

Knowledge-based workflow system for Grid systems

KW-F Grid

The Grid as a vast space of partially cooperating, partially competing Grid services will be a very dynamic and complex environment. In order to address the complexity in using and controlling the next generation Grid, the K-WF Grid consortium addresses the need for better infrastructure for future Grid environments, by adopting the approaches envisioned by the semantic web and Grid communities in a novel, generic infrastructure.

K-WF Grid's **main goal** is developing a system that will assist its users in composing powerful Grid workflows by means of a rule-based expert system. All interactions with the Grid environment will be monitored and evaluated. The knowledge about the Grid itself will be mined and reused in the process of workflow construction, service selection and Grid behaviour prediction. Workflows will be dynamic and fault-tolerant beyond the current state of the art.

The K-WF Grid system will be **generic** by providing domain-independent system components, freeing the user from the burden of complex Grid usage and maintenance. Specific application knowledge will be added in a customisation phase carried out by system integrators including SMEs.

The consortium will demonstrate this generality by applying K-WF Grid in three **different application domains**: scientific simulations (flood forecasting simulation) as well as two industrial applications (ERP and traffic management).

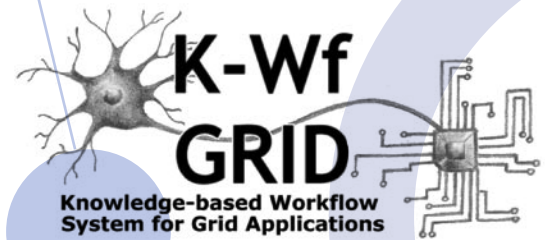
K-WF Grid contributes to **strengthening SMEs** and creating progress by aggregating SME contributions with those of research organisations and global players. Two industrial SMEs are involved in the project, enabling a strong focus on SME research and application, including transferability of results to real-world practice and strengthening of the European SME landscape.

K-WF Grid will help to bring the **benefits** of a global computation and information environment to a **broader user space** beyond the computer science community.

Project partners

Organisation name and country

FRAUNHOFER GESELLSCHAFT E.V.	DE
USTAV INFORMATIKY, SLOVENSKA AKADEMIA VIED	SK
LOGICDIS S.A.	EL
SOFTECO SISMAT S.P.A.	IT
LEOPOLD FRANZENS UNIVERSITAET INNSBRUCK	AT
AKADEMICKIE CENTRUM KOMPUTEROWE CYFRONET	PL



Contract number
511385

Type of project
Specific targeted research project

Project coordinator
Fraunhofer Gesellschaft (FIRST)

Contact person
Dr Steffen Unger
Kekuléstrasse 7
D-12489 Berlin
steffen.unger@first.fhg.de

Project website
<http://www.kwfgrid.net>

Maximum Community contribution to project
EUR 1 746 822

Project start date
1 September 2004

Duration
30 months

