

John Arlinger

21 April 2015

Minutes StanForD2010

2015-04-15--16

Place:	Metsäteho, Vantaa, 12:00 2015-04-15 - 14:00 2015-04-16
Participants:	Tapio Räsänen, Metsäteho Timo Melkas, Metsäteho Juha-Antti Sorsa, Metsäteho (day 1) Lars Henriksson, SDC Antti Korkiakoski, John Deere Jonas Thorsson, Dasa Teemu Paldanius, Ponsse Rikard Jonsson, Skogforsk (day 1) Tuomo Vuorenpää, Savcor (day 1) Kari Peltonen, Fifth element (day 1) Juha Käppi, Fifth element (day 1) Uli Dietz, KWF Niclas Eriksson, Komatsu Forest (Lync) Anders Nylund, Komatsu Forest (Lync) Jean Plamondon FP Innovations (Lync) Urban Folkesson, Ponsse (Lync) Jouni Kytövaara, Logs Set (Lync) Jonas Gustafsson, Sveaskog (Lync, day 2) Juha Yli-Hemminki, Exertus (Lync) John Arlinger, Secretary Johan J. Möller, Chairman

§ 1 Opening of meeting

Johan J Möller opened the meeting.

§ 2 Agenda

The agenda was accepted by the meeting.

The secretary presented our road map for implementing new standard version.

An important issue to discuss in the autumn is whether we should aim for a new major version 4.0 in 2016 or stay with major version 3. There are presently only a limited number of issues that requires a new major version:

- Renaming of country specific bark functions, excluding older bark functions (Zacco, Skogforsk_Spruce)
- Attribute “agency” excluded from all “UserID” elements
- UserDefinedData elements without data types
- ShiftKey in Individual- and CombinedMachineWorkTime
- Some elements optional → mandatory?

No participant expressed a present need for quickly implementing version 4.0. This means that we may very well decide at the November meeting to stay with major version 3 for at least one additional year. The only area that might affect this suggestion is the forwarding instructions and production data since there are still some untested structures.

§ 3 Information about decisions after last meeting

Secretary presented some of the major decisions and discussion at the previous meetings in November and February.

It was decided at the February meeting (2015-02-06) to update the annotations of elements LoadNumber, LoadKey and ProductVersion

How to implement OperatorDefinition was discussed at the meeting 2011-11-19. It was then decided that OperatorUserID is to be set by the machine control system. It was strongly recommended that all control systems implement FirstName, LastName, BusinessName and BusinessID as soon as possible in order to be able to register machine owner specific information regarding operator identities. Elements FirstName, LastName, BusinessName and BusinessID must be possible to edit by the operator.

ModificationDate & pin-administration was also discussed at the meeting 2011-11-19. No changes to the standard was decided. However it was pointed out that is is acceptable with a flexible interpretation of ModificationDate when updating products in the harvester:

- Komatsu pointed out that they will always ask the operator whether to update a product when receiving a modified pin independently of ModificationDate.
- It is also possible to let ModificationDate remain unchanged when changes to ColorMatrix and grade settings are carried out.

§ 4 StanForD2010 projects

WOODFORCE

Kari Peltonen and Juha Käppi (Fifth Element) presented the WoodForce system. Kari Peltonen gave an introductory presentation of the system (appendix 1) and Juha Käppi thereafter presented some different user interfaces. WoodForce includes both a planning interface that can be used by e.g. contractors as well as mobile interfaces (windows and Android) for field workers (road building, forest energy, silvicultural and logging operations). Observe that WoodForce is only replacing some minor parts of the ERP-systems of forest companies. The forest company ERP-systems will be used for all planning and follow-up work regarding logging operations at the company side which means that forest companies are never to use the WoodForce clients.

As far as the secretary understood the discussion WoodForce will send production data in a compressed non-StanForD-format on a daily basis from the mobile client in forest machines to the ERP-systems. Whether original StanForD files (hpr and fpr) are to be sent when logging operations has been completed seemed to still be an open question. Operational monitoring files (mom) will not be handled by WoodForce.

WoodForce interfaces for logging operations will be tested during this year and the plan to release it is for early 2016. Sending of pin, oin, spi and hpr files will also be tested together with machine manufacturers during this year.

KAOS

Tapio Räsänen and Tuomo Vuorenpää presented the KAOS-project (appendix 2). The main objective of the KAOS system is to make it possible to decide the optimal products and their price and distribution matrices to harvest at individual harvesting objects based on industry demands and available harvesting objects. The system will include advanced functionality for creating stem data-sets in order to make it possible to do bucking simulations with various pin files for individual sites.

SDC IMPLEMENTATIONS OF STANFORD2010

Lars Henriksson presented the implementation of StanForD2010 done at SDC.

Since March 2015 a new system for interpretation of forwarder production files (fpr) is in use. Prl are converted to fpr. Migration of forwarders to the new system is going on and will hopefully be finished before summer. Presently SDC is not receiving any "real" fpr yet, only prl. SDC is interested to get fpr-examples.

SDC has opened their system for hqc files. No new system for hqc since the interpretation of hqc is included in the old system as for ktr-files. SDC is presently receiving hqc-files from about 5 harvesters.

Prd reception is closed since April 1. Old "Prd-harvesters" now have to report volumes per assortment by a phone or a web application.

Documents (in Swedish) with SDC rules for interpretation of hpr, fpr and hqc are published on SDC's and Skogforsk's StanForD websites.

SDC has studied the possibility to develop SDC SenderXC in order to make it possible to distribute harvesting instructions to machines. This will be tested during the autumn 2015.

More information about SDCs work can be found in appendix 3.

IMPLEMENTING HARVESTER INSTRUCTIONS IN SWEDEN

There are between 5 and 10 harvesters using StanForD2010 instructions today. The major weak links for wider implementations are right now that there does not exist functionality for:

- distributing instructions automatically from the ERP-systems to the harvesters.
- creating object instructions (oin) within the ERP-systems of the forest companies.

PULP WOOD MATRIXES

Rikard Jonsson presented Skogforsk's ongoing project related to recommendations on how to construct pulp wood matrixes (appendix 4).

CALIBRATION OF MULTITREEHANDLED VOLUMES

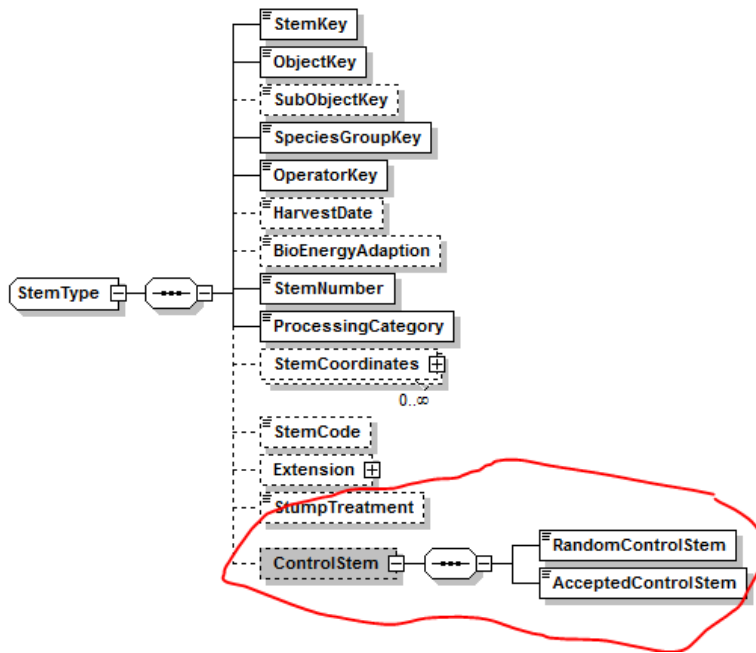
Johan Möller presented Skogforsk's work on developing a calibration routine for multi tree handling (appendix 5).

§ 5 Proposals (appendix 2)

RANDOM CONTROL STEM IN HPR-FILE

Johan Möller, 2015-12-18

It would be simpler to analyze the frequency of random selection of control stems if a flag for control stems is available in hpr-files. The preliminary idea is to have two boolean elements which tells whether a stem was randomly selected or not as well as whether it was accepted or rejected. The suggested new elements are presented below:



The objective is to have a simple quality control of randomization of control stems since it would be simple to calculate the “real” randomization frequency based on this information. It would be very simple to check whether randomization of control stems has been carried out according to a possible requirement, for example when using harvester data for paying forest owner.

Observe that the proposal does not mean that any measured control data is to be stored in the hpr-file, that means no redundant information is to be stored in hpr-file.

Several participants were hesitant about the proposal since this information is already included in the hqc. It was pointed out that it will never be enough with this type of flag in order to make certain that a specific harvester is following all procedures in a correct way. This means that it can very well be argued that we should stay with the present structure where StemKey must be used to connect hpr-data with hqc-data.

Metsäteho is writing on new Finnish regulations regarding how to use harvesting quality control in Finland. KWF expressed that there might also be a need for including information

The meeting decided to postpone the issue.

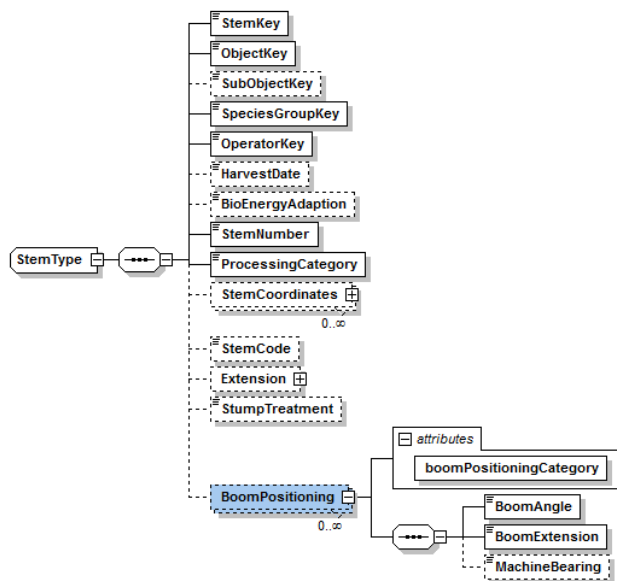
BOOM ANGLE WHEN FELLING

Johan Möller, 2015-04-01

It would be an advantage to know the exact position of the harvester head when felling a tree in cases where the hpr-file is used for following up thinning. Since it is not deemed to be possible to have a GPS on the head tests have been carried

out by Skogforsk and some manufacturers where the boom angle is registered in the hpr-file.

It was therefore suggested to add a new structure to the CoordinatesType making it possible to register boom angle, compass bearing of machine and boom extension (length) as illustrated by figure below. It was suggested during the discussion that BoomPositioning is moved directly under element Stem due to the fact that the CoordinatesType is used in a large number of completely different situations not connected to a stem.



Name	Description	Unit	Type
BoomPositioning	Information used to calculate position of harvester head based on angle and extension of boom.		
boomPositioning-Category	Definition of when boom angle is registered: "Felling", "Last log cut".	List	
BoomAngle	Angle of boom (0-360 degrees) when felling tree or when last log is cut (according to boomPositioningCategory.	Degrees	nonnegative-Integer
BoomExtension	Extension of boom when angle is registered. This is the distance from the harvester to the harvester head. This value can be a "default" value indicating the "normal" extension.	Cm	Positive-Integer
MachineBearing	The bearing (0-360 degrees) of the machine boom when angle is registered.	Degrees	nonnegative-Integer

It was also suggested that attribute boomAngleCategory includes enumeration values: Felling, Last log cut.

It was pointed out by Teemu that the boom angle might be difficult to standardize since the basic construction differs between different harvester models (e.g. Ponsee Ergo). The secretary mentioned that this is to be an optional element and that it would be possible to use element StemCoordinates with attribute receiverPosition having the value "Crane tip position when felling the tree" in the future.

No one at the meeting opposed the idea of introducing this new structure. The meeting decided to postpone the decision regarding a new structure BoomPositioning to the meeting in November.

NEW FILL-TYPE IN FORMATFILLSTYLE (OGI)

The table below illustrates the different fill types to be used by forest companies in the southern part of Sweden for “environmental no-go” areas. The fill types are based on an agreement between a number of forest companies and the Swedish forest agency.

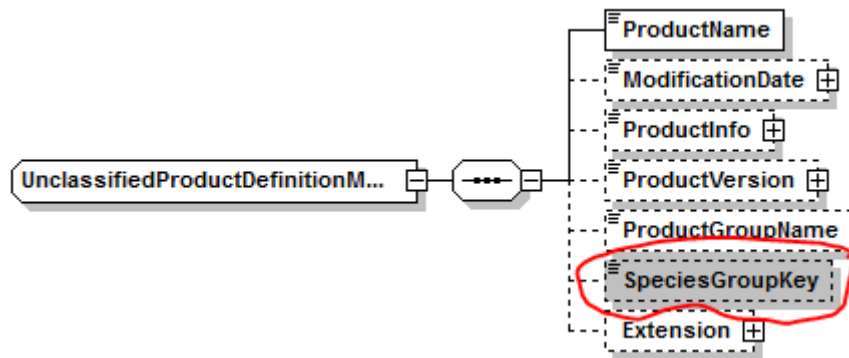
Lager	Tecken-förklaring	Färgkod (hex)	Beskrivning
Biotopskydd		993399	Lila kantlinje med svart kontur, lila fyllnad halvtransparent
Fornlamning och Skogohistoria (linje)		ff6e00	Orange linje med svart kontur
Fornlamning och Skogohistoria (punkt)		ff6e00	Orange triangel med svart kontur, vänd med spetsen nedåt
Fornlamning och Skogohistoria (yta)		ff6e00	Orange kantlinje med svart kontur, fyllnad orange prickar med
Nationalpark		336b4f	svart kantlinje, mörkgrön fyllnad halvtransparent
Natura2000		00DD00	Ljusgrön kantlinje, ljusgrön kryssfyllnad
Naturreservat		7ccb52	Svart kantlinje, ljusgrön fyllnad halvtransparent
Naturvarden		DCDC00	Svart kantlinje, gul snedrandig fyllnad (slash "/") tät
Naturvardsavtal		FF66DC	Rosakantlinje med svart kontur, grå fyllnad halvtransparent
Nyckelbiotoper		DC0000	Svart kantlinje, röd snedrandig fyllnad (slash "/") tät
Sumpskogar		0000FF	Blå kantlinje, fyllnad av blå horisontella linjer, gles
Vattenskydd		8888FF	Blå kantlinje, text "Vattenskydd" med blå text på vit bakgrund

The fill type for polygons for historical/cultural remnants does not exist today in StanForD. It was therefore decided that we add a new enumeration “DottedFill” to element FormatFillStyle. This fill style should look like this: 

UNCLASSIFIED VOLUMES PER SPECIES GROUP

Per Knutsson, 2015-04-08.

There are two different types of implementations of the unclassified products. Most manufacturers seem to have implemented one unclassified product per species while at least one manufacturer only have one single unclassified product for all species. It would be more straight forward to include the species groups also per unclassified product in order to present unclassified volumes per species. It was therefore suggested that we add a new optional element SpeciesGroupKey under UnclassifiedProductDefinition according to the figure below:



It was pointed out that a possible solution might be to use SpeciesGroupUserID instead of SpeciesGroupKey.

No one at the meeting opposed the idea of introducing this new element. The meeting decided to postpone the decision to the meeting in November.

BARK FUNCTION

The possibility to add a new Lithuanian bark function has been discussed at the last two meetings.

The Lithuanian functions were developed in 2007/08 (Petrauskas E., Rupšys P., Memgaudas R., Bosas G. Bark thickness variability models for prevailing tree species of Lithuania). In the study bark thickness was measured every second meter on 2384 stems. Logistic type models for approximating bark thickness relationship with diameter of measurement place and distance of measurement place from stump were developed for use in harvesters.

The suggested equations used for calculating bark thickness of several different species are described below.

Z_{sx2} = double bark thickness, mm

D_{sz} = diameter on bark, cm

H = measurement place (distance from the stump cross section), m

$$Z_{sx2} = a + bD_{sz}$$

$$a = \frac{a_3}{1 + \left(\frac{a_3}{a_1} - 1\right)e^{(-a_2H)}}$$

$$b = \frac{b_3}{1 + \left(\frac{b_3}{b_1} - 1\right)e^{(-b_2H)}}$$

Björn Hannrup did a preliminary analyzes of the Lithuanian bark function in early February using bark data from some older Swedish studies. The main results of his comparisons between different types of bark functions are illustrated in table 1-3 and figure 1-3.

Table 1) Comparison of bark functions on Scots pine

Function	N	Mean dev (mm)	Std. dev. (mm)
Skogforsk_pine	1 276	2,7	5,0
Zacco	1 276	10,0	11,8
Petrauskas m. fl	1276	6,1	7,0

Table 2) Comparison of bark functions on Norway spruce

Function	N	Mean dev (mm)	Std. dev. (mm)
Skogforsk_spruce	991	3,7	2,7
Zacco	991	3,9	2,7
Petrauskas m. fl	991	4,1	2,8

Table 3) Comparison of bark functions on birch

Function	N	Mean dev (mm)	Std. dev. (mm)
Skogforsk_Tall	235	4,7	8,9
Zacco tall	234	12,8	11,5
Petrauskas m. fl	234	5,8	8,5

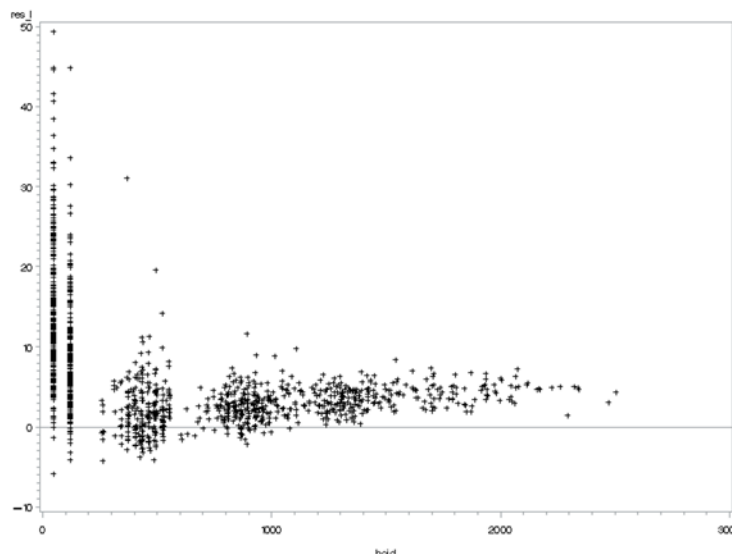


Figure 1) Residual plot for Lithuanian bark function used on Scots pine.

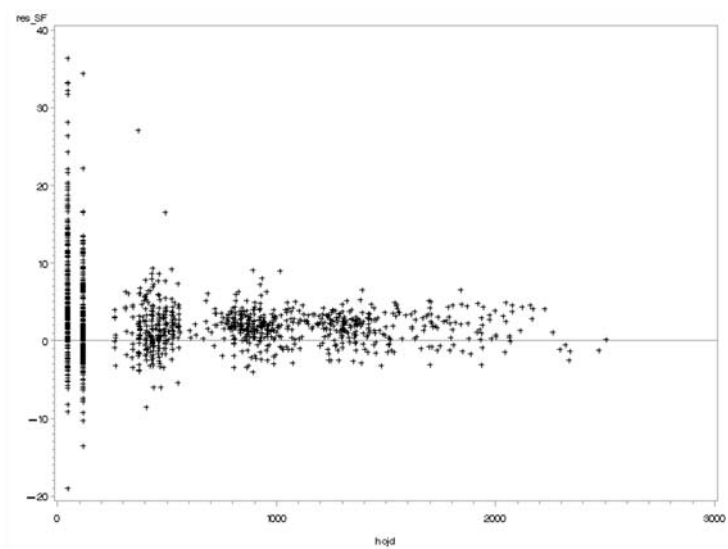


Figure 2) Residual plot for Skogforsk-Pine function used on Scots pine.

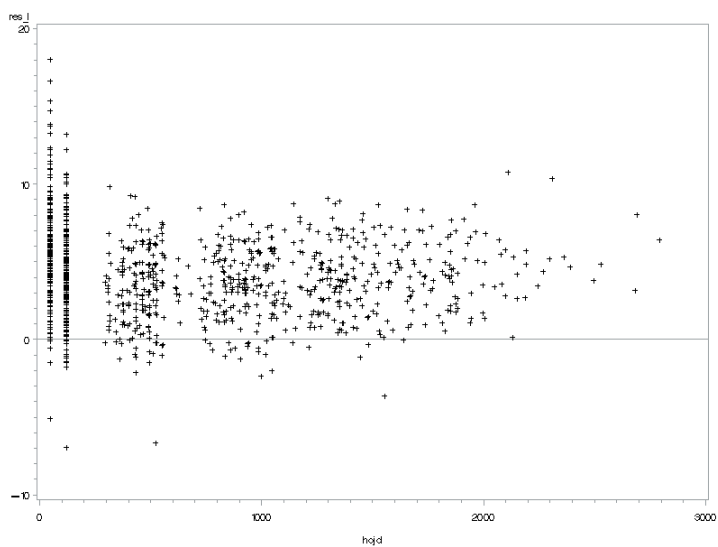


Figure 3) Residual plot for Lithuanian bark function used on Norway spruce

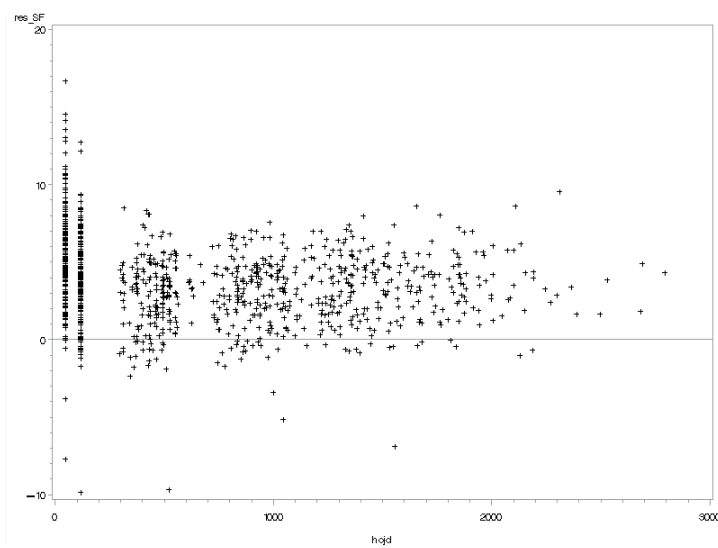


Figure 4) Residual plot for Skogforsk-Spruce function on Norway spruce

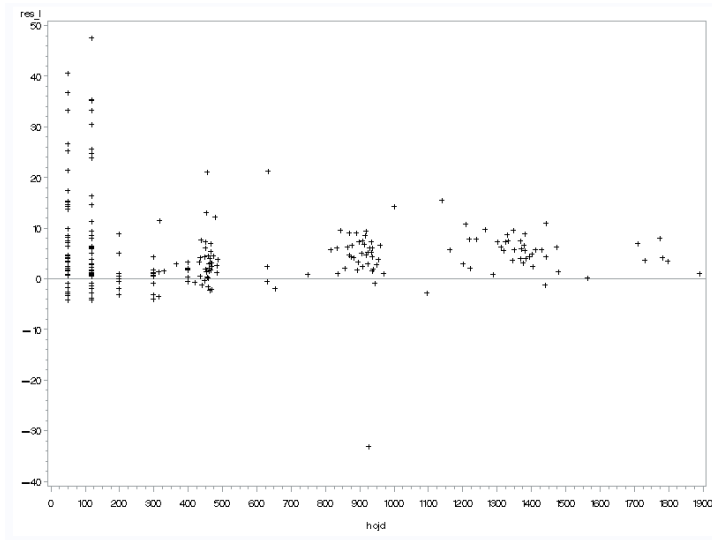


Figure 5) Residual plot for Lithuanian bark function on Birch

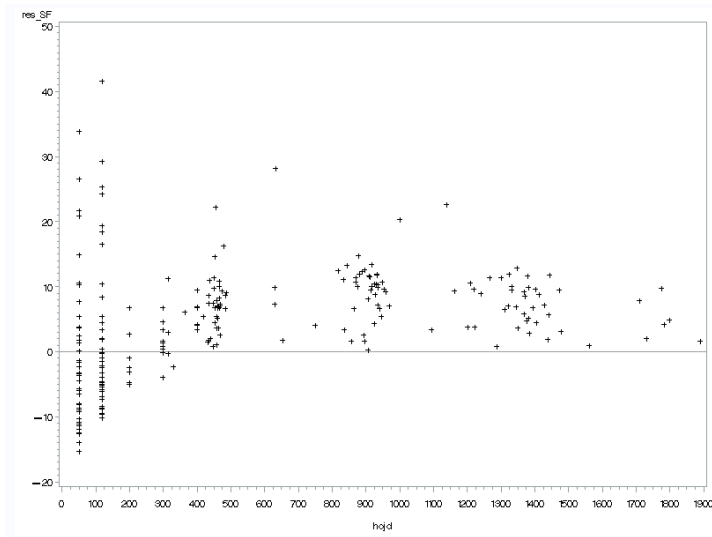


Figure 6) Residual plot for Skogforsk-Pine function on birch

The main result from Hannrup's study was that the Lithuanian function seems to works fine for spruce and birch. This means that we could probably exclude the present "Zacco" and "Skogforsk spruce" functions.

Some adjustments are probably needed for Scots pine if we are to exclude the present "Skogforsk pine" function (illustrated in figure 7):

- The slope of the curve needs to be adjusted, perhaps through calculating a new set of parameters based on Swedish data.
- Might be a need for compensation factor for latitude.

The possibility to use the Lithuanian function also for Scots pine must be evaluated until autumn meeting.

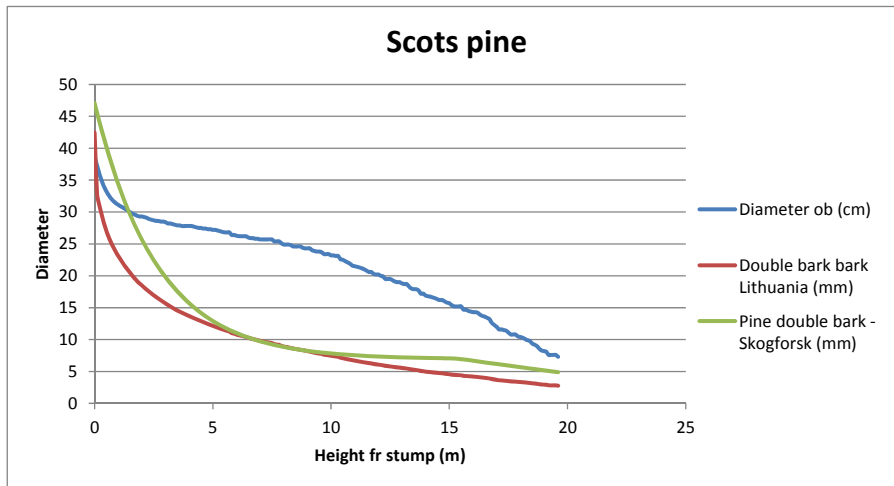


Figure 7) Bark thickness for a single Scots pine stem.

We have discussed the possibility to implement a new bark matrix instead of a new function. However, a matrix makes it more difficult to determine what type of bark function was used in hpr-file, evaluating the bark calculations is more complex since it has to be done for each possible diameter position. A function is probably easier to administer, support and implement. It will be suggested that we decide that “any proposals for new functions must include proof of improvement” if we decide to introduce a new logistic bark function.

Adding a new structure to the spi-file, as illustrated below, in order to make it possible to register the required parameters would, from a standard perspective, be quite simple. Observe that the naming of the new elements probably should be

discussed. It has been noted that having country specific naming of the different bark functions is probably not a good idea.

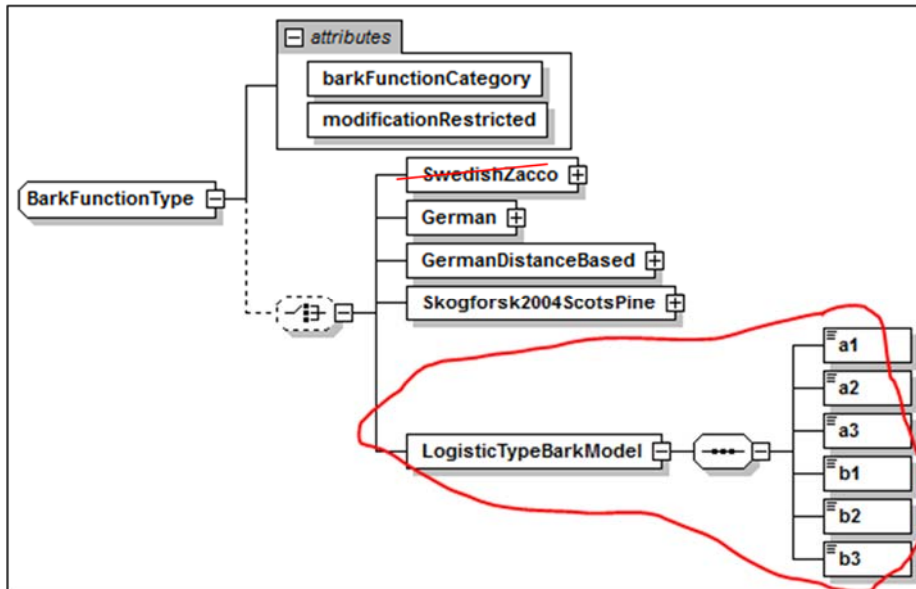


Figure 8) Possible new structure for registering logistic bark function, both SwedishZacco and Skogforsk_spruce functions to be excluded in version 4.0.

The final decision regarding the new bark function will be made at the next meeting.

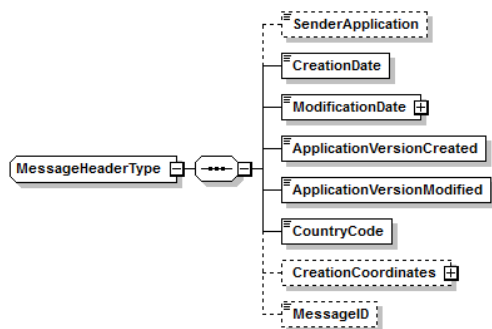
Skogforsk's comments

Even though a matrix would be more flexible Skogforsk today prefers a solution where a logistic function is added by making it possible to register the parameters of the function. The basic reasons for this is that it makes it simpler to control, implement, support and administrate the bark-functions in StanForD2010. It is important that any future proposals for additional functions must include proof of improvement.

NEW MESSAGEID ELEMENT IN MESSAGE HEADERS.

Tapio Räsänen, 2015-04-10.

A possible new MessageID element added to the header in every message in version 3.2 was suggested by Metsätaho. The proposal originates from the KAOS project where a need was found when trying to design an acknowledgment message.



The basic idea is that this new element should be a globally unique identifier (GUID). There was also a suggestion from Metsäteho that there might be a need for a totally new message whereby an “acknowledgement” that a file has been received can be included.

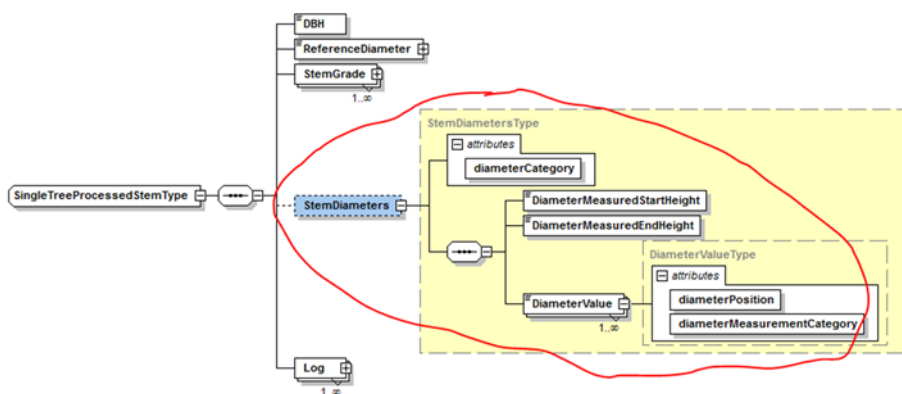
The meeting discussed how a new message might affect the machine manufacturers. In the KAOS system it would most certainly only be used internally. It was decided that we will have a web meeting in 2015-09-25 at 10:00 CET in order to discuss this issue further. It was also decided that Metsäteho will write a document including use cases regarding how to use a new “business acknowledgement” message. The document should describe how this new message might affect the manufacturers.

§ 6 Implementation issues (appendix 3)

DIAMETERVECTOR IN “NORMAL” HPR-FILE

DiameterVector in ”normal” hpr

SCA are today using stm-files for estimating measuring quality based on the diameter vector. It is possible to register the diameter vector in the hpr-file according to the figure below.



When analyzing the diameter vector some different key figures are calculated, for example no of diameter drops, sections with no taper, log cuts done in sections with no taper.

Overview	Details	Stem	Log
		Spc 1	Spc 2
No of stems		13	87
Summary			
Diam drops per m		5,35	22,89
No of diam drops		40	50
Total analyzed length, m		214,1	1144,7
Summary, flat areas (0mm/m)			
Meters of flat areas		27,6	91,9
No of flat areas		21	82
Distance between start of flat areas		10,2	14,0
No of flat areas		8,9	12,8
No of cuts		52	278
No of cuts in flat area		6	24
No of stems		12,9%	8,0%
Distance between diameter drops		5,4	22,9
Cuts in flat areas		11,5%	8,6%

It would be an advantage to be able to analyze this type of data based on normal production data included in hpr-files.

A simple solution could be to implement a harvester function whereby the diameter vector is always registered in all hpr-files for every 10th/50th/100th stem. The frequency should probably be settable in the harvester. Is this a possible solution?

Prior to the meeting Mikael Eliasson wrote the following comments:

Example of a file with 12281 stems (including stem profile):

	032669 Sickobacksvägen med profil.hpr	2015-04-14 07:21	HPR-fil	119 069 kB
	032669 Sickobacksvägen med profil.zip	2015-04-14 07:22	zip Archive	6 209 kB

According to Mikael the normal minimum transmission-speed is about 50 kB/s in Sweden. This means a transmission time of 124 sec. If automatic hpr-reporting is used daily the file sizes will be significantly smaller and the size of files probably will not be a problem at all. Mikael therefore prefers a solution where it is possible to always include diameter vector in production reporting.

No one at the meeting argued against some kind of possibility to include diameter vectors in normal production reporting. It is thus strongly recommended that this is implemented by all manufacturers and that it is settable in the machine. However, it is left open to the manufacturers exactly how this functionality is implemented (subset of stems, all stems or some other method).

AUTOMATIC HPR-REPORTING AND SEVERAL OBJECTS

Almost all manufacturers can today automatically generate production reports (hpr) for a specified time interval (e.g. once per hour). However, it should be observed that several different receiving systems can only handle hpr-files with one single harvesting object. This means that hpr-files which include data from

several objects will be rejected. It is therefore strongly recommended that it is always possible to divide up fpr- and hpr-data in order to avoid shaving files with more than one single object.

It is also recommended that new systems that receives production messages (fpr and hpr) are developed in a way that it is possible to handle several different harvesting objects within one file.

TIME SCHEDULE FOR IMPLEMENTATION

The following table for harvesters was compiled at the meeting.

Manufacturer	Version 2.0	Version 2.1	Version 3.0
Opti (Ponsse)		Q1 2015	Q4 2015 (incl 3.1)
Timbermatic (JohnDeere)		Autumn 2014 (1.19)	August 2014 hpr, mom, hpr
LogMate	Spring 2013		Q4 2014
MaxiXplorer (Komatsu)		Spring 2013	Q1 2015
Dasa*	Autumn 2014		Q3-4 2015
Motmit (Parker)			Q3-4 2015 (version 3.1)
Haglöf	Spring 2013	Spring 2013	Spring 2013
Silvia7		Spring 2013	May 2014
SDC		December 2013 (hpr)	March 2015 (including hqc)
WoodForce/ Fifth Element			Q3-Q4 2015. Older formats converted to 3.0. Version 3.1 used from 2016

* A conversion module will be available for Dasa4/5 (oin,pin,spi,hpr)

The only manufacturer that has implemented forwarder instructions so far is Ponsse.

Presently the following control systems can update a product, by sending a new pin, during harvesting at a site:

- Dasa
- LogMate

It is not possible to use the updated pin until you start on a new site in:

- Timbermatic (implemented 2015)
- MaxiXplorer (implemented Q3-4, 2015)
- Opti (no implementation is planned but planning is started ☺)

The following table for forwarders was compiled at the meeting.

Manufacturer	Version 2.1	Version 3.0
Opti (Ponsse)	All messages implemented if scale is used.	Q4 2015 (incl 3.1)
Timbermatic (JohnDeere)	Fpr,foi and fdi implemented. Testing of fqc.	August 2014 hpr, mom, hpr
MaxiXplorer (Komatsu)	Fpr implemented (other files Q4, 2015)	Fpr Q2 2015 (other files Q4, 2015)
Dasa*		In planning process
Motomit (Parker)		???
Silvia7	Fpr implemented.	Fpr implemented
SDC	March 2015 (fpr)	Q3/q4 2015
WoodForce/ Fifth Element		Q3-Q4 2015. Older formats converted to 3.0. Version 3.1 used from 2016

The secretary discussed the use of harvester instructions with Thorbjörn Westman, Sveaskog and Pierre Qvist, Vida who both have tested using the instructions in harvesters used in “normal” production.

The main remaining obstacles they have noted are:

- Updating product (pin) during harvesting at object
- Sending pin-files (SDC SenderXC)
- Company specific systems for creating oin
- Simple GUI for operator when updating a product (color matrix & quality/button settings). Perhaps a question when replacing product: ”Do you want to keep color, quality and cutting window settings?”

It is thus recommended that all manufacturers makes it possible to update a product (pin) during harvesting at object and that GUI for operator is simple when updating a product.

CONTENT OF HPR-FILE.

Tapio Räsänen, 2015-04-14.

Analyzing an hpr-example (illustrated below) made Metsäteho wonder if it is reasonable that e.g. log-data looks like below? Is it possible to restrict LogDiameter / logDiameterCategories to only those that are used in the particular country? Same applies to LogVolume / logVolumeCategory.

```
<Log>
  <LogKey>1</LogKey>
  <ProductKey>43</ProductKey>
  <LogVolume logVolumeCategory="m3 (price)"
logMeasurementCategory="Machine">0.0411</LogVolume>
  <LogVolume logVolumeCategory="m3sob"
logMeasurementCategory="Machine">0.0411</LogVolume>
```

```

    <LogVolume logVolumeCategory="m3sub"
logMeasurementCategory="Machine">0.0411</LogVolume>
    <CuttingCategory>
    <CuttingReason>Automatic</CuttingReason>
    </CuttingCategory>
    <LogMeasurement logMeasurementCategory="Machine">
    <LogDiameter logDiameterCategory="Butt ob">132</LogDiameter>
    <LogDiameter logDiameterCategory="Butt ub">132</LogDiameter>
    <LogDiameter logDiameterCategory="Mid ob">95</LogDiameter>
    <LogDiameter logDiameterCategory="Mid ub">95</LogDiameter>
    <LogDiameter logDiameterCategory="Top ob">95</LogDiameter>
    <LogDiameter logDiameterCategory="Top ub">95</LogDiameter>
    <LogDiameter logDiameterCategory="Mid HKS ob">90</LogDiameter>
    <LogDiameter logDiameterCategory="Mid HKS ub">90</LogDiameter>
    <LogLength>547</LogLength>
    </LogMeasurement>
</Log>

```

It was noted during the meeting discussion that Juha-Antti Sorsa developed an xslt transformation for excluding hpr elements not relevant on a certain market. This issue was e.g. discussed 2010-11-10 and 2010-12-10. Rules 6.1-6.3 in document “StanForD2010_Rules_tableV1p5.doc” describes how to handle national schemas.

§ 7 Other issues

WEB SITE

The Skogforsk web site was completely updated in November 2015. The StanForD web site at <http://www.skogforsk.se/stanford> therefore looks quite differently. Do not hesitate to give feedback to the secretary.

EXTRANET

Also the extranet (sharepoint/portal) was updated in the autumn of 2014, https://skogforsk.sharepoint.com/stanford/_layouts/15/start.aspx#/SitePages/Startsida.aspx

The main difference regarding the new extranet is that a completely new log in routine exists. Please have a look at appendix 6 for instructions regarding the use of the new sharepoint.

§ 8 Next meeting

Next regular StanForD2010 meeting will start at 10:00 CET, 2015-11-18 in Uppsala.

Web meeting regarding new message for “business acknowledgement”, 2015-09-25, 10:00 CET.

§ 9 End of meeting

Johan thanked everyone for their participation.

Decision summary (postponed issues not included):

- Decided that we add a new enumeration “DottedFill” to element FormatFillStyle.

Action list:

- It has been decided that OperatorUserID is to be set by the machine control system. It was strongly recommended that all control systems implement FirstName, LastName, BusinessName and BusinessID ASAP in order to be able to register machine owner specific information regarding operator identities. Elements FirstName, LastName, BusinessName and BusinessID must be possible to edit by the operator.
- It is strongly recommended that this is made possible by a machine setting to include diameter vector in normal production reporting (hpr). However, it is left open to the manufacturers exactly how this functionality is implemented (subset of stems, all stems or some other method).
- It is recommended that it is always possible to divide up fpr.- and hpr-data in order to avoid having files with more than one single object.
- It is recommended that new systems that receives production messages (fpr and hpr) are developed in a way that it is possible to handle several different harvesting objects within one file.
- It is recommended that all manufacturers makes it possible to update a product (pin) during harvesting at a harvesting object and that the GUI for operators is simple when updating a product (e.g. keeping seeing for grades and color matrix).