

COMET Project Shapes the Future of Robot Machining

The COMET project consortium was present at the 6th General Assembly meeting, held at Lund University, Sweden from 11th – 13th April 2012. Now in its final year, the Delcam coordinated project is focusing on demonstrating the advantages of using the complete COMET platform for performing machining operations with industrial robots.



*The COMET consortium during 6th
GA meeting in Lund, Sweden.*

The production and assembly of the High Dynamic Compensation Mechanism (HDCM) has now been completed, including the precise fitment of piezo actuators for fast and precise movement of the device, and the integration and calibration of the advanced control modules of the HDCM. The combination of continued development of Nikon Metrology's advanced tracking system (ATIR), further advancements of Delcam's innovative robot programming and simulation software, and the implementation of the kinematic models across numerous COMET robot cells, has resulted in plans for the COMET project to increase the number of real-world machining experiments over the next few months.

During the meeting, the consortium visited the Lund University laboratory to witness several robot demonstrations, including a robot imitation concept based on the ATIR capabilities and the HDCM control concept that Lund University is developing together with Fraunhofer IPA. Lund University is the largest institution for research and higher education in Sweden with expertise in non-linear control, hybrid control, system identification, iterative learning control, and practical implementations of these techniques in industrial systems.

Present from the European Commission was Prof. Vincenzo Nicolò, Project Technical Advisor, who remarked: "It is clear that much has been achieved over the last six months. The partners have invested a lot of effort to overcome the challenges of the project and it is evident that there is a strong commitment within the consortium to meet the project target".

In the remaining 10 months of the COMET project, the consortium will integrate each part of the COMET platform and provide solid proof that machining with robots is a new, cost-effective and reliable manufacturing solution, by demonstrating the platform across a variety of real-world applications.

For more information about the COMET project visit <http://www.comet-project.eu> and the project's social media pages, including Facebook (Comet project) and Twitter (@COMET_project).

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