

“Project” Use Case

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The first step(s)

- Use case
- Small team, *mixed skills*
 - Domain expert
 - Semantic web experts
 - Software engineers
- Analysis
- Develop model ontology

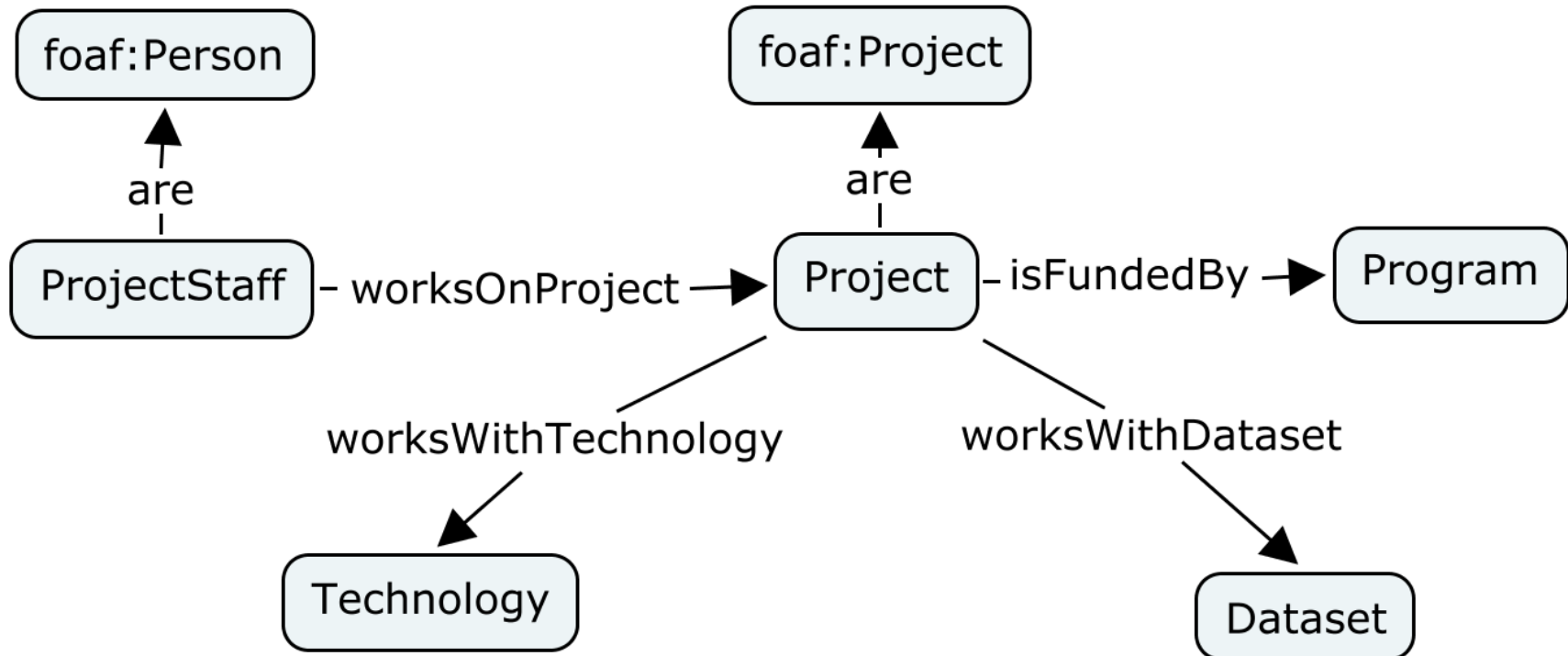
Problem Statement

- Within ESIP, it is difficult to know:
 - Who is working on similar technologies
 - Who is working with similar datasets
- If we could ferret out this information, we could improve knowledge sharing and even make connections
- Meanwhile, agency program managers sometimes need to know who is working on what data with what technologies

Basic Concept

- Develop a simple ontology of Projects, People, Datasets and Technology
- Populate with ACCESS, MEaSUREs and similar project instance info
- Store triples in ESIP Testbed triple store

Draft Domain Model



Sample Queries

- Which projects are working with semantic web technology?
- What technologies are being used in NASA's ACCESS program?
- Are any projects working with the same dataset?
- Which datasets are being used in projects working with semantic web?

Use Cases

- Describe the users' interaction with the system
 - Include both the user's and the system's actions!
 - But avoid specifying the user interface
- Can evolve into Test Cases

Use Case Template

1. Use Case Identification (Number and Name)
2. Short Definition
3. Primary Actor
4. Purpose
5. Assumptions
6. Scenario
 1. Step 1
 2. Step 2...
7. Extensions
8. Definition of Success
9. Notes / Issues

Use Case 1: Enter Project Data (cont.)

1. Use Case 1: Enter Project Data
2. Short Definition
The Principal Investigator of the Data Quality Screening Service project wants to populate the triple store with the project information. This capability is supplied via a simple Web interface.
3. Primary Actor: P.I. for Data Quality Screening Service
4. Purpose: Enter project information into the triple store.
5. Assumptions: The P.I. knows enough about his/her project to populate the fields

Use Case 1: Enter Project Data

6. Scenario

1. Interface asks for overall project information: name and program
2. User enters “Data Quality Screening Service” and “NASA ACCESS”
3. Web interface saves root project triple
4. User selects Add Staff and Web interface presents existing staff, plus blank for staff not yet in triple store
5. User selects “Peter Fox” and role , and Web interface saves triples linking staff to project
6. User selects Add Technology and Web interface presents existing technologies, plus blank for technologies not yet in triple store
7. User selects “Jena”, and Web interface saves triples linking Jena to Data Quality Screening Service
8. User selects Add Datasets and Web interface presents existing datasets, plus blank for datasets not yet in triple store
9. User selects “AIRS Level 2 Standard Retrievals”, and Web interface saves triples linking technology to project

7. Extensions

- 5b. User enters “Christopher Lynnes” and picks “Principal Investigator” and Web interface saves triples linking him to Data Quality Screening Service with that role
- 7b. User enters “REST Web Service” and Web interface saves triples linking REST Web Service to Data Quality Screening System
- 9b. User enters MODIS Level 2 Water Vapor and Web interface saves triples linking that dataset to Data Quality Screening Service

8. Definition of success: triples are added to the database

Use Case 2: Produce Program Technology Inventory

1. Use Case 2: Produce Program Technology Inventory
2. Short Definition
The NASA ACCESS program manager gets a report on what technologies are being used in his program.
3. Primary Actor: NASA ACCESS program manager
4. Purpose: Get a report on technology usage for planning purposes (or occasional “fire drill”).
5. Assumptions: The ACCESS projects have been entered into the triple store

Produce Technology Inventory, cont.

6. Scenario

1. User pulls up Technology Inventory Report and selects NASA ACCESS from available programs.
2. Web Interface queries triple store for technologies used by projects within the select program and generates a report.

7. Extensions: None

8. Definition of success: The ACCESS Program Manager gets a formatted list of which projects are using which technologies within his program.

9. Notes: This scenario is not uncommon, particularly for new technologies.

Use Case 3: Discovering Dataset Commonality

1. Use Case 3: Discovering Dataset Commonality
2. Short Definition
Discover other projects working with the same datasets.
3. Primary Actor: Project Investigator
4. Purpose: Discover other projects working on AIRS Level 2 Standard Retrievals in order to share experiences and/or analysis techniques or results.
5. Assumptions: The triple store is thoroughly populated with dataset info, and datasets are uniquely identified.

Discovering Dataset Commonality, cont.

6. Scenario

1. User pulls up Dataset Usage Report and selects “AIRS L2 Standard Retrievals” from available datasets.
2. Web Interface queries triple store for datasets used by projects and generates a report.

7. Extensions: None

8. Definition of success: Project investigator discovers which other projects, if any, are using the same dataset.