SMART VORTEX

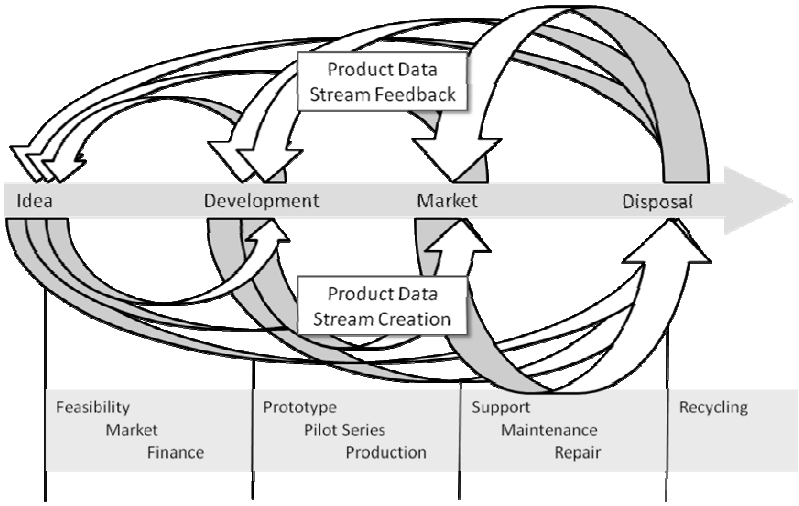
Scalable Semantic Product Data Stream Management for Collaboration and Decision Making in Engineering

"Helping industry to cope with data deluge in Design & Manufacturing"

Annual Report 2010

SMART VORTEX Project aims at providing a technological infrastructure and interoperable methods, tools, and services that will support large-scale industrial innovation and collaborative engineering projects; making possible that information management will underpin an intelligent analysis of massive data streams and growth of business value and capabilities.

In this project, the union of all product data streams, both along the direction of the product lifecycle and the product and innovation process feedback, is called **SMART VORTEX**. It comprises amongst other, sensors` data, design, simulation, experimental, and testing data, multi-media collaboration data and data from higher level inferred events generated by analyses.



Summary of Activities

The SMART VORTEX project is a 48 months FP7 Integration Project started on October 1st 2010, under the domain of Strategic Objective 4.3 Intelligent Information Management. The main achievements of SMART VORTEX reached along 2010 are:

a) We have successfully set into motion the SMART VORTEX project. It was successfully launched in Darmstadt, Germany.

b) All partners met during kick-off meeting and reviewed the scope of the project securing project roll-out and consolidating a shared vision and common understanding on the operational details of the SMART VORTEX project.

Important work areas

The course of action within SMART VORTEX project is organized in four overlapping cycles that comprises the development of all project processes. The Inception and Elaboration cycle is the first cycle, aimed at creating “common ground” among all consortium participants. This cycle has started with the definition of requirements analysis, which comprised setting up the definition of the standard RTD workflow of requirements needed for the RTD cycle of the project.

Requirements analysis and identification of user scenarios, aimed at collecting the needs and expectations of end users and service providers for SMART VORTEX development. Key activities performed comprised organisation for setting up the analysis of user requirements, needs and usage scenarios.

Suite modelling, data & system architecture; aimed at creating information models of concepts, relationships, constraints and rules for the technological framework of the project. Key activities performed comprised organisation and setting up the evaluation for high-level semantic representations for streaming information and data sources as well as for information and semantic modelling.

Semantic data stream models and access language; aimed at developing semantic models for sensors` data streams and collaborative models. Key activities performed comprised evaluation of operational details for this area of work.

User Involvement, Promotion and Awareness

Although promotion and awareness actions will formally start during the first quarter of 2011, a few actions have been performed; main activities comprise covering with a press release the successful launching of SMART VORTEX and contacting pre-existing consortium’s professional and business networking contacts, to explain the scope of SMART VORTEX and raise their interest for future project activities.

Future Work

During 2011 efforts will be focused on consolidating the first and second cycles of the project. On one hand, actions will be centred in securing the project roll-out and consolidating a shared vision for common understanding among partners on the operational details of the project. On the other hand efforts bring to bear the ground for the creation of SMART VORTEX infrastructures and services. Main activities will comprise analysing how and for what needs SMART VORTEX can enhance business value and capabilities in large-scale engineering projects, developing the needed semantic models and languages for the SMART VORTEX suit and securing a proper dissemination of the project.

Further Information

- EC ICT Information and Communication Technologies Projects: SMART VORTEX