

Satellites for smart logging

October 22 2014



Treemetrics in Ireland, supported by ESA's ARTES Programme, has developed an all-encompassing device with hybrid satellite/terrestrial communications and GPS to better manage our utilisation of forest resources. Credit: Treemetrics

Satcoms are helping to save our trees through more efficient use of our forests.

Satellites are mapping forests, sending instructions to loggers,

monitoring tree-harvesting machinery and coordinating log transport almost in [real time](#).

The Treemetrics company in Ireland, supported by ESA, has developed an all-encompassing device that uses hybrid satellite and terrestrial communications, and GPS.

The display gives detailed mapping information, showing a harvesting machine's driver which trees should be felled and how the wood should be cut.

At the same time, information on the logger's progress and location is sent via [satellite](#) to a central web-based system.

The in-vehicle display also helps other drivers find the logs stacked at specified locations so they can be moved to the roadside to await transport to sawmills.

Independent owner-operators of harvesting machinery benefit from detailed navigation as well as security features that help safeguard their equipment.

For forest owners, the system offers accurate information on logging yields.

The sawmills can tune the incoming supply by informing operators the type of timber currently in demand, whether pulp or a higher grade.

Treemetrics is also working under ESA's ARTES programme to develop a web-based application that uses [satellite navigation](#) and Earth observation data to provide vital insights into the health of forested areas, assisting the owners of forests to identify those areas most suitable for logging.

Satellites provide much higher-resolution images than traditional hardcopy maps, and they can be updated more frequently, giving landowners highly accurate and up-to-date information.

The Irish Farmers Association will jointly market the approach to their national membership under the name 'iForest'. Green Belt, Ireland's largest private forestry company, has announced plans to deploy it nationally to their clients.

Coillte are in talks to begin a pre-commercial rollout of the system in a test area by the end of the year. It is also being introduced in the UK to relay harvester information to some of the largest forestry companies.



Treemetrics in-cabin display. Credit: Treemetrics

Treemetrics plans to offer it to the haulage trucks that collect the timber left on the roadside ready for the sawmills.

This would mean the system could handle the entire timber chain, making it possible to closely track this valuable natural resource.

Provided by European Space Agency

Citation: Satellites for smart logging (2014, October 22) retrieved 21 September 2024 from <https://phys.org/news/2014-10-satellites-smart.html>

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