Large Scale Choreographies for the Future Internet

From 2010-10-01 to 2013-09-30, closed project

Project details

<table>
<thead>
<tr>
<th>Total cost:</th>
<th>Topic(s):</th>
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<tr>
<td>EUR 8 679 857</td>
<td>ICT-2009.1.2 - Internet of Services, Software and Virtualisation</td>
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<tr>
<th>EU contribution:</th>
<th>Call for proposal:</th>
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<tr>
<td>EUR 6 384 089</td>
<td>FP7-ICT-2009-5 See other projects for this call</td>
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<tr>
<th>Coordinated in:</th>
<th>Funding scheme:</th>
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<tr>
<td>France</td>
<td>CP - Collaborative project (generic)</td>
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Objective

The CHOReOS project positions itself in the context of the Ultra-Large-Scale (ULS) Future Internet of software services. To address the challenges inherent of ULS as well as other key requirements of the Future Internet, such as fusion of the user/developer/system roles, adaptability and QoS-awareness, to name a few, CHOReOS revisits the concept of choreography-based service composition in service-oriented systems. CHOReOS introduces a dynamic development process, and associated methods, tools and middleware sustaining the ever-adaptable composition of services by domain experts – being the users of business choreographies - in the Future Internet. CHOReOS concepts then encompass formally grounded abstractions and models, dynamic choreography-centric development process, governance and service-oriented middleware, thus providing an Integrated Development & Runtime Environment (IDRE) aimed at overcoming the ULS impact on software system development. Formally grounded abstractions and models enable reasoning about the properties, both functional and non-functional, of ULS choreographies. Dynamic choreography-centric development process allows the fusion of the user/developer/system roles, while managing the ULS service base, and supports the synthesis of scalable and adaptable choreographies. Governance includes service integration policies and rules, as well as tools for dynamic verification & validation of choreographies. Finally, service-oriented middleware enables adaptable choreographies over ESB-based middleware, Grids, Clouds, and technologies for the Internet of Things, thus overcoming scalability and heterogeneity issues of the Future Internet. Last but not least, CHOReOS assesses the industrial exploitation of this choreography-centric vision by experimenting on three demanding use cases in different domains (passenger-friendly airport, mobile-enabled coordination of people, vehicular network) and by carrying out a study of social-technical factors.

Related information

Documents and Publications

- D4.1 Governance V&V policies and\n\n\n\nrules
- D3.1 Companion to Deliverable D3.1 Survey on DPWS
- D3.1 Middleware specification
- D8.1 "DynaRoute" scenario specification and requirements
- D2.1 Dynamic Development Model Definition
- D9.7.1 Plan of open source community building
D5.1 Requirements for the CHOReOS IDRE
D1.1 State of the Art, Baseline, and Beyond
D10.5.1 Plan of CHOReOS standardisation activities and groups
D1.3 Initial Architectural Style for CHOReOS Choreographies
D1.2 Perspective on Future Internet and Initial Conceptual Model
D9.1 Public Web site
D5.7.1 Integration Plan - 1st version
D9.9.2 First report and updated plan on CHOReOS collaboration
D9.2.1 Flyer - 1st year
D9.3.1 Annual Report on CHOReOS Dissemination 1st year
D6.1 Requirements and scenarios for the "Passenger-friendly airport"
D9.9.1 Collaboration plan
D5.2 Specification of the CHOReOS IDRE

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