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CTDA connecticut digital archive

The Connecticut Digital Archive Handbook 2016

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What is the CTDA?

The Connecticut Digital Archive (CTDA) is a collaborative effort of the Archives & Special Collections at the University of Connecticut Libraries and the Connecticut State Library. The CTDA is dedicated to the maintenance, delivery, and preservation of a wide-range of digital resources for educational and cultural institutions and state agencies in the State of Connecticut.

CTDA Community

The CTDA community consists of educational, cultural, and memory institutions based in the state of Connecticut. The three distinct communities of the CTDA are: University of Connecticut, Connecticut State Library, Connecticut based libraries, archives, galleries, museums and other memory institutions. Eligible institutions have a mission to preserve and make available historically valuable resources and records. The CTDA is not open to individuals or organizations that do not have as part of their mission a commitment to preservation and access. The CTDA encourages individuals or non-memory organizations to work with an eligible institution to preserve their organization's records.

Mission

The vision of the CTDA is to provide services for the preservation of and access to digital assets inherent to the research, information, and educational missions of its participating institutions.

Vision

The vision of the CTDA is to serve as a standards-based repository and infrastructure supporting a diverse set of applications, services, and discovery tools that offer long-term management, secure storage, preservation solutions, and – whenever possible- open access to digital assets of enduring value, as determined by the CTDA participants.

Governance

The CTDA is a service of the University of Connecticut Libraries. The CTDA provides services to preserve and make available digital assets related to Connecticut and created by Connecticut-based, not-for-profit educational, cultural, and historical institutions, including libraries, archives, galleries, and museums. In order to insure that the needs of the community are being met by CTDA services, the UConn Libraries convenes two committees to provide strategic advice on CTDA operations and services: Advisory Committee and the Technical Roadmap meeting.

Advisory Committee

The CTDA Advisory Committee consists of colleagues and peers from the cultural heritage, digital preservation, and academic communities in Connecticut and

represents a wide variety of talents, knowledge, and perspectives. The committee meets quarterly to share experiences and provide advice on CTDA services and programs.

Membership:

Advisory group members serve three-year terms by invitation of the Vice Provost for University Libraries. Members represent a diverse group of experts in their respective areas, and will always include representatives from the library, archives, museum, and historical societies as well as relevant state agencies and/or independent experts. The group will have a minimum of 9 and a maximum of 12 members.

Operations:

A Chair and Vice Chair/Incoming Chair of the group will be chosen by the group. The Chair develops the meeting agenda in consultation with CTDA staff and the membership and facilitates the meetings. Meetings dates and locations will be posted on the CTDA website. Minutes will be recorded and posted on the CTDA web site for anyone interested to read.

List of Current Members: http://ctdigitalarchive.org/organization-and-governance/ctda-advisory-committee/Agendas & Meeting Minutes: http://ctdigitalarchive.org/organization-and-governance/ctda-advisory-committee/

Technical Roadmap

The Technical Roadmap is a discussion group on how to chart the short and long term technical infrastructure of the CTDA. It is made up at its core of those working directly with CTDA technical infrastructure maintenance and enhancement. This discussion group meets every month. The discussion group is convened by CTDA staff.

Membership:

Technical Roadmap core consists of the CTDA lead applications developer, the CTDA Program Director, and CTDA repository coordinator. Anyone is invited to attend.

Operations:

The Technical Roadmap meets on the 4th Monday of each month for 30 minutes. Meetings can be cancelled for major holidays or for other extenuating circumstances. There is always a virtual component to meetings. Anyone is invited to attend the meetings either in person at the Homer Babbidge Library

on the UConn Storrs campus or virtually. Meetings will be announced via the CTDA News blog and on this page.
Information on Participation and notes: http://ctdigitalarchive.org/organization-and-governance/ctda-technical-roadmap/

Finances

The budget of the CTDA is currently a separately maintained budget, held within the University of Connecticut Libraries budget system and managed by the UConn Archives & Special Collections at the Thomas J. Dodd Research Center. Some additional financial components of the operation are represented by commitments by participating institutions. The University Libraries financial procedures are subject to audits by the UConn Office of Audit, Compliance & Ethics.

Succession Plan

Support for the CTDA resources and services is provided by the University of Connecticut Libraries in collaboration with the Connecticut State Library. The University of Connecticut Libraries is the current host of the infrastructure where digital content deposited by participating institutions is preserved and made accessible. Support for this infrastructure is part of the base-funded responsibilities of the University of Connecticut Libraries, and ongoing funding for the Libraries is provided to that end. Hardware, software and services purchased by the University of Connecticut Libraries or resources created by the University of Connecticut Libraries are done so on behalf of the participating institutions with a commitment to the preservation of and access to digital assets inherent to the research, information, and educational missions of its participating institutions. Should the funding or organizational imperatives of the University of Connecticut Libraries change and the CTDA service is terminated, the CTDA will return to all members all digital assets deposited in the CTDA following a mutually agreed upon format, method, and timeline, commit to determining a viable persistence plan for the Handle registry for all objects deposited in the CTDA, and, furnish sufficient notice (no less than six months) to all participating institutions concerning any and all plans to discontinue CTDA services.

Technology

The CTDA is built on the open source Fedora Commons architecture and uses a number of open source tools, applications, and services. Fedora (Flexible Extensible Digital Object Repository Architecture) was originally developed at Cornell University and the University of Virginia in the late 1990s. Fedora application development is currently managed by Duraspace, a non-profit organization dedicated to preserving scientific and cultural heritage digital assets. The Fedora

repository architecture is currently in production in hundreds of academic, governmental, and cultural organizations around the world.

The CTDA's current management and presentation platform is Islandora. Islandora is an open-source software framework designed to help institutions and organizations and their audiences collaboratively manage and discover digital assets. Islandora was originally developed by the University of Prince Edward Island's Robertson Library, but is now implemented and contributed to by an ever-growing international community. Islandora development is now managed by the Islandora Foundation a non-profit membership organization.

The CTDA implements the Handle System to provide persistent and unique identifiers for digital assets. The Handle System is a component of CNRI's Digital Object Architecture and provides a means of managing digital information in a network environment. The Handle System includes an open set of protocols, a namespace, and a reference implementation of the protocols that enable a distributed computer system to store identifiers, known as handles, of arbitrary resources and resolve those handles into the information necessary to locate, access, contact, authenticate, or otherwise make use of the digital assets. This information can be changed as needed to reflect the current state of the identified digital asset without changing its identifier, thus allowing the name of the item to persist over changes of location and other related state information.

Institutional affiliation and other indicators of viability of the project

Name of environment	Connecticut Digital Archive
Name of major systems	Fedora and Islandora
Version of major systems	Fedora 3.71 and Islandora 7.16 (Drupal 7x)
URL of project homepage	http://ctdigitalarchive.org
Age of project	Launched November 13, 2013
Notes on long-term viability of project	CTDA is a service of the University of Connecticut Libraries in collaboration with the Connecticut State Library. It is supported with a base funding from these institutions.
Degree of deployment	Repository is located at the University of Connecticut The data is replicated and consists of active and passive sites.

Type of open-source license	The CTDA is built using open source technologies. All metadata has been dedicated to the public pursuant to Creative Commons' CC0 public domain dedication (see CTDA Metadata Guidelines).
Other documentation	Information about the CTDA, including governance, mission, vision, resources for participants, or services are available at: http://ctdigitalarchive.org.

Technical requirements, maintenance, and scalability

Local install or ASP?	There is one implementation of Fedora and multiple Islandora/Drupal sites.
Operating system	Red Hat Linux 5
Hardware	Dell Intel-based servers running VMware
Application server	Fedora, Islandora, Handlebar, MySQL
Web server requirements	Apache Tomcat, Apache HTTP
Primary programming language	PHP
Auxiliary programming language(s)	Drush, Perl
Application framework	System and software development in the CTDA is driven by the need to fulfill its mission and vision. This has resulted in a modular architecture where discrete systems fulfilling different OAIS functions (e.g. object ingest, storage, indexing) communicate and interoperate as an integrated whole. Disaggregation of the functional components of the repository allows agile response to problems that arise (e.g., issues with ingest, storage, or access systems are localized and may be addressed separately) and sharing of development responsibilities across partner institutions. Although many repository systems and services sit on central servers, the modular architecture and orientation toward open standards and open systems make it possible for partner institutions to develop services and key pieces of repository functionality.
Database server requirements	MySQL
Other software requirements	Drupal, Solr, Command Line tools
Required skills	Significant knowledge of UNIX, PHP, Apache, MySQL, Drupal, Java
Internal backup and restore functions	Backup and restore functionality is provided at a system level and consists of a) file backup b) database

	backup and c) virtual machine. Backup services are currently provided by Unix Systems Administrator.
Disaster recovery plan	The University of Connecticut Libraries maintains a disaster recovery plan.
Scalability: Application	Applications are lightweight and served by multiple servers; additional web servers can be added to increase application performance.
Scalability: Data	The CTDA uses Dell equal logic storage.
Batch ingest	Batch ingest is handled by Islandora and relies on a zip submission package.
Batch export	The CTDA does not support batch export at this time.
Support for OAI harvesting	OAI harvesting is handled by Islandora and does not include support for deletions at this time.

Security	
Access control	Access to digital items is determined by rights statements and is handled through Islandora's XACML Policies.
User management	The University of Connecticut Libraries manages CTDA users as described in the CTDA Managing Users Guidelines.
Policy management	The CTDA adheres to the information security policies of the University of Connecticut Libraries and the CTDA Managing User Guidelines and best practices.

Storage	
Add content	Content is added through Islandora or via the command line using drush.
Access content	Content is accessed and presented through Islandora/Drupal.
Remove content	Content may be removed at the request of the creator/contributor, participating institution's discretion, CTDA's discretion, by legal order. Content files are removed and a tombstone record is made available.
Manage metadata	Descriptive metadata is managed through Islandora. This metadata includes information on rights. Structural metadata is managed by Fedora's RELS-EXT and RELS-INT relationship data streams. Technical metadata is managed through Islandora as a data stream. Preservation metadata is created on the fly through Islandora.

Aggregation	
Create aggregation	The CTDA aggregates first digital objects based on namespaces, which identify the institution that holds or acts as steward for the particular digital objects for management and harvesting purposes. Second, the CTDA aggregates digital assets for the Connecticut History Illustrated using the metadata tag, CHI.
Remove aggregation	All participating institutions are required to be assigned and implement their unique namespace. However, the aggregator metadata tag CHI can be removed from any digital object.
Change aggregation membership	Digital objects can be shared or migrated with other collections. Aggregation can only be changed for CHI.
Find aggregation members	All digital objects are part of a namespace. Namespaces are easily identified and found in the repository. It is possible to facet search results in the CTDA to limit results from a particular institution, which corresponds with a namespace.

Administrative functions	
Multiple roles	The ability to change user roles and permissions is held by a limited group of developers and administrators.
Configuring roles	Roles are configured using Drupal.
Versioning	Data streams are versioned in Fedora.
Archiving	The CTDA provides management, secure storage, preservation solutions, and – whenever possible- open access to digital assets of enduring value, as determined by the CTDA participants.

Access and formats functions	
Accessibility of system	The CTDA system and interfaces are currently not designed to provide access for users with disabilities.
Internationalization support	Unicode encoding (utf-8 basic multilingual plane) is supported in repository applications.
Citation linking	Each digital assets receives a persistent and unique identifier using the Handle System.
RSS feed	An RSS and CSV export of search results exist and can be found by clicking on icons in the right hand corner in the search results.
Search and retrieval	The CTDA offers full text, faceted, simple and advanced searching.

Indexing	Indexing is provided through Solr and Gsearch.
Help Support	A contact email address is provided on the website.

List of Formats and Format Support

The CTDA is committed to providing long-term access to all deposited content by applying best practices for digital preservation while also acknowledging the complexities involved in preserving digital information. The CTDA will work within evolving "best practices" to be responsible stewards and will work to preserve the metadata and supported digital and media objects. The CTDA will research the "state of the art" preservation practices and offer preservation ideas and recommendations. Choices regarding preservation will be based on the CTDA's community demand. Assessments will be continuously undertaken regarding ongoing technical feasibilities and digital repository "best practices." For preservation format support, see Preservation and Infrastructure Policy below.

Any format can be deposited into the CTDA. However, the CTDA through Islandora provides services such as the creation of derivatives and technical metadata extraction for the following formats: doc, docx, ods, txt, html, sxc, csv, tsv, odp, sxi, ppt, pptx, xls, xlsx, warc, PDF, tiff/tif, jp2, jpg/jpeg, png, bmp, wav, mp3, ogg, mp4, mov, qt, m4v, and avi.

Content & Collections

What type of formats & content can be added?

Any format or type of content can be added to the CTDA. However, not all formats will be preserved or be subject to a file transition and migration plan. The CTDA will work within evolving "best practices" to be responsible stewards and will work to preserve the metadata and supported digital and media objects. The CTDA will research the "state of the art" preservation practices and offer preservation ideas and recommendations. Choices regarding preservation will be based on the CTDA's community demand. Assessments will be continuously undertaken regarding ongoing technical feasibilities and digital repository "best practices."

Who can add content?

Users from eligible participating institutions that comply with the terms of the MOU and, in cases where an institution is paying content storage or service fees, to meet their financial obligations in a timely matter.

Adding content

The CTDA and its participating institutions encourage the deposit of digital assets within the CTDA to be openly available to the public whenever possible. The CTDA supports the deposit of any file format except hostile files or formats.

Managing content

All digital content and/or assets deposited within the CTDA for any purpose remains the sole property of the content creator, contributor, or contributing agent as determined by institutional and local agreements prior to or at the point of submission to the CTDA. Managing content is done through Islandora/Drupals's administrative interface.

User Support Services

The CTDA maintains core connectivity and communication mechanisms. Primary email communication with the CTDA relies on ctda@uconn.edu. The CTDA relies on a user-identified issue tracking service for the CTDA that can be access by sending an email to ctda@uconn.edu or by going to http://helpspot.uconn.edu. Development and technical systems issues tracking relies on the Trello online project tracking system as well as HelpSpot. Larger development issues relating to bugs in Islandora are reported to the Islandora Foundation Jira ticketing system. General information for users working in production environments relies on a Google Group email list. Documentation and the general knowledge base is archived on a shared network folder provided by the University of Connecticut Libraries. Documentation is also kept on CTDA's GitHub as well as on the CTDA's main website.

XAMCL Policies and Namespaces

To help users add and management content, channels will enact access policy and namespace restrictions. These policies and namespaces will enable users to see and search for only their content.

For those with their own channel, their channel will be configured for their namespace(s) and the Solr Index Query Defaults will be limited to their namespace(s) only.

For those who add and manage content through the CTDA Management site, this channel will be configured for those namespaces corresponding to users using that namespace working in this production CTDA Management channel. For example, if only Connecticut Historical Society has decided to use the CTDA Management site and every other institution has their own channel, then the CTDA Management site will only be configured for CHS's namespace, the query defaults in the Solr Index will be limited to CHS's namespace, and XACML policies. In other words, the Islandora configured namespace section and Solr Index Query Defaults are limited to the same namespaces.

Statistics and Visualizations

Statistics for the CTDA and participating institutions that have their own sites (or channels) are updated monthly and can be found at http://ctdigitalarchive.org/statistics/.

CTDA is working with the UCL Data visualization Librarian that integrates real-time data from Google Analytics into Tableau. CTDA is also working with UCL's Information Technology Services on the creation of assessment and monitoring tools.

Policies

Current Policies can be found on our CTDA website.

Organizational

To ensure the needs of the CTDA community are being met, the University of Connecticut Libraries convenes committees to provide advice on CTDA operations and services. These committees are: Advisory and Technical. Final decisions about the future direction of the CTDA rests with the University of Connecticut Libraries.

Grant Support Policy

The CTDA will make available to participating institutions all necessary financial, operational, and personnel documentation required by granting agencies when the CTDA is included as part of technical infrastructure and/or preservation activities. The CTDA will assist in the development, application, and revision process of grant applications at the request of participating institutions as resources permits.

All grant proposals created and submitted for funding to internal or external agencies and programs by CTDA participating institutions involving the CTDA should include, either in requested funds or as in-kind financial support, realistic storage amounts for any and all digital content intended to be deposited within the CTDA as part of the grant activities. Participating institutions will work with the CTDA Coordinator to determine realistic storage needs and costs related to all grant activities.

Eligibility & Agreements

Participation in the CTDA is open to all educational, cultural, and memory institutions based in the state of Connecticut that have a mission to preserve and make available historically valuable resources and records. The CTDA is not open to individuals or organizations that do not have as part of their mission a commitment to preservation and access. The CTDA encourages individuals or non-memory organizations to work with an eligible institution to preserve their organization's records.

Participating institutions are expected to comply with the terms of the MOU and, in cases where an institution is paying content storage or service fees, to meet their financial obligations in a timely manner. Any institution consistently out of compliance with the policies of the CTDA may have its *management* access to the CTDA blocked until the situation is resolved. Since the trustworthiness of the CTDA is tied to the persistence of the historical record of what it contained and when, viewing access to an institution's digital assets will not be affected.

If an institution wishes to end its participation in the CTDA the institution may request, at its own expense, copies of its digital assets (objects and metadata) deposited in the CTDA following a mutually agreed upon format, method, and timeline.
It may also request that:

- The CTDA take custodial responsibility for previously deposited digital assets and maintain viewing access to them in the CTDA system;
- The CTDA withdraw the digital assets (see Withdrawal policy);

Since any CTDA item that has existed at some time may have been cited using its identifier the CTDA encourages institutions to allow continued access to the digital assets to insure the persistence of the historical record. The Withdrawal policy allows an institution to withhold access to the primary content but preserve information about the existence of that content.

The CTDA encourages participating institutions to designate a successor institution to be responsible for its digital content in the event that the participating institution ceases to exist. If the participating institution ceases to exist without naming a successor institution, the CTDA will take custodial responsibility for previously deposited digital assets "orphaned" by the dissolution of the institution and will endeavor to find an institution willing to take management responsibility for the digital content insofar as it can.

Content and Metadata

The CTDA encourages the deposit of digital assets within the CTDA to be openly available to the public whenever possible. A digital object receives two unique identifiers within the CTDA: a PID (persistent Identifier) and a Handle. Both the PID and Handle are assigned at the point of deposit (a.k.a. ingest). PIDs and Handles remain unique to an object even if that object has been suppressed and/or withdrawn.

The CTDA will develop viable and responsible metadata practices. The CTDA uses the Metadata Object Description Schema (MODS) as a normalized descriptive metadata schema. All objects in the CTDA will have, either included or created at

point of ingest, a Dublin Core and/or MODS metadata data stream. The CTDA requires all depositors to furnish minimal level MODS records for digital assets according to the CTDA Metadata Guidelines roughly equivalent to the DLF's Shareable Metadata Guidelines MODS Levels of Adoption Level 1.

The CTDA will make available to OAI harvesters OAI-Dublin Core records for all publicly viewable digital objects within the repository. The CTDA will allow web crawlers to index the CTDA, its metadata, and accessible primary content data streams at regular intervals.

Access, Rights & Usage Policies

All digital content and/or assets deposited within the CTDA for any purposes remains the sole property of the content creator, contributor, or contributing agent as determined by institutional and local agreements prior to or at the point of submission to the CTDA.

CTDA participants and contributors are responsible for adhering to the copyright policies of their parent institution, which includes adherence to United States federal copyright law. In general, good faith is assumed on the part of repository contributors and the CTDA will work with participating institutions on broad copyright and intellectual property issues. It is the responsibility of each participating institution to educate their contributors on their rights and responsibilities with respect to copyright, and act quickly to remedy copyright problems if they come up.

Content Removal

Withdrawal Policy

In normal circumstances, the CTDA will retain, make publicly available, or provide controlled access to all items that have undergone the submission process and been ingested into the CTDA. Under some circumstances items will be withdrawn from view. Since any CTDA item that has existed at some time may have been cited, and to avoid loss of the historical record, all such transactions will be traced in the form of a "tombstone". The content of the note will be one of the following:

- "removed from view at request of the creator/contributor"
- "removed from view at [institution's] discretion"
- "removed from view at CTDA's discretion"
- "removed from view by legal order"

Any links to the object within the repository that is in indexes, etc. will be removed. Although items may be withdrawn from the CTDA for any of the reasons set out above, a request for withdrawal may be refused by the

participating institution, the final decision on withdrawals rests solely with the institution, except where there are legal ramifications for the University of Connecticut Libraries.

Deletion Policy

Deletion of items will mean removal of the item itself, plus any metadata pertaining to the item. In this instance, there will be no "tombstone" marker as is the case with withdrawn items. Since the integrity of the repository and the preservation of the historical record are dependent on good recordkeeping, deletion should be considered a last resort. Publicly available and controlled access items will be deleted from the repository if there is a legal requirement to do so, or in extreme cases, if it is deemed by the participant institutions and/or the University of Connecticut Libraries to be in its best interests.

Preservation & Infrastructure

The CTDA will work within evolving "best practices" to be responsible stewards and will work to preserve the metadata and supported digital and media objects. The CTDA will research the "state of the art" preservation practices and offer preservation ideas and recommendations. Choices regarding preservation will be based on the CTDA's community demand. Assessments will be continuously undertaken regarding ongoing technical feasibilities and digital repository "best practices."

- The CTDA commits to preservation of source primary content data streams at the bit stream level
- The CTDA commits to preservation of standards-based core metadata in an interoperable format for all objects
- The CTDA will support migration as demand and resources warrant, but only guarantee preservation and access to the source primary content data streams and core metadata
- The CTDA will develop a file transition and migration plan for file formats identified with defined levels of service regarding preservation.

The University of Connecticut Libraries centrally manages and maintains the technical infrastructure of the CTDA. The University of Connecticut Libraries follows: vendor-identified end-of-life cycles for hardware when appropriate, commits to managed growth of the repository hardware as capacity needs are met and in keeping with vendor-identified upgrades, the Open Archives Information System (OAIS) for digital asset preservation and repository construction, a back-up schedule, actively monitors the performance of the CTDA and will produce a PREMIS (Preservation Metadata Implementation Strategies) data stream on demand for all objects deposited in the CTDA.

Quality

The CTDA relies on participating institutions' descriptive cataloging, ensuring that records meet CTDA minimal MODS requirements. To ensure that minimal MODS requirements are being met, CTDA materials are subject to quality review.

Privacy

The Connecticut Digital Archive (CTDA) is committed to protecting the privacy of the users of our electronic resources. While the CTDA does gather data about system and resource usage for administrative purposes, the use of that information conforms to generally accepted privacy standards as detailed below.

- Data gathered about each session varies according to the method of connection to the resource.
- The resulting logs contain information necessary for analyzing the use of resources, troubleshooting problems, and improving services.
- These logs remain intact for at least one year from the time of accessing the resource.

CTDA's commitment to user privacy extends to our agreements with participating institutions. If a user links from the CTDA to an external provider or digital object, the privacy policies of that provider will apply.

When submitting content or browsing through the CTDA website, reading pages, or downloading information, certain information about the visit is gathered and stored. This information does not identify the user personally. Information that is automatically collected and stored includes but may not be limited to:

- the Internet domain and IP address from which the CTDA website was accessed,
- the type of browser and operating system used to access the CTDA site,
- date and time the CTDA site was accessed,
- pages visited, and
- the address of the last site visited before linking to the CTDA site.

This information is automatically gathered and stored to make the site more useful to visitors, keep a tally of the number of visitors to the site and report on the types of technology visitors are using.

If users provide the CTDA with personal information by submitting a digital object or by filling out a form and submitting it through the site, the CTDA will use that information to ingest the object or to respond to a request. Personal information is only shared with another agency if the inquiry relates to that agency, or otherwise required by law. The CTDA does not create individual profiles with the information provided to give to any private organizations. The CTDA does not collect information for commercial marketing.

Services

As outlined below, the University of Connecticut Libraries offers deposit, access, and preservation services to support the CTDA and its users. In addition, the Libraries provides community management, end-user support, and system management services to provide ongoing support for institution participants, respond to user inquiries, and supply system monitoring, back-up, and recovery.

Deposit Services

The CTDA offers participating institutions offers the ability to contribute content through the Islandora Administrative interface. To become a participating institution, inquiries can be sent to ctda@uconn.edu. After eligibility is confirmed and the institution has completed training and signed applicable agreements, deposit services include but are not limited to:

- Edit user profile
- Add content
- Enter descriptive information (metadata)
- Include additional metadata
- Bundle multiple files of the same format with or without metadata in a single deposit
- Manage and/or delete digital assets and/or metadata

Access Services

The CTDA access services give users the ability to browse, search, and discover digital assets. Those interested in accessing CTDA content can:

- Browse content by simple keyword search
- For those with their own channel, browse content by simple keyword search and an advanced search customized to the needs of the participating institution and that typically include search by title, creator, topic (subject).
- Search for digital assets anywhere in CTDA or within a particular collection or participating institution
- Search for matches within creator, title, or full text words and view results
- View a digital asset and its associated metadata
- View a digital asset online
- Download an individual item

Repository Services and Quotas

The CTDA provides storage and preservation services to ensure the longevity of deposited content. The CTDA community should be assured that content deposited in many formats (see Preservation & Infrastructure) will be accessible even when the original asset or the original application in which it was created is obsolete. For each deposit, the CTDA:

- Provides persistent storage, including appropriate back-up and recovery procedures
- Assigns a persistent identifier (Handle) that will not change and can be used in citations
- Notifies the CTDA community of preservation constraints
- Will implement PREMIS

Storage quotas will be based on the size of the CTDA community as determined by the University of Connecticut Libraries. Thereafter, quotas will be reviewed on an annual basis in June at which time the Libraries reserve the right to alter quotas as dictated by demand and resource availability. Participating institutions with greater storage needs can contact the CTDA for further assistance.

CTDA Community Management Services

The CTDA community management services are a set of consultative and applied services designed to meet the needs of eligible participating institutions. The CTDA core services will provide guidance in using the Islandora Administrative interface, adding and managing content, and organizing content.

The CTDA will manage the set-up process for participating institutions, including:

- Introduction to the CTDA and initial training
- Guidance on adding, managing, and organizing content
- For those without their own channel:
    - Adding and managing user accounts
    - Managing the XACML permission policies of their content
- For those with their own channel:
    - Training for Institutional Site Administrator
    - Guidance on channel theming

End-User Support Services

The University of Connecticut Libraries provides both web-based and telephone support for all CTDA participating institutions. Support will be provided Monday through Friday from 9:00 am to 5:00 pm. Inquiries will typically receive a return response via e-email or telephone within one business day. The CTDA web site will provide documentation, including how-to documents that answer routine questions and user support contact information for more complex questions.

System Management Services

System Management services are the back-office support for the CTDA. The University of Connecticut Libraries will provide:

- Performing system monitoring, testing and debugging
- Performing system administration
- Monitoring and upgrading CTDA programs, middleware, and hardware when applicable
- Developing approved system enhancements
- Performing quality reviews on at least an annual basis
- Maintaining a registry of known content and metadata formats for preservation purposes

Fee-based Services

The CTDA offers premium, or fee-based, services beyond the core services described above. The CTDA was designed as a distributed system that allows participating institutions to manage their own content and, for those with their own channel, their own site. The services described above aim to achieve that. The CTDA realizes that some participating institutions may want to outsource certain activities to the University of Connecticut Libraries or may put demands on the system that require additional resources for support.

These premium services include:

Additional Preservation storage services

The CTDA offers participating institutions an allocation of storage of up to 500GB at no cost to the institution. Participating institutions with content in excess of the storage allocation can pay in two ways: yearly subscription or pay once store forever. Storage allocations and rates are set each year in June.

Channel services

The CTDA offers participating institutions the ability to manage their content in an aggregated site at no additional cost for that site. Participating institutions that need a web site (channel) of their own pay for the CTDA to create their own channel. The costs of a CTDA channel are set each year in June.

Data Curation Services

The CTDA offers participating institutions the ability to add and manage their own content at no additional cost when that institution manages their content on their own. Participating institutions may wish to outsource some data curation services to the University of Connecticut Libraries. These data curation services include:

- Data migration
- Data cleanup and enhancement
- Batch import of digital assets with or without metadata
- Development and implementation of metadata mapping to the CTDA normalized metadata standard and guidelines
- Development and implementation of best practices for controlled vocabularies

The costs for data curation services are set each year in June.

Costs

Premium, or fee-based, services, will be reviewed on an annual basis in June at which time the Libraries reserve the right to alter any costs.

Current costs for FY14-15:

- Additional Preservation Storage services
    - Yearly subscription: $1.54/GB

    - Pay Once Store Forever (POSF): $15.40/GB
- Channel services: $3150 set up fee and $900 annual maintenance fee
- Data Curation services: $105/hr.
- Digital services: $105/hr.

Roles & Responsibilities

CTDA Participating Institution Responsibilities

A CTDA participating institution agrees to:

- Understand and observe the MOU
- Understand and observe policies, terms and conditions and educate depositors regarding these policies
- Understands that it appoints the CTDA as its agent for the purposes of providing access to the digital assets
- If that institution has its own channel:
    - Understands and agrees to appoint an Institutional Site Administrator as the main point of contact for the CTDA
    - Understands and agrees to take responsibility for customizations and unique requirements implemented on their institutional channel(s)

CTDA Participating Institution Rights

A CTDA participating institution retains the right to:

- Limit access to content at the item level
- Remove digital assets as outlined in Content Removal
- Control the organization of digital assets
- It is the creator, contributor, or contributing agent of the digital assets it submits and if applicable, has obtained the necessary copyright assurances from creator and/or copyright holder;
- It will notify the Connecticut Digital Archive within 30 days if rights to deposit digital assets are reassigned;
- It will provide a means of contact and communication with the Connecticut Digital Archive;
- It has the full power and authority to make this agreement;
- It has obtained or will obtain any insurance that the Institution deems appropriate to insure the content submitted and understands that the Connecticut Digital Archive does not maintain any such insurance;
- The submissions do not infringe any copyright, nor violate any proprietary rights, nor contain any libelous matter, nor invade the privacy of any person or third party;

- No right in the submissions have in any way been sold, mortgaged, or otherwise disposed of, and that the content is free from all liens and claims; and
- Once the digital asset(s) is submitted to the CTDA, a full bibliographic citation to the digital asset(s) may remain visible in perpetuity, even if the content is updated or removed.
- The Institution shall indemnify, defend, and hold harmless the University of Connecticut Libraries and the Connecticut Digital Archive, its officers, members, employees and agents for any damages, including any reasonable attorney's fees, that arise from any breach of warranty or for any claim by any third party of an alleged infringement of copyright or other intellectual property rights arising from the Institution's submission of materials with CTDA or of the use by the Connecticut Digital Archive or other users of such materials. THIS INDEMNITY SHALL SURVIVE THE TERMINATION OF THIS AGREEMENT.
- If that institution has its own channel(s):
    - A connection to the CTDA's production Fedora Commons repository
    - A connection to the CTDA's Handle System and inclusion in the CTDA Handle prefix
    - One generic standard CTDA Drupal theme, with the channel name at the top
    - One assigned web address linked to a DNS supplied by the subscriber
    - Site administrator permissions assigned to the n
    - CTDA generic standard forms for MODS data entry and editing
    - CTDA standard indexing, faceting, and display templates for MODS
    - One day's (7 hours) consulting and training for Site Administrators
    - Google analytics account for usage monitoring. Note: if institution prefers to use its own existing Google Analytics account, UConn requires access for two Google user accounts. These accounts need to have the following user permissions: Read & Analyze, Collaborate, and Edit. If desired, this may be done by creating a new Property in the institution's GA account for use only by CTDA channel(s).

University of Connecticut Libraries Responsibilities

- Convene committees to ensure that the needs of the CTDA community are being met by CTDA services
- Retain and maintain digital assets deposited within CTDA
- Maintain the system the supports persistent URLs (Handle)

- Preserve content according to accepted preservation techniques per our policies on preservation
- Provide access to CTDA content
- Notify CTDA participating institutions of significant preservation actions, e.g. format migration
- Make reasonable efforts to manage the digital assets in perpetuity, developing them as appropriate to make them available for non-commercial use;
- Make reasonable efforts to comply with and inform end users of known copyright and user restrictions pertinent to the Institution's digital assets;
- Cooperate with Institution to ensure that digital assets are replaced or removed as needed to comply with claims related to the digital asset's copyright and user restrictions;
- Not pay royalties to the Institution or copyright owner for the acceptance and use of its digital assets for non-commercial purposes;
- Provide persistent access to CTDA content, but it does not guarantee persistent functionality. If determined necessary by the CTDA, the current hardware and software used for the CTDA may be replaced. All deposited content will be preserved through migration by the Connecticut Digital Archive.
- Assume custodial responsibility for previously accepted digital assets "orphaned" by the dissolution of the Institution and not formally assigned to the custody of another agency;
- Incur no liability for the loss of or damage to submitted digital assets, although due care will be made to preserve the physical integrity of the digital assets.
- Make available to OAI harvesters OAI-Dublin Core records for all publicly viewable digital objects.
- Provide basic technical support and problem report/resolution
- Evaluate requests for changes and enhancements
- Is not responsible for ensuring that any customizations implemented by an institution for their channel(s) will continue to function properly following upgrades of the supported software and hardware.

University of Connecticut Libraries Rights

The CTDA retains the rights to:

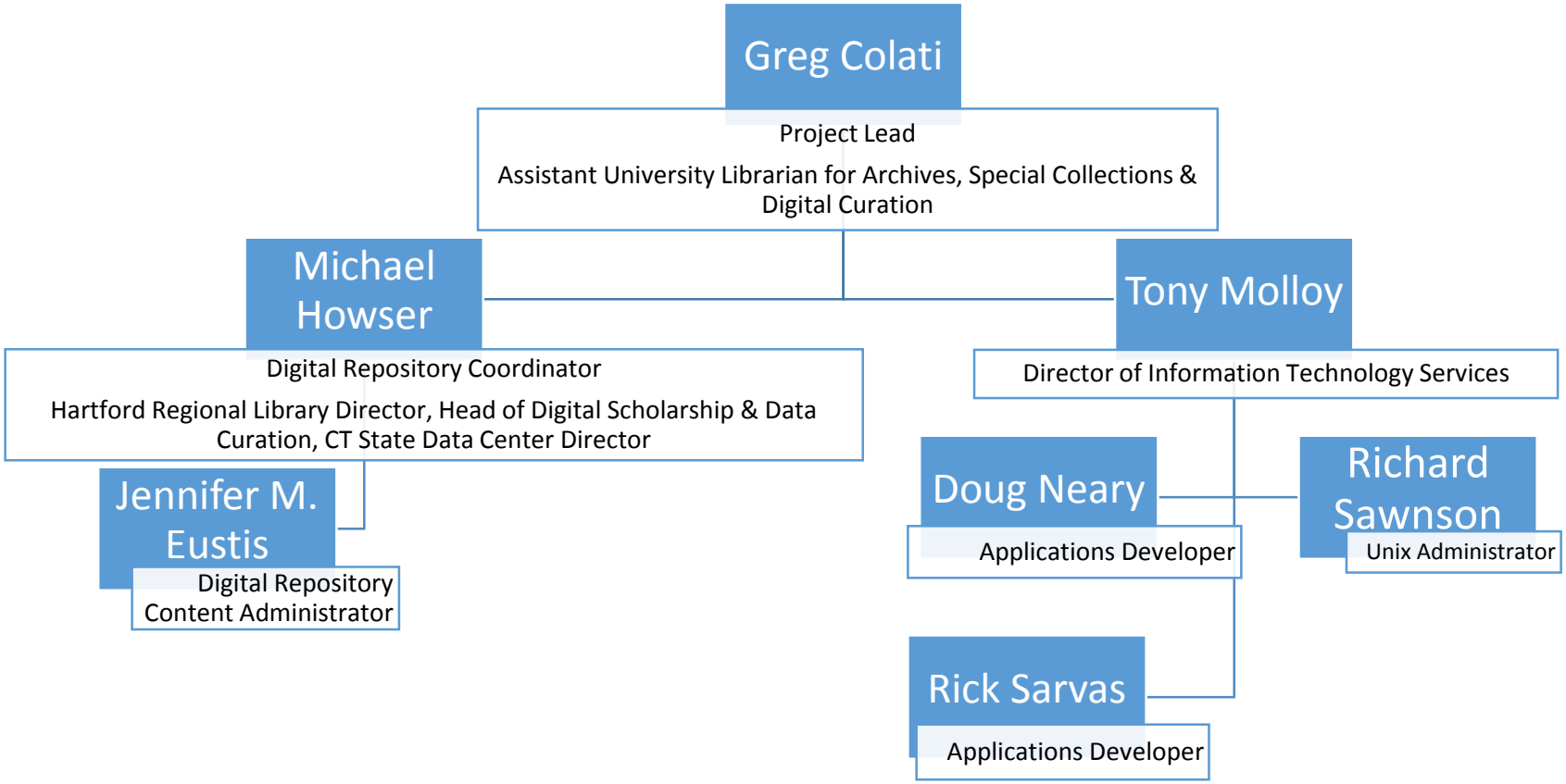
- Amend and/or redistribute descriptive information (metadata) for items
- Refuse or withdraw content under certain circumstances as outlined in Content Removal

- Renegotiate terms of deposit agreements with CTDA participating institutions
- Perform appraisal for transfer or other disposition when CTDA participating institutions cease to exist
- Institute pre-deposit selection or appraisal if financial constraints require that limits be placed on the repository's operations
- Move content to reflect changing agreements between CTDA and participating institutions
- Migrate digital assets if format is in danger of obsolescence
- Set quotas for size of files, number of digital assets
- Reproduce, translate, and distribute digital assets submitted to the CTDA in any format or medium worldwide and royalty-free, including but not limited to, publication over the Internet.
- Restrict or remove access to the CTDA for participating institutions consistently out of compliance with CTDA policies
- Perform regulary quality reviews to ensure content meets CTDA minimal requirements
- Charge additional fees for services that require additional or extraordinary effort due to extensive customizations or other unique requirements for institutional channels.

University of Connecticut Responsibilities

UConn is expected to set policy at the University level regarding issues that affect CTDA, e.g. copyright rules, audit, etc.

Organizational Chart for the CTDA Program



Glossary

Collection Policy: A collection policy is a data stream that specifies which content models are associated with a particular collection object. This determines which file types can be ingested into the collection. The data stream ID (DSID) for a collection policy will always be COLLECTION_POLICY.

CTDA Channel: A presentation channel or web site created for a specific participating institution.

CTDA Participants (or Participating Institutions): Eligible institutions that have agreed to participate in CTDA.

CTDA Services: CTDA services include core, or those at no cost to the participating institution, and fee-based, or premium, services that are offered as part of the CTDA project.

Digital Assets: Digital objects that include metadata, primary content data streams, and derivative files of metadata or primary content data streams that are managed in the CTDA.

Data streams (or Datastreams): Data streams are digital files that are components in a digital object that represent MIME-typed content. In short, data streams are the files that make up a digital object.

Data stream ID (or DSID): The Datastream ID is an internal unique identifier within the scope of the digital object.

Datastream Label: The Datastream label is the human-readable title given to a data stream. It does not need to be unique but it should be informative enough for a user to understand the purpose of the data stream.

Digital Object (or Repository Object): A digital object is a set of data streams grouped together in an Archival Information Package (AIP) that is the basic building block of the repository.

Drupal: Drupal is an open source software package, or content management system, that allows for the organization, management, and publication to the Internet of content.

Fedora: Fedora (Flexible Extensible Digital Object Repository Architecture) is an open source software system that enables long-term access, storage, and management for digital resources.

Fedora Container Object: Container objects, also referred to as Collection Objects, is a simple container, like a folder, that describes a collection, grouping or set of other repository objects. Container objects may contain an infinite number of other containers.

Fedora Content Object: Content objects contain a metadata record that describes the primary content, or digital asset, data stream

Handle System: The Handle System provides efficient, extensible and secure resolution services for unique and persistent identifiers for digital assets.

Information Package: An Open Archival Information System (OAIS, ISO 1294 2012) term that denotes a coherent, self-describing set of files.

Islandora: Islandora is an open source software framework designed to help institutions and organizations manage and discover digital assets.

Islandora Content Models (or Content Models or Content Model Objects): A content model is a type of digital object that acts as a template for a particular type of content. This type of content can be a Container or a Content Object. Content Models that act as a template for Content Objects are format driven. These Content Models are: Basic Image (png, gif, jpg), Large Image (tif, tiff, jp2), PDF (pdf), Audio (wav, mp3), Video (ogg, mp4, mov, qt, m4v, avi), Book & Page (includes container object for book and pages of jp2 or tiff/tif), Binary (any format).

MODS (or Metadata Object Description Schema): The CTDA normalizes metadata to MODS to provide descriptive information for digital assets.

Namespace: A namespace is a series of digits used to identify an institution and sometimes a particular set of objects within that institution. The namespace is the first component before the colon in the PID (namespace:ID).

Open Archive Information System (OAIS): OAIS is a conceptual model of an information object that is self-contained and self-describing.

PID (or Persistent IDentifier): The PID is an internal unique and persistent identifier assigned by Fedora to digital objects. It is not the persistent identifier, or Handle, used for citation purposes.

Relationship (or RDF): Objects in a Fedora repository are organized using Resource Description Framework, or RDF, statements. These statements define the relationships between objects.

RELS-EXT: The RELS-EXT.xml data stream provides explains the container or content object's relationship to other container and/or content objects.

Repository Object: See Digital Object.

Site Administrator (or Institutional Site Administrator): The Site Administrator manages their Institutional Channel only and can make changes to blocks, theme appearance, and create users according to CTDA policies and best practices.

Subscriber: A subscriber is an institution that has its own CTDA channel.

Users: Users are individuals from participating institutions that contribute content and/or act as a site administrator for an institutional channel. All users are assigned a role.

XACML (or eXtensible Access Control Markup Language): XACML is an OAIS standard to manage and implement access security policies to objects and data streams in the repository.

XML Forms: XML forms are a collection of Drupal modules that allow for the manipulation of XML documents through Drupal forms. For the CTDA, these XML forms allow for the moment users to create and edit MODS metadata. The XML Form builder is used to create and manage XML forms.