

**COMET Press Release:**

***European “COMET” Project targets the use of industrial robots for high-end machining for cost effective, flexible and reliable manufacturing solutions in the “Factory of the Future”.***

*Delcam recently hosted the inaugural meeting in Alicante, Spain, of the 8 M€ COMET project funded by the European Commission. As the Co-ordinating Partner, Delcam is combining its experience and expertise in manufacturing with 13 other technical partners from 8 countries across Europe to use plug-and-produce COmponents and MEthods for adaptive control of industrial robots enabling high-end machining for cost effective, flexible and reliable manufacturing solutions. Partners include Nikon (B), ARTIS (D), AMRC (UK), TEKS (Fr), Fraunhofer IPA (D), BTU (D), Lund University (S), Gizelis (Gr), University of Patras (Gr), N Bazigos (Gr), DemoCenter Sipe (It), SIR (It), and Nisaform (CZ). The COMET project will impact on automotive, aerospace, high precision and mould & die applications.*

*The 30 month COMET project aims to overcome the challenges facing European manufacturing industries by developing innovative machining systems that are flexible, reliable and predictable with an average of 30% cost efficiency savings in comparison to machine tools. From a conceptual point of view, industrial robot technology could provide an excellent base for machining being both flexible (due to their lay-out) and cost efficient (robots cost 2-5 times less than machine tools). However, industrial robots lack absolute positioning accuracy, are unable to reject disturbances in terms of process forces and lack reliable programming and simulation tools to ensure right first time machining, once production commences. These three critical limitations currently prevent the use of robots in typical machining applications.*

*Innovations to overcome these limitations proposed by the COMET consortium include an adaptive robot path generation system based on kinematic and dynamic models, an adaptive tracking system and a High Dynamic Compensation Mechanism (HDCM). These innovations will improve robot accuracy, reduce setup times by 50% and enable precise first time programming and simulation with real-time robot path correction.*

*According to the coordinator of the project, Jan Willem Gunnink from Delcam PLC, “The COMET consortium contains a unique combination of partners from industry, research institutes and universities who all have an enormous drive to deliver project results to European manufacturing industries. The inaugural meeting already showed a great team spirit and a strong belief in the project goals. With my colleagues in the Management Board of this project, I am confident that these goals can support European manufacturing industries to continue to move forward”.*

*From January 2011 the website [www.cometproject.eu](http://www.cometproject.eu) will provide regularly updated project results.*

**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/lists/factories-of-the-future\\_en.html](http://ec.europa.eu/research/industrial_technologies/lists/factories-of-the-future_en.html)*

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*Figure 1: COMET consortium*