

Minutes from the meeting with the StanForD-group 2002-10-28

Place: SkogForsk, Uppsala, Sweden

Present: Stefan Falk, Rottne
Jari Korhonen, Ponsse
Anders Emmoth, Ponsse
Anders Nylund, Partek
Ola Söderlund, Partek
Jörgen Eriksson, ESE-Technique
Anders Hansson, SCA
Leif Orth, Södra
Leif Johansson, Timberjack
Sakari Suuriniemi, Timberjack
Dan Norman, Caterpillar
Tapio Räsänen, Metsäteho
Perttu Isosaari, Mitron
Nicklas Götz, CC Systems

From SkogForsk: John Arlinger, Secretary
Jan Sondell, Chairman
Johan J. Möller

§1 Opening of the meeting

Jan Sondell opened the meeting. The proposed agenda was accepted.

§2 Clarifications of variables

The following improved descriptions were decided (new text in bold style):

Var no	Type	Old description	New description
255	2	Number of codes for causes	Number of codes for causes for downgrading according to var256 t1 (log code 702)
256	2	Description of causes 1...var255T2	Description of causes for down-grading according to var256_t1 (log code 702): 1...var255T2
502	1	Lower DBH break /.....	Lower DBH limit on bark /...
503	1 & 2	... diameter class...	... DBH class...
504	1 & 3	Total volume / DBH class / tree species: 1...var501/1...var111	Total volume including unclassified assortments, sum of Var504 should be equal to sum of Var249, /DBH class/tree species: 1...var501/1...var111

The following changes of priorities were decided:

Var505 o 506	To be given priority 4, old variables with a poor description, existed in 1995
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LWRLNGTHL (var132), lower length class limit

Timo Hokka, Metsäteho, presented the following problem at the meeting in April 2002.

There are two different ways to handle lower length class limits (var 132 t1) combined with cutting window limits. A short example: Length classes 400 cm and 430 cm (var 132 t1) cutting window [-3, 3] (var135 t3, t4), log length 427 cm

- 1) *In the first case the cutting window is taken into account and the log is registered in class 430 (Timberjack, Ponsse, Mitron, Mevire).*
- 2) *In the second case the cutting window is not taken into account, the log is registered in class 400, because it's length is shorter than the lower limit of the lengthclass. (Dasa, Valmet) In practice negative cutting window is not used with these machines but it's possible to use it.*

It should also be noted that no overlapping between the cutting windows of different length classes is allowed, that is the cutting window cannot be wider than a length class. The following proposal concerning variable 135 was accepted, the definitions are also illustrated in figure 1-3:

Var no	Type	Old description	New description
135	1	Additional length margin/length class/price matrix/tree species: 1..var116/1..var111	Additional length margin/length class/price matrix/tree species, can not be a negative number : 1..var116/1..var111
135	3	Lower limit for "cutting window"/price matrix/tree species: 1...var116/1...var111.	Lower length limit for "cutting window"/price matrix/tree species. Lower length class limit (var132) and variable 135, type 1 and 3 together, define the length class of a log if lower limit of the cutting window is below lower length class limit : 1...var116/1...var111
135	4	Upper limit for "cutting window"/price matrix/tree species: 1...var116/1...var111.	Upper length limit for "cutting window"/price matrix/tree species. It does not affect length classification of a log. It can not be above lower length class limit (132_t1) nor above lower length limit for the "cutting window" (135_t3), of the next length class : 1...var116/1...var111

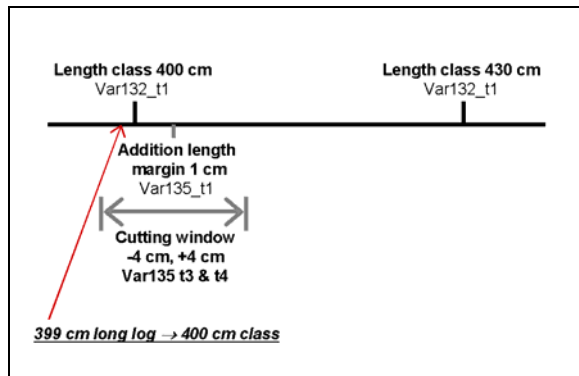


Figure 1. A log with a length of 399 cm will be registered in the 400 cm class

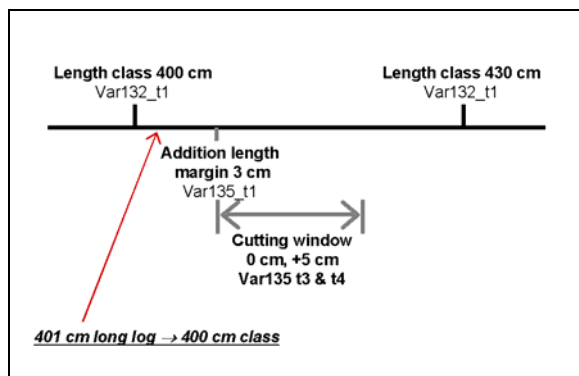


Figure 2. A log with a length of 401 cm will be registered in the 400 cm class while a log with a length of 399 cm will not be registered in the 400 cm class

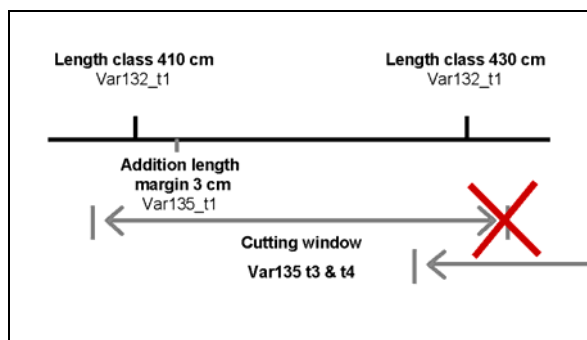


Figure 3. This is not a correctly defined "cutting window" since the upper length limit is above the lower length class limit or above the lower length limit for the "cutting window", of the next length class.

Diameter and volume registration

There is, today, usually no specific registration of measured or extrapolated diameter measurements. Most stem files start from the butt end and diameter measurements are presented for each 10 cm.

The following updated description was therefore accepted (new text in bold):

Var	Name	Type	Data type	Unit	Description
271	STARHEIGHT	2	integer	cm	Height of first registered diameter value.
		3	integer	cm	Height of first measured, i.e. not extrapolated , diameter value.
272	ENDHEIGHT	2	integer	cm	Height of last registered diameter value.
		3	integer	cm	Height of last measured, i.e. not extrapolated , diameter value.

Variable 299, type 1 has a somewhat unclear description concerning what type of volume it refers to. It was therefore decided to improve the description as follows:

Var	Name	Type	Data type	Unit	Description
299	LOGVOL	1	integer	0.0001 m3	Merchantable Volume of logs as specified in var161_t1:1...var290

It is also of interest to register the solid volume of logs in stm-files. It was therefore decided to introduce the following two new variables with priority 2 for stm-files:

Var	Name	Type	Data type	Unit	Description
299	LOGVOL	2	integer	0.0001 m3sub	Solid volume under bark of logs: 1...var290
		3	integer	0.0001 m3sob	Solid volume on bark of logs: 1...var290

§3 New variables

Variable 51, APTHISTORY

In order to improve and complement the definitions of variable 19 (BREAKDATE) and variable 50 (MODIFIED) a new variable was suggested by SkogForsk. This variable (Var51, APTHISTORY) will enable control of whether an apt-file has been changed by the operator as well as making it possible to analyze changes concerning registration of production results caused by

modifications of the apt-file. This variable is suggested to have priority 2 in apt-, prd- and pri-files.

We suggest that all information in variable 51 for an individual apt-file is saved in all prd-files until the variable is reset; this means that the “total history” of an apt-file is saved in the prd-file.

Var	Name	Type	Data type	Unit	Description
51	APT-HISTORY	1	integer	number	Number of times that changes has been made to the apt-file. Possible to reset in administrative program.
		2	string	yyyymmdd hhmmss	Date and time for change/modification of apt-file during the harvest of a site: 1...var51_t1 Possible to reset in administrative program.
		3	string	Text	Text describing variables that have been changed in the apt-file, e.g. "var132_t1, var135_t2": 1...var51_t1 Possible to reset in administrative program.
		4	string	Text	Identity of machine (var3_t2) in which change in apt-file was done, if change is not done in a machine signature of person responsible: 1...var51_t1 Possible to reset in administrative program.
		5	String	yyyymmdd hhmmss	Date and time when Var51 type 1, 2, 3, and 4 were last reset. This is the same date as when the file was first created if type1, 2, 3 and 4 has not been reset.
		6	string	Text	Signature of person responsible for resetting type1, 2, 3 and 4. This is the person that created the file if type1, 2, 3 and 4 has not been reset.

Variable 296, PRICEMATR

It is presently possible to assign a description of the price matrix for each log in an stm-file (var296_t2). To make it possible to use the price matrix code in stm-files it was decided, based on a proposal from Metsäteho, that the following new variable is introduced with priority 2 in stm-files:

Var	Name	Type	Data type	Unit	Description
296	PRICEMATR	3	string	Assortment code	Assortment code (same code as in var121_t2) /log: 1...var290

Metsäteho have found, based on studies of a large number of stm-files, the following problems that ought to be considered by the manufacturers:

Var	Type	Comments
271	3	Ought to be implemented
277	all	Should not be used as it has priority 4
120	1	Ought not to be used, use var120 t2 Instead
121		Ought not to be used in stm-file, use 296 instead.

Variable 657, HARVTREE

When recording data on stands that are to be thinned, it is valuable to record whether a measured tree is planned to be harvested or not, as well as whether it is situated in a planned strip road or not. It would be possible, if this information is registered, to do a bucking simulation only on, for example, trees that are to be harvested in a planned thinning.

It is therefore proposed that a new variable for inv-files is included in the standard with priority 3 (it is presently user defined by Haglöf as var2004, type 2):

Var	Name	Type	Data type	Unit	Description
657	HARVTREE	1	integer	code	Code/tree/sample plot stating whether tree will be left or cut in subsequent harvest operation, 0= to be removed/harvested (default) 1=to be left, not harvested, 2= to be removed/ harvested in strip road: 1...var222/1...var651

The default value is 0 if this variable does not exist in the inv-file.

New variable 22, FILEORDER

New proposal with the minutes, an earlier proposal involving new types of variable 19 and 20 were rejected at the meeting. As there were no objections to the proposal it is considered to be approved.

The descriptions of variable 19 (BREAKDATE) and 20 (RESTARTDATE) were updated at the last meeting (2002-04-08). However, these new descriptions make it impossible to use these variables if we, after a restart, want to store data in a totally new production file (prd- or pri-file).

In some cases it is needed to restart on a totally new production file as described by the following two examples:

1. If the operator has to change an apt-file during harvesting of a certain site he might be forced to restart on a new prd-file. For example because the limits of the length classes of a certain assortment have been changed.
2. If the operator has to send a pri-file everyday and he wants to avoid having to send already reported log data every time he is sending the pri-file. This will mean sending significantly smaller files.

The following new variable was therefore decided with the minutes (priority 1 in prd- and pri-files):

Var	Name	Type	Data type	Unit	Description
22	FILEORDER	1	integer	integer	Order of production files (prd or pri), used when dividing production result from one site into several different files. In the first file FILEORDER = 1. Only the last file has an ENDDATE (var17_t4). When production is resumed and production is stored in a new file, with no old data, FILEORDER must have a value >1

If the total production is registered in one single file variable FILEORDER is equal to 1 and the file has an ENDDATE.

The last and final production file from a site must have both a FILEORDER number as well as an ENDDATE. If a file has a FILEORDER-value large than 1 and no ENDDATE (var17_t4) then several files have to be summed up in order to calculate the total result of a site. All FILEORDER values between 1 and n must be included when summing several files, where n=the FILEORDER number of the last file, the last file has an ENDDATE value.

Below is an example of how to use the new variables for daily reporting of the production results for three days using a pri-file. Observe that the length of the date and time strings are a bit shortened for practical reasons.

Date and time	Logging operation	Prod. reporting	Action concerning pri-file	Var22 t1 FILE-ORDER	Other variables affected
Day 1 02-10-10, 10.00	Start on new site		Start on new file	1	STARTDATE: 02-10-10, 10.00
Day 1 02-10-10, 22.00	Close for the night	Sending daily pri-file	Sending report (pri-file)		
Day 2 02-10-11, 08.00	Start for the day		Start on new file, old data excluded	2	
Day 2 02-10-11, 19.00	Close for the night	Sending daily pri-file	Sending report (pri-file)		
Day 3 02-10-12, 07.00	Start for the day		Start on new file, old data excluded	3	
Day 3 02-10-12, 15.00	Site finished	Sending final report	Sending report (pri-file)		ENDDATE: 02-10-12, 15.00

This means that the first pri-file sent on the first day has the following variables:

STARTDATE (var16 t4)	02-10-10, 10.00
ENDDATE (var17 t4)	Not existing
FILEORDER (var22 t1)	1

This means that the last pri-file sent on the third day has the following variables:

STARTDATE (var16 t4)	02-10-10, 10.00
ENDDATE (var17 t4)	02-10-12, 15.00
FILEORDER (var22 t1)	3

To calculate the total result, three files with the following FILEORDER numbers have to be summed: 1+ 2 + 3

\$4 Updating the pri-file

General updates of pri-file

The PRI-file needs several updates if it should be possible to use instead of the traditional prd-file. One principal is to avoid aggregated or summed variables if these are possible to calculate based on data already existing in the pri-file.

Another principal is to avoid variables copied directly from the apt-file. The reason for this is to avoid forcing the operator to start registering the production results in a new file if only minor changes has been done to the apt-file.

It was decided that the following variables are to be included in the pri-file:

Var	Name	Type	Priority
3	MCHNNO	2	2
11	RESETDATE	4	1
12	DATESAVED	4	1
16	STARTDATE	4	1
17	ENDDATE	4	1
18	CONTRDATE	4	2
19	BREAKDATE	4	2
20	RESTARTDATE	4	2
22*	FILEORDER	1	1
31	ORG	All types	2
32	BUYER	All types	3
34	SUBCON	2-5	2
51	APTHISTORY	All types	2
120	TREESPEC	3	1
121	ASSTDESCR	2	2
211	OPERATOR	2	2
212	DRIVERNAME	1	2
221	NUMSTEMS	1	3
500	DBHHT	1	3

**New variable, see previous paragraph*

It was decided to change the following priorities in the pri-file:

Var	Name	Type	Old priority	New priority
117	NUMDIACL	1	1	3
118	NUMLNTHC	1	1	3
131	DIAGRDLMT	1	1	3
132	LWRLNGTHL	1	1	3
141	GRADE	1	1	3
142	NUMGRADUS	1	1	3
143	GRADDESIG	1	1	3

It is also suggested that the following priorities in the pri-file are changed (not discussed at the meeting but could be added to the decision if no one disagrees):

Var	Name	Type	Old priority	New priority
169	DENSITY*	1	3	3
169	DENSITY*	2	3	3
243	BUTTVOL	1	2	3
250	SAWLGVOL	1	2	3
258	DISTANCE*	1	3	3
258	DISTANCE*	2	3	3
274	DIAGRDLMT	2	2	3
275	LWRLNGTHL	3	2	3
276	GRADE	3	3	3
504	VOLDBHCL	3	3	3
504	VOLDBHCL	4	3	3
504	VOLDBHCL	5	3	3
510	DBHDERDIST	1	3	3
660	STANDAGE	1	3	3
660	STANDAGE	2	3	3
670	UNITAREA	1	3	3

**These variables were added to the pri-file in the minutes (2001-10-22) but, by mistake, not in the standard documents.*

The following new log codes in variable 256, type 1 were decided:

Code	Description
207	Middle diameter in mm according to HKS measurement over bark
208	Middle diameter in mm according to HKS measurement under bark
2000-series	User defined codes, not standardized

It was decided that the description of log code 1 and 2 is updated according to the following table (new text in bold):

Code	Description
1	Price matrix/assortment number. The number refers to the order of the assortment according to variable 121. Number = 0... n, n = var111 x var116. Assortment no 1 is the assortment that comes directly after the type number in var 121. Observe that no. 0 is used only for logs that do not belong to a certain matrix, that is unclassified logs.
2	Species number. The number refers to the order of the species in variable 120 . Number = 1... n, n = var111. The first assortment is the assortment that comes directly after the type number in var120.

If we are to store tree data (for example DBH) in the pri-file using var256 and var257 we will get problems with redundancy since DBH will be stored for each log. A solution to this problem would be to store tree data in separate variables. To make it possible to relate tree data with log data the stem number has to be stored in both variables 255-257 and in 265-267. It was therefore decided to introduce three new variables according to the following table:

Var	Name	Type	Data type	Unit	Description
265	NUMTRECOD	1	long integer	Number	Number of log codes in var266
266	TREECODE	1	integer	Code	Codes set for registered data in var267, all trees follows the definition in this variable:1..var265 See appendix
267	TREEDATA	1	long integer	Number	Measurement data in the pri-file for each tree /1...var265/1...var221.

The following codes in variable 266 (TREECODE) were decided (to be included in StanForD-appendix):

- 500 – Stem number
- 2 – Species
- 740 – DBH (on bark), mm
- 741 – Stem type (Finnish PMP-codes, see Var124 t2)
- 750 – Operator number. The number refers to the order of the drivers in variable 212, type 1. Number = 1...var211_t2. Operator no. 1 is the operator that comes directly after the type number in Var 212.
- 2000-series – User defined codes, not standardized

It was decided to update the following description of variable 257 (LOGDATA) since the structure of the file has changed with the introduction of variable 265, 266 and 267:

Var no	Type	Old description	New description
257	1	Measurement data in the pri-file for the log/1...var255/1...var290. Due to technical reasons the variable 290 is allowed to be stored after variable 257 in the pri-file. Variable 257 should be read until the sign end of variable. After that one can use var290xvar255 (number of log data) as a control of the correct reading of this variable.	Measurement data in the pri-file for the log/1...var255/1...var290. Due to technical reasons the variable 290 is allowed to be stored after variable 257 in the pri-file. Variable 257 should be read until the sign end of variable. After that one can use var290xvar255 (number of log data) as a control of the correct reading of this variable.

It was decided that the following log data (var257) must be included in a pri-file:

- 1-Price matrix number
- 201-Top diameter ob,
- 202-Top diameter ub,
- 301-Length,
- 400-Vol according to Var161,
- 401-Vol. m3sob,
- 402-Vol. m3sub,
- 500-Stem number,
- 501-Log number

It was decided that the following tree data (var267) must be included in a pri-file:

- 500-Stem number,
- 2-Species
- 740-DBH, mm

Coordinates in the pri-file

There are many advantages to collect coordinates for each log or tree. The simplest case is to monitor the position of the harvester and connect it to each tree harvested at that spot. If this information is relayed to the forwarder, it will be possible to, for example, optimise the forwarding operation or just give the forwarder precise information about where to find the piles.

To save data space it seems advantageous to register a start point (e.g. at the landing) at the logging site and after that only store the differences from that point.

It should be possible to estimate the approximate size of the stand as well as the strip roads if the coordinates of each tree or log are registered in the pri-file.

The following detailed descriptions of new variables and log codes were worked out after the meeting and distributed with the first draft version of the minutes. Since no objections were raised concerning these new variables they are considered to have been decided as new variables.

All new coordinate variables will have priority 3 in pri-files.

Var	Name	Type	Data type	Unit	Description
520	COORD-REF	1	integer	Code	Position of coordinate registration in file: 1= Base machine position 2= Crane tip position when felling the tree 3 = Crane tip position when processing the tree
521	COORD-TYPE	1	integer	Code	1=coordinates stored as a difference from the starting coordinates (COORDSTART var522) 2=absolute coordinates are stored in the file.
		2	integer	Coder	Coordinate system used in file: 1=WGS84 (Default)
522	COORD-START	1	integer	0.00001 degrees	Latitude when file is created (absolute value), registered according to var521_t2 and var520_t1.
		2	integer	Code	1=North, 2=South
		3	integer	0.00001 degrees	Longitude when file is created, (absolute value), registered according to var521_t2 and var520_t1.
		4	integer	Code	1=East, 2=West
		5	integer	Meters	Altitude, height above sea level, registered according to var521_t2 and var520_t1.
		6	string	yyyy-mmdd	Date and time

New tree codes in variable 266 type 1:

Code	Description
760	Latitude, integer as 0.00001 degrees, stored according to var521_t1, var521_t2 and var520_t1.
761	1=North, 2=South The code in var522_t2 is valid for all trees if this code is excluded.
762	Longitude, integer as 0.00001 degrees, stored according to var521_t1, var521_t2 and var520_t1.
763	1=East, 2=West The code in var522_t4 is valid for all trees if this code is excluded
764	Altitude, meters above sea level, stored according to var521_t1, var521_t2 and var520_t1.

Other comments concerning pri-files

We are currently using var121_t1 in the pri-file which is directly copied from the apt-file (also the case for var116, var125, var126 and var127). This is in sometimes a problem since it forces the operator to start registering the production results in a new file if only minor changes has been done to the apt-file.

It was discussed after the meeting whether or not we should introduce a new version of var121 with a list of the assortment codes used in the file. This issue will be discussed at the next meeting.

§5 Items for discussion and information

Variables for monitoring

The secretary reported from the ongoing work. The working group, consisting of the secretary and four representatives from the TSG-group, has written a draft proposal describing how to implement a standardized system for monitoring. The working group met at ESE-Technique, Växjö, in October. The working group will meet again in December to work out a final proposal. The plan is to have a discussion concerning this proposal with the manufacturers prior to the next StanForD-meeting in order to be able to make a decision then.

Abbreviations in StanForD-documents

Jan Sondell informed the meeting that the following abbreviations will be used in the standard documents:

1. When writing an abbreviation for variable number, lowercase letters are used and, a space or underscore e.g. **var35 t2** or **var35_t2**
2. The abbreviation for file types are always written using lowercase letters, e.g. **stm-file**, **apt-file**
3. The name of a variable is always written using uppercase letters, e.g. **CONTACTNO**

§ 6 PRD-file for forwarder

A general demand to read or create prd-files in the forwarder has been identified by some forest companies and machine manufacturers. When pc-computers are installed in the forwarders the possibilities to use the forwarder as an important node in the information system will be greatly enhanced.

Prior to the meeting Timberjack suggested a number of new variables to be used in prd-files from forwarders predominantly dealing with weighing/scaling of timber.

The following new variables were decided with priority 3 in prd-files:

Var no	Name	Type	Data type	Unit	Description
237	MASS	1	Long integer	Kg	Total mass/weight of loads per species: /1...var111
	MASS	2	Long integer	Kg	Total mass/weight of loads per operator/assortment/species: 1...var211/1...var116/1...var111
	MASS	3	Long integer	Kg	Total mass/weight of loads per assortment: 1...var116/1...var111
	MASS	4	Long integer	Kg	Total mass/weight of loads per product group/species: 1...var125/1...var111
60	WEIGHTCAL	1	Integer	Integer	Number of weight scaling calibrations
	WEIGHTCAL	2	String	yyyymmdd hhmmss	Weight scaling calibration date (scaler): 1...var60_t1
	WEIGHTCAL	3	Integer	Kg	Reference mass of weight scaling calibration: 1...var r60_t1
	WEIGHTCAL	4	Integer	0,1%	Error of weight scaling when calibration is carried out: 1...var r60_t1
	WEIGHTCAL	5	Integer	0,001	Factor used in weight scaling, default value is 1000.

The following new variables were decided with priority 3 in drf-files:

Var no	Name	Type	Data type	Unit	Description
430	FUEL	1	Integer	0,1 l/h	Average fuel consumption/operator/site (from start to finish of a site)
		2	Integer	0,1 l/h	Average fuel consumption/site (from start to finish of a site)
		3	Integer	0,1 l/h	Average fuel consumption over a long period of time, basically the lifetime of a machine

The following suggested variables were not accepted at the meeting, they need further discussion or are already included in the standard:

DATATYPE	UNIT	DESCRIPTION	Comments
Long integer	Kg	Average loadmass /operator/site	"Average load mass" is not needed since both total mass and number of loads (var228, NUMLOAD) are already included in the standard.
Long integer	Kg	Average loadmass/site	"Average load mass" is not needed since both total mass and number of loads (var228, NUMLOAD) are already included in the standard.
Integer	Kg/m3	Factor of the mass/ assortment/tree species	This is identical with var169, DENSITY
	m	Total driving distance/site	This is identical with var258_t1, DISTANCE
	m	Average driving distance/load	"Average driving distance" is not needed since both total driving distance and number of loads (var228, NUMLOAD) are already included in the standard.
Integer	Code	Calibration, 1=yes 2=no	Probably not needed
Long integer	m3	Volume/assortment/ operator/site	This is identical with var236_t10, VOLUME
Long integer	m3	Volume/assortment/site	This is identical with var236_t10, VOLUME

Additional comments from Timberjack:

Calibration (WHEIGHTCAL) is a calibration of a weight scaler. A 1000 kg load (*Reference mass*, var60_t3) is lifted with the crane and this is compared with the measurement of the weight scaler and the scaler is corrected with some factor (*Factor used in weight scaling*, var60_t5), if correction is needed.

True mass (var237) is the mass registered in the prd-file.

Factor used in weight scaling is used when calculating the *True mass* from the *Mass according to the scaler*. If needed the *Factor used in weight scaling* is adjusted when the scaler is calibrated.

$$\text{True mass} = (\text{Mass according to scaler}) * (\text{Factor used in weight scaling} / 1000)$$

$$\text{Error of weight scaling calibration} = (\text{Scaled mass before calibration} - \text{Reference mass of weight scaling}) * 1000 / \text{Reference mass of weight scaling}$$

Average fuel consumption is calculated over a long period of time, basically the lifetime of the machine. This can be compared with the *average fuel consumption/ site* which is based on data registered between the start and finish of a site.

To improve the identification of production files it was decided to introduce the following variable:

Var no	Name	Type	Data type	Unit	Description
3	MACHINE	3	Integer	Code	Code describing type of machine: 1=harvester (default if variable is missing) 2=forwarder 3=harwarder, machine which handles both harvesting and forwarding 99=other

Variable 3 type 3 should have priority 1 in prd-files and code 1 is assumed as default if variable is missing.

When we start to use the prd-file on a large scale for forwarders the priorities of some variables in the prd-file must be changed. For example, log tallies (var201) are probably one of the most central variables in a prd-file from a harvester, while it can not be generated by a forwarder.

It was decided that the secretary is to study the variable priorities of the prd-file in order to suggest changes at the spring meeting.

§ 7 Development of StanForD towards XML

Tapio Räsänen reported from the recent work done on StanForD XML at Metsäteho.

The report "Towards StanForD-XML" is finished and can be downloaded at StanForD's web site (www.skogforsk.se). New translating programs together with XML-schemas have been develop. The following translating programs have been developed, each application used for translating a specific file type:

- PRD_to_XML.exe
- STM_to_XML.exe
- APT_to_XML.exe

These programs are free and will be avaiable for testing and further development (can be downloaded at StanForD and Metsäteho's web pages). The source code (C++) may be given for all. A use example could be to: creating a stem database by collecting stm-files from different machines.

Metsäteho's XML project ends by year 2002. Further schema definitions and changes to the programs can be done if feedback from testing is achieved.

Below is a suggested continuation of the XML-project outlined:

1. Finishing the translating programs and schemas by the end of the year
Testing and feedback
2. Setting up a working group from machine manufacturers and other partners?
Meeting during the winter or at the next StanForD meeting

3. Manufacturers' and forest companies' own development work
Software, new files
New ways to use XML-files
Testing in harvester environment (compression and data transfer tests)
4. Further definitions and development by Metsäteho and SkogForsk
Handling in the working group
5. Final definitions and documentations
Agreement of StanForD-XML files and schemas in StanForD group,
continued work later?
6. Planning of the implementation

§8 Naming of ID-variables in prd-files (Swedish issue)

Johan J. Möller presented a proposal concerning Swedish ID-variables. It was decided that the Swedish interface names listed in Appendix 1 should be used in all Swedish applications implementing StanForD, the text will be added to the Swedish appendix:

§9 Information about control of harvester measurements

Johan J. Möller informed about the ongoing work concerning certification systems for control of harvester measurements in Sweden. A possible certification system will be evaluated in a practical field test together with Sveaskog, VMF Qubera and VMR/SDC during the first half of the year of 2003.

§10 Recommendations concerning unclassified logs

Jan Sondell informed about handling of unclassified logs. A suggestion, which will be discussed on the next StanForD-meeting, is attached to the minutes in Appendix 2.

§11 Standard for data exchange between machine control systems and other applications

Jan Sondell and John Arlinger informed about the current situation.

Bengt-Arne Walldén will set up a meeting concerning "Standard for data exchange between machine control systems and other applications", hopefully before the end of the year. This meeting will focus on communication between different applications. This whole issue will probably not be part of the standard.

John Arlinger has been approached by a Swedish forest company concerning how to handle geographical information in "site directives". Different GIS application today need different information and different format. A group with different representative might be set up.

§12 Other StanForD issues

How to handle different versions of StanForD as well as how to document changes to the standard was discussed. The discussion was initiated by Ola Söderlund through an E-mail sent out two days before the meeting (Appendix 3). SkogForsk will consider the ideas and try to put forward some suggestion at the next meeting.

One idea, discussed after the meeting, is to introduce a new variable with information concerning which version (date) of StanForD that was used when developing the software.

§13 Next meeting

Next meeting will take place on Tuesday April 8th, 2002, at SkogForsk in Uppsala, starting at 10.00 a.m. Proposals for the meeting shall be the secretary by hand not later than March 1st 2002.

§14 End of meeting

Jan Sondell (chairman) closed the meeting.

Secretary

John Arlinger

John Arlinger
Johan Möller
2002-10-27

Identity variables

Swedish interface nomenclature.

It is very important that the identities of a certain harvested volume is correct when using harvesters for measuring the procured volume, and this volume is used for paying the forest owner.

Different forest companies in Sweden use different variables for identification while different bucking computer manufacturers are using different names for the same variables in their computer interface.

One way to solve part of this problem would be to change the names shown in the user interface of a bucking computer through the apt-file. This is probably not a good solution since the manufacturers will not know the length of the variable names used by different organisations and computer manuals differ from the actual interface depending on what apt-file is used.

A different way to solve part of the problem is standardize the interface naming of some important identity variables. At least this will make it possible for the companies to write, in text, instructions to the operators of harvesters independently of what kind of harvester they are using.

SkogForsk and the Swedish users therefore propose that the Swedish names used in the interface of bucking and administrative programs are standardized.

The Swedish users also want the variable number to be displayed in the interface in some way, for example “Objektnr (var21 t1)”. Certain variables which are not commonly used in Sweden should only be displayed using the variable number as described bellow.

The following text and table should be added to the Swedish appendix:

*The following names must be used in the interface of bucking computers, parentheses are used for parts of names that only need to be included once. * Id-variables that have to be included in all new versions of harvester computers in Sweden.*

Var No	Name	Type	Old Swedish standard names	Used by SDC	New interface name in Swedish
2	ID	1	Identitet	x	Apt-identitet
3	MCHNNO	1	Maskin		Tillverkningsnr
		2 *	Unik maskinidentitet	x	Maskinnr., uppdragsgivare
5		1	Datortyp	x	Version apt.-program
		2	Datortyp		Version adm.-program
21	SITE	1*	Objekt nr	x	Objektnr
		2*	Stämpling	x	Delobjektnr.
		3*	Trakt nr	x	Var21_t3
		4	Skiftes nr		Var21_t4
		5	Certifierad		Certifierad
31	ORG	1	Organisation	x	Organisation
		2	Förvaltning		Förvaltning
		3	Distrikt		Distrikt
		4	Arbetslag		Arbetslag
		5	Virkesvälta		Var31_t5
32	BUYER	1	Köpare		Köpare
		2		x	Mottagningsplats
33	VENDOR	1	Säljare		Säljare
34	SUBCON	2*	Kod (entreprenör)	x	ID avverkningsföretag
		3	Namn (entreprenör)		Namn avverkningsföretag
		4	Adress (entreprenör)		Adress avverkningsföretag
		5	E-post (entreprenör)		E-post avverkningsföretag
		6	Tele & fax (entreprenör)		Tele/fax avverkningsföretag
35	CONTRACT-NO	1*	Kontraktsnr.	x	Storvirkesordernr
		2*	Virkesordernr.	x	Virkesordernr
121	ASSTDESCR	2*	Sortimentskod / mottagningsplats	x	Sortimentskod

To improve the identification of production files one new variables are suggested:

Var no	Name	Type	Data type	Unit	Description
3	MCHNNO	3	Integer	Code	Code describing type of machine: 1=harvester 2=forwarder 3=harwarder (<i>harvester extracting logs to roadside</i>) 99=other

Variable 3 type 3 should have priority 1 in prd-files and code 1 is assumed as default if variable is missing. The Swedish interface name should be "Maskintyp".

Johan J Möller
Jan Sondell
2002-10-09

To manage unclassified timber

Background

Already at the StanForD meeting in April 2001 the participants agreed to implement as default a standard matrix for unclassified timber in the bucking computers. However there is still some uncertainty on how to handle it. Therefore some clarifications may be needed.

Function

The actual matrix for unclassified timber is aimed to catch all dimensions of logs (manually) produced where the actual quality and dimensions (too short or too long or under- or oversized) are not found by the computer in any of the matrixes included in the apt-file.

The unclassified timber matrix is just for monitoring and should not be included in any price calculations. Therefore it should not be included in the apt-file but included in the prd-file.

Problems

Allowed undersized logs

In some cases undersized top logs of pulpwood is allowed within the ordinary assortment. These pieces must not be handled as unclassified. Instead it is easy to introduce a smaller diameter class in the ordinary pulpwood matrix in the apt-file, but without any prize. Of course the manufacturer must adjust the program so that it first tries to place an undersized log in an ordinary matrix and if it does not fit put it into the unclassified matrix.

Presentation or not of unclassified volume?

In some cases the harvester employer do not want the unclassified timber to be shown in the prd-file. Therefore it ought to be possible to exclude this matrix by changing a setting in the machine. It should however be on by default.

Identification – new type of variable and code

It must be possible to introduce some kind of identification of the unclassified assortments from the keyboard of the machine or via the administration program. For the Swedish market, the SDC codes 4301 (pine), 4302 (spruce), etc, could be used. When a code 0 is found in the log-variable in the pri-file the administrate program has to find out the tree species in the tree variable for the actual log.

-----Original Message-----

From: ola.soderlund@partekforest.com
[mailto:ola.soderlund@partekforest.com]
Sent: den 25 oktober 2002 13:33
To: Arlinger, John
Cc: All StanForD
Subject: Re: StanForD E-mail conference

Hello all!

This is a late "other issue" but due to the non technical contents, I dare to send it this late.

I have a suggestion that the StanForD pages at Skogforsk shall contain a little bit more than it currently does. Here comes some suggestion to get better traceability of changes in the standard. Perhaps some see this as totally waste of time but I'll assure you, it's not ;)

1. StanForD version

The standard consists of a couple of documents. Some of the documents are more less "unrelated" but some are tightly connected. A new function could be affecting more than one document and to get the complete description of the function, correct version of all of the affected documents must be read. What I misses here is some kind of StanForD top version that is set for the specific documents/versions that belongs together. The version could be either the date or some sequence numbering (eg. A, B ,,,). A settled version and the contents of the contained document should not be changed afterwards.

2. StanForD version history

It would also be nice if all of the different versions according to '1' above is found at the pages. During the years and during the development of the standard different machines and controll systems will be handling different versions of the standard. If all old variables would remain unchanged in the standard It would be enough with the latest one, but as you all know, there are chages introduced or at least the priorities are changed. With this "history" it will be easier to keep track of changes and to dig in the past, if needed.

3. Current ongoing work

Between the versions of StanForD there are work ongoing with the Standard. Some are directly introduced in the documents and some are handeled in other documents (like the proposal appendixes sent out before the meeting). I suggest that all these working documents are visible at the web. I'll suppose that all information from the additional working proposals, after a version is settled, are found within the ordinary standard documents which perhaps make the "proposal documents" superflous when a version is settled or?

4. Meeting Protocol

Perhaps also the approved meeting protocol should be found for each version, this will reflect the decisions connected to a version.

Example 1: Version by using dates.

Working documents (meeting will be held yyyy-mm-dd)
 Main document (2001-01-22)
 Variables in numerical order (2002-04-04)
 Variables by category (2002-01-20)
 Appendix 1 (2002-04-04)
 Extended documentation (2002-01-10)

Proposal new variable 296 PRICEMATR
 General update of pri-file type

Version 2002-04-08
 Main document (2001-01-20)
 Variables in numerical order (2002-04-04)
 Variables by category (2002-01-20)
 Appendix 1 (2002-04-04)
 Extended documentation (2002-01-10)

Information about changes from 2001-10-01 to 2002-04-08
 Proposal new variable 344
 General update of apt-file type
 StanForD meeting protocol

Version 2001-10-01
 Main document (2001-01-20)
 Variables in numerical order (2001-01-20)
 Variables by category (2001-01-20)
 Appendix 1 (2001-10-04)
 Extended documentation (2001-10-04)

Information about changes from 1999-09-01 to 2001-10-01
 Proposal new variable 344
 General update of apt-file type
 StanForD meeting protocol

Version 1999-09-01
 Main document (1998-01-20)
 Variables in numerical order (1999-04-20)
 Variables by category (1999-01-20)
 Appendix 1 (1999-06-04)
 Extended documentation (1998-10-04)

Information about changes from yyyy-mm-dd to 1999-09-01
 Proposal new variable 344
 General update of apt-file type
 StanForD meeting protocol

Example 2: Verison numbering by using A, B, C ...

Working documents for version F (meeting will be held yyyy-mm-dd)
 Main document 2002-02-02

Variables in numerical order E
Variables by category. C
Appendix 1 2002-08-01
Extended documentation 2002-09-13

Proposal new variable 296 PRICEMATR
General update of pri-file type

Version E
Main document E
Variables in numerical order E
Variables by category. C
Appendix 1 B
Extended documentation B

Information about changes from D to E
Proposal new variable 344
General update of apt-file type
StanForD meeting protocol

Version D
Main document A
Variables in numerical order D
Variables by category C
Appendix 1 A
Extended documentation A

Information about changes from C to D
Proposal new variable 344
General update of apt-file type
StanForD meeting protocol

Version C
Main document A
Variables in numerical order C
Variables by category. C
Appendix 1 A

Information about changes from B to C
Proposal new variable 344
General update of apt-file type
StanForD meeting protocol

Regards Ola

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