PLoS ONE Application

- Journal Publishing System (JPS)
- First application built on Topaz application framework
- Web 2.0
  - Uses a template engine to display the content received from Topaz service.
  - Uses AJAX toolkit to handle complex user interactions like annotations, ratings, etc.
  - Social networking.
  - Turns a reader of scientific articles into a knowledge contributor, knowledge that can be used by other users.
PLoS ONE – Current Features

- Ingest and publication of articles
- User registration, login (single sign-on) and profiles
- Public annotations
- Threaded discussions
- Search
- RSS feeds – all articles or by subject category
- Email alerts
- Browse by subject and date
- Administration of users and annotations
- Article ratings (soon)
PLoS ONE – In Development

- Virtual journals
- Community portals
- Annotations types (private, author, correction, etc.)
- Advanced search
- Articles like this “you might be interested in” (Amazon model)
  - based on user annotations/tags
  - based on user ratings
- Folksonomy tagging (user tags)
- Groups - forming communities
- Expand corpus to external data
  - Ingest/publication of datasets
  - Annotations of datasets
- More...
Topaz – What is it?

- Original intention is to create an end-to-end online publishing system built on an Open Source platform
  - Journal Management System (JMS)
  - Composition System
  - Journal Publishing System (JPS)
Topaz – Overview
Fedora - Open Access meets Institutional Repositories

• **Flexible Extensible Digital Object Repository Architecture**
• Online repository for collecting and preserving the intellectual output of an institution.
• Repository can store any type of digital object (PDF, XML, images, videos, etc.)
• Scalable to millions of objects
Mulgara – Open Access meets the Semantic Web

• “Surface Web” vs. “Deep Web”
  - Provide computers means to extract useful information from data accessible on the internet
  - Computers can understand and integrate information from the web

• “Semantic Labels” express relationships among objects and components
  - Describing information about web pages, such as content, author, created and modified date

• Allows for analysis of metadata
  - Describe meaningful content for search engines
Fedora + Mulgara

- **Complex Objects**: creation of new forms of “information units”
- **Networks of Objects**: Knowledge integration: capturing semantic and factual relationships among information entities
- **Re-use**: objects or parts of objects in can appear in new contexts where they can be augmented or contextualized
- **Process-orientation**: Integration with the processes of research, collaboration, and scholarly communication
- **Collaboration**: Accommodate information that is created as a byproduct of using resources
Topaz – Future Goals/Needs

- Incorporate a workflow engine
- Journal Management System
- Composition System
- Create associations across multi-disciplinary papers within the PLoS corpus and external content
- Federated Databases – integrate other Fedora repositories (science, education, etc.)