The Open Data Repository's Data Publisher

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HISTORY

University of Arizona Geosciences created the RRUFF (http://rruff.info) database in 2004.

The database has received over 400 million accesses making it one of the most successful databases in the field.

Many researchers in the field wished to have a similar web-based database capability, but the available tools could not match the performance or capabilities of the custom-programmed solution used by RRUFF.

The Open Data Repository was created to generalize the RRUFF toolset as an open source framework for data publication.

Funded by NASA Ames Research Center through the Mars Curiosity Rover's CheMin team, the data publication system aims to make data publication a simple task with powerful plugins and tools to support data sharing and analysis.
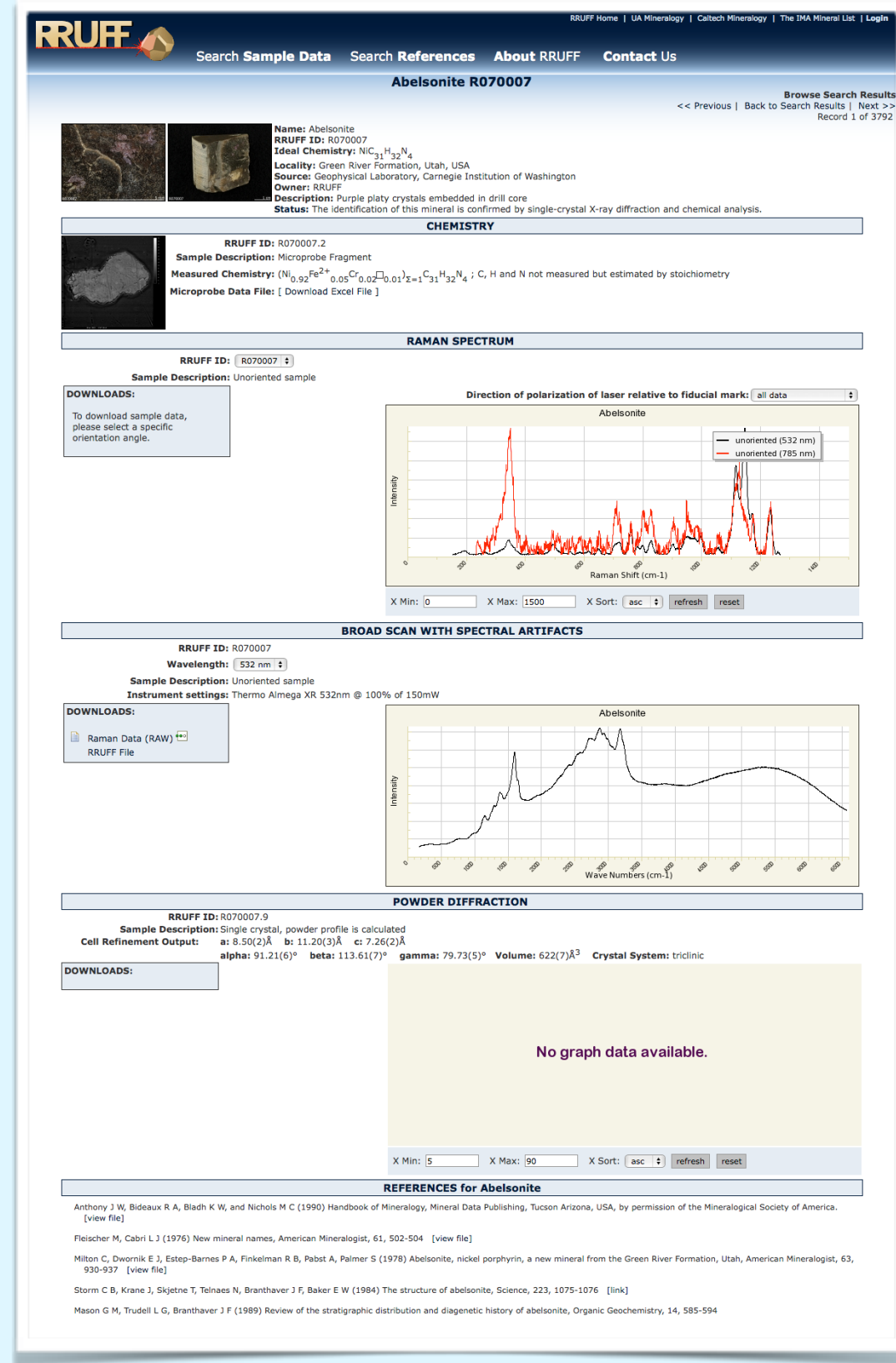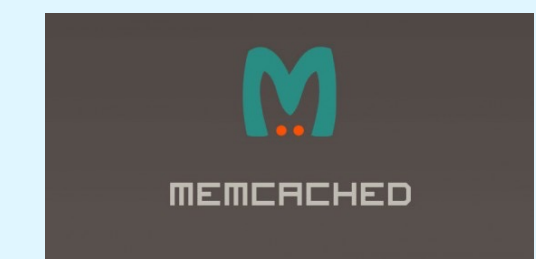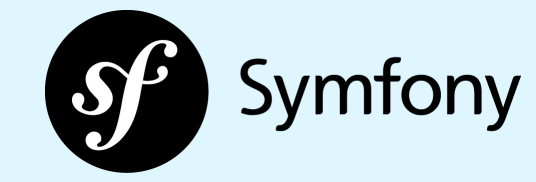

THE OPEN DATA REPOSITORY

- Inspired by Wordpress and the WikiPedia.
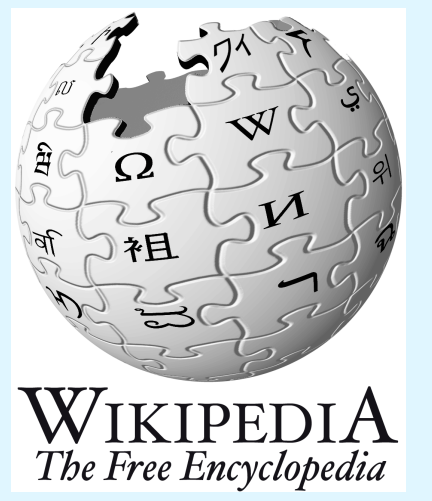
- Goal is to create an open source platform for managing and publishing scientific data.

- Fully open source utilizing various open source technologies.

PHASE 1 - DATA MANAGEMENT TOOLS AND PUBLICATION SYSTEM

DRAG AND DROP TOOLS

Designers utilize drag and drop editing tools to design the web form and the underlying database structure.

When records are added, plugins render graphs, image galleries, custom search views, and custom export tools.

The system comes with an expression based search capability that can be extended by developing a custom search plugin.
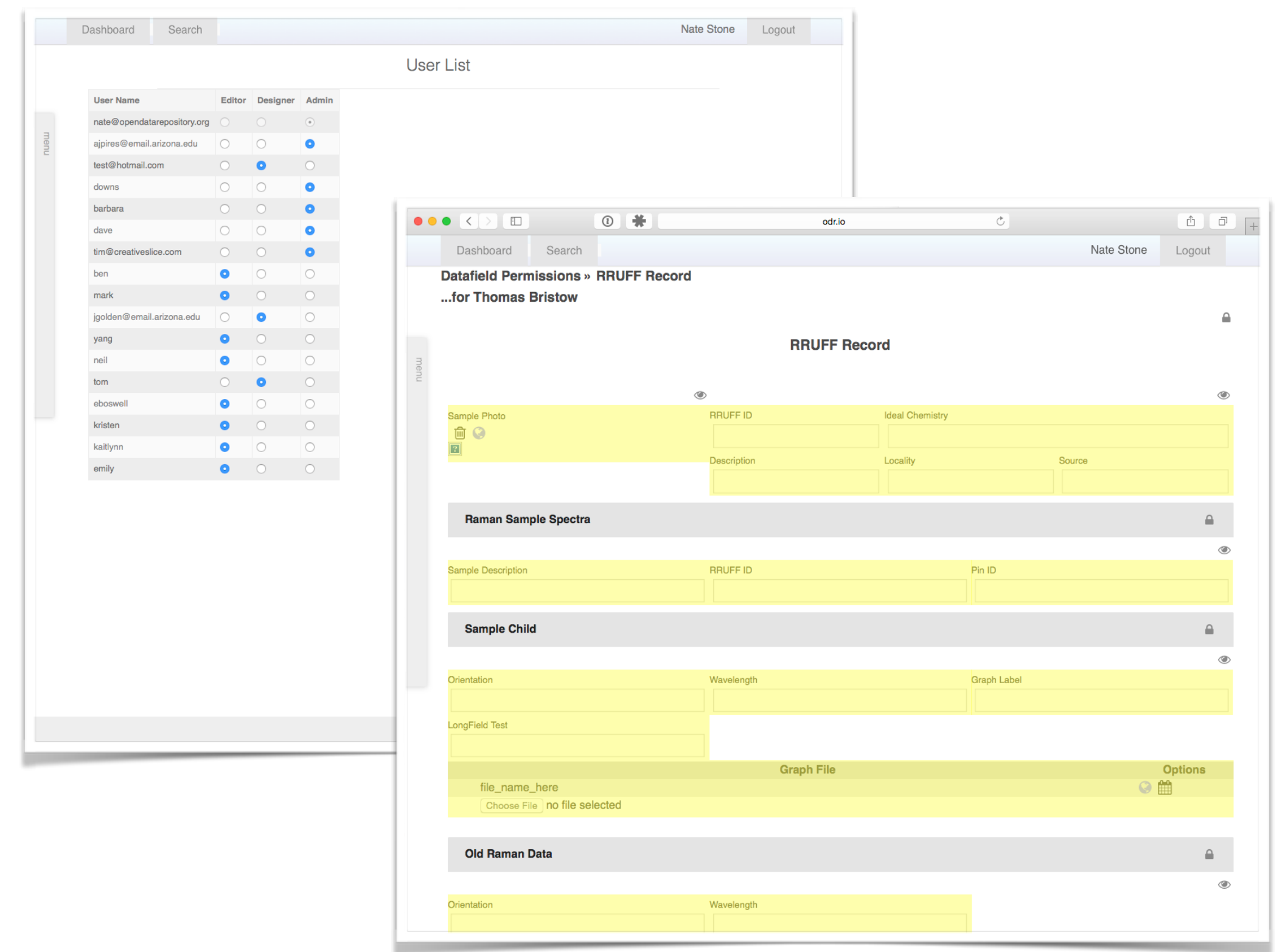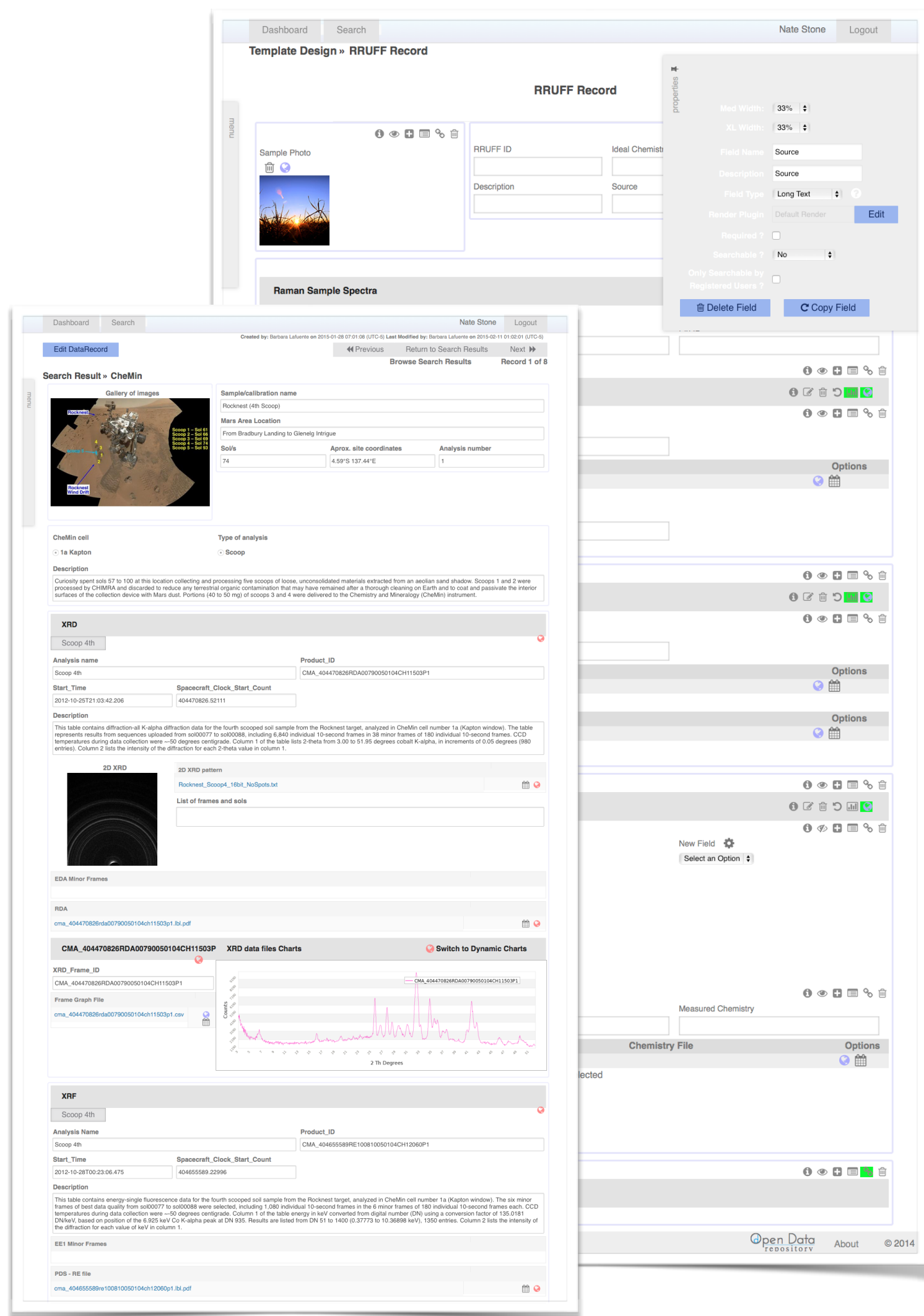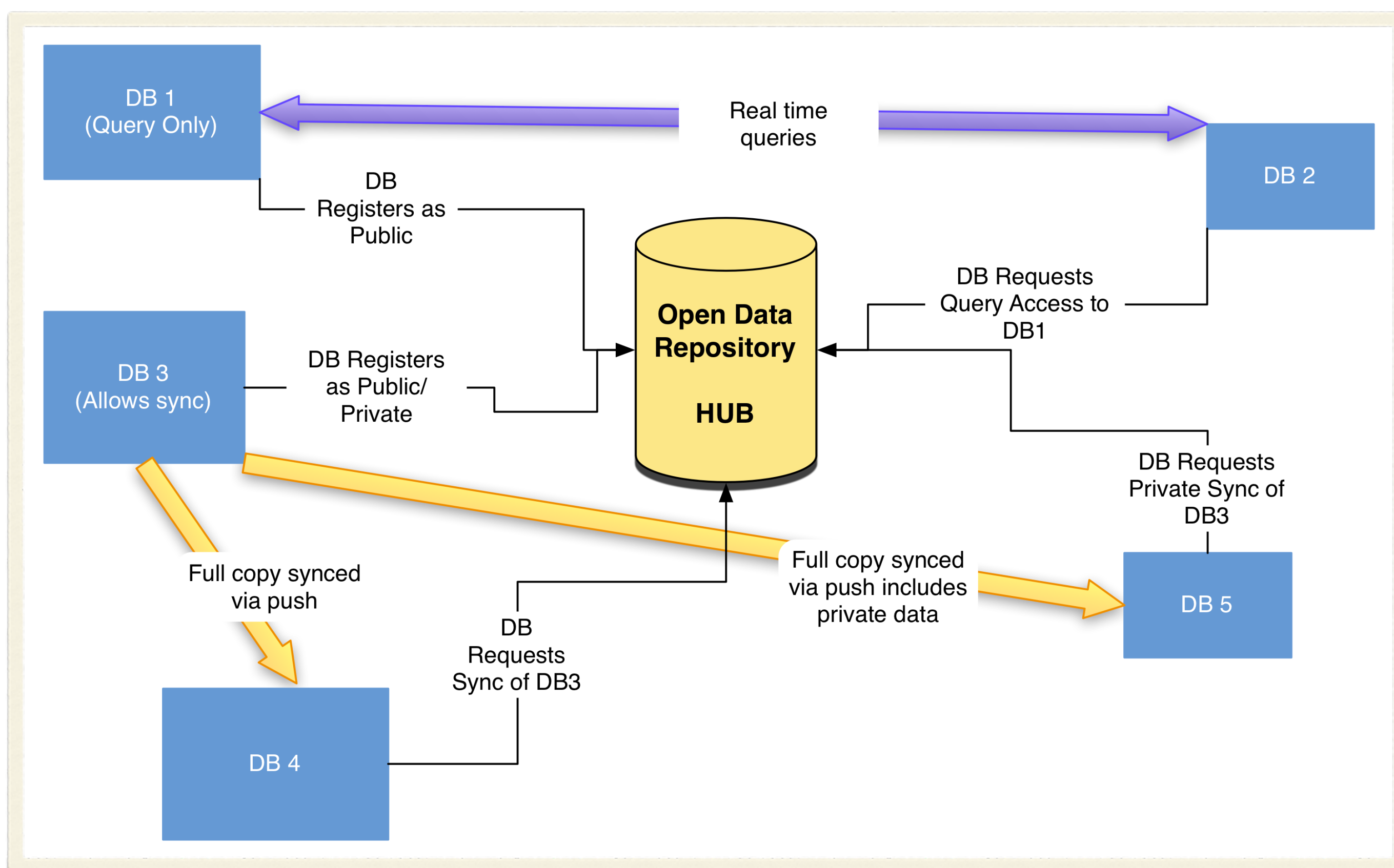

Robust permission system permitting field level permissions on a user-by-user basis. Allows segmentation of duties and fine-grained access control.

PHASE 2 - SEMANTIC TOOLS, INTEGRATION, AND COLLABORATION TOOLS

HUB MODEL

The Open Data Repository Hub will facilitate explicit sharing of data between researchers and provide a tool for registering and sharing ontologies as the software integrates support for the semantic web.

- Will leverage existing semantic structures to make data searchable and interchangeable.

- Database is currently XML-based and will be extended to incorporate semantic standards such as OWL (Web Ontology Language), RDF (Resource Description Framework), and RDFa (RDF in attributes).

Coming soon to Docker.

GitHub
Fork me on GitHub:
https://github.com/OpenDataRepository/data-publisher

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