

Confessions of a new (agile) software project manager

Laura Akerman



EMORY
LIBRARIES

Agile at Emory Libraries:



our own flavor

- “Iterations” are 2 weeks long.
 - A “minor release” = a “Milestone” = 2-3 iterations (ideally).
 - We use TRAC to document the user stories, story points and progress for each Milestone
-

TRAC

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Milestone Prototype ingest - editing (Euterpe)

Completed **8 weeks** ago (09/02/10 12:52:08)

100%

Closed tickets: 31 Active tickets: 0 / Total tickets: 31

[view/edit development plan](#)

Overview

The goal of this release is to build a prototype system that includes the simplest implementation of a metadata editor interface and content ingest. This includes a simple content model, ingest of a single sound file, and simple indexing. This system will use LDAP authentication for library staff.

Dependencies:

- MODS subset of fields to be used from project stakeholders ([#25](#))

Progress: 50.0 Total Story Points with 50.0 Completed and 0.0 Remaining.

User Stories

Users can log into the application with their Emory User ID so they can be authorized if appropriate. (6.0 pts) [New Task](#)

- [#15](#) / redirect to /admin/ [storypoints: 0; completed: 05/28/2010]
- [#16](#) Stabilize, test, and doc existing eulcore LDAP features [storypoints: 5; completed: 06/03/2010]
- [#17](#) Add emory ldap backend to auth modules [storypoints: 0; completed: 05/28/2010]

Close Out Tasks

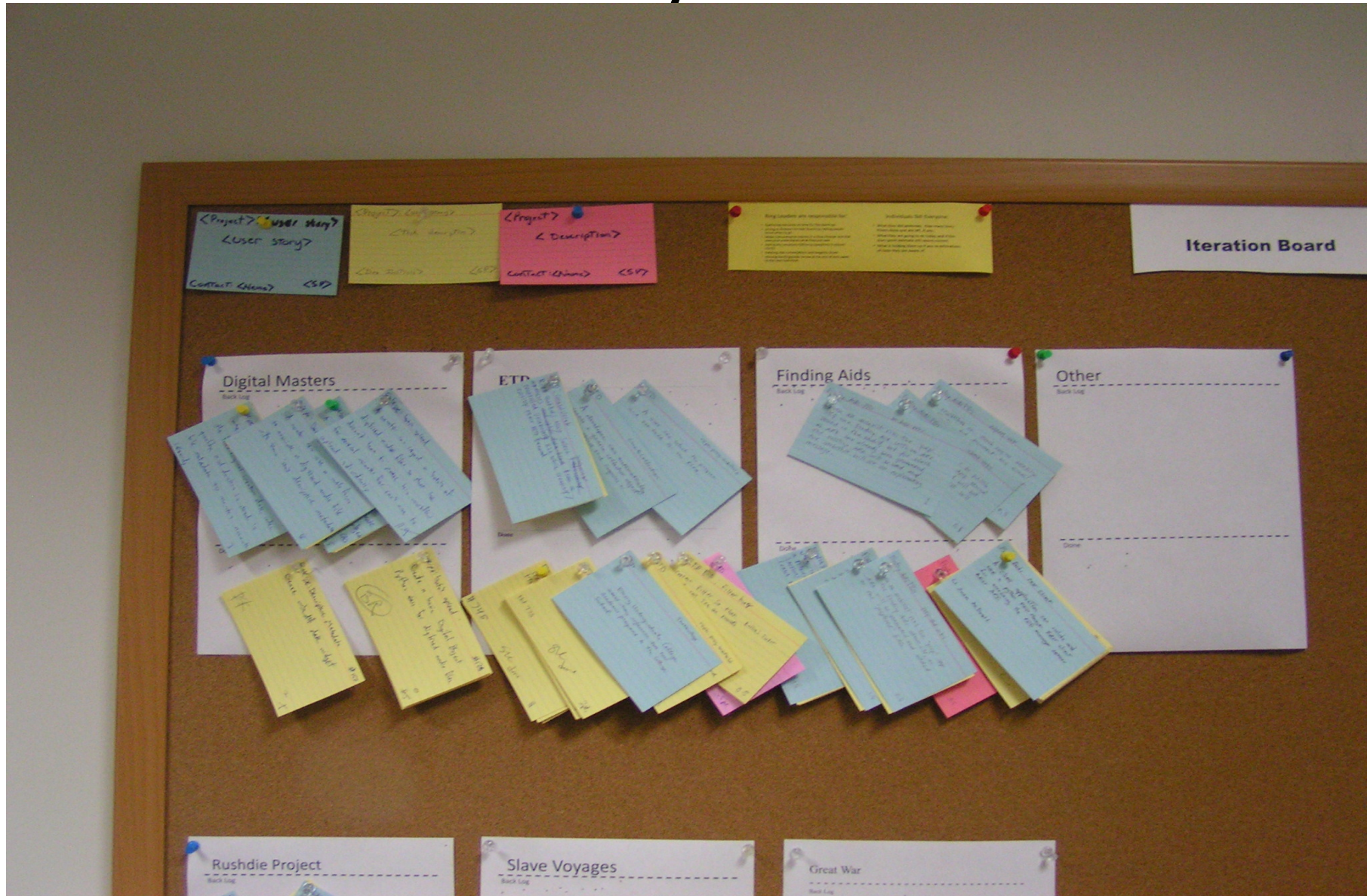
(1.0 pts) [New Task](#)

- [#37](#) Deploy to staging [storypoints: 1; completed: 08/06/2010]
- [#38](#) Acceptance testing [storypoints: 0; completed:]

[Edit milestone](#) | [Delete milestone](#) | [Attach file](#)

Note: See [TracRoadmap](#) for

story board



“stand up” every day at 10:30 a.m.



Project meetings



Ben Ranker, Steve Anderson, Scott Turnbull, me, Rebecca Koeser. Not pictured: Kyle Fenton (stakeholder who often attends meetings).

Iteration Planning meetings

- Held around mid-point of iteration, to plan for next.
- Project managers, Systems managers and sometimes Joan Smith, Chief Technology Officer

Digital Systems Project Dashboard

Schedule All Projects Legend

<< Back

Priority	Project Name and Link	Team	25-Oct-10	8-Nov-10
1	Digitization Workflow	SW	Testing	
1	Fedora 3.4 migration	Core	SysMaint	
1	Illiad Server migration	DSK	Support	
1	Voyages	SW	Coding	
2	Preservation server space	Core	Planning	
2	Drupal Standardization	Core	SysMaint	
2	Digital Masters	SW	Coding	
2	ETD (all)	SW	Coding	
2	MARBL Finding Aids	SW	Coding	
3	Origins	N/A	External	
3	Databases at Emory	Core	Planning	
3	Rushdie	STR	Coding	
3	Beck Great War	STR	Coding	

Project intranet site

Digital Masters

View

Edit

Outline

Submitted by Libadmin on Tue, 02/02/2010 - 11:40
in [▶ Laura Akerman](#) [▶ Active](#)

Digital Masters Metadata Management System is a suite of tools to replace current systems, in order to provide needed improvements to metadata architecture, editing, searching, dissemination and management, support preservation functions and improved file handling, and improve access control and interoperability with external systems.

- ▶ **Technical Project Manager:** Laura Akerman (with assistance of Kyle Fenton on some features)
- ▶ **Strategist:** Stacey Martin
- ▶ **Phase:** Approved
- ▶ **Status:** Development
- ▶ **Most recent R.A.P. sheet:** https://digital.library.emory.edu/webfm_send/472
- ▶ **Link to R.A.P.:** <https://digital.library.emory.edu/content/rap-sheets>
- ▶ **Link to TRAC:** <https://larson.library.emory.edu/trac/digitalmasters>
- ▶ **Link to "testmasters" Staging interface:** <https://testmasters.library.emory.edu/audio/>
- ▶ **Project Description/Goals:** [Phase I:](#)
- ▶ **Current Project Plan:** https://digital.library.emory.edu/webfm_send/526 (when available; note: requires login.)

[Digital Masters](#)

- [Digital Masters updates and meeting notes, July 2010-](#)
- ▶ [Digital Masters Project Documents](#)
- [Digital Masters Project Summary and Goals: Phase I](#)
- [Digital Masters updates and meeting notes, Jan-June 2010](#)

Action Plan

EUTERPE (Digital Masters 1) Plan Sept. 20	8/16-8/29	8/30-9/12	9/13-9/26	9/27-10/10	10/11-10/24	10/25-11/14	11/15-11/28	11/29-12/12	12/13-
Impacts									
Velocity est. 10.2		1 holiday		LA conf.		LA conf.	2 holidays		2 holi
Timeline/Action plan rev. quarterly							revise plan		
Reports/presentations			report		report		report		report
documentation/training							doc/trg		doc/trg
Development									
Prototype	>	x							
Development	stage/test								
Collection	>	>	x						
Development	>	>	stage/test						
Min Items (23.5)	>	>	>	>	>	>	x		
Planning - stories/points, fedora 3.4 eval	>	>	plan by 9/13						
Specifications		desc., event	tech., rights						
Development			s			stage/test			
PRODUCTION RELEASE							RELEASE		
Migrate metadata (17)				s	>	>	>	>	x
Planning - stories/points			>	>		plan by 10/25			
Specifications						mapping			
Development						s	>	stage/test	

Who does what:

- Overall manager of the development teams:
Scott Turnbull



- Developers are not “dedicated” to projects, but tend to work on 2 projects at a time.
 - One lead developer for each project.
 - Systems Division has Strategists; other divisions can have Project Managers – work with Strategist Stacey Martin, but basically manage their projects
 - How we do it is evolving!
-

Long before agile development came to Emory Libraries...

- We had needs
 - “We” = representatives of 3 different organizational units sharing responsibility for digitized archival material
 - special collections,
 - digitization and preservation of digital assets, and
 - metadata creation,
 - Need: to replace the inadequate metadata database and file storage system we had for digitized archival material (“Digital Masters”)
 - And so much more...
-

We developed a “Data Dictionary”

Draft - Digital Masters Data Dictionary - 2008-10-01										
COLLECTION LEVEL										
Data	Purpose / Description	Required	Repeatable	Editable	Data Source	Source Name?	Data Format	Forma Stand	Comments	Schema element
Collection Metadata ID:	Unique id assigned to this entry in this table by the DMDB.	Y	N	N	DMDB	N	N	N	autofill	MODS recordInfo/recordIdent
Collection Type:	Specifies whether the collection is rare books, manuscripts, or	Y	N	Y	list	N	N	N	drop down	MODS relatedItem type="host"
Collection Title:	Title of the collection (mss collection, archival series or library)	Y	N	Y	EAD or free text	N	N	N	autofill for mss and archives	MODS titleInfo/title
Collection Main Entry:	The name of the person, family, government agency, business, organization, conference, or meeting that is primarily	N	N	Y	LCNAF	Y	N	N	autocomplete from drop down list	MODS name/namePart; MODS role/roleterm
Collection Coverage:	Date span of collection	N	N	Y	EAD or free text	N	Y	Y	autofill for mss and archives	MODS originInfo/dateCreated with point attributes
Collection Identifier:	Unique number assigned to each mss collection or archival series	N	N	N	EAD	N	Y	local	autofill for mss and archives	MODS identifier
Coll PhysicalLocation:	The home location for the resource at the time it was	N	Y	Y	N	N	N	N	free text	MODS location type="physical"
Collection Url:	Url to the collection's EAD finding aid or other descriptive resource	N	Y	Y	N	N	N	N	free text	MODS relatedItem type="isReferencedBy"
Coll AccessCondition:	Information about restrictions imposed on access to a resource.	N	N	Y	N	N	N	N	autofill for mss and archives	MODS accessCondition type "restrictions on

We formulated “functionalities”

[page](#) [discussion](#) [edit](#) [history](#) [move](#) [watch](#)

Digital Masters Functionalities

A word document version sorted into "1st phase", and "Later Phases" can be found [here](#).

Contents [\[show\]](#)

Metadata Architecture, 1st Circle [\[edit\]](#)




- 1.1 Supports metadata based on XML schemas, either stored as XML or retrievable as XML.
- 1.2 Metadata records are linked to files and to "conceptual objects"
- 1.3 Metadata can be created for any type of digital content.
- 1.4 Supports multiple levels of relationships between digital objects (or files), conceptual objects (e.g. physical or "digital" collection, multi-part item, person or "agent"), and associated metadata records; supports part/whole, source/derivative and other relationships
- 1.5 Unique persistent identifiers (URLs) for metadata records and files
- 1.6 Support full [Digital Masters Data Dictionary](#) descriptive metadata fields, captured technical/preservation metadata, rights and administrative metadata.
- 1.7 Support multiple metadata XML schemas
- 1.9 Support one or more metadata sections (or "records") for descriptive, technical, administrative, preservation and rights
- 1.13 System should be as flexible as possible in handling future necessary updates to metadata schemas and fields, or addition of new digital object or metadata relationships, so as to minimize delay and development time/effort to effect changes.

Metadata Architecture, 2nd circle [\[edit\]](#)

- 1.8 Validation against schema or narrower criteria (#2 or #3)
- 1.10 Support for creation and linking of separate metadata files for persons, events, subjects, FRBR entities (Planning for architecture to support, #1; actual files, #2)

Plus: Staff search and editing, Quality control, Workflow, Metadata ingest and export, Access control based on rights, JHOVE integration, file migration

Approved project: Code name Euterpe

- Only the essential functions needed to migrate data (“Phase 1”)
 - Migrate one format (sound recordings) first
 - Use existing Fedora repository to store files
 - This fits agile concept of delivering most important features first and smaller bites (sort of...)
 - My roles:  Project Manager,  Metadata Specialist (specs),  Stakeholder (advanced metadata functions)
-

Learning how to do it:

- Brief training on agile and on the Project manager role from Stacey Martin
 - 5 day training in Project Management (the “traditional” kind) offered by University Technology Services (confusing)
 - Learning how it works by observing
-

Things I've come to love about agile:

- Stand Up
 - The team
 - Not having plans completely nailed down at the outset
 - Being able to change in response to different needs (e.g. new delivery method – “the Kiosk”)
 - Seeing and testing the product in smaller chunks
 - Not having to shield the developers from the stakeholders (and vice versa)! They talk. OK! Keep me in the loop...
-

Things about agile that are frightening:

- Not having plans completely nailed down at the outset
 - The shifting time estimates
 - The fact that, we're still expected to have Action Plans, timelines, etc.
 - The threat of cutting features if we miss our target date
-

General PM Challenges:

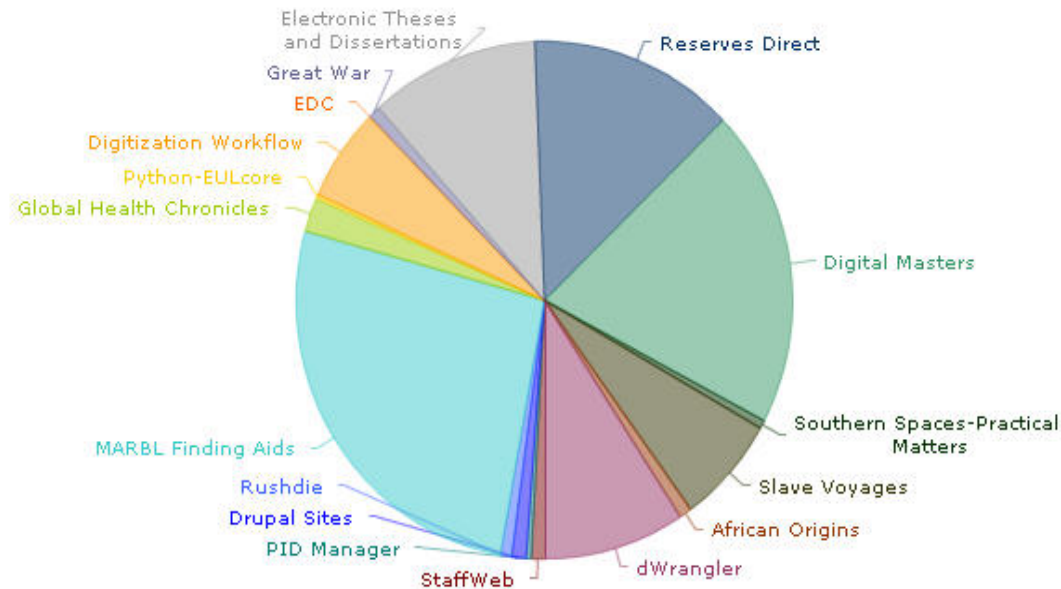
- Understanding/translating “programmer language” from/to “stakeholder language”.
 - Trying to understand the impact of programming and infrastructure decisions without getting too far into “their territory.”
 - Getting to shared understanding on why we need complex metadata relationships...
-

+ - Sharing the development team

Summary of Efforts by Project

Displaying project data for period 2010-04-01 to 2010-10-31

Story Points by Project



- + Pluses:
 - +working on code that's shared across Fedora repository, so one project can benefit others;
 - +small development group can share knowledge and solutions,
 - +several people so project can keep moving forward even when developers aren't available.
- Minuses:
 - not as efficient;
 - - developers have to switch gears a lot;
 - - another project could "bump" yours

Planning

- How much planning is enough?
 - How much planning is “too much for agile”?
 - When is planning “just in time”?
 - When is planning “behind”?
-

Initial Plan

- Infrastructure
 - Prototype (a few simple fields)
 - Collection editing
 - Full MODS descriptive editing, collection metadata, vocabulary control, search
 - JHOVE, source technical, rights, and events metadata, version control, navigation, identifiers, flagging, search/query.
 - Migration
 - **PRODUCTION RELEASE**
-

Lead developer Ben Ranker urged us to release a subset of functions early.




The big change

- Lots of discussion! How do we break down what was already “minimal”?
 - Result: duplicate the functionalities we have in old system, start using that for newly digitized material
 - Forego “full metadata” until later...
 - This was much closer to “agile” process – releasing actual code for use gradually, rather than all at once at the end.
 - Had to get stakeholder ok, since some of them wait longer than others for “production”.
-

The new plan

- Infrastructure
 - Prototype (a few simple fields)
 - Collection editing
 - “Min Items” (**Production release of subset**)
 - Migrate metadata (**Production**)
 - Migrate files (**Production**)
 - “Full Items” (all the metadata we left out plus OAI provider, etc.) (**Production**)
 - Automation – incorporate JHOVE and preservation functions (**Production**)
-

Dependencies

- Unforeseen problem: dependency on  metadata specialist (me!) who now had to
 - deal with detailed specs for technical metadata much earlier than in previous plan
 - determine the subset for all metadata types
 - consult with all stakeholders on this
- This caused a delay in development (4-6 weeks)
- Rather than trying to add them to a Timeline... we are trying adding them to Milestone documentation

- Researchers accustomed to using the kiosk to access audio files should see no functional difference in accessing migrated records. (Minor textual variances are acceptable, but any file identifiers must retain searchability)

Progress: No results


Dependencies, "Whos", Time Triggers

- Specifications for metadata fields not in "Min Items", required for migration. Who: Laura Akerman (Metadata librarians). Trigger: Needs to be done one week prior to start of coding. Est. to take about 20 hours work.
- Full path identification for all metadata fields being migrated. Who: Laura or Kyle. Trigger: Needs to be done prior to start of coding (find out format). Est. 5-10 hours of work.
- Specifications for additional types of search needed to access migrated metadata. Who: Laura Akerman (consults with stakeholders, particularly MARBL). Trigger: In time to furnish one week prior to start of coding. Est. 1 week for recommendation and getting feedback.

User Stories

A system administrator can run a script that reads metadata from audio records in the old database and transforms it into repositied metadata in the new system. "Dry run" functionality is also available to log what would be accomplished without committing anything to the repository.

I'm optimistic:

- We've got a long way to go.
 - I'm learning to trust the team.
 - I'm trying to  juggle hats better (and working on those dependencies!)
 - So far, senior management seems to be ok with the “variable” timeline projections
 - The team is very engaged now and moving fast! (+ new programmer, Steve)
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**Special
thanks to...**

- **Ben Ranker**
- **Rebecca
Koeser**
- **Scott
Turnbull**
- **Kyle Fenton**
- **Steven
Anderson**



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