



The Digital Library Landscape: Building a Digital Library from Scratch

Robin Fay @georgiawebgurl

### Building a digital library from scratch

Introductions: Robin Fay, Portal Manager, ATCx3 Consortia/ATC

- Choosing a software
- Digitizing & archiving
- Cataloging
- Rights management
- Lessons learned
- Moving forward planning for sustainability
- **❖**Questions?

BUILDING A DIGITAL LIBRARY FROM SCRATCH MATERIAL

#### Resources - What we have

- ❖ Reports
- Working papers
- Commercial publications about the college
- PR materials
- Scrapbooks
- Ephemera such as plaques and plates
- Films
- Grant related teaching materials in digital formats
- Print material in this collection spans the establishment of the College in 1956 until the early 2000s. Digital content is more scattered.
- Some formats and/or software are obsolete already.



### BUILDING A DIGITAL LIBRARY FROM SCRATCH MATERIAL: PHOTOGRAPHS



- Large format aerial photographs
  - Approximately 2000 photographs
- Negatives
- Slides



# BUILDING A DIGITAL LIBRARY FROM SCRATCH MATERIAL: NEWSPAPER CLIPPINGS

- ❖Going back to 1986
- Collected by the library
- ❖Approximately 1,500
- Clippings database in ACCESS, exports as a CSV file for the repository



## BUILDING A DIGITAL LIBRARY FROM SCRATCH: OUR MATERIALS

#### Where we get stuff

- ❖Director of PR
- Staff photographer/graphic designer
- ❖ Director of ATC Foundation/Alumni Association
- Faculty as they leave (clean office)
- Offices/storage areas that are cleaned out
- ❖Retired staff and faculty
- Alumni
- Community gifts
- ❖Current faculty and staff
- Grant staff and faculty

## BUILDING A DIGITAL LIBRARY FROM SCRATCH: SOFTWARE CHOICES

Opensource or Commercial or Freemium?

- Opensource costs are less apparent need staff time, hardware, etc.
- ❖Time, resources (includes staff and money) and scope = quality
- If you want good and cheap, you're going to have be flexible on time
- "Less" good doesn't mean poor quality, it could mean less functionality

What is on your shopping list?

Considered: Equella (Pearson), Dspace, Islandora, Fedora, Avalon/Hydra, Omeka









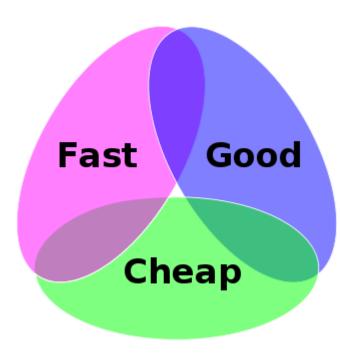
## BUILDING A DIGITAL LIBRARY FROM SCRATCH: QUESTIONS

- ❖What existing resources do you have in place? Will anything need to be upgraded? (Do consider partners, training for staff – do they have skills already?)
- ❖What is your budget? (if any?)
- ♦ What is your time line?
- ❖Materials:
  - ❖Formats: What type of materials do you have?
  - ❖Do they have description?
  - ❖Will you need to digitize materials?
  - ♦ What is the highest priority?
  - ❖Do you own the rights to publish (or re-publish)?
- ❖What is the scope of the project the absolutes?









### BUILDING A DIGITAL LIBRARY FROM SCRATCH: DEVELOP A PROJECT PLAN

#### **Identify Who:**

- Who will install and configure the software?
- ♦ Who will handle branding and design?
- Who will maintain the software (upgrades?)
- ❖Who will digitize materials?
- Who will describe (catalog) materials?
- ❖Who will do training?
- ❖Who will review content (rights, etc.)?

#### **Identify How:**

Draft workflows – how does content get to the repository – who vets?

Think. Sustainability – enhancements, scaleability DOCUMENT ALONG THE WAY.



## OPENING UP INSTITUTIONAL HISTORY: COLLECTION DEVELOPMENT & WEEDING

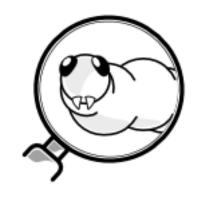
#### What we won't collect in the Archives

- ❖ Personnel records such as contract letters, hiring offers, evaluations, etc. (contacted those in charge of records to see what we should do with them – shred, send elsewhere, etc)
- ❖Obsolete formats if we can't access it (obsolete software) or do not have an appropriate media device, and/or it does not appear to be relevant (past retention period, etc.) – we are reviewing as possible disposal items Ex: Student course catalogs from 1994 on DAT Tapes
- Broken/unusable items Magnetic formats that are lacking data, things which are broken beyond repair, etc.
- Content that does not belong to us or about us
- Content of questionable copyright locally made copies of commercial content
- ❖Write it down!



### BUILDING A DIGITAL LIBRARY FROM SCRATCH: DEVELOP A PROJECT PLAN

- 1. Identify resources
- 2. Build a plan work the plan
- 3. Be flexible
- 4. Build in cushion
- 5. Avoid scope creep start enhancements list



# BUILDING A DIGITAL LIBRARY FROM SCRATCH: PROJECT QUICK OVERVIEW

### **Project Overview:**

- Project planning
- Software analysis/review
- Software installation
- Software configuration/customization (and branding!)
- Workflows and Process documentation
- Cataloging & Content loading
- Statistics and reporting
- Enhancing metadata (identifying people, places, etc.)
- Harvest of archives to other repositories
- Enhancement of workflows
- ❖PR
  Robin Fay @georgiawebgurl



### BUILDING A DIGITAL LIBRARY FROM SCRATCH: SOFTWARE: OMEKA

### Software analysis/review

- Software review/research
- Software testing test server



#### Software installation

- Configuration and extension (30+ modules including support for LCSH and OAI for harvesting)
- Significant custom coding with more every day (but out of the box ready)
- Deciding on a controlled vocabulary and metadata schema (and then building outward)...
- Design and branding

#### Workflows

- Establishing cataloging process and revising workforms to meet needs of metadata schema and materials (archives and grant materials)
- Working with library on best practices for scanning for archives
- ❖Test scanning materials
- Document!

# BUILDING A DIGITAL LIBRARY FROM SCRATCH: SOFTWARE PROJECT PIECES

#### Cataloging & content

- Spreadsheets for importing metadata; Google Forms for collecting data
- Develop metadata schema (maps to MARC)
- Develop and document cataloging processes (RDA, LCSH, local fields)
- Subject analysis
- Batch edit what can be done

#### Statistics & reports

#### Enhancing metadata

- Who are these people?
- Social media identification campaign

#### PR and next steps

- Enhancements
- Harvest elsewhere
- Backup schedule
- Upgrades



# BUILDING A DIGITAL LIBRARY FROM SCRATCH: COMPARISON

| Learning Object (traditional) | Description                                                                                                                                                                                                                                                                                                                                | System Requirements*                                                                                                                                              | Creative Commons | Supports a variety of file formats                                                                           | Modules/Plugins                                                | Collections /<br>Tagging                                 |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------|
|                               |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                   |                  |                                                                                                              |                                                                |                                                          |
| Avalon                        | Early development repository software framed on<br>Ruby on Rails, a Hydra fork -Strong support for<br>multimedia and video; good metadata support<br>demo: https://pawpaw.dlib.indiana.edu/                                                                                                                                                | Hydrant Rails ; Hydra; Fedora;<br>Solr                                                                                                                            | YES              | YES with support<br>for embedded<br>viewers                                                                  | Uncertain                                                      | YES                                                      |
| lydra                         | Avalon actually has a stronger design presence.<br>Early development repository software framed on<br>Ruby on Rails -Strong support for multimedia and<br>video; good metadata support<br>http://projecthydra.org/                                                                                                                         | Hydrant Rails ; Hydra; Fedora;<br>Solr                                                                                                                            | YES              | Yes, through setup                                                                                           | Uncertain                                                      | YES                                                      |
| Ospace                        | Very popular repository software used by USG and others; traditionally a repository for text based documents THECB (The Texas Higher Education coordinating board ) was working on learning objects and SCORM, but development seems to have installed; currently does supports learning objects as an zipped file. http://www.dspace.org/ | SQL 8.1.3, and DSpace                                                                                                                                             |                  | Yes, through<br>setup; although<br>less native support<br>for multimedia<br>using embedded<br>viewers        | Some but limited                                               | YES, but<br>limited in<br>hierarchies an<br>crosslinking |
| Drupal                        | Can be built into a LMS but as a default installation works more as a repository + forum; strong support; no gradebook or built in class space                                                                                                                                                                                             | Full list: minimum installation requires 15 Megabytes. 60 MB; Apache; MySQL 5.0.15; PHP 5.4 or higher (same as Drupal); Linux https://www.drupal.org/requirements |                  | Yes, through<br>setup; embedded<br>viewers can be<br>added and modules<br>help support<br>multimedia display |                                                                | Yes                                                      |
| Fedora Commons                | More of a back-end and would need to have a front end (public space) developed; https://wiki.duraspace.org/display/FEDORACREAT Islandora is Fedora + Drupal paired together http://islandora.ca/                                                                                                                                           | Maven (download from site)                                                                                                                                        |                  | Yes, through setup                                                                                           |                                                                | YES, but<br>limited in<br>hierarchies an                 |
| Omeka                         | Very nice repository, but really no collaborative spaces; no gradebook or built in class space; omeka.net demo / test space                                                                                                                                                                                                                | Linux, Apache, MySQL, PHP,<br>ImageMajick (free)<br>http://omeka.org/codex/Preparing to Install                                                                   |                  | Yes, through setup                                                                                           | Numerous although<br>mostly focused on<br>display - timelines, | YES                                                      |

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# BUILDING A DIGITAL LIBRARY FROM SCRATCH: WHY OMEKA

### Why Omeka?

- Works with LCSH and DC
- Easy to configure and maintain
- Good with multimedia can easily build exhibits
- Can build webpages within Omeka
- Meets basic grant mandates public interface, CC, and open
- Primarily MySQL, PHP, CSS/Jquery, Apache, Linux server (can run on Windows server)
- List of modules used available at <a href="http://ctlblog.athenstech.edu/digitizing-our-past-atc-archives/">http://ctlblog.athenstech.edu/digitizing-our-past-atc-archives/</a>

#### Omeka

#### GRANT CRITERIA

- ✓ Meets accessibility standards
- ✓ Supports licensing (Creative Commons)
- ✓ Supports sharing/Open Educational Resources (OER) across many platforms (including Social Media)
- √ Public portal (public interface)

#### ADDITIONAL FEATURES

- ✓ Upload workflow with the ability to provide private/public spaces
- ✓ Mobile friendly (HTML5 players, etc.)
- ✓ ANGEL/Blackboard integration
- ✓ Measurable Statistics/Analytics/Reports
- ✓ Secure, sustainable and scalable with an active community
- ✓ Technical support: The <u>Omeka</u> User groups work together to build new features, provide technical support for each other and upgrades

#### Staffing:

With <u>Omeka's</u> backend support, this project will need a local administrator for managing and curating content, creating workflows, organizing upgrades, in addition to some server work, which matches our current staffing.

#### Our content workflow

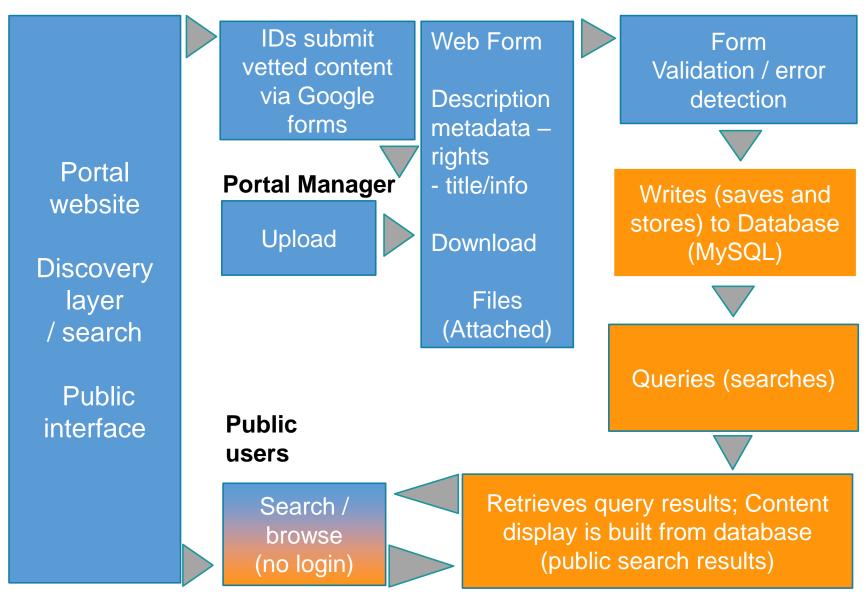


Diagram Robin Fay, 2015

### BUILDING A DIGITAL LIBRARY FROM SCRATCH: GETTING STARTED DIGITIZING

#### **Evaluation of material**

- CTL and Library met to evaluate material
- Library met with Digital Library of Georgia representatives and others regarding this type of project

#### Collection Development

- Library is revising Collection Development Policy for Archive to include information about scanning process and repository
- Portal Manager established a Collection Development Policy for the digital Archives and created information webpage about submission process
- Identified items that would not be scanned (on earlier slides) and items that could be destroyed
- Drafted digitization workflows and scanning processes http://ctlblog.athenstech.edu/digitizing-our-past-atc-archives/
- ❖Separate workflow for grant material, OER, and archives

### BUILDING A DIGITAL LIBRARY FROM SCRATCH: WHAT METADATA SCHEMA? HOW TO CATALOG?

- DCMI/Dublin Core Qualified
- **\$LCSH**
- ❖Local fields
- Rights adding access notes, Creative Commons
- Decide upon the rights noncommercial? Commercial?





| Georg       | ia E-Resources Archi | ivės & R | lepository                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                  |                                    |                                       |
|-------------|----------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|---------------------------------------|
| ELEMENT     | TERMS                | USE      | SCOPE NOTE                                                                                                                                                   | INSTRUCTIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | EXAMPLES                                                                                                                                                                                                                         | DCMI                               | MAR                                   |
| creator     |                      | REQ      | Use for an entity (person, organization, or service) responsible for the content of the resource. Use creator for primary authors or other content creators. | 1. Surname name first. 2. Use form of name established by local practice (e.g. fullest form possible or most frequent form) 3. Multiple authors/creators list in Order as in publication 4. Organizations with hierarchy - list the parts of hierarchy from largest to smallest separted by full stop and space. 5. If ambigious, list as it appears on item.  For ATCx3 materials, cite the author or submitting members as primary creators; cite other names and contributors under creator.  If no author is included, list author as institution. Athens Technical College (Athens, Ga.)  Albany Technical College (Albany, Ga.) | Brown, Elizabeth                                                                                                                                                                                                                 | creator                            | 100 F<br>110 (<br>111<br>Meet<br>ents |
|             |                      |          |                                                                                                                                                              | ATCx3 Consortia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                  |                                    |                                       |
| creator     | marcrelator          | Opt      | Use for an entity (person, organization, or service) who makes significant contributions to the resource.                                                    | Choose from list. Describes the role of the persons above.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Actor Animator Annotator Compiler Composer Conductor Director Editor Illustrator Interviewer Interviewee Musician Narrator Performer Producer Reviewer Speaker Scientific advisor Standards body Surveyor Transcriber Translater | contributor<br>http://www.loc.gov/ | 100 S                                 |
| contributor | contributor          | Opt      | work (anthology, serial publication, or                                                                                                                      | Personal names: Surname name first if a personal name.     Use fullest form possible, VIAF entry, or name established in GEAR (search GEAR).     Order as appears on publication     Organizations with hierarchy - list the parts of hierarchy from largest to smallest separted by full stop and space.                                                                                                                                                                                                                                                                                                                             | Fay, Robin Maimonides Park Sung Hee United States. Internal Revenue Service Elvis Presley Fan Club Federal Aviation Administration. Aviation Safety Program Athens Technical College (Athens, Ga.)                               | contributor                        | 700                                   |

#### Item Types Tags Mapping Simple Pages metadata LC Suggest Corrections CSV Import Simple Vocab **♦**Exported as a .csv Catalog Search **♦**Imported Dropbox to Omeka **Bulk Editor** CSV Collection Tree ❖ Also supports OAI-PMH Harvester XML, OAI, and API Omeka Api Import using different Embedded Items modules/ YouTube Import methods Zotero Import Reports User Profiles Element types

Confections

### Step 1: Select File and Item Settings

Choose Tag Delimiter\*

Upload CSV File\* Maximum file size is 100 MB. Choose File | 1GEAR E-book Work...m (Responses).csv Use an export from Selecting this will override the options below. Omeka CSV Report Automatically maps columns to elements based on their Automap Column column names. The column name must be in the form: Names to Elements {ElementSetName}:{ElementName} 1 Select Item Type Newspaper clipping Select Collection Athens Technical College in the News ٧ Make All Items Public? 1 1 Feature All Items? Choose Column A single character that will be used to separate columns in the Delimiter\* file (semi-colon by default). Note that spaces, tabs, and other whitespace are not accepted.

A single character that will be used to separate tags within a cell (comma by default). Note that spaces, tabs, and other whitespace are not accepted.

### BUILDING A DIGITAL LIBRARY FROM SCRATCH: MAPPING METADATA

|                      | From CSV file                     | From CSV file N              | Maps to DCMI Metadat               | :a & lo | ocal fi | elds |
|----------------------|-----------------------------------|------------------------------|------------------------------------|---------|---------|------|
| CSV Import           | What resource is it part of?      | "BC Campus"                  | Select Below ▼                     | 0       | 0       | 0    |
| Simple Vocab         | Other (list other resource)       | ····                         | Select Below ▼                     | 0       | 0       | 0    |
| Catalog Search       | Downloadable?                     | "Yes"                        | Select Below ▼                     | 0       | •       | 0    |
| Dropbox              | File Formats                      | "PDF, DOC/DOCX"              | Select Below ▼                     |         |         | 0    |
| Bulk Editor          | TITLE                             | "Adult Literacy Fundamentals | Select Below ▼                     | 0       |         |      |
| Collection Tree      |                                   | Mathematics: Book 5"         | Publisher A                        |         |         |      |
| OAI-PMH<br>Harvester | Title source                      | "solr bccampus.ca            | Relation<br>Replaces               |         |         |      |
| Omeka Api            | Series Title/Additional Title     | 100                          | Requires<br>Rights                 |         | 0       | 0    |
| Import               | Grant affiliation                 | "N/A"                        | Rights Holder<br>Source            |         | 0       | 0    |
| Embedded Items       | CREATOR/AUTHOR1                   | "Girard, Liz                 | Spatial Coverage<br>Subject        | 0       |         | 0    |
| YouTube Import       |                                   | п                            | Table Of Contents                  |         |         |      |
| Zotero Import        | CREATOR/AUTHOR1 Role<br>(Primary) | "Author"                     | Temporal Coverage Title            | 0       | 0       | 0    |
| Reports              | ADDITIONAL                        | "Tagami, Wendy               | Type<br>Affiliation                | 0       |         | 0    |
| User Profiles        | CONTRIBUTORS                      | ragami, wendy                | Creator<br>Downloadable            |         |         |      |
| Element types        | COPYRIGHT/PUBLICATION DATE        | "2010"                       | Edition<br>ISBN (if available)     |         | 0       | 0    |
| Item History Logs    | ICEN                              | liell                        | LC Classification (if available) 🕶 | m       | (1)     |      |

Select Below

#### Robin Fav @georgiawebgurl

| Items                  |                  |                                                                                                                  |                                                |
|------------------------|------------------|------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| Collections            | The item "Photog | raph of students studying" was successfully changed!                                                             |                                                |
| Item Types             |                  |                                                                                                                  | Prev Item Next Item                            |
| Tags                   |                  |                                                                                                                  |                                                |
| Simple Pages           |                  |                                                                                                                  | Edit                                           |
| LC Suggest             |                  |                                                                                                                  | View Public Page                               |
| Corrections CSV Import | Title            | Photograph of students studying                                                                                  | Delete                                         |
| Simple Vocab           | Description      | 1 man writing at a table. Sony headphone box on the table. 2 men at study carrels with headphones. At computers. | Public: Yes Featured: Yes                      |
| Catalog Search         | Country          |                                                                                                                  |                                                |
| Dropbox                | Creator          | Athens Technical College (Athens, Ga.)                                                                           | Collection                                     |
| Bulk Editor            | Subject          | College students                                                                                                 | ATC History through Photographs<br>(1956-2012) |
| Collection Tree        |                  | Study and teaching                                                                                               | ***************************************        |
| OAI-PMH<br>Harvester   |                  |                                                                                                                  | Tags                                           |
| Omeka Api<br>Import    |                  | Athens Technical College (Athens, Ga.)                                                                           | Athens Technical College     early years       |
| Embedded Items         |                  | Athens Technical College (Athens, Ga.)                                                                           | <ul><li>historic</li><li>photographs</li></ul> |
| YouTube Import         |                  |                                                                                                                  | vintage photos                                 |
| Zotero Import          |                  | Photographs                                                                                                      | File Metadata                                  |
| Reports                | Publisher        | Athens Technical College                                                                                         | ATCAP BX1014.jpg                               |
| User Profiles          | Source           | Athens Technical College Photograph Archives, Athens                                                             |                                                |



#### Front end – at the moment

Home TAACCCT Resources Open Textbooks Historic Photographs Advanced Search Collections Contribute About



Welcome to GEAR, Georgia E-Learning Access & Repository. This site features open textbooks, open educational resources, training materials, and other TAACCCT related documents. Additionally, GEAR houses digital copies of the photographs located in the ATC Archives in the Athens Campus Library; in addition to newspaper clippings records, and much more.

#### LATEST ADDITIONS

#### Modern revolution in physics [ebook]



"The Modern Revolution in Physics" is an online physics textbook written by Benjamin Crowell, a lecturer in physics and astronomy at Fullerton...

Q

#### Newtonian physics [ebook]



This is an introductory physics textbook designed for use in a typical one year survey course. This is book 1 in the Light and Matter series of free...

#### Vibrations and waves [ebook]



This is a text on vibrations and waves for an introductory college physics class. The treatment is algebra-based, with applications of calculus...



Jquery slideshow

a l

Home TAACCCT Resources

Open Textbooks

Historic Photographs

ATC in the News

Advanced Search

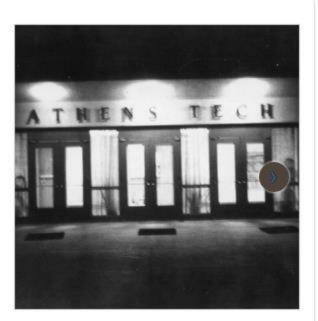
Contribute

About

Home > ATC Photo Album







#### Collection

**Grant Materials** 

#### Files for Download



### Sharing is caring...

#### Tags

Albany Technical College, career development center, ePortfolio, PLA, portfolio, presentations, prior learning assessment, student success

#### Citation

Brown, Elizabeth, "Prior Learning Assessment [presentation]," GEAR, accessed November 12, 2015, http://gear.athenstech.edu/items/show/7356.

#### Social Bookmarking





















#### License



#### Catalog Search

Search for related records in these catalogs:

Archive Grid Digital Public Library of America Library of Congress WorldCat

#### **Embed**

Copy the code below into your web page

<iframe class='omeka-embed' src='http://gear.ath ▼ enstech.edu/items/em

# BUILDING A DIGITAL LIBRARY FROM SCRATCH: DIGITIZING EFFORTS: WHAT WE LIKE

- ❖Social media sharing button
- Flipbook for the scrapbooks (thanks Internet Archive!)
- Embedded PDFs and video (HTML5)
- Clean design
- Searching is ok looking to SOLR for more robust searching and faceting

# BUILDING A DIGITAL LIBRARY FROM SCRATCH: DIGITIZING EFFORTS: WHAT WE LEARNED

- People in photos hard to identify. Social media how can we use to identify people?
- ❖Getting the word out
- ❖The newspaper clippings database
- ❖Importing/ Batch work
- Need to create more documentation in terms of how to use material
- Embedded search box for Blackboard, etc.
- Better scanning workflows better backend for large volume projects
- ❖Rights management

### Technology Ecosystem Web Content Management Systems (WordPress, Drupal, Joomla, MediaWiki) [Omeka] Library and Archival Museum Collections Repository and Digital Management and Online Collections Systems **Exhibition Systems** (Fedora, Dspace, (TMS, KE Emu, Greenstone, CONTENTdm) PastPerfect, Pachyderm)

Omeka.org/about/

