ARMD Test Data Portal (ATDP) Overview

June 06, 2023

David Yergensen – ATDP Data Management Lead
Analytical Mechanics Associates (AMA)

Minh Luu – ATDP Asset Manager
NASA

Agenda

- Introduction to ATDP
- System Access
- Project On-Boarding
- Overview of ATDP Pages
- ATDP ‘live’ Demo
- Summary | Q & A

Please note the ARMD Flight Data Portal (AFDP) is being renamed to the ARMD Test Data Portal (ATDP). However, some slides still show the old AFDP name.

Introduction

PROBLEM

NASA Aeronautical Research Mission Directorate (ARMD) decided that NASA Aeronautics needed a better way to collect and distribute data from tests.

Data in the form of electronic documents, pictures, audio recordings, video and more are lost or effectively unavailable through the following:

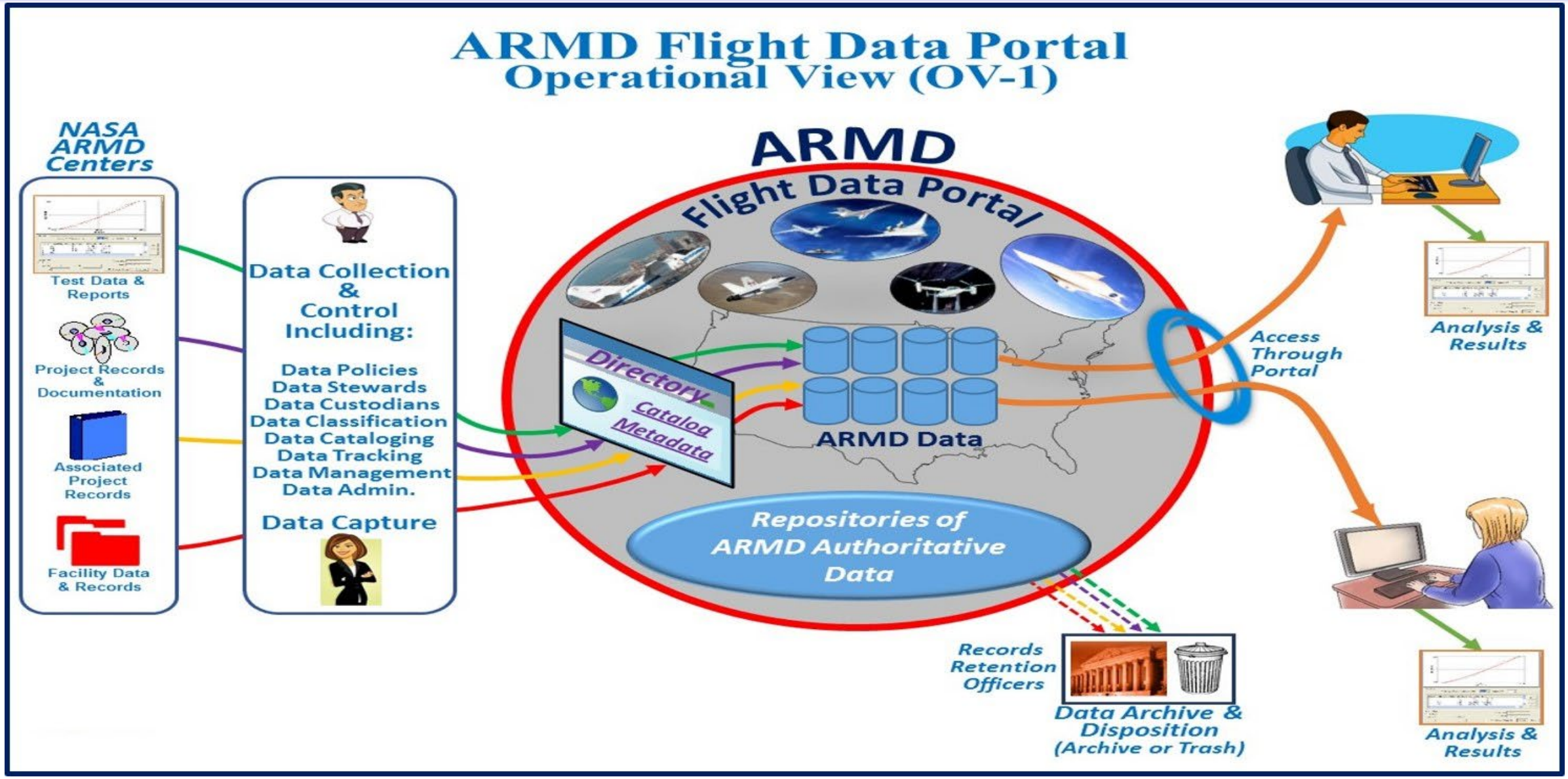
- The use of personal, organization, and a variety of cloud data stores
- The use of removable drives and media for long term storage
- Inconsistent retention policies
- Inconsistent naming conventions
- Insufficient metadata
- Inconsistent information control and security

Introduction – What is ATDP?

The ARMD Test Data Portal (ATDP) is a data archive that allows NASA personnel to remotely *upload and register* ARMD test data, as well as to quickly *search*, *access*, *extract*, and *download* test data for further analysis.

- ATDP is a secure system, authorized to store Controlled Unclassified Information (CUI) data.
- ATDP Login requires multi-factor authentication.
- ATDP is a replacement for the NASA Flight Data Archive (FDAS) system.
- ATDP currently supports HDF5 data
- ATDP will support of other test data formats such as pdf, docx, csv, yaml, TIFF, JPEG, PNG, Raw, MP4, WAV, etc.

ATDP Operational View



System Access

- All user functions are through a web-based Graphical User Interface (GUI) called Portal User Interface (PUI).
- ATDP implements **Role Based Access Control (RBAC)** via user account membership to *groups* and *roles*.

  Groups – ATDP has identified the following types of groups
  - **Project** – *This group type is used to identify users for a specific Project of Record*
  - **Specific** – *This group type is used to identify users (within the project) to receive access to CUI parameter data*
  - **Facility** – *This group type is used to identify users in a test facility or laboratory*
  - **Global** – *This is a specialized group type (used to identify basic users, AFDP Admin, and AFDP Data Custodian)*

  Roles – ATDP has identified the following types of roles
  - **Basic User** – *All users receive this role. It grants access to ATDP, the Dashboard, the Search page, and the Help & Support page*
  - **Data Steward** – *This role grants permissions to access the Parameter Access Rights Handling (PARH) Registration page*
    NOTE: *A PARH file defines all parameters (and derived parameters) to be used during testing, assign CUI markings, and assign access rights to CUI parameters.*
  - **Data Producer** – *This role grants permissions to access the Event Registration page and is assigned to users who will be responsible for loading test data files (HDF5) and registering test events for a project*
  - **Project-Level** – *This role grants permission to the Time Slice Creation page and the Time Slice Management page. It is assigned to users who will be accessing test event data for Time Slice download and analysis*
  - **Project-Specific-Access** – *This additional role is granted to project-level users who require access to perform Time Slice analysis on CUI parameter data*
- ATDP is a secure system, authorized to store CUI data. Login requires multi-factor authentication.

ATDP Demonstration

DEMO

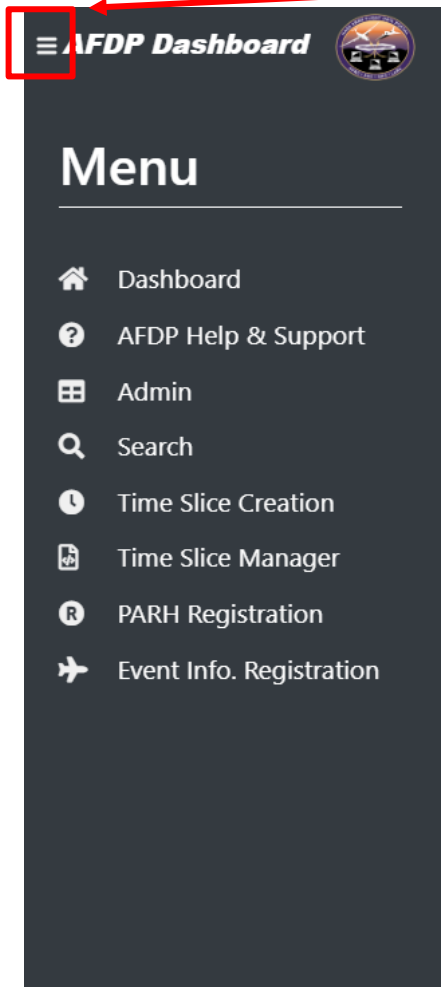
NOTE: During the live demonstration, Controlled Unclassified Information (CUI) marks are displayed for example only. No actual CUI data will be displayed/accessed!

Overview of ATDP pages

- Dashboard
- Navigating ATDP
- Help & Support
- Facet Search
- Time Slice Creation
- Parameter Access Handling Rights (PARH) Registration
- Event Registration

NOTE: Controlled Unclassified Information (CUI) marks that appear within the ATDP system screenshots are for illustrative purposes only. No actual CUI data is contained in these examples.

Navigating ATDP



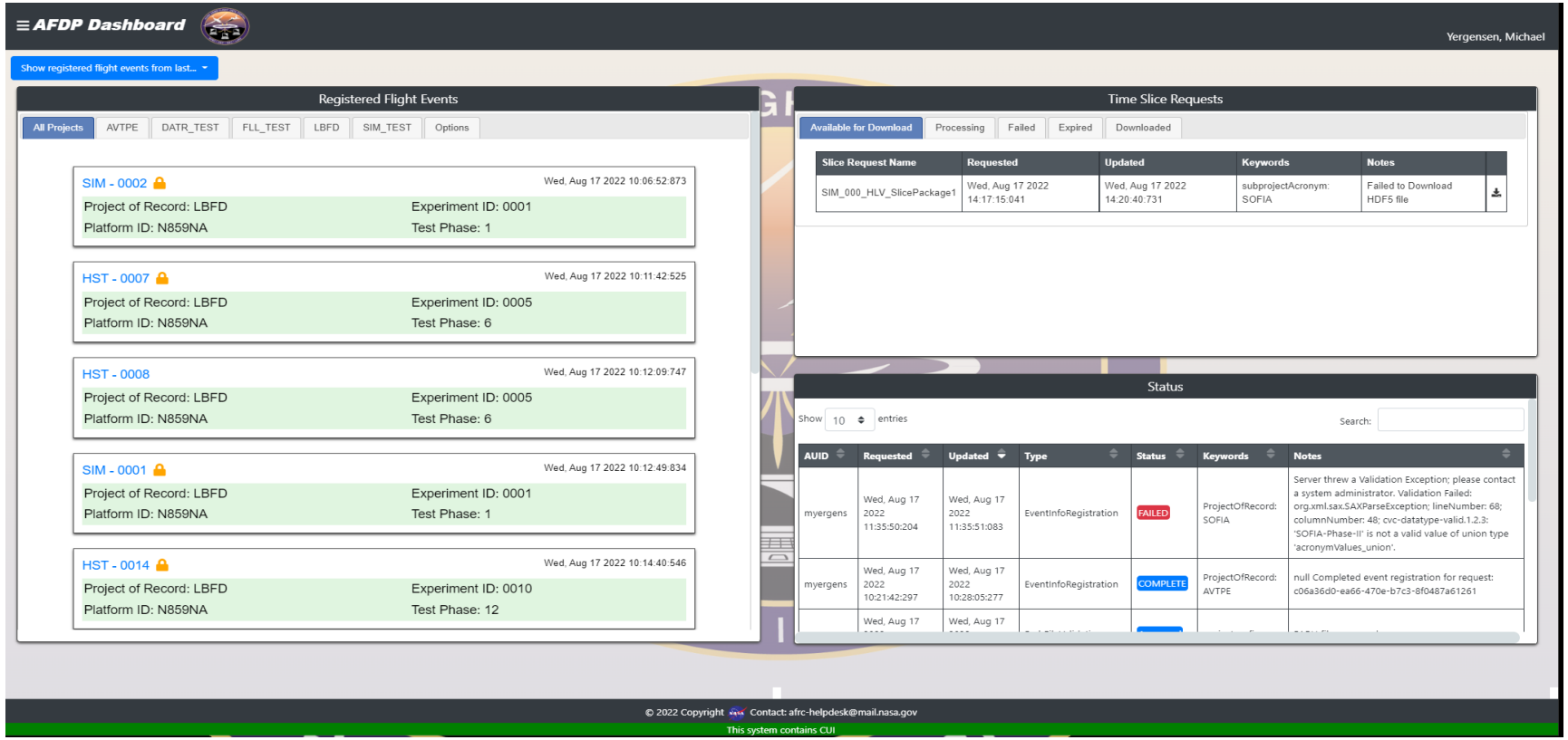
Clicking the hamburger icon will expand/collapse the ATDP Menu.

- The ATDP Menu provides access to various ATDP pages.
- These pages are permissioned for access.

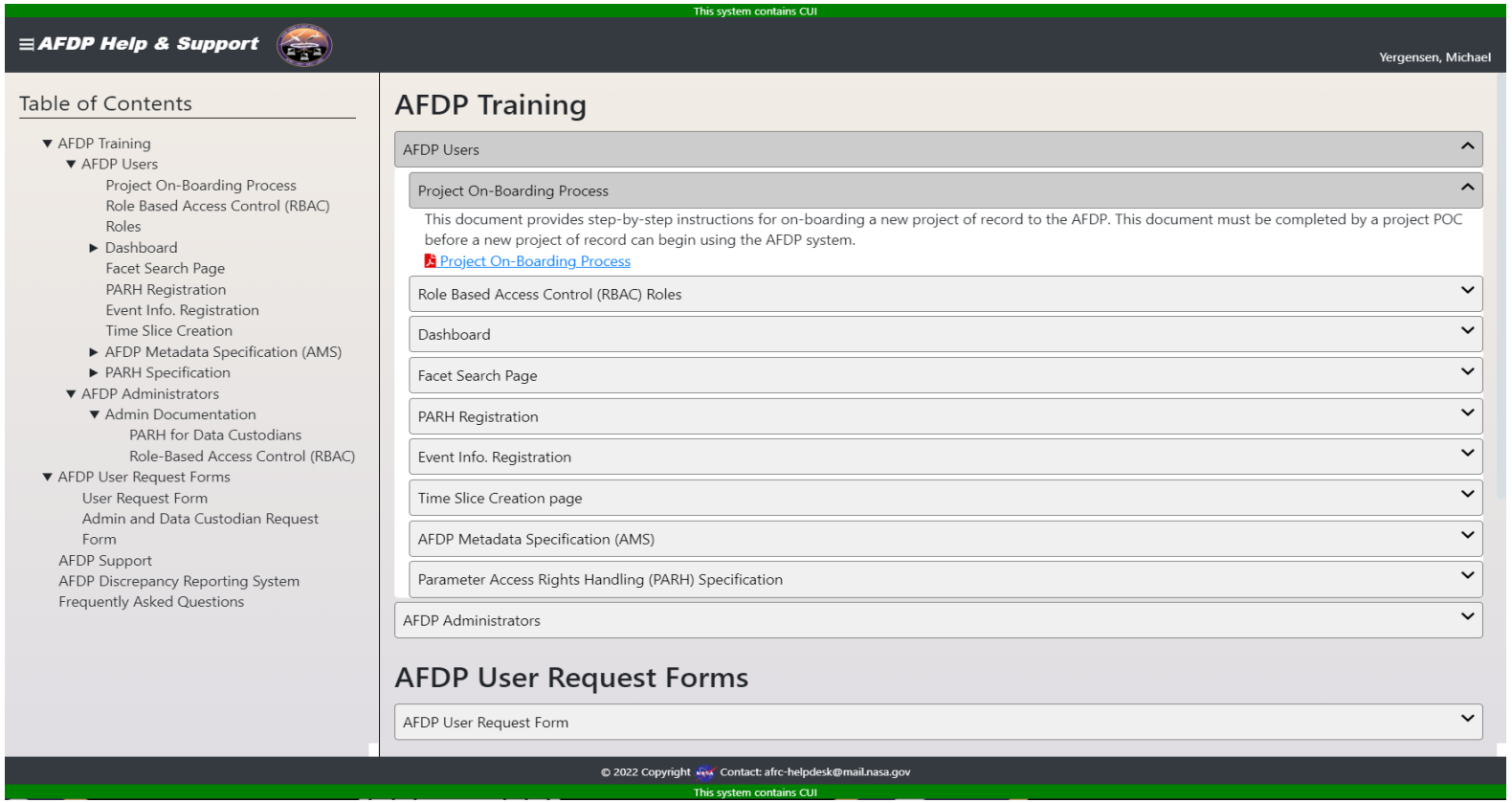
Dashboard

Upon successful login to ATDP [ATDP Training], the Dashboard will display.

- The **Registered Flight Events** widget displays test events for projects of which the user is a member.
- The **Time Slice Requests** widget displays status of time slice requests and the ability to download time slice requests.
- The **Status** widget displays information to Data Stewards and Data Producers, regarding PARH Registration and Event Registration status.



Help & Support



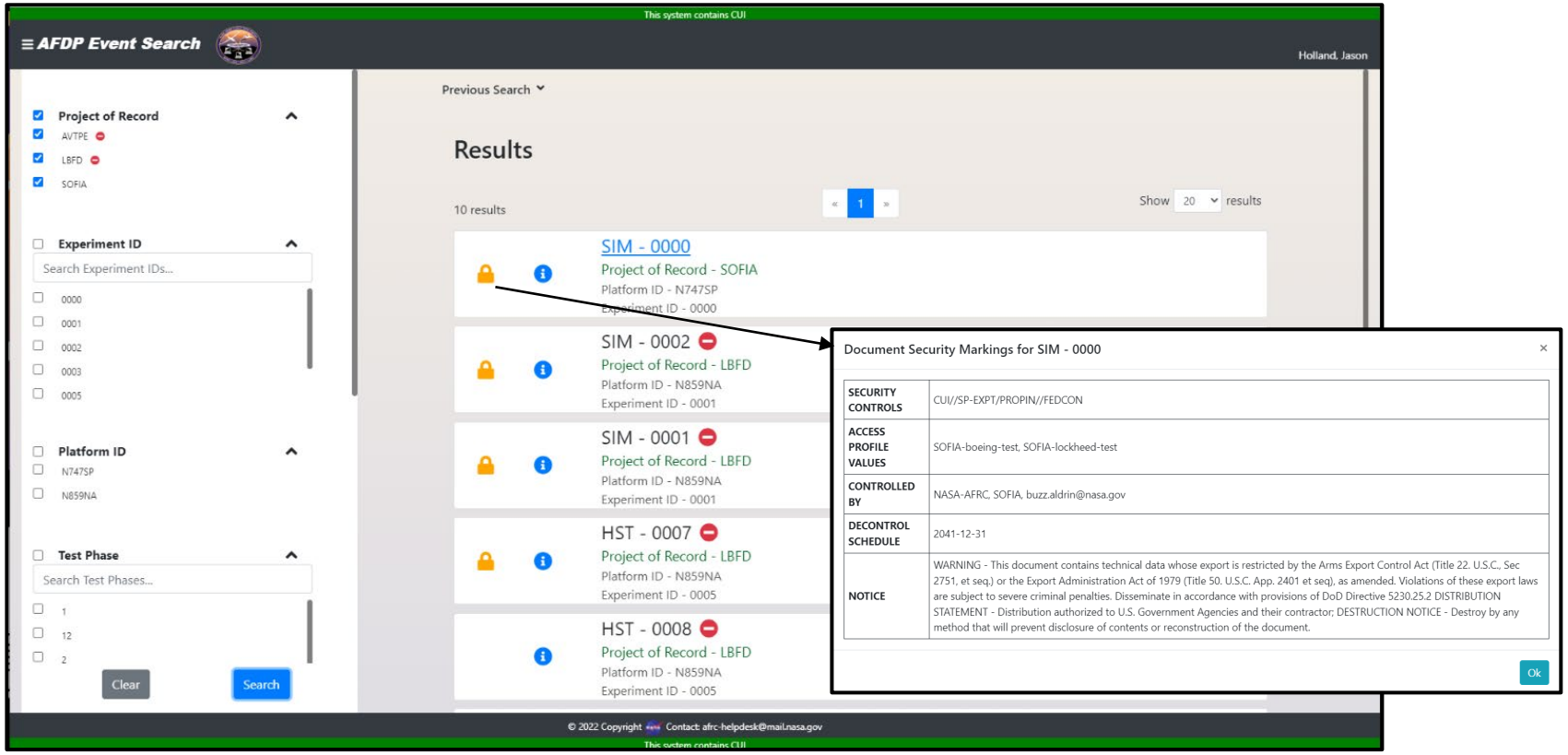
The ATDP Help & Support page is accessible by all AFDP users. It provides access to the following:

- ATDP Training - *Access to all user guides. Video tutorials will be available soon!*
- ATDP Support - *Link to submit questions to AFDP via email.*
- Frequently Asked Questions – *This section contains FAQs.*
- ATDP Enhancement Requests and Issue Reporting – *This explains how to report bugs, issues and requests for enhancement.*

Facet Search

All users can search for registered test events (for any project of record) and see the results.

- *A user must be a member of the project in order to access the data.*



Search page example

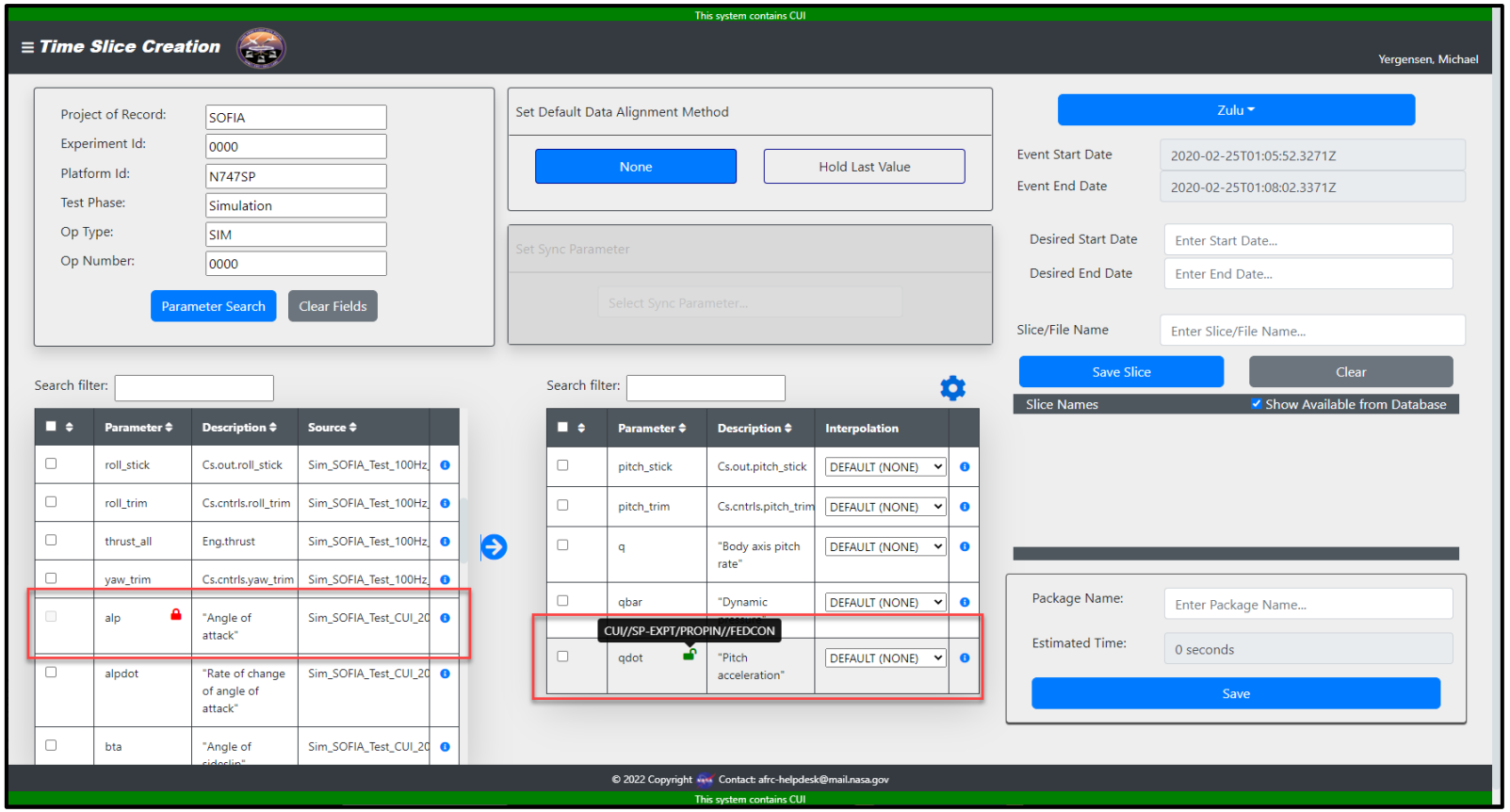
A yellow lock icon identifies the test event contains CUI. Clicking the lock will display the CUI Document Markings.

A red 'no access' icon appears beside each project and test event that the user cannot access.

A blue info icon provides details related to the associated item, such as flight event information, parameter details, source file name, PARH file name, access group.

Time Slice Creation

The Time Slice Creation page allows a user to search for test events by Project of Record, Experiment ID, Platform ID, Test Phase, Op Type and Op Number. Results will only display parameters related to the test event (and for a project) the user has permissions to access. Users can select the parameters and identify other details for the time slice they wish to create.



A blue info icon provides details related to the associated item, such as flight event information, parameter details, source file name, PARH file name, access group.

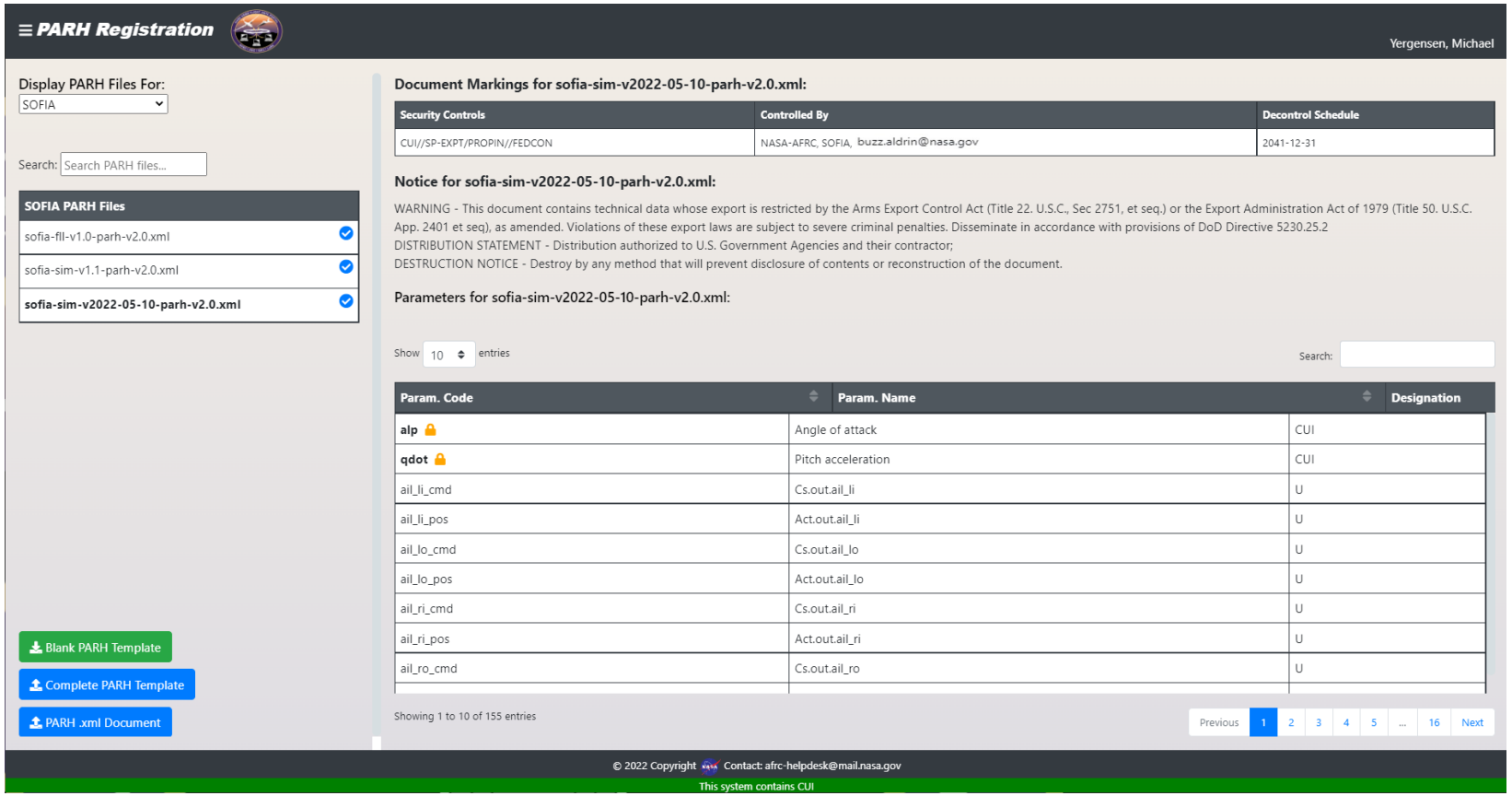
A red locked icon alerts users to a restricted parameter containing CUI data they cannot access.

A green unlocked icon alerts users to a restricted parameter containing CUI data they can access.

Hovering over a lock icon will display the CUI Portion Marks.

Parameter Access Rights Handling (PARH) Registration

This step will be performed by someone who is familiar with building a Master Measurement List (MML) spreadsheet.



During PARH Registration, a user [assigned the Data Steward role] will identify all parameters, security values, and RBAC groups in a PARH file.

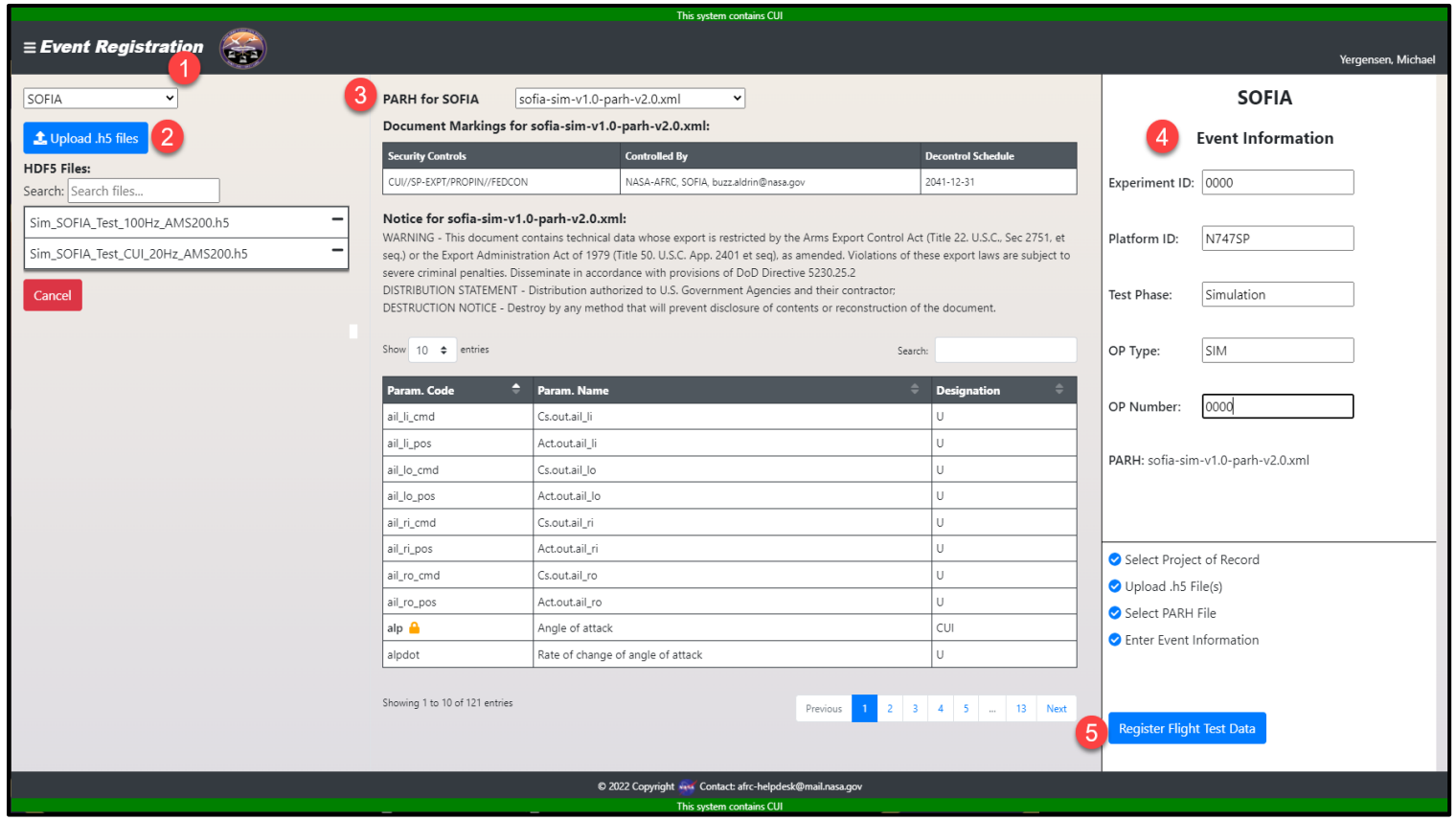
PARH values are used by AFDP to render

a) CUI Document Markings on test events
b) CUI Portion Marks on individual parameters
c) Implement access controls to restricted CUI parameters

Event Registration

This step will be performed by a member of a test facility (DATR, FLL, SIM, CITC).

Once the event registration process is complete, ATDP will store the event information, render CUI markings, and implement access controls.



During Event Registration, a user [assigned the Data Producer role] will perform the steps identified below.

1. Project of Record – Select the project of record associated with the flight event and flight test data (HDF5) files being registered.
2. Load Test Data (HDF5) files – Upload and select the test data files to be registered with the flight event.
3. Parameter Access Rights Handling (PARH) – Select the PARH file to be assigned to the flight event and associated test data (HDF5) files for data validation, rendering of required security markings, and to implement access rights handling.
4. Event Information – Enter the Event Information values for the flight event.
5. Register Flight Test Data – Click the button to complete the process.

Questions?