StanForD 2010 is a global standard for forest machines applying both cut-to-length (CTL) and tree length method, and is used by all major manufacturers.

The first version of StanForD appeared in 1987, and the first major revision of the standard, StanForD 2010, was adopted in 2011. Support for tree length machines were included in 2019.

Skogforsk is responsible for routine administration and development of StanForD, supported by Metsäteho in Finland. The work is jointly financed by machine manufacturers and the forestry sector. Meetings are held twice a year to discuss the development of StanForD.

StanForD currently has fourteen members:

Biometria – CGI – Coillté – Dasa Control Systems – Forest PHD
John Deere Forestry – Komatsu Forest – LogMax – Logset – Ponsse
Rottne Industri – SkogData – Technion – Tigercat

Do you want to know more about StanForD 2010?

More information is available at: skogforsk.se/stanford

Contacts

John Arlinger, Skogforsk, john.arlinger@skogforsk.se
Johan J. Möller, Skogforsk, johan.moller@skogforsk.se
Tapio Räsänen, Metsäteho, tapio.rasanen@metsateho.fi


John Arlinger


Johan J. Möller


Tapio Räsänen

skogforsk

StanForD 2010

– Modern communication with forest machines

New standard – new capabilities!

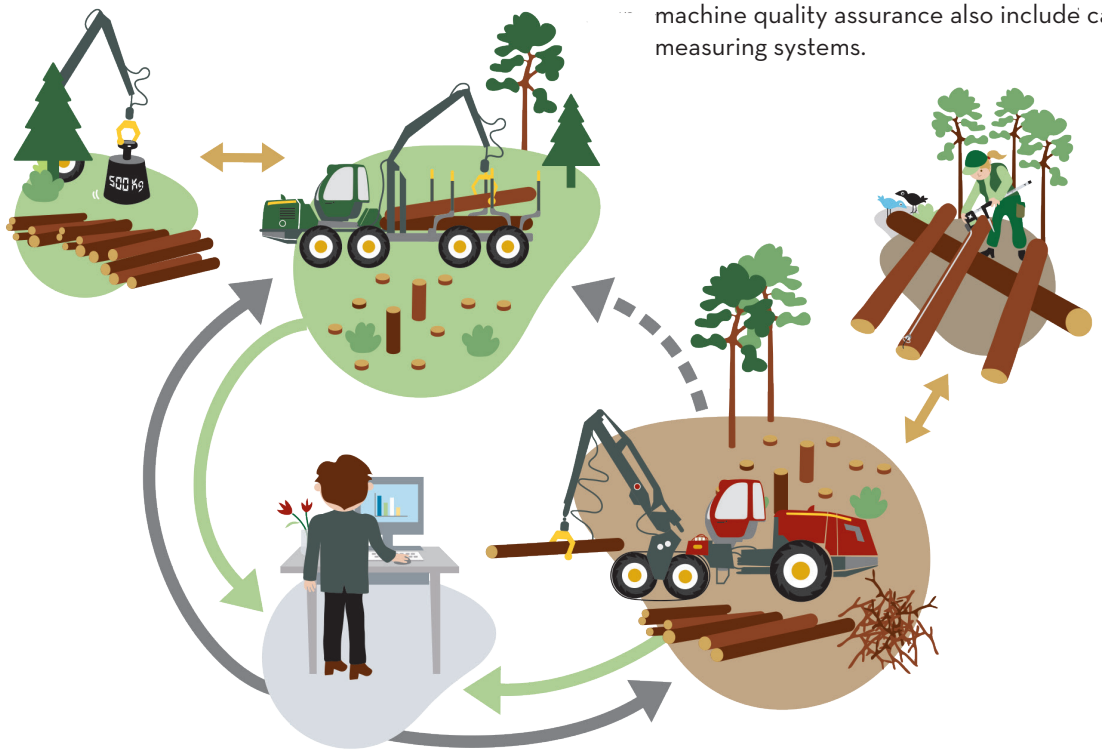
The software in the forest machine computer helps the operator cut the wood that industrial customers then process into sawn timber products, pulp or energy. Most of the data flows to, from and between forest machines are managed according to StanForD, the forestry sector's own standard, which supports operational control, production reporting, quality assurance, and operational monitoring.

With StanForD 2010, the forestry sector has a standard that is adapted to modern IT solutions and information needs, allowing detailed and flexible control and monitoring of harvester, forwarder, skidder, feller-buncher and yarder.

The format and structure in StanForD 2010 gives the forestry sector a very powerful tool for close control and in-depth analysis of logging. StanForD uses the well-established XML format.

Quality assurance and calibration

In order to ensure that the forest machine systems for measuring length, diameter, volume and weight are accurate, there are procedures for assuring measurement quality. For the harvester measurement, quality assurance includes making random control measurements of a number of stems and comparing the results with the machine data. An independent auditor making regular follow-ups can also be linked into the system. For the forwarder, quality assurance includes checking any load-weighing equipment. The StanForD 2010 messages for harvesting and forwarding forest machine quality assurance also include calibration data for the measuring systems.



Control

StanForD 2010 enables flexible control of logging operations. Changes can be made at any time to the products that are to be made and how they are to be bucked, even when logging is under way. Furthermore, only the small, altered part of the overall instruction need be sent to the machines if production parameters are changed.

Production reporting

Production reporting from the harvester is per log, so production can be reported and analysed according to very specific requests from, for example, the logging organisation or industrial customer. In the future, the structure will also allow every log to be reported online. The detailed harvester information can also be used as a basis for forecasts of forest fuel extraction and calculation of such product properties as density, heartwood content and knot structure. StanForD 2010 also introduces a message for reporting geographical information.

Operational monitoring

Operational monitoring is done by registering each individual work process for the operator and machine separately. The cause of various types of disruption can be registered. The system is independent of the logging object on which the machine is operating at the time. One advantage of separating operational monitoring from the object is that, for example, time gaps are avoided when a machine is moved from one object to another and then back again. Relevant key performance indicators can later be calculated and different machine systems and logging teams can be compared, by analysing production and standstill in different time series.