Contribution 173 in session “Logging in Steep terrain“

Project SLOPE: introducing new technologies in mountain forest operations

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Forestry operations in mountain areas are generally more expensive and less flexible compared to the harvesting systems deployed on flatland. In order to reduce this gap the EU funded the FP7 project “Integrated processing and control system for sustainable forest production in mountain areas” (SLOPE), which aims at developing a more efficient working system, by mean of innovative planning and harvesting tools specific for steep terrain conditions.
The projected system will enable the collection of multi-sensor data from remote sensing, Unmanned Aerial Vehicles and on-field surveying systems, for the generation of a Virtual Forest Model. This will be applied for characterizing and planning the use of the forest resources, optimizing the forest road network use, managing the logistics and assessing the optimal position of each single cable yarder corridor. Likewise an intelligent cable yarder/processor head system will be developed, featuring sensors and communication tools for a high degree of automation and advanced human-machine interface. Different Non-Destructive Testing methods, as well as pioneering chemometric analysis will be tested during the project allowing in-site automatic timber sorting. All assortments will be identified throughout the whole supply chain by mean of RFID tags and other traceability systems.
Information about origin, quality and quantity of the material will be real-time integrated in a unique online system, generating innovative procedures for silviculture, harvesting, logistics as well as purchasing activities. The outline and first results of this project will be presented.