
SIMDAT

Data Grids for Process and Product Development using Numerical Simulation and Knowledge Discovery

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SIMDAT Facts

- IST Grid IP project
- 4 years
- Start date: September 1st, 2004
- 26 partners
- www.simdat.org

End Users



Capability Providers



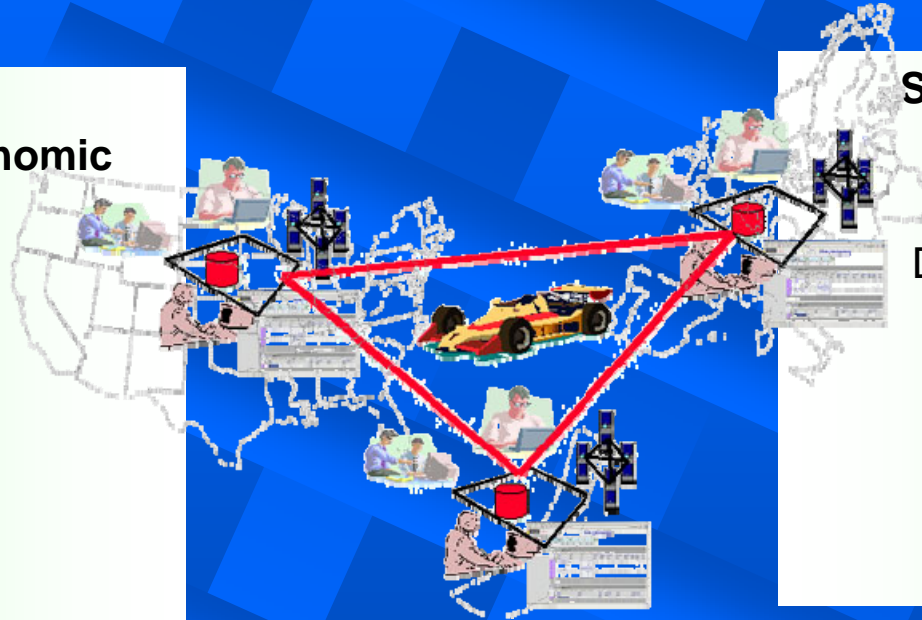
Grid Technologists



SIMDAT - Overview

Four sectors of international economic importance:

Automotive
Pharmaceutical
Aerospace
Meteorology



Seven Grid-technology development areas:

Grid infrastructure
Distributed Data Access
VO Administration
Workflows
Ontologies
Analysis Services
Knowledge Services

The solution of industrially relevant complex problems using data-centric Grid technology.

SIMDAT 

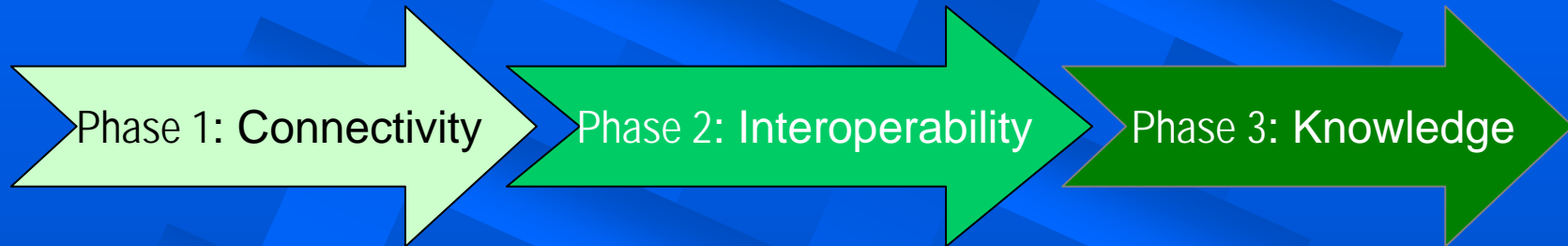


SIMDAT Objectives

- Develop federated versions of problem solving environments
 - Support of distributed product and process development
 - Test and enhance grid technology for access to distributed data bases
 - Tools for **semantic transformation** between these databases
 - Grid support for knowledge discovery
- Promote de facto standards
- Raise awareness in important industrial sectors

SIMDAT - Strategy

- SIMDAT takes an ambitious and credible route to drive Grid technology to the heart of industrial process:



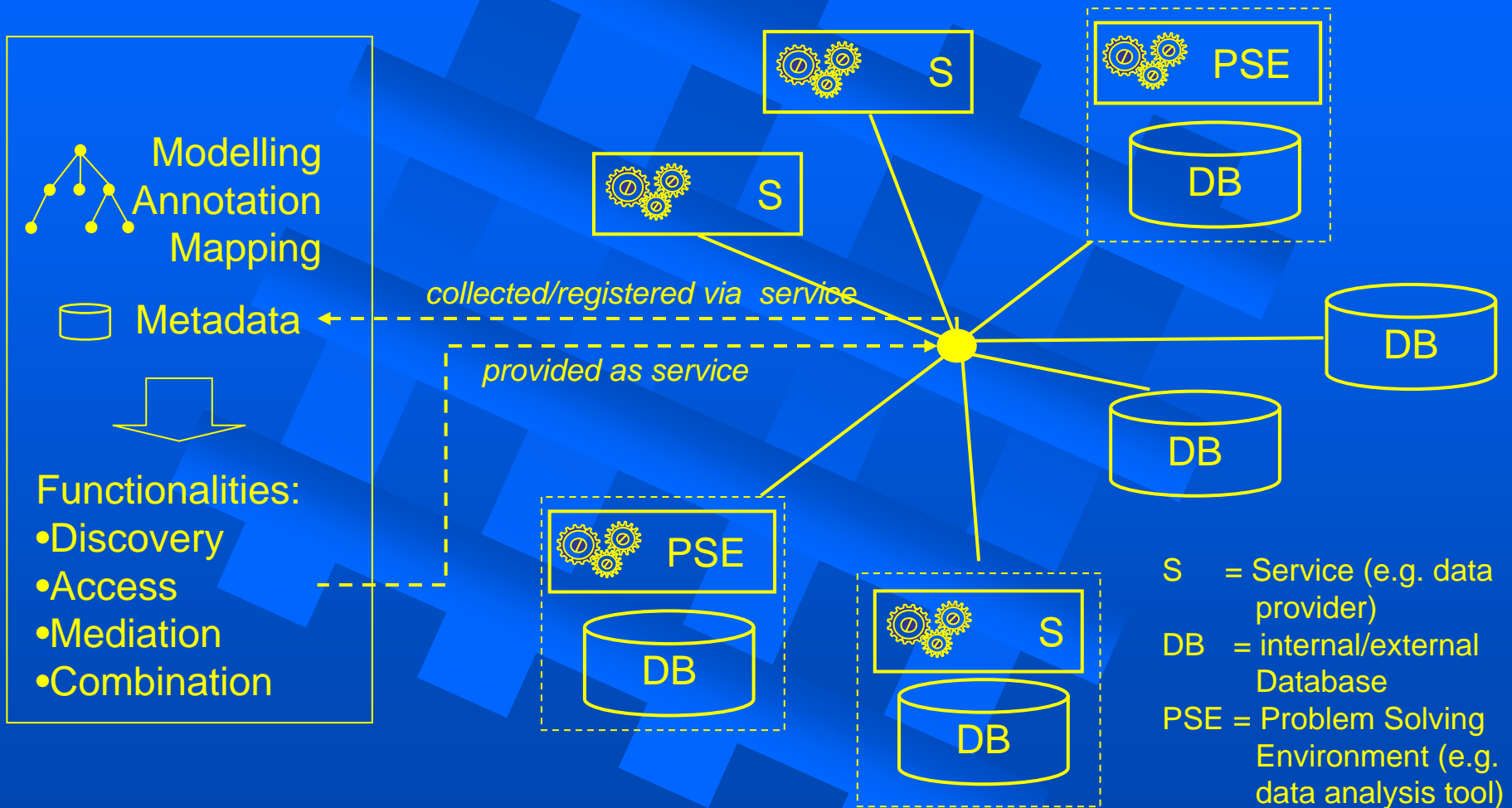
Deployment of Grid concepts, existing and emerging architectures with particular attention to data management.

Data aggregation through the use of ontological concepts.

Workflows for next-generation aggregated knowledge capture, discovery and mining.



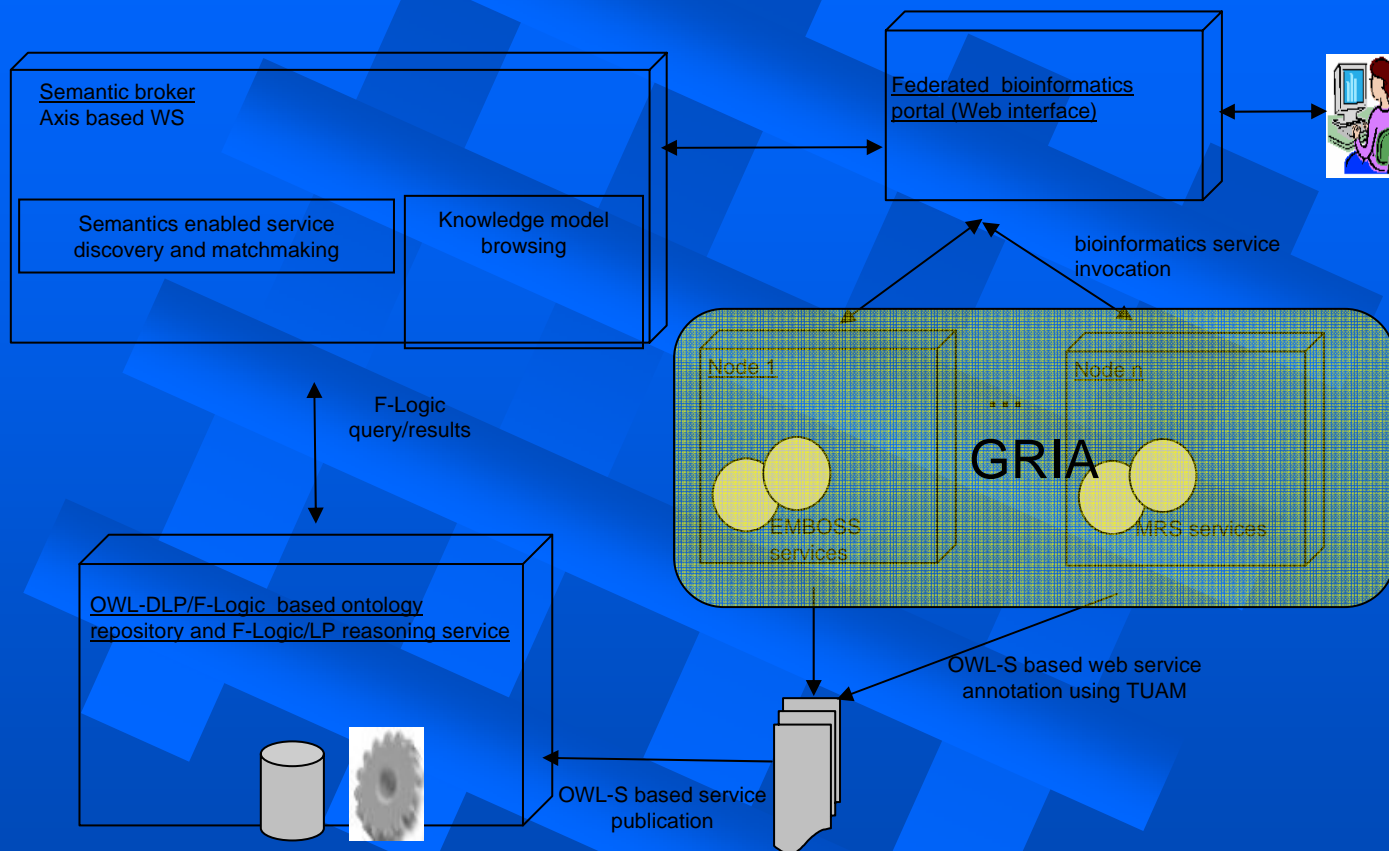
Semantic Technologies in SIMDAT



Pharmaceutical activity – technical achievements

- Database federation at the level of MRS
- Specification of complex bioinformatics workflows
 - Security requirements
 - Scenarios for research collaboration
- Semantic Mediation in heterogeneous data and computing environments
- Semantic service discovery and brokering
 - Interoperability with standards
 - Semantic workflow brokering and enactment
- Dynamic Access Control for remote data sets and resources
 - Identity, Attribute, and Authorisation Services in VOs
- Peer to Peer technologies
 - Decentralised storage, pre-processing data and usage pattern
 - Node disjoint redundant retrieval paths for P2P networks

Pharma module interactions



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