Hot Topics: The DuraSpace Community Webinar Series

Series Seven:
“All About DSpace 4—Improved Interfaces for Man & Machine”

Curated by Bram Luyten, @mire
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Webinar 1: DSpace 4 Roundup

Presented by:

Hardy Pottinger, Technical Lead, MOspace
@hardypottinger
http://lso.umsystem.edu/~pottingerhj/

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It’s lonely over here, ask me questions!

• This is an interactive presentation [http://bit.ly/dspace4-roundup](http://bit.ly/dspace4-roundup)

• Go to this page, if you have questions, add them, and either I or my army of minions will answer them as quickly as possible

• A link to these slides will be posted at this page
There will be a new release of DSpace every year

- At the end of each year, it is the goal of the DSpace Committers to release a new version of Dspace
- \([\text{major}].[\text{minor}]\) (e.g. 4.0, 4.1, 5.0)
- MAJOR=new features
- MINOR= bug fixes (only)
- Details: http://tinyurl.com/dspace-relno
DSpace 4 Roundup, overview

- How did we get to DSpace 4.0?
- Notable Features of DSpace 4.0
- Will there be a 4.1?
How did we get to DSpace 4.0?

• Lots of hard work from these folks:
  – DCAT (DSpace Community Advisory Team)
  – DSpace Committers
  – The DSpace 4 Release Team (RT)
    • Mark H. Wood – RT Leader (IUPUI)
    • Hardy Pottinger (University of Missouri)
    • Andrea Bollini (CINECA)

http://tinyurl.com/dspace-dcat
How did we get to DSpace 4.0?

- Lots of hard work from people like YOU
- 59 individuals contributed code
  - There are 24 active committers
  - You can do the math
  - I will name names
Notable Features of DSpace 4.0

- REST-API module
- “Request a Copy” for non-public files
- DOI Support
- Discovery (faceted search/browse) replaces legacy Search & Browse as the default
Notable Features of DSpace 4.0

- SWORDv2 updates
- Improved Command Line features
- Simple Embargo supported in AIP import/export
- You can run your handle server on another machine
- LDAP authentication improvements
- Better-looking thumbnails from media filter
Notable Features of DSpace 4.0

- Curation task for consuming “web services”
- Filtering web spiders from statistics based on domain or user-agent
- More help for Google Scholar (and similar) to better index your content
DSpace 4 JSPUI-specific features

• A new Bootstrap-based default look and feel
• Integrated PubMed, Arxiv and CrossRef metadata lookup
• AJAX progress bar for file upload step
• Sherpa/Romeo integration
• Porting XMLUI-only features
• Batch metadata import for bibliographic formats
DSpace 4 XMLUI-specific features

• Support simple embargo in item display
• Language switching
• Mobile theme matures from beta
Included Automatically

- What you get “out of the box”
REST-API (based on JAX RS 1.0)

contributor

Peter Dietz (Ohio State University Libraries)

• “Representational State Transfer”
• A machine-friendly interface to DSpace
• Facilitates re-use of the data and metadata you store in your repository
• Mark your calendar for Wednesday February 19, 11am ET
REST-API, use-case example

A javascript widget, scholars can embed in their own pages to list their publications. By William McKinney, Harvard

http://tinyurl.com/ds-rest-widget

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**My Publications**

Shieber, Stuart

<table>
<thead>
<tr>
<th>Publication List</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>Type</td>
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<td>Conference Paper</td>
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<tr>
<td>2017</td>
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<tr>
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<td>Journal Article</td>
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<td>2012</td>
<td>Journal Article</td>
</tr>
<tr>
<td>2016</td>
<td>Journal Article</td>
</tr>
</tbody>
</table>

**Details**

An algorithm for generating quantifier scopings


**Abstract**

The syntactic structure of a sentence often manifests quite clearly the pre-grammatical subordination. But scope dependencies are not so transparent.

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**Preview**

**Publication List**

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
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<td>Commentary or Review</td>
<td>Statement of Stuart M. Shieber before the Committee on Science, Space, and Technology Subcommitte...</td>
</tr>
<tr>
<td>2012</td>
<td>Journal Article</td>
<td>The Case for the Journal's Use of a CC-BY License</td>
</tr>
<tr>
<td>2011</td>
<td>Commentary or Review</td>
<td>Inverting the Turing Test (review of The Most Human Human by Brian Christian)</td>
</tr>
<tr>
<td>2011</td>
<td>Monograph or Book</td>
<td>Neo-Riemannian Cycle Detection with Weighted Finite-State Transducers</td>
</tr>
<tr>
<td>2010</td>
<td>Journal Article</td>
<td>Agent Decision-Making in Open Mixed Networks</td>
</tr>
<tr>
<td>2010</td>
<td>Journal Article</td>
<td>Recognizing Uncertainty in Speech</td>
</tr>
<tr>
<td>2010</td>
<td>Conference Paper</td>
<td>Bayesian Synchronous Tree-Substitution Grammar Induction and Its Application to Sentence Compl...</td>
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<tr>
<td>2010</td>
<td>Journal Article</td>
<td>Complexity, Parsing, and Factorization of Tree-Local Multi-Component Tree-Adjuncting Grammar</td>
</tr>
</tbody>
</table>

**Details**

**Plan Recognition In Exploratory Domains**


**Abstract**

This paper describes a challenging plan recognition problem that arises in environments in which agents engage widely in exploratory behavior, and presents new algorithms for effective plan recognition in such settings. In exploratory domains, agents' actions map onto logs of behavior that include switching between activities, extraneous actions, and mistakes. Flexible pedagogical software, such as the application considered in this paper for statistics education, is a paradigmatic example of such domains, but many other settings exhibit similar characteristics. The paper establishes the task of plan recognition in exploratory domains to be NP-hard and compares several approaches for recognizing plans in these domains, including new heuristic methods that vary the extent to which they employ backtracking, as well as a reduction to constraint-satisfaction problems. The algorithms were empirically evaluated on people's interaction with flexible, open-ended statistics education software used in schools. Data was collected from adults using the software in a lab setting as well as middle school students using the software in the classroom. The constraint satisfaction approaches were complete, but were an order of magnitude slower than the heuristic approaches. In addition, the heuristic approaches were able to perform within 4% of the constraint satisfaction approaches on student data from the classroom, which reflects the intended user population of the software. These results demonstrate that the heuristic approaches offer a good balance between performance and computation time when recognizing people's activities in the pedagogical domain of interest.
Discovery: Faceted Search/Browse

- Enabled by default in both XMLUI & JSPUI
- Lucene Search/Browse still supported, but is deprecated and will (probably) be removed in a future release
Discovery: Faceted Search/Browse enhancements

- Solr libraries upgraded to version 4.4
- Solr search accent intensive
- Solr-based item counter
- Query spell checking ("did you mean"), XMLUI & JSPUI

Contributors:
- Luigi Andrea Pascarelli (CINECA)
- Andrea Bollini (CINECA)
- Kevin Van de Velde (@mire)
- Ivan Masár
Discovery: Faceted Search/Browse

Search: All of DSpace

pannl error

Did you mean: panel error

Add filters
SWORDv2 module updates

contributor
Richard Jones (Cottage Labs)

- Proper authentication for accessing actionable bitstreams
- Tighter security around mediated actions
- Extra security to the access of descriptive documents
- More configuration options
- More bug-fixes and refactoring
Improved Command-line features

contributor

Mark H. Wood (IUPUI University Library)

• Run commands in a batch (shorter maintenance windows!)
• Display DSpace instance information including version and enabled modules
• Create and manage user accounts from the command line
Simple Embargo supported in AIP import/export

contributor
Ivan Masár (Helix84)

• Items exported via AIP backup/restore now correctly maintain Embargo data
More help for Google Scholar to better index your content

• requested by the Google Scholar team
• Fixed dc.date.issued sometimes incorrectly set
• Easier way for crawlers to find recently-added items
• Link to “primary bitstream” in citation_pdf_url
• Team effort on behalf of many DSpace committers
Some configuration required

• Comes in the box, but you’ll have to fiddle with it.
DOI support

contributors

Pascal-Nicolas Becker (TU Berlin)
Mark H. Wood (IUPUI University Library)

• Digital Object Identifier
• Automatic generation, reservation and registration of DOIs for every item that enters the repository
• Support for DataCite and EZID DOI providers
• In addition to CNRI Handle identifiers
“Request a copy” for non-public files

Contributors

University of Minho, with improvements and porting to XMLUI by Andrea Bollini (CINECA)

- facilitate access when uploaded content can not be openly shared with the entire world
- User submits a form, original submitter receives an e-mail
- Original submitter may click a link, and approve the request, or may forward the e-mail to someone else, who can also make use of the same link
“Request a copy” for non-public files

Test item with closed access document

Doe, John

URI: http://hdl.handle.net/123456789/10726
Date: 2013

Abstract:
This is a great piece of research. For publisher policy reasons, the associated file can currently not be openly shared with the world. However, the author is able to send you an individual copy as long as you ask nicely.

Show full item record

Files in this item

Name: Precious-Research ...
Size: 8.849Kb
Format: PDF
Description: Accepted version ...
“Request a copy” for non-public files

Request a copy of the document

Enter the following information to request a copy of the document from the responsible person

Test item with closed access document

**Name:**

**Your e-mail address:**

This email address is used for sending the document

**Files:**

- [x] All files (of this document) in restricted access.
- [ ] Only The requested file.

**Message:**


[Request copy]
You can run your handle server on another machine

contributors

Pascal-Nicholas Becker (TU Berlin)
Andrea Bollini (CINECA)
Mark H. Wood (IUPUI University Library)

• Simplifies hosting multiple repositories (only one Handle service is required)
• May be a security requirement, due to the nature of content preserved in your repository, or other institutional requirements
LDAP authentication improvements

contributors

Ivan Masár (Helix84)
Sam Ottenhoff (Longsight, for Allegheny College)

- LDAPHierarchicalAuthentication plugin replaces the LDAPAuthentication plugin, capable of both:
  - authentication against a flat LDAP tree where all users are in the same unit
  - authentication against structured/hierarchical LDAP trees of users
Better-looking thumbnails from media filter

contributor
Jason Sherman
(University of Science and Arts of Oklahoma)

• Utilizes the Imgscalr library
  – A perfect fit for DSpace (friendly license, in Maven, source code is on GitHub)
  – Does a fantastic job

http://www.thebuzzmedia.com/software/imgscalr-java-image-scaling-library/
Curation task for consuming “web services”

**contributor**

Richard Rodgers (MIT)

- uses item metadata to invoke a web service whose response data can be written back to the item, displayed to the user, etc.

- Intended as a cataloging tool, 'authority service' look-up, etc., tested with:
  - Sherpa/Romeo,
  - OCLC
  - CrossRef, and others.
Filtering web spiders from statistics based on domain or user-agent

contributor

Mark H. Wood (IUPUI University Library)

- Two folders for configuration files, full of regular expressions for matching domains or user agents
- `[dspace]/config/spiders/domains/crawl-(.*)-googlebot\.com\.`
- `[dspace]/config/spiders/agents/Googlebot`
DSpace 4 JSPUI-specific features

• A new look and feel based on Twitter Bootstrap!
• Metadata lookup!
Mark your calendar

- Webinar 2: DSpace User Interface Innovation
- Wednesday, February 5, 11:00amET
A new Bootstrap-based default look and feel

contributors
Andrea Bollini (CINECA)
Luigi Andrea Pascarelli (CINECA)

• If you’ve never worked with Bootstrap-based design, you’re in for a treat
  – nice introduction
  http://coding.smashingmagazine.com/2013/03/12/customizing-bootstrap/
  – a tool for applying a palette to bootstrap
  http://paintstrap.com/
  – a tool for generating a palette from a photograph, and then apply it to bootstrap
  http://www.lavishbootstrap.com/
A new Bootstrap-based default look and feel
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Integrated PubMed, Arxiv and CrossRef metadata lookup

contributors
Andrea Bollini (CINECA)
Luigi Andrea Pascarelli (CINECA)

• A new submission step, called “StartSubmissionLookupStep”
• extends the basic SelectCollectionStep
• allows the user to search or load metadata from an external service (arxiv online, bibtex file, etc.) and prefill the submission form.
Integrated PubMed, Arxiv and CrossRef metadata lookup
Integrated PubMed, Arxiv and CrossRef metadata lookup

New submission: get data from bibliographic external service

Select a file to upload and its type from the drop-down menu. If "Preview Mode" is enabled, the list of the publications in the file will be shown to you to select the one for submission. If it is disabled, all publications will be imported in your MyDSpace page as "Unfinished Submissions" while the first one will go through the submission process.

Select data type:

File:

Preview mode
Collection:

Search  Exit
Integrated PubMed, Arxiv and CrossRef metadata lookup

New submission: get data from bibliographic external service

Search Form

Free search

PubMed

Insert basic info about publication: either title or author/year is required. If you know any unique identifier about publication like DOI, Pubmed, or arXiv you can switch on the identifier search mode.

Title:

Year:

Authors/Publishers:

Search for identifier

Upload a file

Default mode Submission
AJAX progress bar for the file upload step

Contributor
Andrea Bollini (CINECA)

Submit: Upload a File

Please enter the name of the file on your local hard drive corresponding to your item. If you click "Browse...", a new window will appear in which you can locate and select the file on your local hard drive. More Help...

Please also note that the DSpace system is able to preserve the content of certain types of files better than other types. Information about file types and levels of support for each are available.

Document File:  Select a file...  

GoodRelationships-Nao4J-MichaelHunger.pdf  

Upload in progress... 18% [27197440 bytes of 144814490]
Sherpa/Romeo integration in the submission upload step

**contributor**
Andrea Bollini (CINECA)

- integration with the Sherpa/Romeo Publishers policy database
- shows contextual copyright policy on the submission upload step for item that refers to recognized Journals.
JSPUI porting of features previously available only on XMLUI

contributors
Keiji Suzuki
Luigi Andrea Pascarelli (CINECA)

- Advanced Embargo
- Item-level versioning
- Curation Tasks administrative UI
- “Login as” feature
UI support for metadata batch import from various bibliographic formats

contributor
Greek National Documentation Centre/EKT

• Update Biblio-Transformation-Engine
• Added data loader for OAI-PMH
• New configuration format to support simultaneous input mappings from the various supported metadata formats
• New interface for administrators in JSPUI
• Bibtext, CSV, TSV, EndNote, RIS
DSpace 4 XMLUI-specific features

- Simple Embargo in item display
- Language switching
- Mobile theme improvements
Support simple embargo in item display

contributors

Ivan Masar (Helix84)
Terry Brady (Georgetown University)

- Information a developer would need, to use to convey (or limit) information on embargoed items, is now made available in the XMLUI

- Use case: hide a thumbnail of an embargoed item in the public interface
Language switching
contributor
Claudia Jürgen (TU Dortmund University)

- enables the active language selection
- stores the active locale in the session and context
Mobile theme matures from beta contributor

Elias Tzoc, James Russell (Miami University)

- Every page can switch to non-mobile theme
- All calls to CSS and other pages now use absolute paths
- Includes an Advanced Search page
Mobile theme matures from beta

Browse ALL by:
- Date
- Author
- Title
- Subject

View full website

Mobile theme for DSpace
Mobile theme matures from beta
Will there be a DSpace 4.1?

- Probably? (we haven’t officially discussed it yet)
- Bug fixes only, of course!
Image Credits

• “Dizzy” by Matt Brooks, from The Noun Project
• “Mesh Network” by Lance Weisser from The Noun Project
• “Box” by Dmitry Baranovskiy from The Noun Project
• “Wrench” by John Caserta from The Noun Project
• “Spray Can” by Luke Anthony Firth from The Noun Project
Thank you!

Hardy Pottinger
@hardypottinger
http://lso.umsystem.edu/~pottingerhj/

Don’t forget, slides and questions: