managing software complexity

Collaboration plan
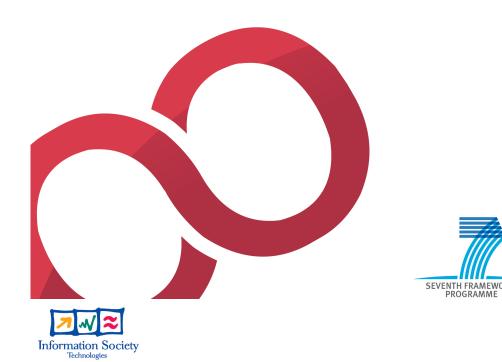## Deliverable D7.1

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SEVENTH FRAMEWORK PROGRAMME

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Web site: www.mancoosi.org   **Blog:** blog.mancoosi.org

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1   Introduction

The collaboration plan described in this report covers the liaison and co-operation activities with the other ICT projects under the WP2007/2008 objective "Service and Software Architectures, Infrastructure and Engineering". The cooperation aims at exploiting synergies between the projects and increasing the impact of the ICT initiative. Exploitation of synergies between Mancoosi and the other projects will consist in participation to workshops, in contributions to working groups, in joint dissemination activities and in production of joint dissemination material.

This report presents the SSAI FP7 projects relevant to Mancoosi topics and the collaboration plan between Mancoosi and each of them. In a second section, complementary Mancoosi actions transversal to all projects are spelled out.

2   Mancoosi collaboration plan with FP6/FP7 projects

2.1   S-CUBE

Project name	S-CUBE
Project type	Network of Excellence
Web site	`http://www.s-cube-network.eu/`
Start date	March 2008
Duration	4 years

S-Cube is a Network of Excellence in software services and systems aiming at establishing "an integrated, multidisciplinary, vibrant research community". S-Cube is coordinating a set of transversal activities with the objective to reduce research fragmentation and to improve global European innovation efficiency. S-Cube activities consist of integration activities, joint research activities and dissemination activities. Mancoosi intends to contribute to the following activities by registering as an associate S-Cube partner and taking part in the subsequent workgroups:

- S-Cube knowledge model: this model will "capture terminology and competences of the S-Cube partners and their research". In the field of open-source software services and systems, Mancoosi will contribute the terminology and conceptual graph covering the field of software dependencies management and software upgrade

- S-Cube joint research activity 1: this activity is "concerned with engineering and adaptation methodologies for service-based applications. It combines different research efforts form the requirements engineering discipline, the human computer interaction discipline and the software engineering, adaptation and testing disciplines." Mancoosi team will contribute to this activity in the field of formal methods for software engineering.

- Spreading of excellence activity, aiming at broad dissemination of research results. Mancoosi will submit for inclusion the produced dissemination material to the general books and brochures produced by S-Cube partners.

2.2 DEPLOY

Project name	DEPLOY
Web site	`http://www.deploy-project.eu/`
Start date	01/02/2008
Duration	4 years
Project type	Integrated project
Coordination	Newcastle University (UK)

As Mancossi, DEPLOY aims at advancing software engineering methods through the use of formal methods. DEPLOY is leading a working group on formal methods for SOA covering the following topics: interface specification and compatibility checking; application and work-flow modelling and analysis, model-based design; model-based testing; model checking and automated verification. Mancoosi will contribute to this working group in the area of system modeling, upgrade modeling and integrated systems maintenance.

2.3 Qualipso

Project name	QualiPSo
Web site	`http://www.qualipso.org`
Start date	01/10/2007
Duration	4 years
Project type	Integrated project
Coordination	Engineering Ingegneria Informatica SpA (IT)

As stated on the project's Web site, "QualiPSo intends to define and implement the technologies, processes and policies to facilitate the development and use of open-source software components". Mancoosi will contribute to QualiPSo along the following axis:

- Trustworthy results: the QualiPSo project describes this axis as "the identification, quantification, and assessment of the quality factors related to the software products as well as to the artefacts produced during software development that affect trust in open source software products, with emphasis on functional and non-functional factors." Maintenance and upgradability of integrated components is a key part affecting adoption of software products. The Mancoosi team will propose to integrate the Mancoosi toolchain into the QualiPSo platform to support trustworthy open-source software.

- Competence centers: QualiPSo intends to develop "a long lasting network of professionals caring for the quality of open-source for enterprise computing. Six QualiPSo Competence Centres – running the collaborative platforms, tools and process developed in this project – will be set up to support the development, deployment and adoption of OSS by private and public Information Systems Departments, large companies, SMEs, end users and ISVs." The Mancoosi team will put its tooling and competencies at

QualiPSo consortium's disposal for integrating Mancoosi achievements and know-how into the QualiPSo platform and enterprise service portfolio.

- Exploitation, dissemination and training: the Mancoosi tooling and documentation will be submitted to the QualiPSo consortium for potential integration into the material disseminated by QualiPSo.

2.4 NESSI Open Framework Reference Architecture

Project name	NEXOF Reference Architecture (NEXOF-RA)
Web site	`http://www.nexof-ra.eu/`
Start date	01/03/2008
Duration	2 years
Project type	Integrated project
Coordination	Engineering Ingegneria Informatica SpA (IT)

NEXOF-RA describes itself as a project aiming at "building the NEXOF generic open platform for creating and delivering applications enabling the creation of service based ecosystems where service providers and third parties easy collaborate." The NEXOF-RA will focus on the following areas: Core services, User interaction, Infrastructure, Security, Quality of service.

The NEXOF-RA specification will be designed in an open process involving all the relevant initiatives and organizations concerned on building a new generation of services of the Internet of the future. Mancoosi will play an active role in the design of those specifications by contributing in particular to the following topics targeted by the NEXOF-RA.

- Definition of infrastructure services[1]: NEXOF infrastructure services include "network connectivity, storage, processing and execution environments for software components and virtual machines, [...] and the combination of these into integrated environments."

- Highly available SOA[2] and scalable approaches to service oriented infrastructures[3]: those two topics focus on the consistency and on the provisioning of NEXOF services for maximizing the NEXOF quality of service, hence share concerns with Mancoosi objectives.

The Mancoosi team will contribute their know-how on complex software system management to the design of NEXOF specifications for service consistency checking and for service upgrades management. Mancoosi input will be contributed on the occasion of the NEXOF architecture meetings, whose kickoff is scheduled October 20-21 2008 in Brussels.

3 Other collaboration actions

In addition to direct collaborations with the working groups set up by the other FP7 projects listed above, Mancoosi will take part in the transversal initiatives presented below.

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[1] `http://www.nexof-ra.eu/definition_infrastructure_services`
[2] `http://www.nexof-ra.eu/highly_available_SOA`
[3] `http://www.nexof-ra.eu/scalable_approaches_SOI`

3.1   Participation in the SSAI collaboration meetings

A Mancoosi delegation will attend the SSAI collaboration meetings for identifying new collaboration and dissemination strategies and refining the Mancoosi collaboration plan during the whole life of the project.

3.2   Workgroup on system upgrade management

Mancoosi will set up a working group for discussing the management of software dependencies and system upgrades.

3.3   Workshops

Mancoosi workshops will take place at months 18 and 36. The FP7 projects mentionned above will be invited to submit contributions.

3.4   Joint dissemination effort

Mancoosi will take part in the joint dissemination effort set up within the SSAI projects' group[4] and aiming at the production of dissemination material that can be used for communication towards the general public, the organization of joint summer schools, and common contributions to standards.

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[4]`http://cordis.europa.eu/fp7/ict/ssai/events-20080922-23-cm-soft_en.html`