FoFdation
FOUNDATION FOR THE SUSTAINABLE FACTORY OF THE FUTURE

SEVENTH FRAMEWORK PROGRAMME

21/12/2011, Toulouse: FoFdation Project Partners Discuss the Foundation for the Smart Factory of the Future with the European Commission

Members of the FoFdation project recently held their third General Assembly meeting in Toulouse, France from 14th–15th December 2011 at the premises of coordinating partner AIRBUS. The FoFdation project is addressing today's major challenges for manufacturing companies, operating under productivity pressures, greater product variability and environmental constraints. FoFdation envisions a 'Smart Factory' architecture and implementation which holds promising potential in achieving significant benefits in earlier visibility of manufacturing issues, faster production ramp-up time, faster time-to-volume production and subsequently shorter time-to-market, reduced manufacturing costs and improved product quality as well as sustainability objectives like reduced energy consumption and waste reduction. The project started in June 2010 and will run for 4 years.

FoFdation will:

- Develop a Smart Machine controller (SMC) concept enabling innovative adaptive and self-learning capabilities within a machine controller
- Realize a Smart Manufacturing Optimizer (SMO) enabling optimized and predictable cutter paths in combination with innovative monitoring technologies to optimize the actual manufacturing process
- Integrate manufacturing engineering in the CAD/CAM/PLM domain with production execution in a Manufacturing Execution System (MES) and logistics managed in ERP in order to improve productivity and sustainability.

These results will be integrated and demonstrated using case studies from end-users Fiat and Airbus.

Representatives from the European Commission, including Rolf Riemenschneider, FoFdation Project Officer, and the Project Technical Advisors Thomas Baer (Daimler), Christoph Hanisch (Festo), Christos Emmanouilidis (CETI/R.C.) and Dominique Laffret (Missler) attended the General Assembly meeting for the project's first contractual review meeting. Not only being a contractual obligation for PPP-FoF-projects, the review provided valuable feedback. The wealth of experience and knowledge of the representatives helped partners to focus on the aims and objectives of the FoFdation project: increasing the competitiveness of the European manufacturing industry.

Members of the FoFdation project together with representatives from the European Commission at the 3rd General Assembly meeting at coordinator AIRBUS in Toulouse, France

Being 18 months into the project, partners have defined the general requirements and architectures of the systems that will be developed in the project as well as the case studies from the end-users. Additionally, existing information models have been analysed and weaknesses have been identified. From here, initiatives for extending existing information models or creating new information models have been started. More tangible work has been performed on realizing the machine controller of the future (SMC); a first prototype has been realized by partners CADCAMation and ECN.

Commenting on the FoFdation project, Rolf Riemenschneider, Project Officer from the European Commission said: *"The FoFdation project is an ambitious and innovative project addressing future foundations of product life cycle management, production planning and management to achieve operation excellence of future factories. I am pleased to see that this consortium is addressing real industrial needs which will be demonstrated in Airbus' use case that aims at integrating and optimizing its supplier's manufacturing resources for the production of aircraft parts".*

Over the next 18 months almost all the technical tasks in the project will be active. The first results of the Smart Manufacturing Optimizer will be demonstrated by combining work done by partners ARTIS, Delcam and ECN. This work will show that time estimations in CAD/CAM systems can be more accurate, whilst also showing that surface quality can be accurately represented thus enabling better planning by manufacturing companies and reducing scrap due to non-conformities in surface quality.

According to the Project Coordinator, Jean-Bernard Hentz from AIRBUS, the FoFdation project work scheduled over the next 18 months will *"focus on the integration of the results obtained in the different work packages resulting in solving end-user application problems in the real workflow and having a postive impact in general on the environment".*

For more information about the FoFdation project visit **http://www.fofdation-project.eu** and the project's social media pages, including Facebook (**#fofdationproject**) and Twitter (**@FoFdation**).

Acknowledgements:
This project is co-funded by the European Commission as part of the European Economic Recovery Plan (EERP) adopted in 2008. The EERP proposes the launch of Public-Private Partnerships (PPP) in three sectors, one of them being Factories of the Future (FoF). Factories of the Future is a EUR 1.2 billion program in which the European Commission and industry are collaborating in research to support the development and innovation of new enabling technologies for the EU manufacturing sector.

For further information please visit:
http://ec.europa.eu/research/industrial_technologies/factories-of-the-future_en.html