	File folder	
xml	9/25/2015 12:51 PM	File folder	
CatalogersVersion-20151013.xlsx	10/13/2015 1:34 PM	Microsoft Excel W...	162 KB
ETD4upload2015-07.xml	10/8/2015 11:09 AM	XML File	661 KB
ETD4upload2015-07revised.xml	10/13/2015 4:31 PM	XML File	636 KB
ETD2015-07.html	10/1/2015 9:23 AM	HTML Document	396 KB
ETDmetadata2015-07.xml	9/28/2015 7:53 AM	XML File	884 KB
ETDPreproof2015-07 pt 1 of 3.xml	9/30/2015 10:12 AM	XML File	222 KB
ETDPreproof2015-07 pt 2 of 3.xml	9/30/2015 10:12 AM	XML File	223 KB
ETDPreproof2015-07 pt 3 of 3.xml	9/30/2015 10:13 AM	XML File	218 KB
ETDPreproof2015-07.xml	10/7/2015 8:04 AM	XML File	661 KB
ETDText2015-07.txt	9/30/2015 7:47 AM	TXT File	355 KB
test.xml	10/12/2015 4:09 PM	XML File	641 KB
Uploaded201507-Revised-20151014.xlsx	10/14/2015 9:07 AM	Microsoft Excel W...	158 KB

ETD Workflows

OCLC
Connexion
Upload in
Cataloging and
Metadata
Department

- Modify XSL conversion files for updating academic department names, disciplines, etc.
- Transform ETD4Upload XML into MARC21XML by discipline (sci-tech, soc-sci, East Asian, humanities, music)
- Convert MARC21XML files into MARC21 files
- Import converted MARC21 files to OCLC Connexion's save file
- Review conversion from MARCEdit to OCLC Connexion
- Handoff MARC records to catalogers

Sample XSL files for MARC21 XML Conversion

Name	Date modified	Type	Size
ETD-bepress2MARC21XML-Science.xsl	11/4/2015 3:53 PM	XSLT Stylesheet	48 KB
ETD-bepress2MARC21XML-Music.xsl	11/4/2015 3:47 PM	XSLT Stylesheet	46 KB
ETD-bepress2MARC21XML-HumanitiesCatchall.xsl	11/4/2015 3:42 PM	XSLT Stylesheet	49 KB
ETD-bepress2MARC21XML-EA-SocialScience.xsl	11/4/2015 3:36 PM	XSLT Stylesheet	46 KB
ETD-bepress2MARC21XML.xsl	11/4/2015 3:30 PM	XSLT Stylesheet	45 KB
ETD-ProQuestXML2bepressXML.xsl	10/14/2015 10:05 ...	XSLT Stylesheet	39 KB
ETD-bepressXML2Txt-AXU.xsl	10/14/2015 8:22 AM	XSLT Stylesheet	4 KB
ETD-bepress2MARC21XML-SocialScience.xsl	8/27/2015 10:04 AM	XSLT Stylesheet	46 KB
ETD-bepress2html-display.xsl	1/27/2015 4:53 PM	XSLT Stylesheet	2 KB
etd-txt-other-fields.xsl	1/7/2013 10:40 AM	XSLT Stylesheet	7 KB
ETD-bepressXML2Txt.xsl	1/7/2013 10:30 AM	XSLT Stylesheet	4 KB
etd-fields.xls	11/10/2011 10:04 ...	Microsoft Excel 97...	17 KB

ETD Workflows

Professional
Cataloging in
OCLC
Connexion in
Cataloging and
Metadata
Department

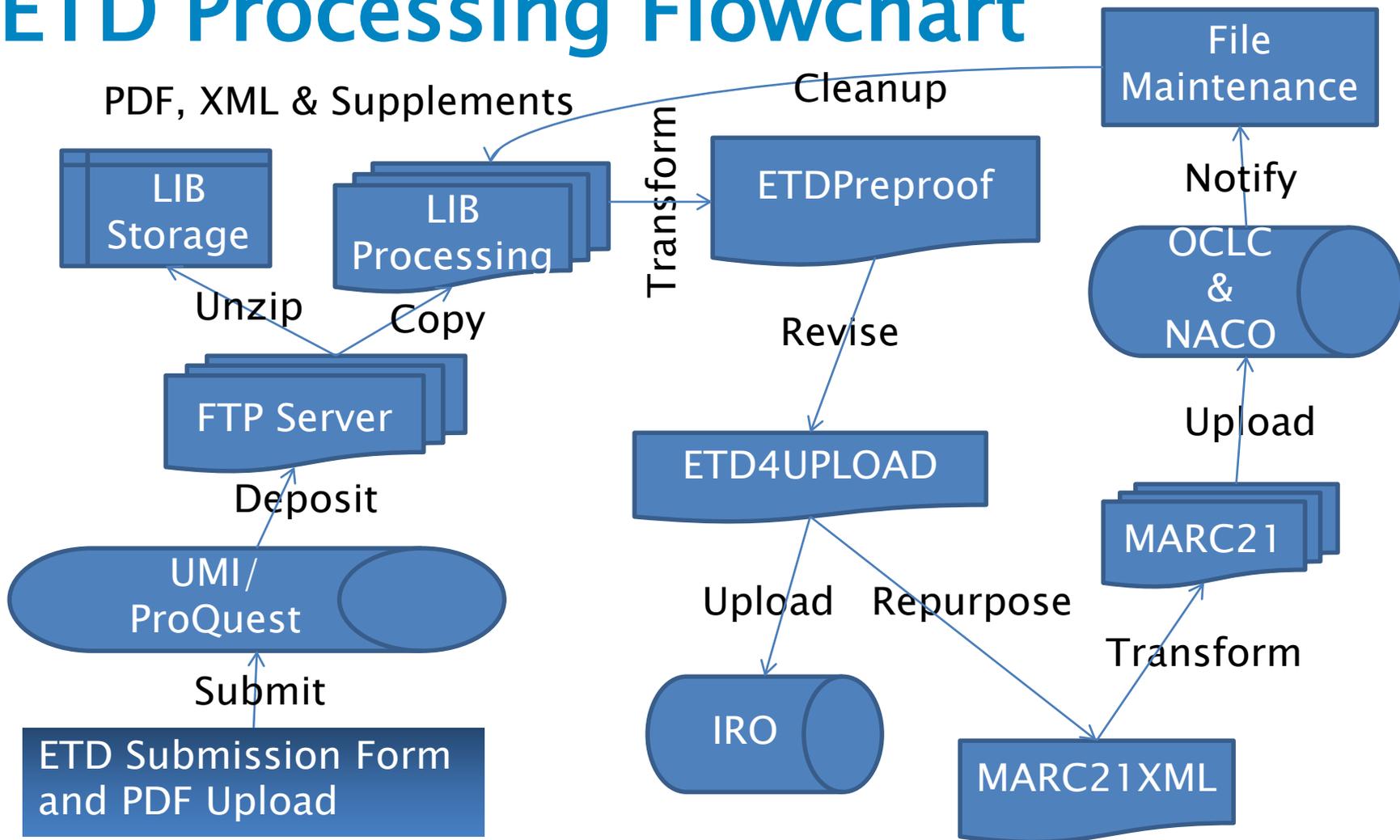
- Catalog MARC records in OCLC by discipline against PDFs
- Add file size
- Create NACO records for thesis advisors and academic departments if not established in LCAF
- Add subject headings and genre headings if appropriate
- Fix any character errors in abstract or elsewhere
- Make notes about supplement files
- Import MARC records into library catalog

ETD Workflows

File
Maintenance in
Digital Studio
and
Preservation

- Update ETD batch processing documentation
- Delete ETDs copied into Dropbox
- Notify Digital Scholarship Librarian for new ETDs uploaded
- Notify liaisons and Digital Preservation Librarian
- Cleanup files in ETD folder

ETD Processing Flowchart



ETD Workflows Challenges (1)

- Character representation and display using UTF-8 character codes: character symbol, entity number, and entity name, e.g. {‘} {’} {’}
- Graduate College accepts any/all character forms from candidate
- Bepress supports full Unicode and some formatting. Some character symbols and named entities (e.g. –) through XML updates cause difficulty.
- MARC21 in OCLC Connexion doesn't support formatting and some decimals (ᵥ), but support character symbols, ALA character set

ETD Workflows Challenges (2)

- Fix formatting errors in abstract, Latex encoding for math, symbols, etc.
- Adjust character set changes in XML editors (e.g. oXygen), conversion tools (e.g. xsl files, MARCEdit), and OCLC Connexion
- Tracking changes in academic department names, and mapping into degree disciplines
- Tracking ETD processing workflows and progress with lists, checklists, labels, and due date

What is Trello Board? (1)



Trello is the free, flexible, and visual way to organize anything with anyone.

Drop the lengthy email threads, out-of-date spreadsheets, no-longer-so-sticky notes, and clunky software for managing your projects. Trello lets you see everything about your project in a single glance.

Hey, you're logged in! [Go to your boards.](#)

What is Trello Board? (2)

A list of lists filled with cards adjustable to your project, team, and workflows with checklists, labels and due date to show progress, and inform subscribers to the cards about progress through email notification



ETD Processing on Trello Board – Workflow Tracking for IRO Upload Using Lists and Cards

The screenshot shows a Trello board named "ETD Processing" with five lists and several cards. The browser address bar shows the URL: https://trello.com/b/E56mGoCd/etd-processing. The board is shared with "Amanda Xu".

List Name	Card Title	Progress
Check Files in DSPS	XMLdropboxDec15	
	Dec 15 XML files	
	Dec15 PDF files	
	Dec 15 Supplements	
	Dec 15 Large files	
Copy Files for Digital Preservation	2015-12 PDF files	
	2015-12 XML files	
	2015-12 Supplement files	
	2015-12 Large files	
Convert and Cleanup ProQuest XML for Bepress	Convert ProQuest XMLs for BePress	<input checked="" type="checkbox"/> 0/5
	Create HTML file	
	Test XML File for Character Display	
	Move PDFs to Dropbox for Proofreading	
	Check Files in L Drive for ETD	<input checked="" type="checkbox"/> 0/3
Copy Editing XML File (Pre-proof)	Brenda batch edits - ETDPreproofRev2015-12pt1-BC.xml	
	Sara batch edits - ETDPreproofRev2015-12pt2-SR.xml	
	Christine batch edits - ETDPreproofRev2015-12pt3-CB.xml	
Upload BePress (IRO)	Combine revised XML catalogers into one	<input checked="" type="checkbox"/> 0/1
	Review ETD4upload	<input checked="" type="checkbox"/> 0/3
	Upload to IRO	<input checked="" type="checkbox"/> 0/1



ETD Processing on Trello Board – Workflow Tracking for OCLC Connexion Upload Using Lists and Cards

The screenshot shows a Trello board interface for 'ETD Processing'. The board is organized into four lists:

- Convert ETD4Upload XML to MARC**: Contains four cards:
 - Modify XML Converter for ETD-bepress2MARC21XML.xsl and others
 - Transform XML file into MARC21XML
 - Check Conversion from MARCedit to Connexion (0/4)
 - Convert to MARC
- Upload to OCLC Connexion**: Contains two cards:
 - Import Files to OCLC Connexion (5/5)
 - Handoff MARC records in OCLC to Catalogers
- Catalog in OCLC Connexion**: Contains five cards representing different subject areas:
 - Jia - East Asian and Social Sciences
 - Rebecca - Humanities
 - Melissa - Music
 - Selina - Science
 - Duncan - Social Sciences
- File Maintenance**: Contains two cards:
 - Update ETD Batch Processing Documentation, etc.
 - Cleanup files (0/10)

The interface includes a top navigation bar with 'Boards', a search bar, the Trello logo, and user information for 'Amanda Xu'. The board title 'ETD Processing' is followed by 'ETD Processing Team' and 'Team Visible'. A 'Show Me' link is visible on the right side of the board header.



ETD Processing on Trello Board – Progress Tracking Using Labels

The screenshot displays a Trello board titled "ETD Processing". A card titled "Convert ProQuest XMLs for BePress" is selected, showing a list of tasks with progress bars and labels. The tasks are:

- Combine Theses into Single XML File** (100% progress, green bar)
 - ETDmetadata2015-12.xml: Merge, edit, convert to preproof and save*
- Edit BePress Conversion File** (0% progress, grey bar)
 - ETD-ProQuestXML2bepress.xsl
- Create Pre-Proof File** (0% progress, grey bar)

The card has two labels: "In Progress" (green) and "Completed" (purple). A "Labels" modal is open, showing a search bar and a list of labels: "In Progress" (checked), "Not Yet Started", "On Hold", "Completed" (checked), and an unlabeled blue label. The modal also includes a "Create a new label" option.

ETD Processing on Trello Board – Progress Tracking Using Checklists

The screenshot displays a Trello board titled "Convert to MARC" within a list named "Convert ETD4Upload XML to MARC". The board is organized into a checklist format for tracking progress on five tasks. Each task is represented by a card with a checklist item, a progress bar, and a "Delete..." link.

Checklist Items:

- ETD-bepress2MARC21XML-EA-SocialScience.xml (0% progress)
- ETD-bepress2MARC21XML-HumanitiesCatchall.xml (0% progress)
- ETD-bepress2MARC21XML-Music.xml (0% progress)
- ETD-bepress2MARC21XML-SocialScience.xml (0% progress)
- ETD-bepress2MARC21XML-Science.xml (0% progress)

Board Structure:

- Labels:** Completed
- Actions:** Move, Copy, Subscribe, Archive
- Background Cards:**
 - Upload BePress (IRO) - 0/1
 - Review ETD4upload2015-12.xml - 0/3
 - Upload to IRO - 0/1
 - File Maintenance - Update ETD Batch Documentation, et... - 0/10

ETD Processing on Trello Board – Progress Tracking Using Due Date and Subscribe

The screenshot displays a Trello card interface for 'Duncan - Social Sciences' within the 'Catalog in OCLC Connexion' list. The card is currently labeled 'In Progress' and has a due date of 'Feb 1 at 12:00 PM'. A comment section is visible with a text input field and a 'Save Comment' button. The 'Activity' section shows a log entry: 'AX Amanda Xu added this card to Catalog in OCLC Connexion Nov 6, 2015 at 11:43 AM'. On the right side, the 'Add' menu is open, showing options for 'Members', 'Labels', 'Checklist', 'Due Date', and 'Attachment'. The 'Actions' menu is also visible, including 'Move', 'Copy', 'Subscribe' (which is checked), and 'Archive'. A 'Share and more...' link is located at the bottom of the right-hand menu.

Adoption of Trello Board for ETD Processing

People

- Develop ETD Processing Team (Digital Scholarship Librarian, Digital Preservation Librarian, Database Maintenance Staff, Metadata Analyst, Copy Catalogers, and Professional Catalogers)

Tool

- Implement the Tool for Tracking ETD Workflows

Process

- Analyze ETD processing workflows
- Determine lists for tasks, checklists, labels, due date to show workflow progress
- Get team members subscribed to cards
- Educate and promote the use

References

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