

IPRO 311: IIT Intranet Mediator for USHMM

The IIT Intranet Mediator is a revolutionary new search engine that allows users to enter a natural language query and receive information from many different data sources no matter what format that data source is in. The Mediator searches structured, unstructured and semi-structured data, and provides the information the user requested in an orderly manner.

Previous IPRO teams developed the Mediator search engine, but this semester we completely tore down and rebuilt the Mediator. We did this to stabilize and increase efficiency of the Mediator.

To further test scalability, this IPRO focused on data provided by the United States Holocaust Memorial Museum (USHMM). The museum is an ideal proving ground for the Mediator as it contains a significant quantity of structured data (e.g., lists of names), semi-structured data (e.g., testimonials), and unstructured data (e.g., journals, pictures, etc).

To date, the USHMM uses only conventional search tools to allow users to search its archives. Users must now use several search tools; one per archive. The IIT Intranet Mediator provides the technology that only requires a single search using a natural language query. After its initial test with the USHMM, it is projected that the Mediator will be considered for numerous commercial applications.

The goals of this IPRO were focused on creating a functional, new Mediator. We accomplished the following core activities:

- 1) Converted rules to fit the new Mediator format
- 2) Added additional rules and data sources to Mediator
- 3) Created intuitive user interface
- 4) Improved quality of search engine by:
 - a) Adding a spell corrector to the Mediator
 - b) Stress testing the Mediator to insure quality performance

This semester the Mediator was demonstrated to senior executives of the USHMM; they were thrilled with the possibilities it provided.

There is still more to be done with the Mediator such as expand the amount of data sources and query modules for additional USHMM data.