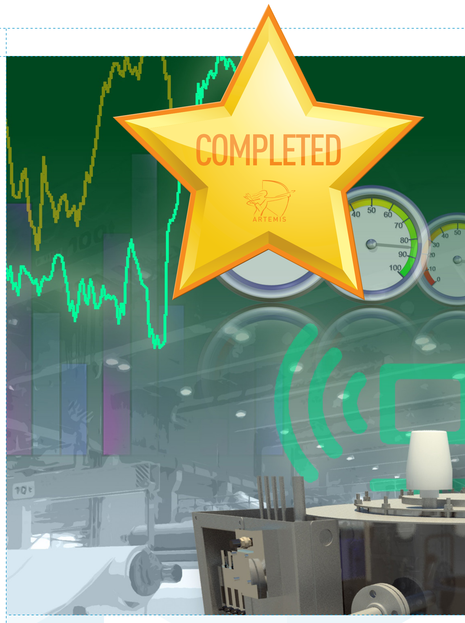
ARTEMIS Call 2009 Project
100223

eSONIA

Embedded Service Oriented Monitoring, Diagnostics and Control: Towards the Asset-Aware and Self-Recovery Factory



EXECUTIVE *summary*

The objective of the eSONIA project is to realize the asset-aware and self-recovery plant through: pervasive heterogeneous IPv6-based embedded devices and on-board specialized services glued through a middleware capitalizing the service oriented approach.

RELEVANCE CALL *2009 objectives*

eSONIA falls within the scope of Sub-programme 4 "Efficient manufacturing and logistics" and delivers on two Industrial Priorities: "Reference designs and architectures", and "Seamless connectivity and middleware".

MARKET *innovation*

eSONIA will have an impact on the business area of efficient development of monitoring systems based on embedded platforms (fast development of new solutions based on eSONIA results, and high performance of the system in run-time). The inclusion of SOA technology will ease the integration among heterogeneous systems, the applicability to other technological fields, and therefore the adoption by the market. In the area of embedded platform based solution, the impact of the project is rooted in the fact that it provides a platform designed to speed up the task of developing and deploying new platforms.

TECHNICAL *innovation*

The novelty of eSONIA lies in the integration of emerging technologies (such as: semantic web services at device level, IPv6-based communication networks in large, distributed and heterogeneous applications, Web Services in wireless sensor nodes, and others) in a novel way.

As an outcome of eSONIA, advances in the state of the art of monitoring & visualization systems and track & trace techniques are foreseen. Expected results include: tools for 3D visualization of plant operations, (asset) health assessment, prognostics, maintenance scheduling (i.e. the best mix of cyclic, condition-based and predictive maintenance); an In-plant (Indoor & Outdoor) Geo-location System for Real-time Asset Management and a Service Management System for Enhanced Manufacturing Control.

eSONIA

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WEBSITE
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START
March 2010

DURATION
36 months

TOTAL INVESTMENT
€12 M

PARTICIPATING ORGANISATIONS
15

NUMBER OF COUNTRIES
4