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Press Information

OASIS, a research project partially funded by the European Commission under FP7, promises to revolutionize the interoperability, quality, breadth and usability of services addressed to older persons through ontologies and semantic web services.

First results will be presented at the 10th International Semantic Web Conference (ISWC 2011) in Bonn, Germany (October 23-27, 2011).

How to support holistically the independent living and mobility of the older citizens across Europe? How to connect services for the elderly in an one-stop-shop fashion and interrelate and integrate those services?

OASIS (Open architecture for Accessible Services Integration and Standardisation), a research project partially funded by the European Commission (FP7-ICT, GA# 215754), has developed an **open and innovative reference architecture, based upon ontologies and semantic web services**. This architecture enables plug & play and cost effective interoperability, seamless connectivity and sharing of content between existing and newly developed services in all domains required for the independent living of older people and for the enhancement of their Quality of Life.

The project addresses the issue of direct re-usability of information across heterogeneous services and devices through the common understanding and sharing of contextual information. The OASIS platform allows aggregation of different services which offers the unique benefit of enhancing each of the services through a synergic exchange of information. In consequence, each application can adapt to the specific needs of the user

*By fostering interoperability, standardization and organizational / business arrangements based on cooperative and aggregating models, OASIS addresses some of the main weaknesses in this area. These include fragmentation and duplication, poor cooperation among the key players of the value chain and lack of sustainable business models. **“By these means, OASIS aims to contribute to the sustainability and efficiency of social and health care systems”** says Project Coordinator Silvio Bonfiglio.*

OASIS will moreover boost and improve the competitiveness of the markets for innovative products and services, responding to the ageing challenge at both EU and global level, thus creating new opportunities for businesses.

The research work carried out by the OASIS Project in the field of ontologies and semantic web services will be discussed during the half-day OASIS Symposium (October 25, 2011: 14:00-18:00) co-located with the 10th International Semantic Web Conference (ISWC 2011) in Bonn, Germany (October 23 - 27, 2011).

Press is invited to attend the Symposium!

<http://iswc2011.semanticweb.org/>

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OASIS Symposium at the ISWC 2011: Hyper-Ontologies and Modularity for Semantic Interoperability

The aim of the OASIS Symposium is to serve as a forum to exchange ideas with regard to the realization of a semantic interoperability of services.

The common vision of the Semantic Web is the achievement of seamless and transparent interoperability of services across diverse providers by making the *meaningful content* of those services openly accessible. For content to become 'meaningful' it must be related to more general information schemes for which some semantics has already been provided. Such information schemes range from tag collections, which impose an indirect semantics by means of induced similarity across tagged entities to formal ontologies, which explicitly represent class-subclass relationships, the attributes of such classes as well as additional information that may be known about combinations of such classes and their instances. Whereas the semantic information that is explicitly maintained in ontologies might appear ideal for realizing the Semantic Web vision, substantial problems still render this goal difficult in practice. The symposium will address these problem areas.

More specifically OASIS addresses:

(i) the inherent complexity of constructing the high quality formal specifications necessary for trustworthy reasoning and (ii) the tendency for many formal specifications to emerge with little overlap in their coverage, modeling styles and intended semantics.

The solutions being explored involve: the replacement of large-scale ontologies by small-scale, application-specific ontologies maintained by those who know their data best, the system developers; automatic and semi-automatic support tools for allowing system developers to flexibly relate their data with re-usable ontologies in their domains of application; and the automatic generation of code supporting seamless data transfer across and within applications. The resulting framework relies on the well supported inter-linking of heterogeneous 'ontological modules', which we term a *hyper-ontology*.

The symposium will present results achieved to date and – through the contribution of highly qualified speakers, external to the OASIS Consortium - will raise issues in the formal foundations and guidelines for future hyper-ontology work and discuss opportunities for new standardization initiatives in the area of hyperontology-driven interoperability.

Specific attention will be devoted to interoperability spanning complex services in the areas of Independent Living, Autonomous and Smart Homes and Workplaces and to the provision of cross-domain networked ontologies, a goal which is itself a substantial research challenge.

Relevant topics that will be raised during the *OASIS Symposium* presented by renowned experts both internal and external to the OASIS Consortium, include:

- Modular Ontology Design
- Reasoning over content from multiple sources
- Query processing over multiple linked datasets
- Creating applications drawing on multiple data sources
- Open Ontology Repositories
- Information and design quality of ontologies
- Semantic Web Services and support tools



The program is completed by a Round Table discussion titled "Interoperability, Applications and Hyper-ontologies: the way forward".

You can sign up for the OASIS Symposium when [registering](#) for the ISWC.



ISWC is the major international forum where the latest research results and technical innovations on all aspects of the Semantic Web are presented.

<http://iswc2011.semanticweb.org/>



OASIS is a project partially funded by the European Commission (FP7-ICT – Grant Agreement #215754). It started on January 2008 and will be completed in December 2011.

www.oasis-project.eu

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