

## Introduction

Sakai is open source hosting framework for Virtual Learning and Virtual Research environments. Sakai was developed in the USA with funding from numerous sources, including the Mellon Foundation and Ivy League Universities.

## Sakai VRE Demonstrator Project

This project aims to introduce scientists and researchers to the capabilities of a VRE through a working portal-based demonstrator and to use Sakai as a framework technology. The project will extend the framework, develop more tools for collaboration and research, and engage with the research community.



### Conferencing, Semantic and P2P Tools

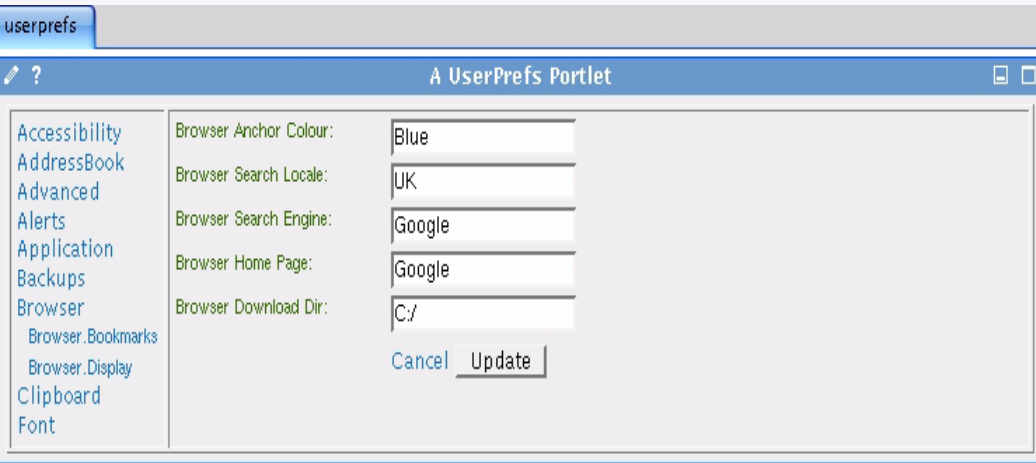
#### Narada Conferencing

The NaradaBrokering Conferencing portlet provides a collaborative environment with chat and video conferencing sessions with either worksite users or external participants.



#### User Preferences Portlet

This portlet uses HP's Semantic Web technologies Jena and Joseki that allows a user to browse and edit their preferences, which are held in a local or remote RDF database. This prototype portlet demonstrates the use of RDF for storing potentially unstructured information.

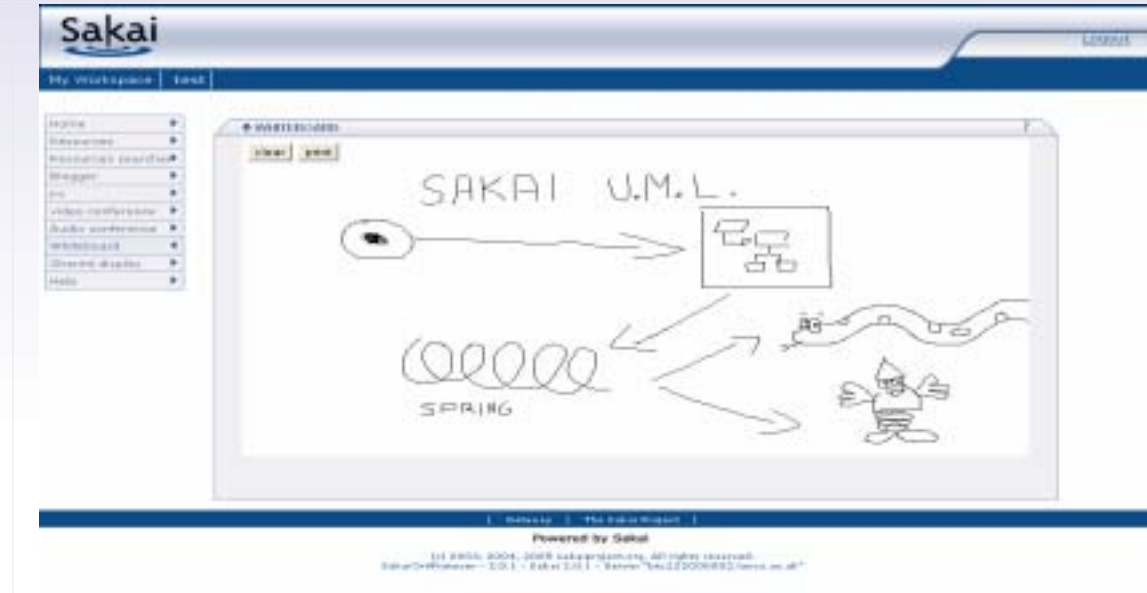


### Scheduling, Discussion and Collaboration Tools



#### Whiteboard

The Whiteboard tool publishes mouse movements via JMS and NaradaBrokering. This allows users to collaborate complex ideas visually.



#### IRC

This IRC tool allows worksite users to interact with other participants, in a group chat; users may be at different remote locations.



# Sakai VRE Demonstrator

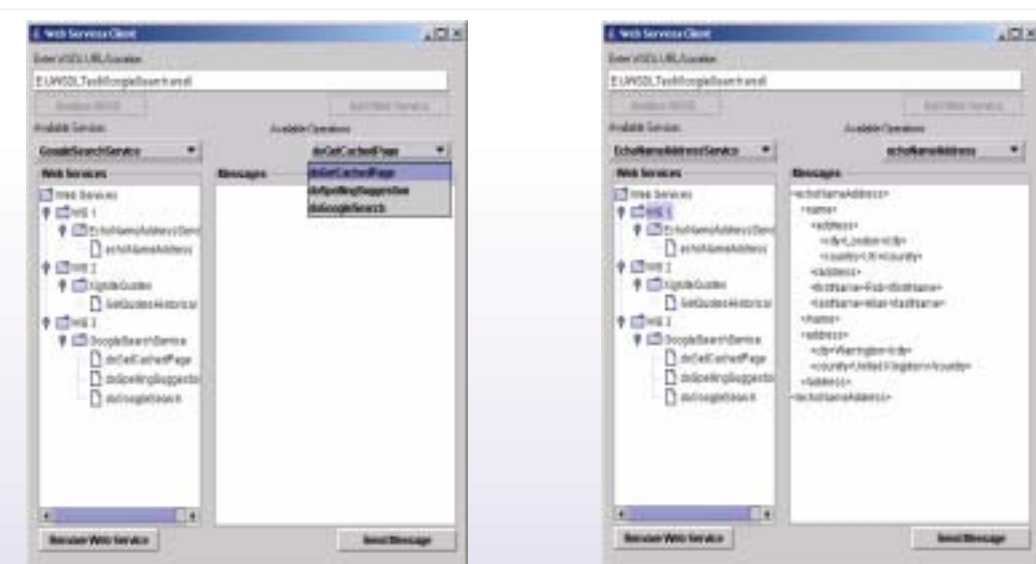
### Analysis Tools

Analysis tools for the Grid and related activities, including gathering network and Grid information. Developers are currently working on porting NGS portlets to Sakai.



### Web Services Generator

This GUI-based tool generates Web Services interfaces for Sakai. This tool is currently being developed to allow portlets to be generated automatically from their respective WSDL file.



### Web Services and Portal Management Tools



### Search Tools

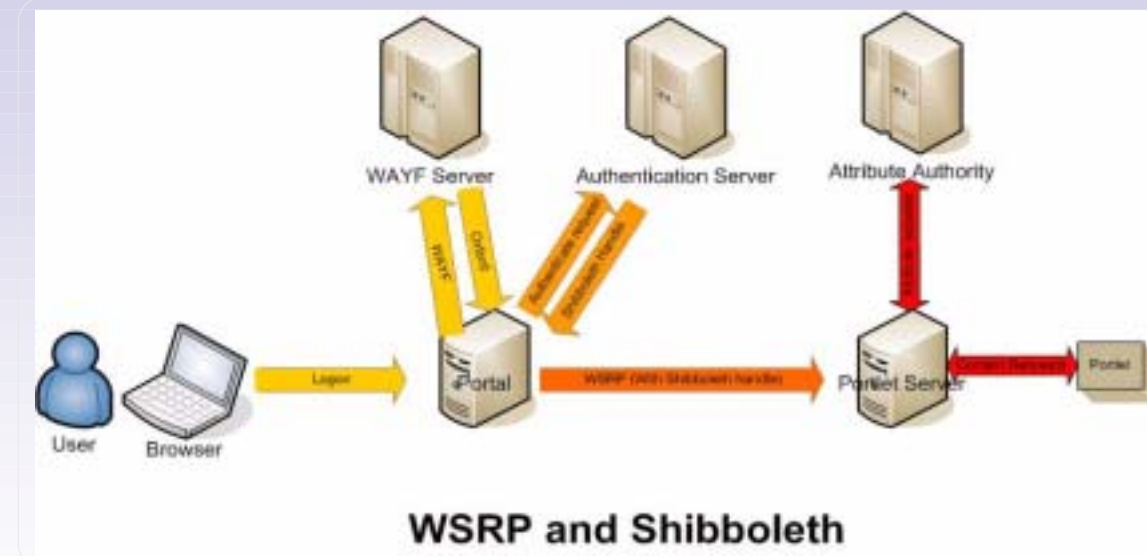
These portlets provide a range of search and retrieval tools (for library, bibliographic, Google services etc.) for the Sakai VRE. Integrating search results into other VRE tools is also under investigation.



### Authentication, Authorisation and Search Tools

### Authentication & Authorisation

The credentials exchanged during the Shibboleth authentication phase will be used for the generation of the appropriate credentials required for the use of Grid tools contained within the VRE.



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