

D3.1



Design of the license service, specification of
WS-Negotiation protocol

Version 1.0

WP 3 - Implementation of Basic Technology and Security

Dissemination Level: Restricted to Programme
Participants

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24/10/2008

Status: Final

**Seventh Framework Programme of the
European Community**



Information Society

Proposal/Contract no.: 216759

Acronyms

ADI	Administrator Interface
API	Application Programming Interface
ARS	Accounting Record Service
ASP	Application Service Provider
CAS	Globus Community Authorization Service
DRM	Distributed Resource Manager
GRAAP-WG	Grid Resource Allocation Agreement Protocol Working Group
IM	Instant Messenger
ISV	Independent Software Vendor
LIS	License Information Service
OASIS	Advancing open standards for the information society
OGF	Open Grid Forum
PDP	Policy Decision Point
PEP	Policy Enforcement Point
PKI	Public Key Infrastructure
PMI	Privilege Management Infrastructure
SAML	Security Assertion Mark-up Language
SLA	Service Level Agreement
SmartLM:	Grid-friendly software licensing for location independent application execution
SOA	Service Oriented Architecture
UNICORE	Uniform Interface to Computing Resources
UVOS	UNICORE Virtual Organization Service
VO	Virtual Organization

VOMS	VOMS is an acronym used for Virtual Organization Membership Service in grid computing.
WS Agreement	Web Services Agreement
WSDL	Web Service Description Language
WSRF	OASIS Web Services Resource Framework
X.509	Public-Key Infrastructure
XACML	eXtensible Access Control Mark-up Language
XKMS	XML Key Management Specification
XML	Extensible Mark-up Language

1. Summary

The objective of this deliverable is twofold:

1. To present architecture and design of the SmartLM license service,
2. To describe the WS-Agreement-Negotiation protocol.

Accordingly, the document is structured in two major parts: Section 2 focuses on the license service while section 3 addresses the negotiation protocol.

Architecture and design of the SmartLM license service are based on three sources:

1. The outcome of work package 1 described in D1.1 [1], namely functional requirements and use-cases.
2. The results of work package 2 described in D2.1 [2].
3. State-of-the-art in web-service technologies.

Gathering of the requirements was driven by technical and functional aspects as well as market perspectives and business models, which are elicited in WP2. The business relevance of the requirements was analyzed and rated in order to distinguish between State of the Art features and new ones, which are either required or optional for new business models.

For the initial prototype of the license service, non-functional requirements will not be taken into account except for security requirements.

The negotiation protocol has been specified in close collaboration with the Grid Resource Allocation Agreement Protocol working group (GRAAP-WG) [3] of the Open Grid Forum (OGF) [4]. The protocol currently described is in the process of becoming a proposed recommendation of the OGF. Members of the SmartLM project actively contribute to this process participating in the GRAAP-WG of the OGF. The collaboration within the GRAAP-WG ensures that the requirements of the SmartLM project find their way into the OGF specification of the WS-Agreement-Negotiation protocol.