Collaborative **O**rthopardics **R**esearch **E**nvironment

The CORE approach to Virtual Research Environment

What is CORE?

CORE is a Virtual Research Environment (VRE) which is designed based on the concept of Service-Oriented Architecture (SOA) and Grid/Web services. It aims to provide an infrastructure that combines clinical, educational and research in one working environment.

Why do we need a VRE?

Firstly, as the number of biomedical investigators increases, it becomes difficult to track their work. Secondly, bio-informatics tools rarely interoperate. Finally, there is a need for collaborative researches to overcome expensive cost.

What are the user requirements?

VRE toolkits should be made easy to use for those who may not be computer literate. There are also requirements for contextualising resources within a research framework that is relevant to the subject discipline, running simulations with large scale data and secure access to resources.

What is the main benefit?

The loosely coupled architecture allows services to be easily added or removed when user requirements change.

The CORE architecture
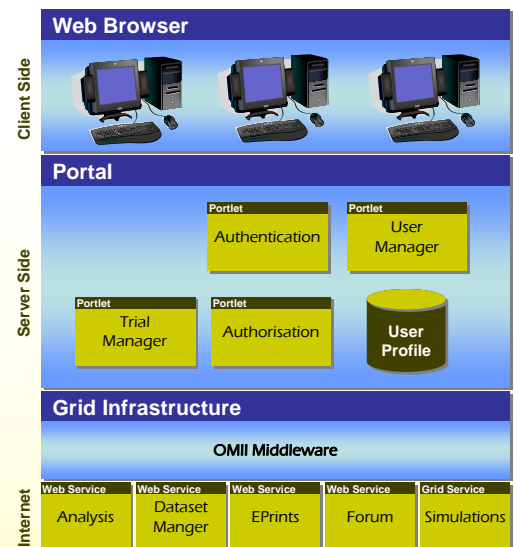
A portal is used as a presentation layer which aggregates, integrates, personalises and presents information, transactions and applications to user. Grid/Web services will be used as the underlying implementation technologies.

Future work

Building a CORE VRE demonstrator and investigating the use of semantic Grid/Web services in the VRE.