



John Arlinger

6 May 2011

Minutes StanForD2010

2011-05-04--05

Place:	Uppsala
Participants:	Lars Henriksson, SDC Niclas Eriksson, Komatsu Forest Joonas Kaarnametsä, John Deere Mikael Eliasson, LogMax Jonas Thorsson, Dasa Jonas Gustafsson, Sveaskog (day 1) Tapio Räsänen, Metsäteho Juha-Antti Sorsa, Metsäteho Timo Melkas, Metsäteho Teemu Paldanaius, Ponsse Joakim Nygren, Haglöf (day 1) Nazmul Bhuiyan, Skogforsk Pasi Palonen, Parker Hannifin (phone) Lars-Erik Andersson, Rottne (phone) Jean Plamondon, Feric (phone) 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.

§ 3 Clarifications and updates of variables

UPDATING DRF PRIORITIES

Proposal based on questions from Jonas Gustafsson, Sveaskog, regarding the drf-file. In a recently developed web application (“DriftWeb”) for analysing drf-files it is of interest to know the harvesting method when comparing different machines. It is also important that the complete production including MTH volumes are included.

It was therefore suggested that var23 (type 1-2) is given priority 2 in drf-files. This is in accordance with the TSG recommendations as presented 2010-04-13. When discussing this issue it was realized that the variable had been implemented in significantly different ways by the different manufacturers. Some are only using it in production and monitoring files if included in apt-file while it is set by the operator in machines from other manufacturers. In some cases a Finnish list of harvesting methods (included in Finnish StanForD appendix) are used as a default. It was decided by the meeting that Skogforsk and Metsäteho will analyse this issue before the next meeting.

It was decided that the following variable are given priority 2 in the drf-file (MTP=multi tree processed, MTF = multi tree felled)

- Var230_t6 (MTF, no of stem bunches per operator and species)
- Var230_t8 (MTP, no of stem bunches per operator and species)
- Var231_t6 (MTF, no of stems per operator and species)
- Var231_t8 (MTP, no of stems per operator and species)
- Var246_t13 (MTF, volume per operator and species)
- Var246_t15 (MTP, volume ob per operator and species)
- Var246_t16 (MTP, volume ub per operator and species)
- Var246_t20 (MTP, no of log bunches per operator and species)

§ 4 MTH volumes per assortment in prd

According to the minutes from the last meeting basically all manufacturers have a possibility to set a special MTH initial grade. It is also possible to set ‘mixed species’ as a tree species, but it seems to be not so clear how widely this is used in Finland and Sweden. A common way is to select the most normal tree species (like pine or birch depending on the forest) for the species of mixed species bunch. Of course this leads to errors in stem counts per tree species, but it is probably not critical in those cases.

This means that the MTH production can be registered per assortment by most manufacturers today.

It was therefore decided at the last meeting to write a proposal for adding MTH-volumes per assortments in the prd-file:

Var	Name	Type	Data type	Unit	Description
246	BUNCHED-PROD	30	Integer	m3 (ob)	Total volume of multi tree processed stems (several stems delimbed and cross cut simultaneously) / operator/assortment/tree species: 1...var211_t2/1...var116_t1/1...var111_t1 The volume is based on the total diameter (diameter measured as if only one stem is processed)
246	BUNCHED-PROD	31	Integer	m3sob	Total volume of multi tree processed stems (several stems delimbed and cross cut simultaneously) as calculated in harvester (definition in appendix) / operator assortment/tree species: 1...var211_t2/1...var116_t1/1...var111_t1 These volumes are to represent estimated merchantable log volumes based on previously single processed stems. Several different methods allowed as described in appendix.
246	BUNCHED-PROD	32	Integer	m3sub	Total volume of multi tree processed stems (several stems delimbed and cross cut simultaneously) as calculated in harvester (definition in appendix) / operator assortment/tree species: 1...var211_t2/1...var116_t1/1...var111_t1 These volumes are to represent estimated merchantable log volumes based on previously single processed stems. Several different methods allowed as described in appendix.

The meeting decided not to implement any new variables with MTH volumes per assortment in the prd-file since we should avoid doing major updates to the old “StanForD classic” standard.

§ 5 Definition of random sampling based on time

BACKGROUND

It is today possible to randomly select control stems in three ways (var361_t4). The existing types of intervals are based on:

- Number of stems (one control stem per frequency according to var361_t3)
- Time (one control stem per machine hour according to var361_t3)
- Volume (one control stem per m3sob according to var361_t3)

Today all systems can sample based on number of stems but not all harvesters can do the sampling based on time or volume.

It is required, both in Sweden and Finland, that one control stem is randomly selected per shift or per work day on an average. This means that it would be a clear advantage to have a possibility to set the randomization frequency per hour. This setting should be defined in a stricter way than today in order to make it possible to have basically the same settings in all machines.

The Finnish official statute requires that:

- sample stems must be selected randomly
- one random sample stem should be control measured per working day
- official minimum is once per 2 – 3 days

OBJECTIVES

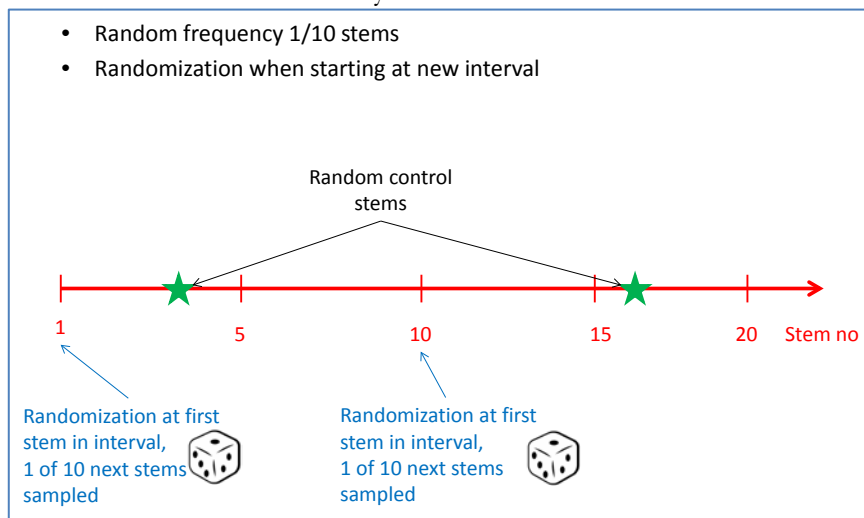
The main objective of the proposals is that it should be possible set that one stem per shift or per work day is randomly selected in a standardized way. This random selection should be totally random.

We should also try to include improved definitions of randomization per number of stems and volume.

RANDOMIZATION METHOD

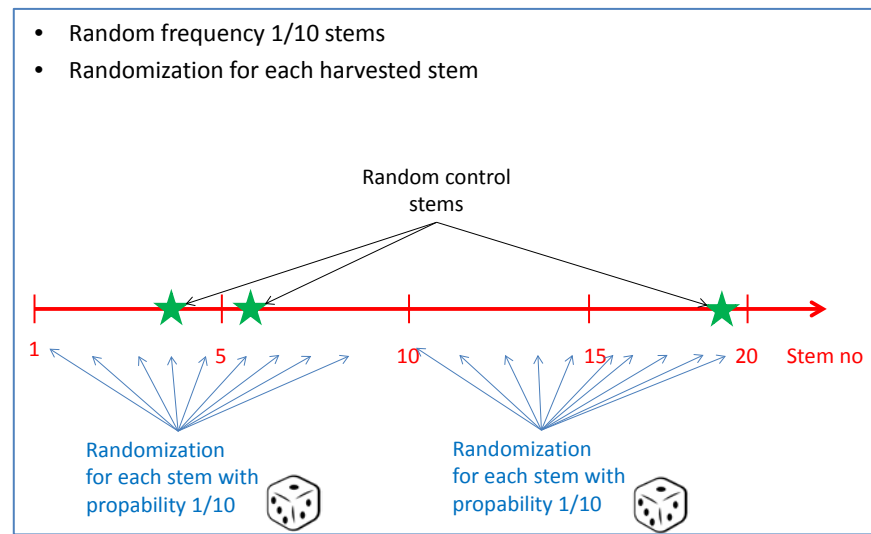
There has been a discussion in Sweden regarding when the random sampling is carried out. There are two different methods if we look at randomization per number of stems:

1. When a harvester is started for the first time, with an activated random sampling interval, one stem is selected within this interval. A new randomization is carried out again when the end of the interval is reached. This means that we can in theory never have more than two stems selected in a row since we only roll the dice at the start of the interval.



2. In a completely independent random selection we have a randomization for each harvested stem. This means that we can in theory have more than

two random stems in a row since we roll the dice for each stem.



It has been pointed out by some actors on the Swedish market (primarily wood measuring associations) that they strongly prefer the second method. It was therefore suggested that method 2 (completely independent random selection) is to be used in all types of randomization of control stems.

In order to try to follow the principle of an independent random selection it is suggested below that the random selection based on time is done once per minute. This means that we roll the dice often enough for those preferring method 2.

It was also suggested that once randomization gives a positive result the next harvested tree shall be selected as a random control stem, if the stem that fulfils the requirements regarding minimum DBH and species. This means that all other rules should be checked after randomization.

RANDOM SAMPLING PER TIME

Below are three different alternative definitions of how to sample based on time.

Alternative 1) Estimated stem number frequency

An alternative could be to have a randomization based on historical data (stems per processing hour). The historical data could be used to calculate a “relevant” stem number frequency.

*You may, for example, have an average production of 97 stems per processing hour. If you work for 5 hours (processing time) during a shift you should have a stem number frequency of 1 sample stem per 485 (5*97) harvested stems in order to have one stem per shift.*

A major drawback with this solution is that we will get changes in the number of control stems if we go to a new site where we harvester a larger or smaller number of stems per hour than we did on the previous site or sites.

Alternative 2) Utilized time

Assume we base randomization on utilized time (including both work and down times). Randomization could be done once every minute and if it is TRUE the next harvested stem is selected for control measurements.

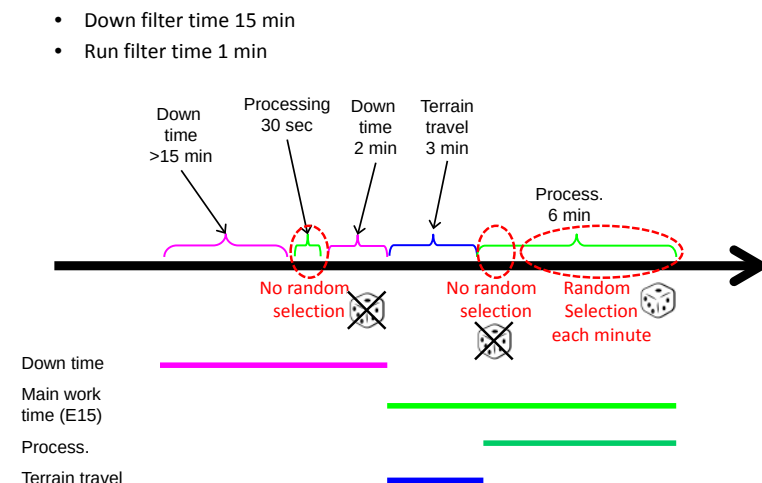
If we have a long period of down times or terrain travel, for example an hour, the chances are very high we will immediately have a selected stem once we start harvesting.

Alternative 3) Processing time

If we have a random selection for each minute defined as “processing” we avoid the problem with long down times as described above. However it is probably a bit tricky to know the normal level of processing time during a shift. Maybe historical data (for example average processing time per calendar day or shift during the last week) can be used in order to indicate what frequency should be set in the machine by the operator.

*If we for example have 6 hours of processing time per shift we should have a random frequency of $1/(6*60)$ for each minute during processing time in order to get 1 sample stem per day.*

A problem with this method is that a processing time is not registered until processing has been carried out for more than 1 or 2 minutes (var315_t2). This means that if you first have a long down time and then carry out processing for 45 seconds the time will be considered to be part of the down time if the processing is followed by a down time (see figure below). However this may very well be an acceptable draw back.



Observe that this solution is dependent on having a continuous communication between the bucking optimization application and the operational monitoring application in the harvester. Basically the operational monitoring system will have to tell the function for randomization if it is processing time or not every minute.

SUGGESTION

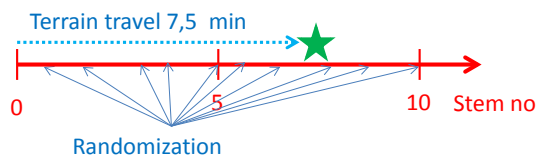
It was suggested that alternative 3 (processing time) is included in the definition of sampling based on time.

However it was discussed whether or not to also include terrain travel time. This would probably be logical in for example felling of widely spaced trees (for example seedling trees) where we may end up in a situation where almost all times are registered as terrain travel rather than processing time.

If we have the following sequence of times no processing time will be registered:

Terrain travel 3 min - Processing 45 sec min – Terrain tr. 30 sec – Proc. 35 sec min – Terrain tr. 30 sec – Proc. 35 sec min – Terrain tr. 30 sec – Proc. 35 sec min – Terrain tr. 2 min

The major problem with including terrain travel is that we will have an increased probability of selecting a control stem after a long period of terrain travel, for example after having driven to the landing and back due to refuelling. A possible solution to this problem could be to reject sampling automatically if no tree is harvested within 3 minutes. These rejected stems should not be logged. This means that the first four randomizations in the figure below are not to be used if they result in the selection of a control stem:



It was suggested that it is to be pointed out that the time to be used is processing time according to the definition in operational monitoring application (activity in harvester head and crane/linkage). Random sampling is only to be carried out if the system is certain that the present time is considered to be processing time. If we have a case where we have just restarted processing ($< \text{Run-filter-time}$) after a long period of down time ($> \text{Down-filter-time}$) we will not know for certain if this is going to be processing time or not, thus no random sampling is to be done.

RANDOM SAMPLING PER VOLUME

It was suggested that we define sampling per volume in a similar way as per time. This means that we do a randomization for each new cubic meter (m³sob) instead of for each new minute.

RANDOM SAMPLING AFTER REJECTION

It was also suggested that the probability is doubled for every control stem that is rejected and then reset again back to given probability when a control stem is accepted. This means that the probability is doubled for each rejection until a stem is accepted.

For example we may have a frequency of $1/8$ h. The frequency will then be $1/4$ h if we reject a randomly selected stem. If we reject once more we will get a frequency of $1/2$ h and finally if we accept a stem and measure it we will go back to the frequency $1/8$ h.

DECISIONS

It was decided to postpone the issue after a lengthy discussion.

Two ideas to be analysed further before next meeting are:

- Use indications directly from harvester head, not using time concept as defined in operational monitoring system in order to handle situations where no monitoring system exist.
- Use machine hours (when computer is turned on). Do randomization once per 5 min, select first stem harvested. Reset randomization after 5 min and do a new randomization. Double frequency if no tree is harvested within 5 minute period.

The following possible requirements must also be analysed:

- Must be random selection once a day/shift or
- Random selection on an average once per day/shift

What if a day is very short, for example only 1 hour long?

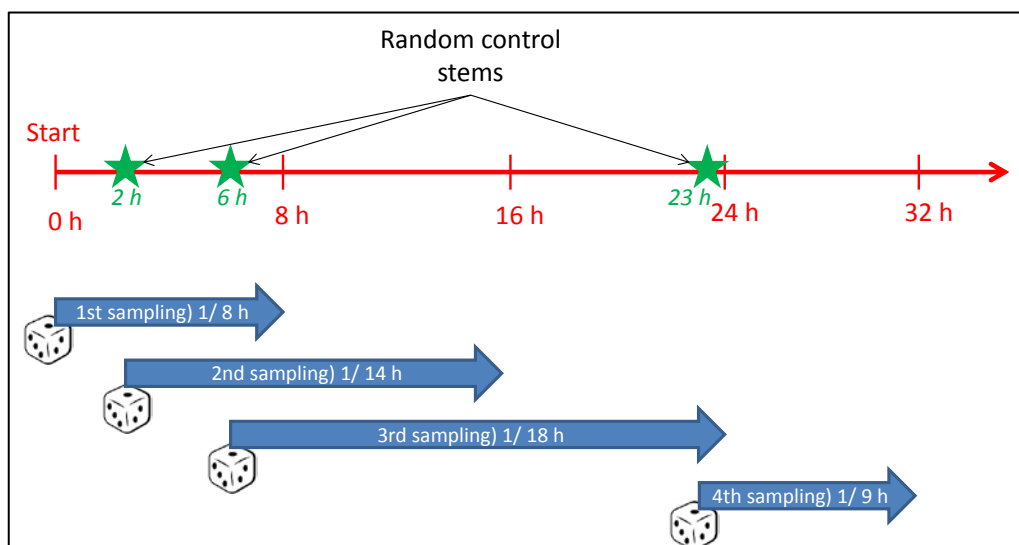
ADDITIONAL IDEAS AFTER THE MEETING

Teemu Paldanius, Ponnse, sent a new proposal after the meeting (2011-05-11). Below is an updated version of the proposal.

The basic idea with the new method is that sampling is done only when activating the system for random selection and when sample trees have been selected. The frequency is adjusted:

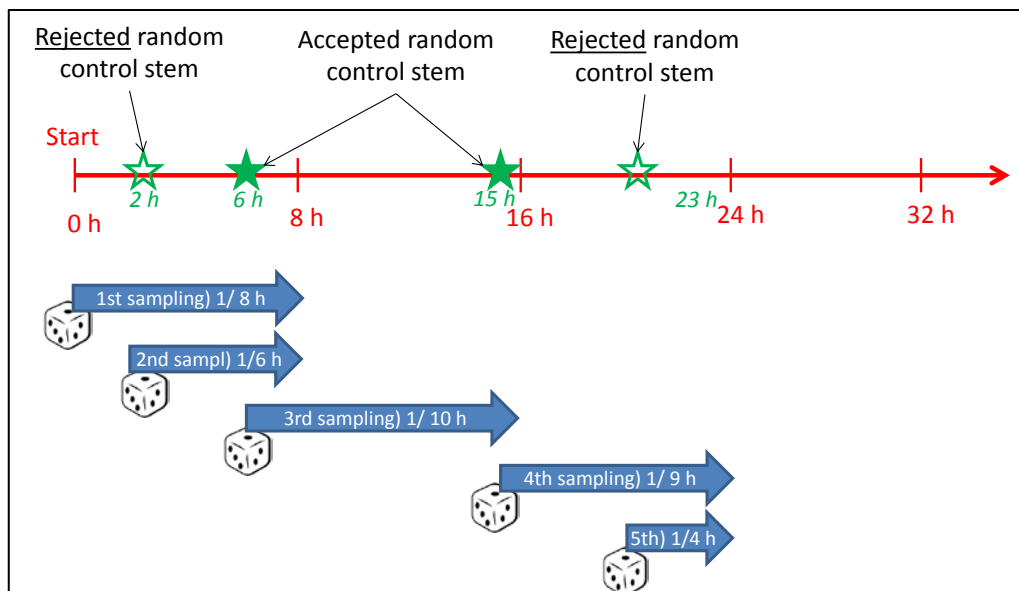
- Rejected stem → frequency is increased
- Accepted stem → frequency is decreased

Below is an example where all sample trees are accepted. The frequency used after a sampling is adjusted so that we will achieve the correct number of sample stems over a long period of time. The base frequency in this case is 1 stem / 8 hours.



Observe that the frequency must not be reset between work shifts since that mean that the average number of sampled stem might deviate from the base frequency (in this case $1/8$ hours).

Below is an example where some sample trees are rejected. Once a stem is rejected a new randomization is done with a higher frequency. The base frequency in this case is 1 stem / 8 hours.



Definition of time

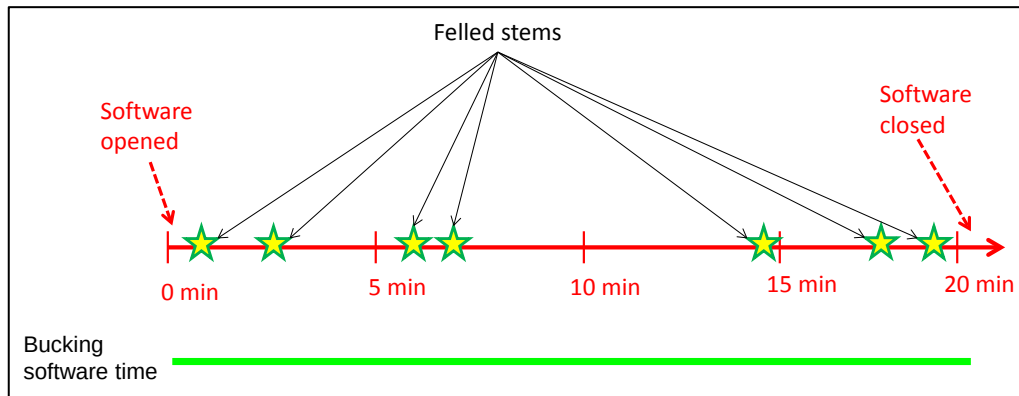
Two new possible types of time are suggested in order to avoid the problems that will occur if any of the monitoring times are used.

The sampling could thus be based on either a new “randomization time” or a “bucking software time”. Observe that not much thinking has been done regarding the names of these times. One hour of “randomization time” or “bucking software time” may not be equal to a “calendar hour”.

Bucking software time is:

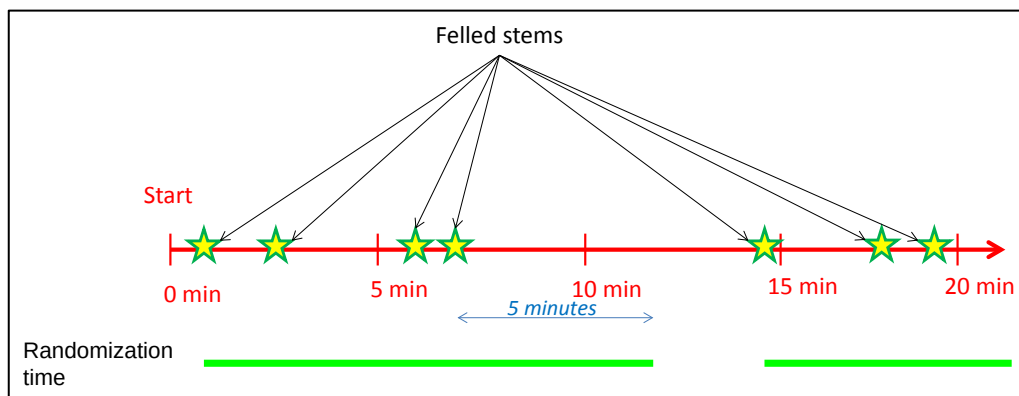
- started when bucking application is opened,
- stopped when bucking application is closed.

These basically means that when the computer is on (system is ready for work) the system is also ready to randomly select control stems.



Randomization time is:

- started when stem is felled (processing started),
- stopped 5 minutes after last felled stem.

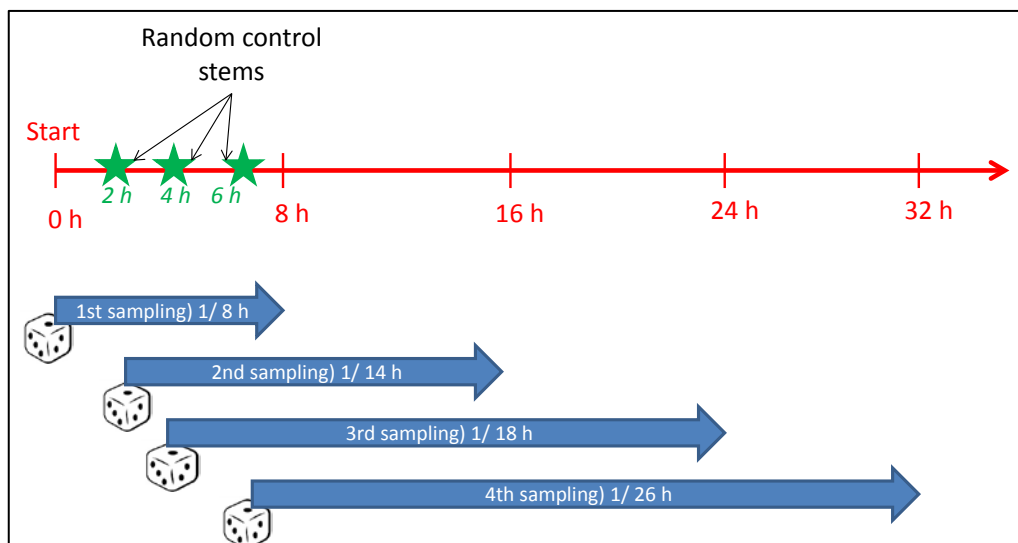


An advantage with “randomization time” is that the probability that a stem is selected after a down time or terrain travel is not much higher than any other stem. However it is probably quite more complex to implement and to check the implementation. The “randomization time” is probably more difficult to understand for the operator than the “bucking software time”. Teemu therefore clearly prefers the “bucking software time”.

Maximum sampling interval

Do we need maximum sampling interval? The method described above means that we may have long time periods between two control stems as illustrated by the figure below.

One solution might be to state that the frequency should never be lower than 1/24 hours. A suggestion could be to include the maximum interval as a machine



Nazmul Bhuyan, Skogforsk, will run some simulations in order to analyse if this will be a significant problem or not.

§ 6 Ghd updates

The following proposals were originally written by Anders Ekberg, Bracke systems.

The main objectives of these proposals are to improve the ghd-file by giving certain important variables a higher priority (mandatory).

The idea is also to make it possible to use other coordinate systems than WGS84 in the ghd-file. Most Swedish forest companies use either RT90 or SweRef99 in their own it-systems. It would be an advantage if they could send out for example the alarm coordinates using the coordinate system that they normally use instead of WGS84. However it must be clearly stated that the only coordinate system that must be implemented by all manufacturers is WGS84. It is also suggested that we probably should stay with WGS84 when registering coordinates for harvested stems in the pri and stm files.

It was decided that:

1. Var467_t2 is to be given priority 1 in ghd-file
2. Var521, var523 and var522 are given priority 2 in ghd-file
3. Var21_t1, var21_t2, var35_t1 and var35_t2 are given priority 2 in the oai-file. This means that the variables should be included if relevant.

It was also suggested that var521_t2 is updated and a new var521_t3 is added (prio 2 in ghd):

Var	Name	Type	Data	Unit	Description
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			type		
521	COORDTYPE	3	Integer	code	Coordinate reference system used for coordinates stored in the file, codes according to the EPSG database
521	COORDTYPE	2	integer	code	Coordinate system used in file: 1= WGS84 (default) 2 = Coordinate system according to var521_t3.

The fundamental reason for adding var521_t3 was thoroughly discussed at the meeting. Since there was no participation from Bracke some questions could not be answered. It was therefore decided to postpone the issue.

§ 7 Items for discussion and information

NEW PRI/HPR REPORTING TO SDC (SWEDEN).

Lars Henriksson informed the meeting about the fact that SDC will retire their system for receiving and using prd-files in about 2 years. Prd-files will be replaced by pri-files or hpr-files. During the transition period SDC will be accepting both prd- and pri-files.

CALIBRATION AND CONTROL OF MTH VOLUME CALCULATION

A Skogforsk project has been carried out where the possibilities to calculate an estimated solid volume for MTH logs were studied. There are some ideas concerning how to control and calibrate these volume functions based on the results from project. However no new project has been started concerning this issue yet.

§ 8 General StanForD 2010,

PROGRESS DURING LAST 6 MONTHS

Johan presented the work carried out during the last months as well as the plans for a harvester test during the autumn.

STANFORD CLASSIC

It was decided at the meeting in November 2010 that StanForD classic should be open for adjustments and updates until the autumn 2011. The issue of whether or not to stop updating the old standard will be discussed at the next meeting.

SEMINAR

Skogforsk will host an open seminar regarding StanForD2011 2011-06-08 in order to inform Swedish users about the new standard version.

HARVESTER TEST

The aim of the test is to control the implementation of StanForD 2010 as a support for the manufactures when they implement the standard and as a support for the users when they start using StanForD 2010

The test can be done in different areas. Requirement is 30 spruce trees and at least 10 pine trees with an average stem size over 0,5 m³ sub. The test is planned from September to November (when manufacturer think they are ready for tests).

The test will include:

- Harvesting
 - oin, pin, spi (messages made in an administration tool)
 - cutting of at least 30 trees
 - different functions (volume types, length margin, apportionment bucking, etc)
- Test of calibration and quality secure system for the harvesters measuring?
 - hqc (messages), send data to and from a StanForD 2010 adapted caliper
 - Production and operational monitoring result (hpr, thp, mom)
 - cutting 3-4 hour
- Control of that the messages follow the schemas and content all data
- Communication and reporting
 - Reporting of messages hpr, thp, mom, hqc, caliper communication, eventually SDC or and Logicas sending program
- Administration of data, saving of data, backup, naming of identities and other elements.
- Are there other important functions implemented by the different manufacturers.

§ 9-10 Harvester quality control StanForD2010

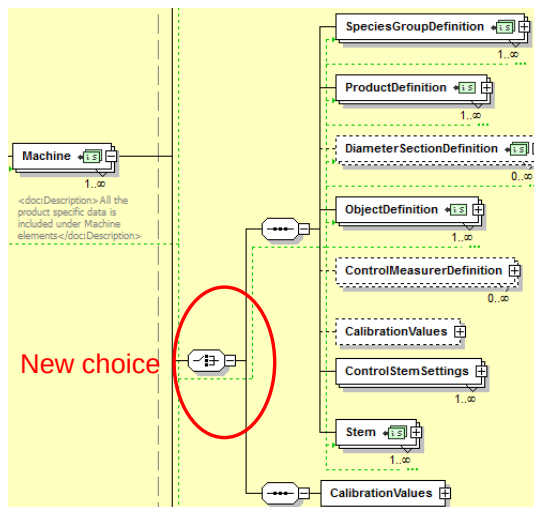
Observe that the decisions below also include those made at the last phone meeting (2011-03-14).

Updates to hqc

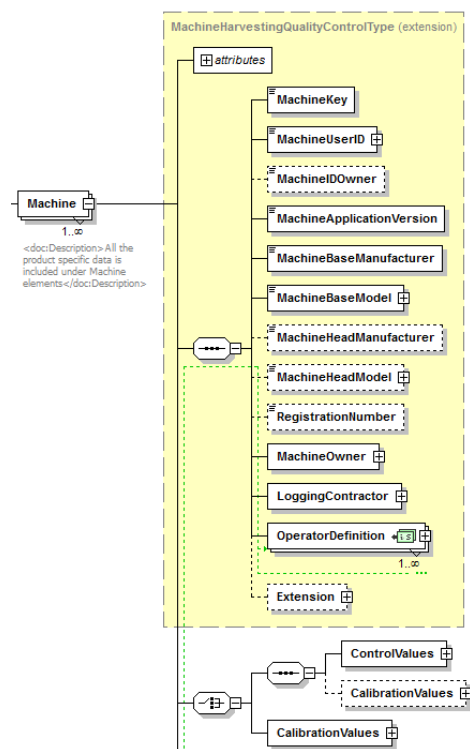
It was decided (2011-03-14) to update harvesting quality control according to the following list:

- ProcessingCategory added to control stem settings
- ProcessingCategory added to stem as well as a choice before element SingleTreeHarvestedStem
- Calibration diameter and length adjustment changed from nonnegative to decimal
- Length calibration adjustment for butt logs shall have an element for length position.

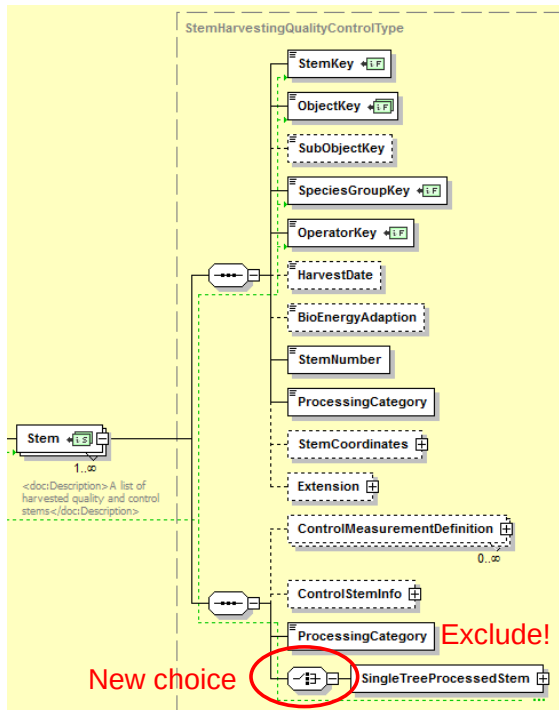
A new updated structure was developed by Juha-Antti after the Helsinki meeting in February in order to handle an hqc-file with only calibration log (see figures below).



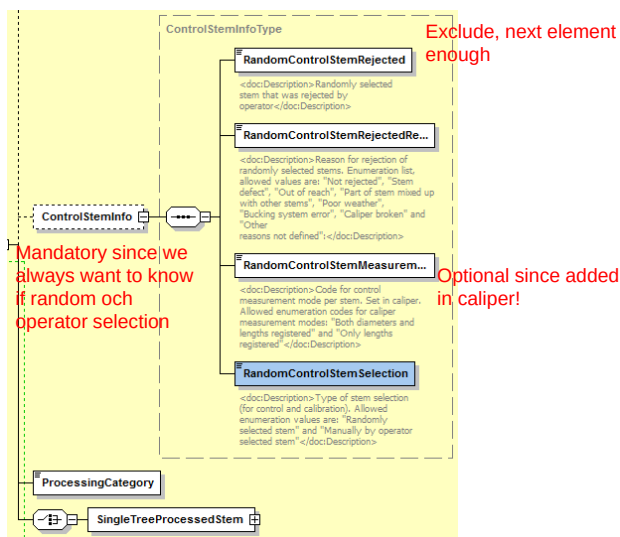
The proposal above was discussed at the meeting in March and again in at the May meeting. It was finally decided to use the following structure::



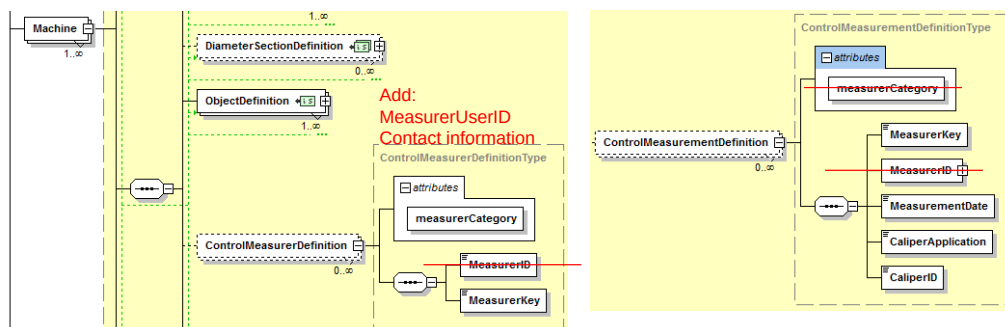
It was decided (2011-03-14) to use the following structure in order to handle more processing categories than SingleTreeProcessedStems (see figures below).



It was decided that **ControlStemInfo** should be updated according to the following figure:



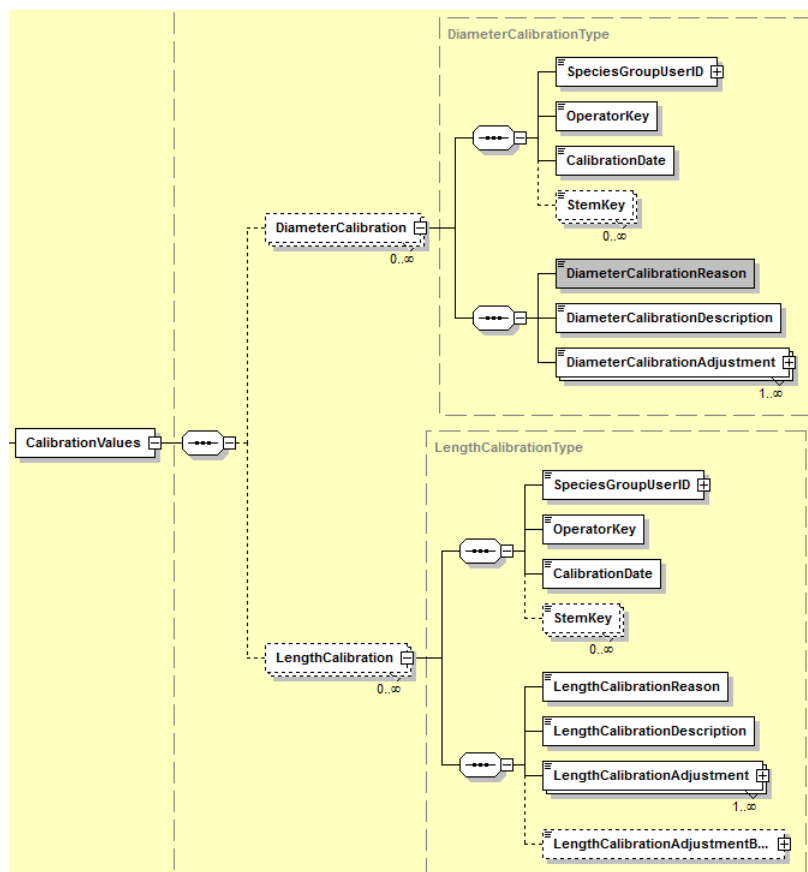
It has been discovered by Skogforsk that some duplicate information has been included in **ControlMeasurerDefinition** and **ControlMeasurementDefinition**. The following updates were therefore decided (2011-03-14):



Structure of calibration history

It was also decided (2011-03-14) to analyse a suggestion from Niclas Eriksson to register calibration history per date instead of per length or diameter.

It was decided to use the following structure (only change since February is that Code is replaced by Reason):



Diameter registration in harvester and caliper

It has recently been discussed how to register machine measured diameters in the hqc-file sent from harvester to caliper.

Decisions to add the following text to “StanForD2010 rules” document:

1. Harvester must use stem diameter vector (element StemDiameters, comparable with var273) when sending hqc to caliper.
At least 1 diameter per dm-modul (as in stm-file) must be registered.
2. Caliper must always use the log diameter vector (element ControlLogDiameter, comparable with var373) when sending hqc from caliper.
Diameters registered at any position (all relevant M1, M2 and M3 shall be registered).
3. Not mandatory for caliper to send original stem diameter vector back in hqc.

An advantage with this solution is that it is very similar to how we deal with this presently. We also avoid a situation where both caliper and harvester are supposed to write data to the same element.

It was decided to exclude DiameterSection from hqc and that Skogforsk shall analyse the definition of diameters registered in hqc. Skogforsk shall also study the possibility of registering information about several different HarvesterHeads in version 2.0.

NEW STANDARD MESSAGES

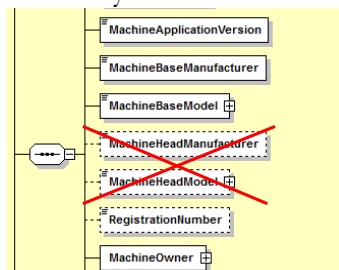
The meeting decided to include the hqc message, version 1.0, in StanForD2010 according to the decision described above.

§ 10 Forwarder instruction & production messages

Observe that the decisions below also include those made at the last phone meeting (2011-03-14).

Machine

It was decided (2011-03-14) to exclude element MachineHeadModel since this is valid only for harvesters.

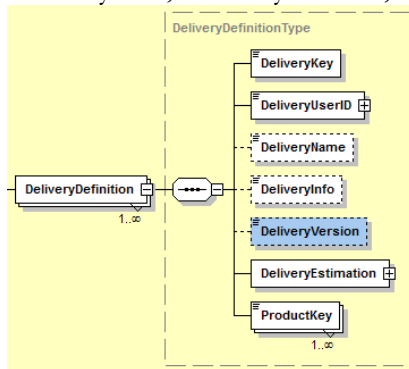


DeliveryDefinition & LocationDefinition

It was decided (2011-03-14) to change all elements under DeliveryDefinition from DeliveryDefinition* to Delivery*. This means that the following suggested changes (fpr and fdi):

Present name	New name
DeliveryDefinitionKey	DeliveryKey
DeliveryDefinitionUserID	DeliveryUserID
DeliveryDefinitionName	DeliveryName
DeliveryDefinitionEstimation	DeliveryEstimation
DeliveryDefinitionEstimationUnit	DeliveryEstimationUnit
DeliveryDefinitionEstimationMethod	DeliveryEstimationMethod

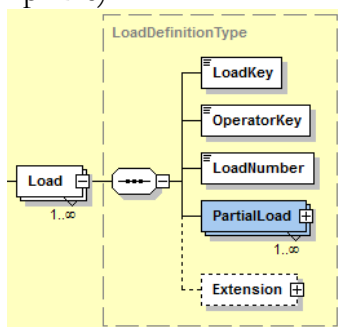
It was decided (2011-03-14) to add new optional id elements are added in order to have the same possibilities as in for example ProductDefinition:
DeliveryInfo, DeliveryVersion, LocationInfo, LocationVersion.



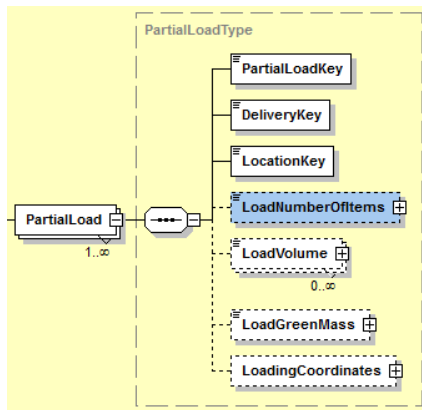
It was decided (2011-03-14) to change data type of ProductKey in DeliveryDefinition to nonNegativeInteger since this is the data type used in ProductDefinition.

Load & PartialLoad

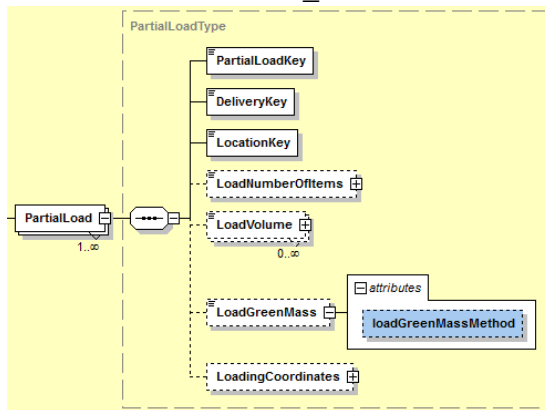
It was decided (2011-03-14) to change the name of LoadDefinition and PartialLoadDefinition to Load and PartialLoad (compare with Stem and Log in hpr-file):



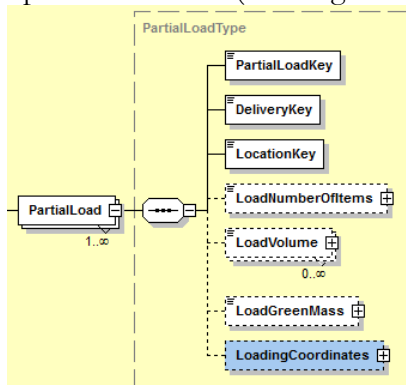
It was decided (2011-03-14) rename LoadNumberOf to LoadNumberOfItems and to move element LoadNumberOfItems (PartialLoad) downwards to a position after LocationKey:



It was decided to add loadGreenMassMethod attribute to element LoadGreenMass with enumerations: loading and unloading. This is identical with load code 499 in var446_t1.



It was decided (2011-03-14) to add possibility to include coordinates for loading per PartialLoad. Unloading coordinates were deemed unnecessary since this information is included in LocationDefinition. This means adding one new optional structure (LoadingCoordinates):



It was decided (2011-05-04) that the loading coordinates are to represent the last registered coordinates during loading.

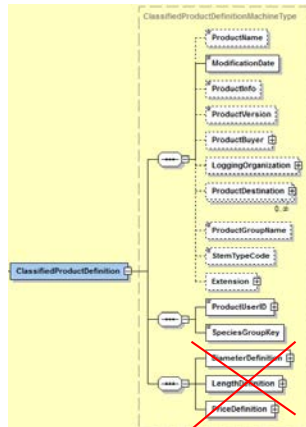
It was suggested by Teemu Paldanius and Niclas Eriksson after the meeting that DistanceFromUnloading and UnloadingTime are both moved “upwards” from

PartialLoad to Load. They would both be registered when the load space is totally emptied. If we keep it under PartialLoad it will be quite confusing especially if we unload at several different Deliveries and Locations. It is probably also a more robust solution to register UnloadingTime per Load with a clear specification that this is the time when the load space is emptied. The meeting (2011-05-04) decided to accept the proposal above.

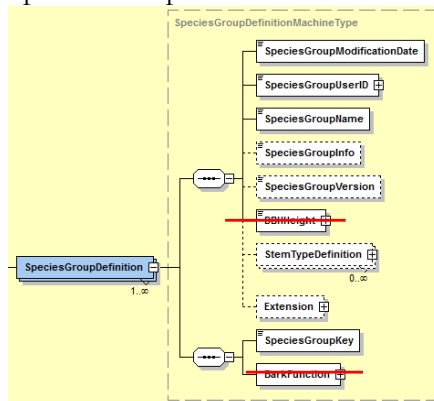
ProductDefinition and SpeciesGroupDefinition

If an fpr message is created based on manual input from the operator, meaning that no instructions or hpr-message is available, it is problematic to have some detailed “harvester information” concerning products and species groups as mandatory elements. It was therefore decided (2011-03-14) that the following elements are updated:

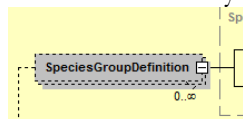
- DiameterDefinition, LengthDefinition and PriceDefinition are excluded from ClassifiedProductDefinition



- DBHHeight and BarkFunction are excluded from SpeciesGroupDefinition



- SpeciesGroupDefinition is made optional since this would make it possible to use only UnclassifiedProductDefinition in case no information is available for any products.

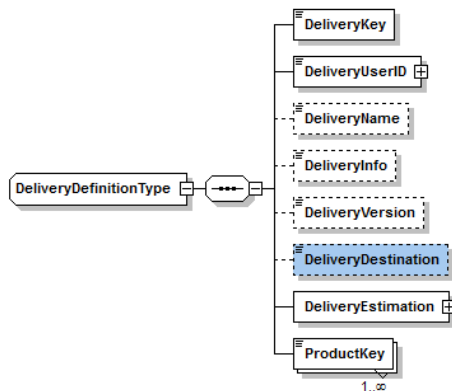


- SpeciesGroupIdInfo shall be changed to SpeciesGroupVersion.

ADDITIONAL ID ELEMENTS

Based on suggestion from Lars Henriksson, SDC.

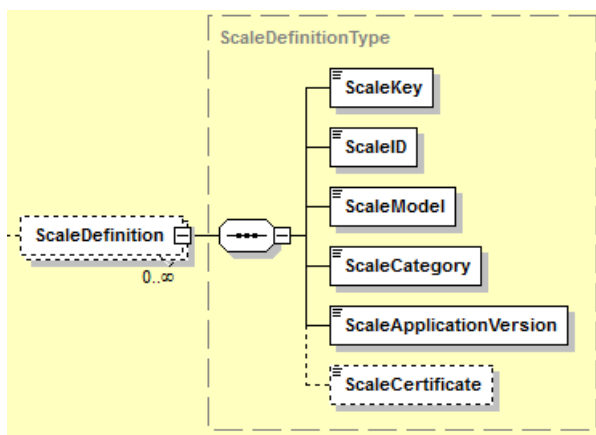
It was decided (2011-05-04) that an additional id element for the destination is added to the DeliveryDefinition.



Observe that all elements in DeliveryDefinition except DeliveryKey and ProductKey must be included in both fpr and fdi messages. The same applies to LocationDefintion in fpr and foi.

SCALEDEFINTION

It was decided (2011-05-04) that a new element for scale program version is included in the ScaleDefinition according to the following figure:



It was also decided (2011-05-04) to:

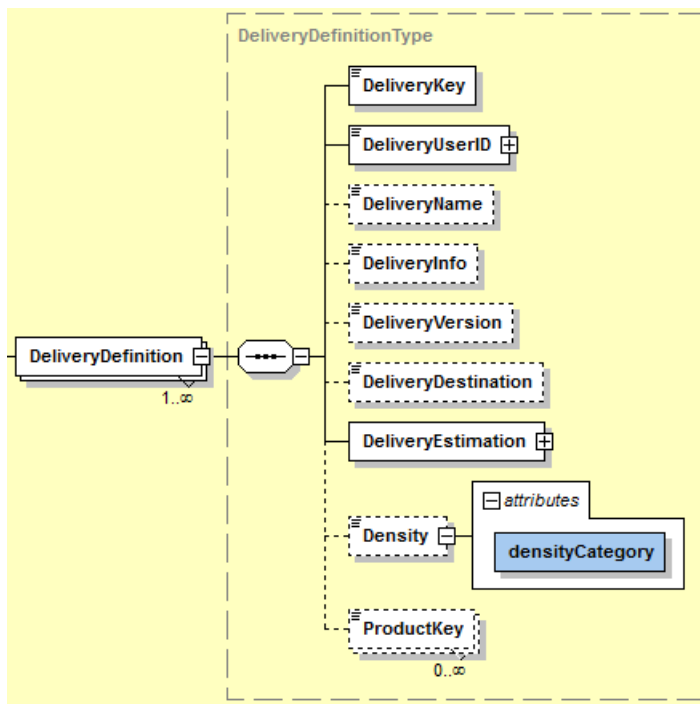
- Update the description of ScaleId, the element should include description “serial number of scale”.
- Add element ScaleCertificate (optional element)

- Include ScaleDefinition as an optional element in fpr.
- Make ScaleDefinition repeatable

DENSITY

The possibility to include an element for density was discussed at a phone meeting (2011-03-14). Density is used as a conversion factor between volume and green mass.

It was decided (2011-05-04) to add new element Density with attribute densityCategory. Enumerations Under bark, On bark and Not specified to be included in attribute densityCategory. This element is to be included in both fpr and fdi.



OPTIONAL PRODUCT

Decided to make ProductDefinition and ProductKey (DeliveryDef), ProdUserId optional in fdi and fpr.

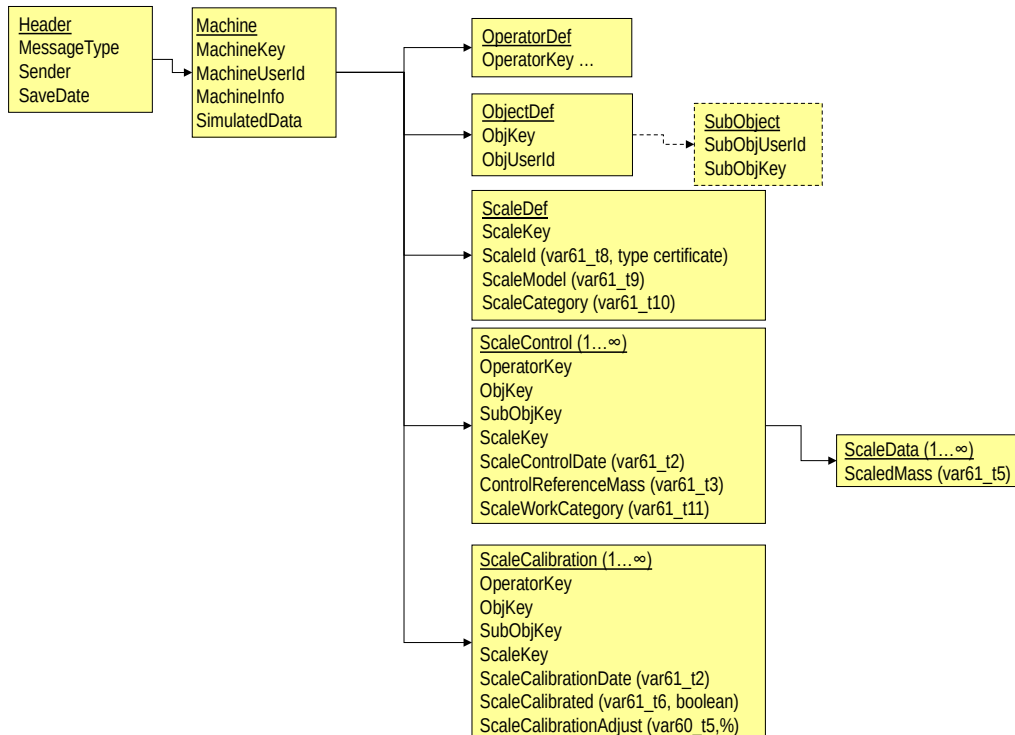
NEW STANDARD MESSAGES

The meeting decided to include the foi, fdi and fpr messages, version 1.0, in StanForD2010 according to the decision described above.

§ 11 Forwarder quality control message StanForD2010

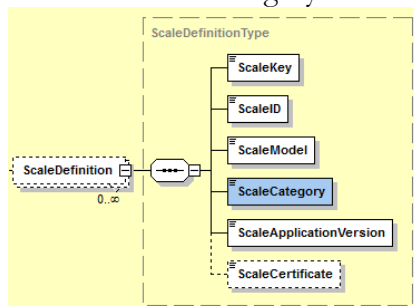
Some of the decisions described under §10 also affects fqc, especially the updates regarding scale definition. For example updated the description of ScaleId, new element ScaleCertificate and ScaleDefinition repeatable

Below is a figure illustrating the structure of the fqc message:



It was decided to do the following updates:

- Make elements ObjectDef and ObjectKey optional since the controls can be done outside any harvesting object.
- Replace enumeration Grapple scale with new enumeration Crane tip scale in element ScaleCategory



- A reference between ScaleControl and ScaleCalibration, add ScaleControlKey.

- Add attribute WorkCategory to both Control and Calibration. This makes it possible to register calibration and control separately for loading and unloading.
- Delete element ScaleCalibrated, not needed since it is included in ScaleCalibration anyway.
- Improve definition of factor (ScaleCalibrationAdjustment) in ScaleCalibration!
- HeadModel/Manufacturer are to be excluded since it is relevant only for harvesters.

NEW STANDARD MESSAGE

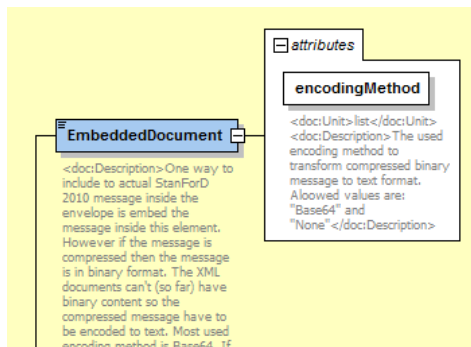
The meeting decided to postpone the introduction of the fqc message until the phone meeting in June.

§ 12 StanForD2010 Envelope

It was discussed how to use TransmissionInfo and BusinessSender when using the envelope in a harvester. It was decided to make these elements optional based on a proposal from Mikael Eliasson.

The following spelling errors are to be corrected: messageCategory, singatureGategor.

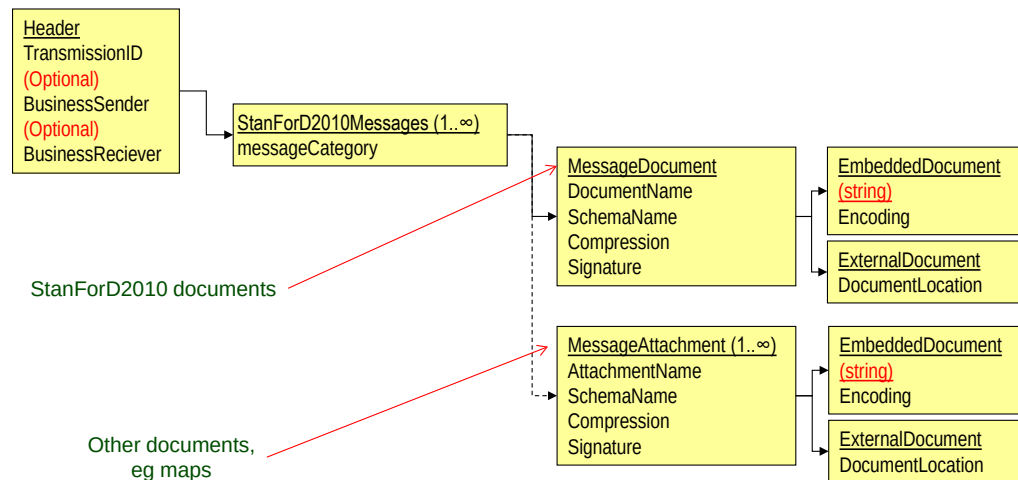
It was decided that EmbeddedDocument and EmbeddedAttachment are to be changed to "string" from "any":



It was decided that the file extension "env" shall be used for StanForD2010 envelope.

Add rules document concerning geographical directives and that it must be possible to generate all messages without an envelope.

The following figure illustrates the structure of the envelope:



NEW STANDARD MESSAGE

The meeting decided to include the envelope message (env), version 1.0, in StanForD2010 according to the decision described above.

§ 13 Versioning of StanForD2010

Versioning of StanForD2010 was discussed. It was decided that a final proposal shall be presented by Metsäteho and Skogforsk at the next telephone meeting.

The following issues were discussed:

- Versioning per message vs one versioning for the complete standard. This includes whether or not to include the version in the namespace.
- Use of different versions in the same harvester or forwarder.

§ 14 Updated annotations in StanForD2010

Skogforsk has not had the time to go through the annotations.

§ 15 StanForD2010 rules

Skogforsk has not had the time to do a proposal for new rules regarding definitions of registered diameters and solid volume.

§ 16 Other suggested StanForD2010 updates

John Arlinger presented a list of suggested updates. However these updates will not be decided on until the versioning has been decided and it is time for a new major or minor release.

The following issues will thus be discussed at a later meeting:

TopLogFreeBuck, Forest certification, Logging organization, Unclassified products, Optional harvester elements, Version attribute, EngineTime in mom, Harvested production in mom, OperatorLoginTime, KeyRefs,

MonitoringSettings, Operational monitoring and excavators, Parameters Nilson's volume unit (Estonian),Diameter section, Completion of logging site, Total harvested production, Top sawing elements, Shift data, Invoiced work time, Distance and route from home, Hpr: number of stumps

§ 17 Other issues

Web site

John will update the official web site with all released schemas as well as some other documents (<http://www.skogforsk.se/stanford2010>).

§ 18 Next meeting

Follow up meeting 2011-06-22, 13.00, phone

Preliminary work meeting 2011-09-15, Helsinki

StanForD meeting 2011-11-16—17, Uppsala

§ 19 End of meeting

Johan thanked everyone for their participation.