Horizon 2020 Project

Real-Time Mining started in April 2015

On 14th and 15th of April the Horizon 2020 funded project Real-Time Mining kicked off. The overall aim of Real-Time-Mining is to develop a real-time framework to decrease environmental impact and increase resource efficiency in the European raw material extraction industry. The key concept of the research conducted is to promote a paradigm shift from discontinuous to a continuous process monitoring and quality management system in highly selective mining operations. Real-Time Mining will develop a real-time process-feedback control loop linking online data acquired during extraction at the mining face rapidly with a sequential up-datable resource model associated with real-time optimisation of long-term planning, short-term sequencing and production control decisions. The project will carry out research and demonstration activities integrating automated sensor based material characterisation, online machine performance measurements, underground navigation and positioning, underground mining system simulation and optimisation of planning decisions, state-of-the art updating techniques for resource/reserve models. The positive impact of the project will be achieved through improvements in process efficiency and resource utilisation. These will increase energy efficiency and facilitate significant improvements in the environmental performance of mining operations by reducing the emissions and wastes generated. It is considered that deposits which are currently thought as economically marginal or difficult to access could become viable.

The project consortium comprises thirteen European partners from five countries and is led by the Resource Engineering Section of the Delft University of Technology assisted by an international External Expert Advisory Board. Besides Delft University of Technology, the partners involved include the Rheinisch-Westfälische Technische Hochschule Aachen; Imperial College of Science, Technology and Medicine; Associacao do Instituto Superior Tecnico para a Investigacao e Desenvolvimento (IST-ID); Nederlands Organisatie voor Toegepast Natuurwetenschappelijk Onderzoek-TNO; Geovariances, Dassault Systems GEOVIA Ltd.; LSA-Laser Analytical Systems & Automation GmbH; XGraphic Ingenieurgesellschaft mbH, SonicSampDrill BV; Technische Universität Bergakademie Freiberg; Spectral Industries B.V. and Ingenieurpartnerschaft für Bergbau, Wasser und Deponietechnik (IBeWa).

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