



Alpine Airborne Hydromapping – R2P

Research Project

Auftraggeber / Förderung	Comet-K (FFG)
Projektzeitraum	2013-2016

In a consortium of 3 scientific partners (University of Innsbruck's Units of Hydraulic Engineering and of Surveying and Geoinformation, Vienna University of Technology, Department of Geodesy and Geoinformation) and 8 company partners (AHM, Riegl Laser Measurement Systems, Revital, TIWAG, IKB, Verbund, BEW and Uniper - formerly e-on), the enhancement of the technology of airborne laser bathymetry was pursued. Airborne laser bathymetry is a technology that allows the determination of inundated river bed topographies, with a resolution of 30 to 40 points per m² and a vertical accuracy of 5 to 10 cm.

The goal was to intensively gain experience in the collection and processing of airborne laser bathymetric information. The consortium contained stake holders of all steps in the process, from instrument and software development, over flight performance and measurement operation, to data processing, evaluation and data analysis for end users. Specific demands for data collection in Alpine areas and also for their processing during strip adjustment were identified and successfully tackled. Comparative measurements of river geometries were conducted to verify the quality of the airborne laser information specifically in Alpine regions. The applicability of the data for the generation of topographic meshes for hydraulic simulations was evaluated. Comparative field measurements of water levels and flow velocities were conducted to validate results of hydraulic simulations that were based on the airborne laser bathymetric information.

