

Demonstration of New OLAF Capabilities and Technologies. C. Kingston¹, E. Palmer, J. Stone, C. Neese, B. Mueller, ¹Planetary Science Institute, 1700 E Ft Lowell Rd, 110, Tucson AZ, ckingston@psi.edu

Introduction: The On-Line Archiving Facility (OLAF) provides an interface by which individuals can submit data to the Planetary Data System (PDS) so that it can be archived and made available to the public. OLAF is maintained by the Small Bodies Node and is being modernized during the upgrade to supporting the PDS4 data archiving standard.

Over the past year, OLAF has begun a transformation into a more modern web application. The proliferation of modern web technologies has made user experience a top priority. It is thus critical that OLAF users find the application easy to use and navigate. We are addressing this goal in OLAF by:

- applying modern web scripting frameworks, specifically Angular.js and Node.js
- using these frameworks to separate the client development from the server logic
- leveraging open-source software modules and their communities
- developing a RESTful API from the existing OLAF codebase to consume data supplied by the server

Additionally, OLAF now includes the capability to upload tabular data as Comma Separated Values (CSV) files, as well as an improved method for upload and batch processing to simplify the data submission process.

Benefits: These are some of the benefits of using the Angular framework with OLAF:

- Simplifies and enhances client-side development
- Promotes re-usability of code blocks and custom validations
- Minimizes existing code revision
- Allows customizable, efficient and secure API requests
- Uses highly-readable JSON strings for data exchange
- Improves code maintainability
- Utilizes semantic URLs
- Provides access to hundreds of thousands of open-source software packages
- Incorporates new data types easily

The use of CSV files for tabular data allows users to use spreadsheet software like Excel to generate data files. Other benefits of CSV files include:

- Headers are embedded directly in the file
- Number of steps in the data upload process is reduced

- CSV files are easier to format than fixed width tables
- Files are more human-readable

The screenshot shows a web browser window displaying the OLAF interface. The page title is "On-Line Archiving Facility (OLAF)" and the URL is "sbpds4.psi.edu/olaf/node/LabSpectra/Units". The page features a NASA logo and a "PDS4 Preview" banner. A navigation bar includes links for "Select/Create Archive Package", "Contact Support", "Welcome, conor", and "Logout". The main content area is titled "Units" and contains a "Lab Spectra Navigation" sidebar with steps: 1. Units, 2. Create Index File, 3. Submission Info, 4. Upload. The main form area has a text box explaining the use of index.tab files. Below this are three sections with radio button options: "Measurement Pressure" (Atmospheres selected), "Measurement Temperature" (Fahrenheit selected), and "Sample Mass" (Grams selected).

Figure 1: The form above demonstrates how the new OLAF will use color to immediately provide users feedback based on custom form validation, clarifying what can often be complex metadata inputs.