Making It Up As We Go Along
How we built our digital collections platform

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What Will We Cover Today?

1. Evaluation of pre-existing tools and systems
2. Explanation of our infrastructure / setup
3. Evaluation and explanation of the user interface
A digital collection consists of digital objects that are selected and organized to facilitate their discovery, access, and use. Objects, metadata, and the user interface together create the user experience of a collection.

NISO, "A Framework of Guidance for Building Good Digital Collections"
http://framework.niso.org
Original Infrastructure Requirements

- Store Digital Objects
- Access
- Search & Discovery
- Preservation
- Integrate
Popular Digital Collections Platforms

CONTENTdm  Omeka  Islandora  Hydra
Did you create a matrix of different platforms and their pros and cons relative to our stated requirements?

Yes and No.
What did you do instead?

Began haphazardly looking at overlapping technologies behind these platforms; shopped them à la carte for the technologies and approaches that best matched our needs and expertise.
Infrastructure Research

“No one expects the Spanish Inquisition!”
Infrastructure Research
<table>
<thead>
<tr>
<th>Desired Functionality</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Store Digital Objects</td>
<td>Fedora Commons</td>
</tr>
<tr>
<td>Access</td>
<td>HTML, CSS, JavaScript</td>
</tr>
<tr>
<td>Search and Discovery</td>
<td>Solr</td>
</tr>
<tr>
<td>Preservation</td>
<td>Fedora Commons</td>
</tr>
<tr>
<td>Integrate</td>
<td>Python API</td>
</tr>
</tbody>
</table>

*overlap everywhere...*
Lots of Models

10/2012
Nope. But some promising elements.
Lots of Models

Somewhere in 2013...
Fast-Forward
One Year...
Lots of Models

10/2013
Yep. Mostly.
Wait a minute... you've talked about why you didn't use a pre-existing digital collections platform (Islandora, Hydra, Omeka, etc.), but why not make the rest of your quest easier with some kind of web framework?

...something like Django or Ruby on Rails?

It's complicated...
Web Frameworks, CMS's, Bears, Oh My

• Ruby on Rails (ROR)
  ▪ don't know Ruby
  ▪ don't like Rails
• Django
  ▪ not a Python shop, yet...
  ▪ using it for management of objects
• Drupal
  ▪ main point of contention with Islandora

Which leads us to...
What We **REALLY** Wanted

- Extremely lightweight, HTML / CSS / JS front-end
- Communications between components would be HTTP / REST / API based
- Ability to create, edit, and destroy objects in bulk, with finesse, with aplomb
- Mixed content types
What We **REALLY** Wanted, Part Deux

- Division of management
  - Metadata
  - Binary files
Our Infrastructure Needed To

- Hold/Preserve our content
- Index our content/metadata
- Display our content
- Work together seamlessly
- Do other things we hadn't thought about
What is it?
- System to hold our content

How did we do it ourselves?
- Hint: We didn't go with Islandora or Hydra
What is it?
- System to index our metadata

How did we do it ourselves?
- Wrote customized indexing
Front-End Display

What is it?
- How we display our content

How did we do it ourselves?
- No Drupal
- No Ruby on Rails
- Just simple, lightweight PHP and JavaScript with some templating thrown in
Digital Glue

What is it?
- What brings it all together

How did we do it ourselves?
- We built it from the ground up
Secondary Systems (In Progress)

- Media Server
  - In Progress
- Image Server
  - Twisted Server with PIL (Python Image Library)
  - IIPIImage Server
Development / Production

- Production Server
- Production Backup
- Development Server
- Regular Backups of Content and Configuration
Build a digital collections platform people will want to use
Defined Goals

- Showcase digital collections in a unified interface
- Ease access for users / Don't make them think
  - Search and Retrieval
  - Filtering / Requerying
  - Discovery
  - Sharing and Saving
Simplified user interface for simplified interactions
Digital Collections @ WSU (DLXS)

- **Making of Modern Michigan**
  - Changing Face of the Auto Industry
  - Herman Miller Consortium
  - Martha Baldwin Diaries

- **Local History Collections**
  - Dorothea June Grossbart Historic (WSU) Costume Collection
  - Herman Miller Consortium
  - Meadow Brook Hall Historic Costume Collection
  - Michigan Opera Theatre Performance Images
  - The Henry Ford Costume Collection
  - WSU Media History
Individual Collection View (DLXS)
Objects in Collection (DLXS)
Single Object View (DLXS)
### Cadillac Motor Car Company Sheet Metal Radiator Assembling Department (EB01a007)

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifier</td>
<td>EB01a007</td>
</tr>
<tr>
<td>File Name</td>
<td>EB01a007</td>
</tr>
<tr>
<td>Title</td>
<td>Cadillac Motor Car Company Sheet Metal Radiator Assembling Department</td>
</tr>
<tr>
<td>Subject 1</td>
<td>Automobile factories-Michigan-Detroit-History</td>
</tr>
<tr>
<td>Subject 2</td>
<td>Automobile industry workers-History</td>
</tr>
<tr>
<td>Subject 3</td>
<td>Automobile industry and trade-History</td>
</tr>
<tr>
<td>Description</td>
<td>8x10 black and white photograph of men posed with radiators outside of a factory, image inscribed &quot;Sheet Metal Radiator Assembling, L&amp;F Plant&quot;</td>
</tr>
<tr>
<td>Publisher</td>
<td>National Automotive History Collection, Detroit Public Library</td>
</tr>
<tr>
<td>Original Date</td>
<td>1912</td>
</tr>
<tr>
<td>Type</td>
<td>image</td>
</tr>
<tr>
<td>Use Format 1</td>
<td>Image/tif</td>
</tr>
<tr>
<td>Creation Format</td>
<td>400dpi, 8 bit gray scale, Tiff Image</td>
</tr>
</tbody>
</table>
Single Object View (DLXS)
Content First

No header. No footer. No branding. No frills. No distractions.
Front-End Components
Ideation (Idea Generation)

- Regular Meetings
- Sketching / Wireframes
- Looking at non-library sites for inspiration
Collections

Name of Collection

Name of Collection

Name of Collection

Name of Collection

Name of Collection

Name of Collection
Build and Refine

Designed in the browser.
What We Built...

Wayne State University Libraries Digital Collection
Why It Was Possible
(or, the Most Important Slide Yet)

- Amazing community around these technologies right now
- Our legacy instance of DLXS still up and chugging
- Institutional confidence in our team
- Team confidence in our team
What's Next?

- Usability Testing
- Launch Beta Site by Spring
FIN.

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Sources for Images

- Slide 4: http://www.contentdm.org/images/ball3.gif
- Slide 4: http://clioweb.org/i/omeka-logo.jpg
- Slide 4: http://islandora.ca/sites/default/files/Islandora.png
- Slide 4: http://www.stanford.edu/~jchris/hydrangea-logos/hydra-logos-final/hydra_logo_h400_transparent_bg.png
- Slide 7: https://wiki.duraspace.org/download/attachments/22022608/Hydra+Architecture+DiagramV2.jpg
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- Slide 15: http://upload.wikimedia.org/wikipedia/commons/1/16/Ruby_on_Rails-logo.png
- Slide 15: http://www.unixstickers.com/image/cache/data/stickers/django/django.sh-600x600.png
- Slide 15: http://newgennow.com/images/opensource/drupal.png
- Slide 21: https://www.coalliance.org/sites/default/files/solr-logo2_0.png
- Slide 24, 25, 26: https://commons.wikimedia.org/wiki/File:Lobes_of_the_brain_NL.svg
- Slide 31: http://www.bekkahwalker.net/192-old/Media/pong.gif
- Slide 44: http://upload.wikimedia.org/wikipedia/commons/e/ea/Bootstrap_logo.svg
- Slide 44: http://sass-lang.com/assets/img/logo-235e394c.png