

FAIR Facilities and Instruments

12/16/2022

NSF FAIR Open Science (FAIROS)
Research Coordination Network (RCN)

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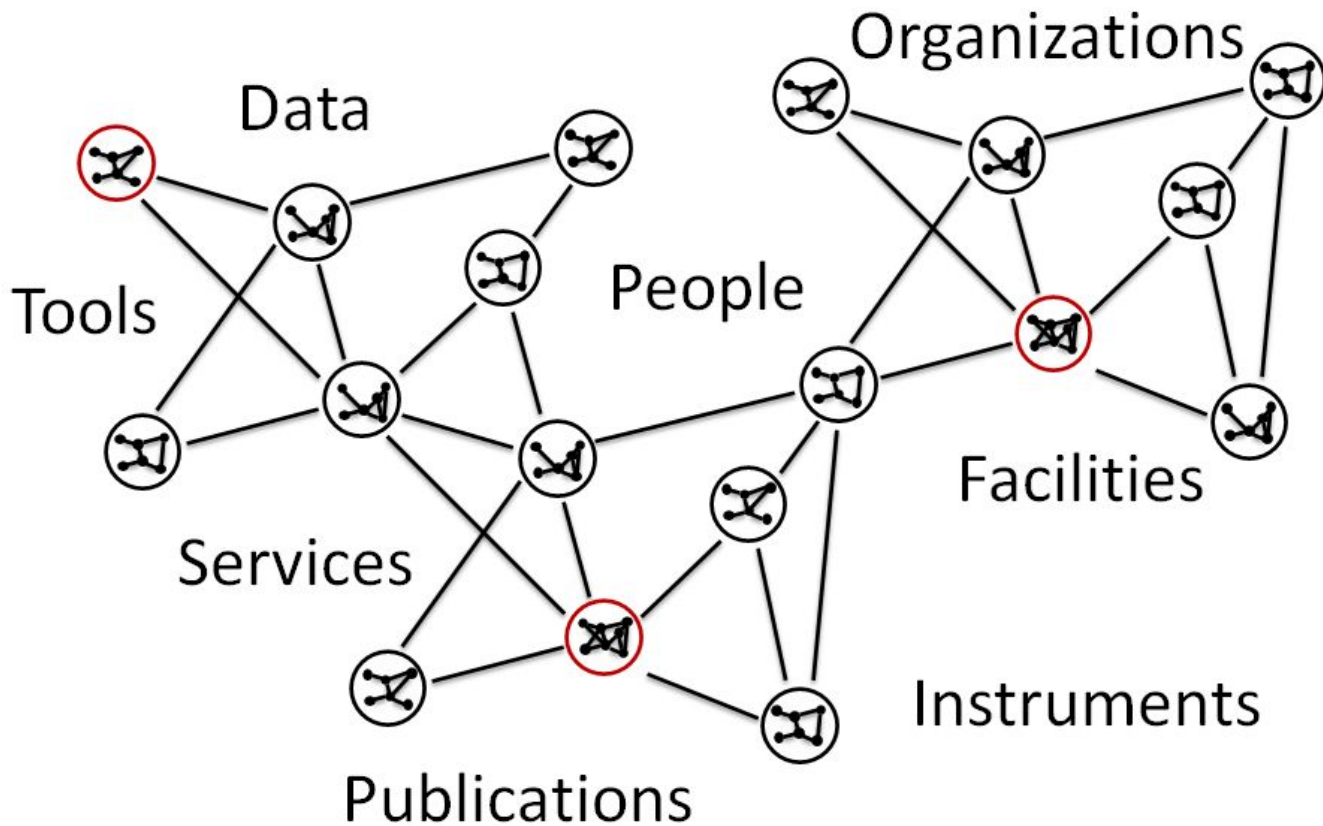


University of Colorado **Boulder**

Overall Goals

- Develop a Research Coordination Network (RCN) focused on the assignment of Persistent Identifiers (PIDs) to research facilities and instrumentation
- Compile use cases for why and how PIDs might be assigned to facilities and instruments
- Facilitate the generation of expertise and guidance on the key topics of interest
- Produce recommendations and lessons learned targeted toward the specific use cases

Networked Science



PIDs for Facilities and Instruments - NCAR



Integrated Surface Flux Sy

ISFS DESCRIPTION



NSF/NCAR C-130

Aircraft Overview

The Lockheed C-130 "Hercules" aircraft is a four-engine, medium-size utility aircraft that has proven to be one of the most well-known and versatile aircraft ever built. The NSF/NCAR aircraft is a model EC-130Q, similar to the more common model C-130H model except for electrical and air-conditioning modifications. The aircraft is an all-metal, pressurized, high-wing monoplane powered by four Allison T-56-A-15 turboprop engines. It is equipped with dual-wheel, tricycle landing gear with the main gear wheels arranged in tandem and the nose gear arranged side-by-side. The C-130 maintained and



C-130


NSF/NCAR C-130

NSF/NCAR C-130 Investigator Handbook
Airborne Instrumentation
NSF/NCAR C-130 Request Guidance
Aircraft Schedules
Request the NSF/NCAR C-130
Contact RAF

PIDs for Facilities and Instruments - FSU

- Campus wide FSU Scientific Equipment Portal
- Proof of concept - Universal Scientific Equipment Discovery Tool (USEDiT), a catalog of scientific equipment, using RRIDs as persistent identifiers. To date, 1788 pieces of large equipment have been assigned with RRIDs

FLORIDA STATE UNIVERSITY



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PIDs for Facilities and Instruments - CU

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RMACC Summit Supercomputer

RMACC Summit is a heterogeneous supercomputing system consisting of NVidia Tesla K80 and high-memory nodes and an Intel generation Intel Omni-Path Architecture interconnect.

Read the [RMACC Summit Specifications](#) for more details.

To learn more about how to use RMACC Summit, in our [documentation page](#).

Sharing Research Computing accounts is against CU policy. Please review www.colorado.edu/policies/acceptable-use-policy.

[RMACC Summit Citation/Acknowledgement Language](#)



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PetaLibrary

The PetaLibrary is a University of Colorado Boulder Research Computing service that supports the storage, archival, and sharing of research data. It is available at a subsidized cost to any researcher affiliated with the University of Colorado Boulder.

To request an allocation on the PetaLibrary please contact rc-help@colorado.edu.



Menu

Community Initiatives

- Research Data Alliance Working Group on [Persistent Identification of Instruments](#) - metadata schema for instrument PIDs
- [CI Compass](#) - coordinating cyberinfrastructure practitioners at NSF Major Facilities to accelerate the data lifecycle and ensure the integrity and effectiveness of cyberinfrastructure
- [SciScore](#) - Adding “Resources” table to papers in bioRxiv and medRxiv via RRIDs
- [Identifiers for Instruments in Australia](#) - community of practice for people in Australasia
- DataCite metadata schema version 4.5 now open for comment - includes new “instrument” resource type and other metadata updates for instrument DOIs

Key Questions

F - Findable - How do we enable people to find relevant facilities or instruments?

A - Accessibility - How do we enable facilities and instruments to be accessible by wider audiences? How can we streamline the burden on researchers with regard to PID use and adoption?

I - Interoperability - How do we consistently capture relationships between persistent identifiers? What are the relative advantages / disadvantages of the various identifier systems (RRID, DOI, ARK, ...) for facilities and instrumentation?

R - Reusability - How can we incorporate information about facilities and instruments into data set provenance metadata more consistently? What provenance metadata is most important to data users for these resources?

Project Phases

1. Gathering input and developing recommendations (phase 1)
2. Dissemination and adoption of recommendations (phase 2)
3. Generalizing the project findings (phase 3)



Phase 1 - Gathering input and developing recommendations

1. Gather use cases outlining the major goals that research facility and instrumentation providers have with regard to PIDs.
 - a. Why have PIDs been assigned to facilities and instruments thus far?
 - b. What are the reasons others are interested in assigning PIDs to their resources?
2. Define the capabilities and limitations of current PIDs systems as they relate to facilities and instruments.
3. Evaluate current PID systems against the use cases

Project Efforts in Year 1

1. Compiling information and resources
 - a. Project web site: <https://ncar.github.io/FAIR-Facilities-Instruments/>
 - b. Compiling relevant people, projects, and documents
2. Workshop - summer 2023, dates tbd, Boulder, CO
3. Conference engagement - AMS presentation in Jan.
4. Focus groups
 - a. To be conducted online, starting in 2023
 - b. 1-2 hours in length each
 - c. Small groups of 5-10 individuals from similar backgrounds and organizations

Focus Groups

- Target groups
 - Earth science observational facilities
 - University-based instrument facilities
 - Data librarians
 - Members of SciCrunch RRID communities
 - Members of DataCite
 - Participants in the RDA PIDINST WG
- Goals
 - Develop use cases
 - Identify key challenges and opportunities
 - Identify key topics for first workshop

Advisory Committee

- **Anita Bandrowski** - founder and CEO of SciCrunch
- **David S. Butcher** - FAIR data management specialist at the National High Magnetic Field Laboratory
- **Matthew Buys** and **Kelly Stathis** - Executive Director and Technical Community Manager at DataCite
- **Danielle Cooper** and **Dylan Ruediger** - Associate Director and Senior Analyst at Ithaka S+R
- **Nate Herzog** - CoreMarketPlace project lead at Vermont Genetics Network.
- **Kevin Knudtson** - President of the Association of Biomolecular Resource Facilities (ABRF)
- **Giri Prakash** - Section Head of the Earth System Informatics and Data Discovery section at Oak Ridge National Laboratory
- **Shelley Stall** and **Brooks Hanson** - Sr. Director for Data Leadership and Executive Vice President for Science at American Geophysical Union (AGU)

Thank you

Please get in touch if you are interested to talk about use cases or identifier systems, or are interested in being involved in the workshop or focus group discussions:

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<https://ncar.github.io/FAIR-Facilities-Instruments/>

