THE EVOLUTION OF COMPONENT DATABASE FOR APS-UPGRADE

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OVERVIEW

- What is Component Database
- The path to a generic schema
- New Functionality
  - Plugin Framework
  - Traveler Integration
  - Custom Views
  - Browse Pages
  - Multi-Edit Multi-Create Pages
- Future Plans
- Project is now on GitHub
WHAT IS COMPONENT DATABASE (CDB)

- Document & manage all parts for the upgraded facility.
- Primary Domains
  - Catalog
  - Inventory
- Web Portal
  - Data entry
  - Browsing
- REST Web Service
  - Python API
  - DB APIs
PATH TO GENERIC SCHEMA

Diagrams show represent same functionality in generic and non-generic schema*.

More Functionality

- Less schema changes
- New domains
- Generic relationships
- High code reuse

*Does not show actual schema but represents ideas in the schema
PLUGIN FRAMEWORK

- Open Source
- Property Values
  - Communication with external system
  - Custom interfaces
- Add item to CDB using plugin
- About Page
  - Links & custom interface
**TRAVELER INTEGRATION**

Enables tracking procedure, inspection, and other data for inventory.

<table>
<thead>
<tr>
<th>FRIB TRAVELER SYSTEM</th>
<th>COMPONENT DATABASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Templates</td>
<td>Catalog items</td>
</tr>
<tr>
<td>Traveler instances</td>
<td>Inventory items</td>
</tr>
</tbody>
</table>

- Custom Interfaces directly in CDB
  - Template
    - Create & Link
  - Traveler Instance
    - Create, Update, Monitor
- Tasks completed in FRIB system
  - Designing a template
  - Filling out traveler instance
CUSTOM VIEWS

- View customizations in CDB
- Columns
  - General Information
  - Permissions
  - Properties
- New Features
  - Mark as favorites
  - Display modes
  - Assign items to projects
  - User & group views
BROWSE PAGES

- Standardized browsing method
- SQL Query Based
- Browse By:
  - Function
  - Ownership
  - Location
MULTI-EDIT MULTI-CREATE PAGES

- Time Saver
- Spreadsheet style editing
- Edit
  - Select existing items
- Create
  - Specify quantity of items
- Editable attributes
  - General
  - Permissions
  - Properties
- Quick apply to all functionality
FUTURE PLANS

- Domains
  - Machine Design
  - Measurement and Analysis ARChive (MAARC)
- Mobile App
- QA Processes
NOW ON GITHUB

- Try CDB at your facility, find it on GitHub at https://github.com/AdvancedPhotonSource/ComponentDB
- Easy deployment scripts
  - Developed for Red Hat Linux but will work with more distributions.
- Deployment instructions can be found in the GitHub Readme.md file
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Thank You. Questions?
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