DSpace UI Prototype Challenge

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⚠️ Next phase of this work (creating the DSpace 7 UI) has moved over to DSpace 7 Working Group

⚠️ Updates on UI Selection Process

Update June 20, 2016: The selection of the Angular 2 UI platform was announced and the proof-of-concept Angular 2 UI was demoed at the Open Repositories conference in Dublin.

- Slides: http://www.slideshare.net/tdonohue/introducing-the-new-dspace-user-interface
- Video: https://www.youtube.com/watch?v=ibxQ60wjPXs
- Ongoing Video Updates: https://www.youtube.com/playlist?list=PLER-v9UmiFBut2SVIA2uUSuBFhsfNqI

Update May/June, 2016: We are now providing video updates on the Angular 2 UI prototype. Please visit our YouTube Playlist to catch up on all the updates. At the Open Repositories conference in Dublin, we will also be providing a live update and demonstration during the "You heard it here first" session on Weds, June 15 at 2:00pm.

Update April, 2016: The extended prototype on Angular 2 (see below) has begun at:

- https://github.com/DSpace-Labs/angular2-ui-prototype
- Details about the extended prototype can be found in its README and Wiki pages

Update March 24, 2016: After detailed discussion of all prototypes, public feedback, etc, the UI Working Group has written a detailed Summary of options / discussions:

- DSpace UI Working Group Summary: https://docs.google.com/document/d/1bvJRWE02ZLTCNiaJ_KXGZKHNIxH/t/ZYGek/edit

As detailed in this document, the UI architecture has been narrowed down to two options under consideration:

1. A Java-based, server-side solution based on Spring Boot. For a sample, see Prototype #1 below.
2. A Javascript-based, client-side solution using Spring Boot (for server-side components) and likely Angular 2 (for the client-side UI). Prototypes #7 and #4 featured client-side UI options, but neither used Angular 2.

At the DuraSpace Summit (March 16-17), these options were discussed with attendees from the DSpace Steering and Leadership groups. During that discussion, it was decided that we would move forward with an extended prototype of the client-side solution featuring Angular 2. As noted, none of our original prototypes used Angular 2 (though one did use Angular 1). Yet, Angular 2 has great interest in that it claims to solve the major SEO (search engine optimization) shortcomings of Angular 1. All original client-side prototypes (#7 and #4) had these SEO shortcomings, which made it difficult to judge their capabilities as a future DSpace UI.

The extended prototype phase will move into May. At that time, a final decision between the two platforms will be made.
DSpace User Interface Prototype Challenge

Help us discover the technology/platform for our new user interface (UI) for DSpace! Create a prototype UI on a platform of your choice (in any programming language), with basic DSpace-like capabilities as described below. The goal of a UI prototype is to exercise a new UI technology /platform to see whether it would meet the needs of our DSpace community.

- **Why?** In time for DSpace 7.0 (late 2016), the plan is to develop a new (single) UI for DSpace that will replace our aging JSPUI and XMLUI interfaces. (See RoadMap)
- **How?** The goal of the "UI Prototype Challenge" is to give everyone a chance to show off what you feel may make a great replacement UI framework. Have a cool idea for what would make a better DSpace UI? This is your chance to show it off in 80 hours or less! Register your idea on our sign-up page (see below) to find other collaborators.
- **What?** Prototypes are not meant to be full applications, but more of a proof-of-concept (something that proves a new DSpace UI could be built in your technology or platform of choice). Prototypes need not be Java (any/all languages welcome). Additional guidelines /scope is provided below.
- **When?** Prototypes /proof-of-concepts are due by Friday, Nov 6 & Friday, Dec 4. At that time, all will undergo a public review period. We will work with Committers, DCAT, Steering and Leadership Groups to select a "best of class" platform to build the new DSpace UI. Even incomplete proof-of-concepts are useful to submit, as we are judging the suitability of the "platform" and not the flashiness of the prototype itself.
- **What do I win?** While there are no official prizes (at this time), this challenge gives you an excellent opportunity to increase your reputation in our DSpace Community. It also provides you and your institution with an opportunity to directly influence the path of the DSpace UI going forward.
- **Other questions?** Ask them on the dspace-devel mailing list, and we'll be glad to clarify any of the goals/guidelines of this challenge.

Good luck! The full guidelines / requirements are included below.

Guidelines

- Prototypes are due by Friday, Dec 4. Please sign up below to register your prototype (and possibly find collaborators).
- Do not spend more than 80 hours total per prototype!
- Use the REST API or DSpace Java API (v5 or pre-6) when accessing DSpace content. Direct database or bitstream file system access is not allowed.
- Use Bootstrap or emulate the existing XMLUI Mirage2 theme . Prototype UI design will not be a major factor in the decision, so keep it simple. Focus on functionality over fancy UI look and feel.
- Make sure the prototype is “developer friendly”: keep the code readable and understandable at this early point. Keep the code DRY (Don’t Repeat Yourself), but don’t overdo it.
- Make all code publicly available on GitHub, along with installation instructions. A publicly accessible demo is also nice but not required.
- Documentation may be provided as a GitHub README, or via a publicly accessible Wiki page (feel free to use the DSpace Wiki).
- Features that can’t be implemented in 80 hours or features not mentioned below may be mocked up or wireframed. But again, please don’t spend more than 80 hours.
Prototype Documentation

Each prototype MUST be submitted with the following documentation. Some of this documentation includes comments on how you feel this prototype or platform might be used to support more advanced UI features. Please base your answers on what you know (or have learned) about this UI platform.

1. How would you envision enriching the theme (e.g. adding colors, fonts, and logo)?
2. How would you envision customizing the theme (e.g. changing the title, adding links, etc.)?
3. How would you envision adding new links or an entire section to the navigation menu?
4. How could the UI framework support optional modules or extensions?
5. How would someone add new links or an entire section to the navigation menu?
6. How would someone adjust the navigation bar to appear on the left or right?
7. How would someone change the colors, fonts, and sizes of the site?
8. How would someone change the location of the breadcrumb trail from the header to the footer?
9. How would someone overlay the default Item View to make that streaming feature available?
10. How would someone display additional metadata fields on the Item View page? For example, displaying "dc.publisher" on the default Item view site wide?
5. How would you envision supporting common DSpace authentication mechanisms (e.g. LDAP, Shibboleth) in this UI prototype/platform in the future?

Out of Scope

The following DSpace features should be considered out-of-scope, and need NOT be implemented in prototypes. No bonus will be given for implementing any of these features:

- Search capabilities (especially via Solr)
- Submission or Approval Workflows.
- Administrative UI
- Any other DSpace features not specifically mentioned in the “Prototype Scope” section above.

Prototype Sign-Up

<table>
<thead>
<tr>
<th>UI Platform / Technologies</th>
<th>Open Source License(s)</th>
<th>Technology Resources</th>
<th>Prototype Links / Notes</th>
<th>Prototyping Team</th>
</tr>
</thead>
<tbody>
<tr>
<td>What UI platform /technologies are you prototyping? (e.g. Java Play!, Ruby on Rails, etc)</td>
<td>What Open Source license(s) is this technology/platform released under?</td>
<td>Add links to resources /documentation for any technologies that this prototype uses</td>
<td>Link to either a public wiki page describing your prototype, or to a public README in Github. Keep in mind, your codebase must also be public.</td>
<td>List your team members</td>
</tr>
<tr>
<td>Java API + Jersey + Twirl (in Scala)</td>
<td>CDDL 1.1 (Jersey)</td>
<td>Java API</td>
<td>Source code: <a href="https://github.com/Cineca/DSpace/tree/dspace-prototype-ui">https://github.com/Cineca/DSpace/tree/dspace-prototype-ui</a> Installation procedure: as a “standard” DSpace 6 JSPUI, details on the README of the project Documentation: Cineca UI Prototype - Documentation Presentation Slides: cineca-dspace-ui.pptx</td>
<td>Andrea Bollini (4Science) Cineca developers - Luigi Andrea Pascarelli (4Science), Unknown User (r.suardi)</td>
</tr>
<tr>
<td>Spring MVC + Spring tags + Spring security + sitemesh + custom extensions</td>
<td>Apache 2 (Spring)</td>
<td>Spring MVC &amp; Spring Tags</td>
<td>Source code: <a href="https://github.com/Cineca/DSpace/tree/dspace-prototype-ui">https://github.com/Cineca/DSpace/tree/dspace-prototype-ui</a> Installation procedure: as a “standard” DSpace 6 JSPUI, details on the README of the project Documentation: Cineca UI Prototype - Documentation Presentation Slides: cineca-dspace-ui.pptx</td>
<td>Andrea Bollini (4Science) Cineca developers - Luigi Andrea Pascarelli (4Science), Unknown User (r.suardi)</td>
</tr>
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Prototype Evaluation Process

The DSpace UI Prototype Working Group will be working with prototype developers to schedule a recorded Q&A discussion for each prototype (starting in January 2016). These Q&A session recordings will be made publicly available on this wiki page.

The Working Group has also created a public Prototype Evaluation Form, where all individual or group evaluations will be recorded. Individuals are also welcome to provide your feedback on specific prototypes via this Evaluation Form. The Evaluation Form is a Google Spreadsheet, where each prototype has its own tab for feedback/evaluation:

- **Prototype Evaluation Form:** [https://docs.google.com/spreadsheets/d/1XWxeERh0UXCOo7LhocMMaqbY2u4b6oI11oWOjSp_aSQ/edit](https://docs.google.com/spreadsheets/d/1XWxeERh0UXCOo7LhocMMaqbY2u4b6oI11oWOjSp_aSQ/edit)

Prototype Presentation Schedule

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Team /Presenter</th>
<th>Prototype #</th>
<th>Recording of Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thurs., Jan 14, 10:00am EST</td>
<td>Art Lowel (Atmire)</td>
<td>#4 (REST + Ember.js)</td>
<td>(NOTE: We encountered technical difficulties during the live session, and the original recording had no audio. Therefore, the above video is a demo/screencast recorded by Art at a later time.)</td>
</tr>
<tr>
<td>Mon., Jan 18, 10:00am EST</td>
<td>Peter Dietz</td>
<td>#2 (REST + Ruby on Rails), #3 (REST + Play), #9 (Rails + dspace-rest-client gem)</td>
<td>Presentation Slides: <a href="http://www.slideshare.net/bramluyten/dspace-ui-prototype-dsember">http://www.slideshare.net/bramluyten/dspace-ui-prototype-dsember</a></td>
</tr>
<tr>
<td>Thurs., Jan 21, 10:00am EST</td>
<td>Texas A&amp;M Libraries (James Silas Creel)</td>
<td>#7 (REST + Spring Boot + Angular.js)</td>
<td>Presentation Slides: DSpace-UI-Prototype-Presentation.pptx</td>
</tr>
<tr>
<td>Date</td>
<td>Time</td>
<td>Presenters/Teams</td>
<td>Language</td>
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<tr>
<td>Mon., Jan 25, 10:00am EST</td>
<td>Monika Mevenkamp, Ekaterina Pechekhonovarina</td>
<td>#8 (Rails + Bootstrap)</td>
<td></td>
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<tr>
<td>Thurs., Jan 28, 10:00am EST</td>
<td>Unknown User (r.suardi), Luigi Andrea Pascarelli (4Science)</td>
<td>#6 (Spring MVC + Spring tags + Spring security + sitemesh + custom extensions)</td>
<td></td>
</tr>
<tr>
<td>Monday, Feb 1, 10:00am EST</td>
<td>Tim Donohue</td>
<td>#1 (Spring Boot + Thymeleaf)</td>
<td></td>
</tr>
<tr>
<td>Thursday, Feb 4, 10:00am EST</td>
<td>Jacob Brown</td>
<td>#5 (Java API + Jersey + Twirl + Scala)</td>
<td></td>
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</table>