
User Guide

NVAF, Volume and Decay Data Collection and Edit System Version 5.6



**Ministry of Sustainable Resource Management,
Resource Information Branch**

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Introduction

Purpose of this Document

This document describes basic instructions on how to use the NVAF, Volume and Decay Data Collection and Edit System. This document is designed for field personnel who are already familiar with the NVAF or Decay data collection process. The Volume data collection process involves the collection of taper data only (diameters outside bark and double bark thickness); the process is not (yet) described in this user guide.

How this Document is Organized

The User Guide is divided into the following sections:

1. Introduction
Provides a brief overview of the entire document.
2. Getting Started
Details how to load the software on your PC and the Handheld.
3. Using the Handheld
Provides data entry instructions for the handheld.
4. Managing your Data
 - PC Handheld Data Transfer
 - Data Backup
 - Reports
 - Maintain Samples
5. Appendices

Document Conventions

All instructions contained in this document for the PC and Handheld are written as DOS based commands. When using the PC, you may also use the equivalent Windows commands.

User Commands and Data Entry Fields

All commands that must be entered by the user are formatted in **Courier 11 point bold** and indented. These commands will look similar to the following example.

```
cd dvhost
```

All fields that require data entry by the user will be **Arial 10 pt. font bold and underlined.**

Warning Notes

WARNING!

Warning Text

Warning notes are used to draw attention to critical items or critical data entry points in the program.

Warning notes are used **in the document** to draw attention to critical items or indicate a point in the program where you **MUST** ensure that the information you have entered is correct.

Warning notes at the end of the following three sections will indicate that the information cannot be changed unless the tree is redone.

1. Standing assessment
2. Marking phase
3. Post bucking phase

Notes

Any items that you should be aware of when following a procedure are described in a note within a section similar to the following example.

NOTE: Items to note before proceeding.

Screen Captures (Pictures)

For each of the screen captures (pictures) an explanation of terminology (e.g., DIB-1) and units is located at the bottom of the screen. This message will change depending on the cursor location.

Header Data identifies screen title, tree and leader number as well as utop and total height.

Footer information contains screen # and a brief explanation of the active field.

```

DecaySec Tr1    D Ldr0 UTop23.61 Ht30.00
Seg CumLen  SegLn DIB-1 DIB-2 DBT  Fk?
13  14.53   0.74   0.0   0.0   0.0
14  16.53   2.00   0.0   0.0   0.0
15  18.53   2.00   0.0   0.0   0.0
16  20.53   2.00   0.0   0.0   0.0
17  22.53   2.00   0.0   0.0   0.0
Cumulative Length to Top of Section
Scrn #211 2002.03.28
Vers:5.6: 2002.03.28 Today:2003.AUG.29 12:38:06

```

Data Entry Notes

Use the <Esc> key to move through the data entry screen more quickly.

You can move through some screens quickly if the information is already in the database by pressing <Enter> to accept the information, then <Esc> to move to the "Screen OK?" prompt.

System Warnings

Press <Enter> to acknowledge a system warning.

System warnings are identified by a question mark and differ from error messages. If a system warning occurs (i.e., a warning message at the bottom of the screen when using this program), press <Enter> to acknowledge the warning. You have the option of changing the information you entered or moving to the next screen.

System Error Message

System error messages are identified by an exclamation mark and are displayed at the bottom of the screen when an error has been made in data entry. You cannot move ahead in the program until the error is corrected.

Keyboard Commands

All frequently used PC and handheld keyboard keys that must be entered by the end user will be denoted with < > brackets. The following example illustrates how typical keys will be denoted in this document.

Key	Text	Description
<< Clr> (Handheld only)	Backspace/Clear	<ul style="list-style-type: none"> Validates information Moves ahead to next screen
<Sp>	Space button	(Handheld only)
<Esc>	Escape	Moves to previous screen. Does NOT validate information.
<F1>	Help	Help for the current screen
<F2> (Handheld)	Pick lists	Access pick lists
<F3>	Go to Decay Identification screen.	Only accessible from the Decay Segment Measurement Screen.

<F4>	Identify fork	Identify fork in the current volume or decay section.
<F5> (Husky: press 'paw' and 5)	Memo field	Memo field is accessible at anytime
<Bkspc>	Backspace	(PC only)
<Ctrl>	Control	
<Alt>	Alt	
<Enter>	Enter	
Up and down arrow keys	Move between fields	(PC and Handheld)

File Format and Utility

.BAT – Batch file. These files are the software startup files that are used to initiate the software. The DV.BAT file starts the handheld DVHAND software on the handheld and DVHOST.BAT starts up the DVHOST software on the PC. In a DOS screen, only the file name (ie DV) is needed to call up the file.

.DBF – Database files. These files contain the sample data and the lookup files used by the software.

.EXE – Executable files. These files contain the operating instructions for the software and are called up by the BAT files.

New Version Developments

Periodically the data collection software is enhanced and a new version is released. Due to operational sampling concerns, the new version of the software may be released in advance of a properly updated User Guide. Consequently, documentation of the enhancements must initially be made in an ad hoc fashion and will be found in the appendix. Note the present version, 5.6, appears to be stable and there are no plans to update it.

Getting Started

Installation of the Software

The installation of the software has two steps:

1. Installing DVHost and DVHand software on your personal computer
2. Installing DVHand on your handheld computer.

Installing DVHost and DVHand Software on PC

Locate the zipped copy of the DVHost software currently found at the following site:

<http://srmwww.gov.bc.ca/tib/vri/vri/software/nvafvoldecay.htm>

NOTE: If using the Windows XP operating system, note that the PC / Husky Handheld communication does not work. In order to work around this problem, you can use "HCOM for Windows" available from the Itronix web site – <http://www.itronix-tac.co.uk/downloads/hcomw.zip> . Unzip the program into a new directory and run the setup.exe file.

Windows based instructions:

1. Open Windows Explorer and access appropriate drive.
2. Open File/New/Folder and create DVHOST subdirectory.
3. Download the zipped software file from the web site.
4. Extract contents into the DVHOST subdirectory.
5. Create a shortcut for the desktop

DOS based instructions for use for most handhelds:

1. Start DOS or open a DOS window. (You should be in the C directory as shown below.)
C:\>
2. Create directory called DVHost
C:\>**md dvhost** <Enter>
3. Copy contents of floppy to directory DVHost
C:\>**cd dvhost**
C:\dvhost>**copy a: *.*** <Enter>
4. Unzip the DVHost files
C:\dvhost>**pkunzip dv56host** <Enter>

NOTE: If you are installing a version of the software other than 5.6, please substitute dv56host in Step 4 with the appropriate program name.

For DOS or Windows systems, follow step 5

5. Edit the Config.sys file, or its equivalent, to increase the buffer size and the number to files that can be opened at any one time. Look for the following lines of code and modify the number cited to match the ones below:

Buffer = 30

Files = 99

Installing DVHand Software onto the Handheld

WARNING!

The following process is required for the initial setup **ONLY**. Do not repeat this part of the setup. Repeat downloading of these data files to the handheld will overwrite any sample DATA entered on the handheld.

The following installation instructions require using both your PC and handheld.

NOTE: Please consult your handheld user manual to determine which connection ports are required.

On the PC

1. On your PC, start the DVHost program from the DVHost directory
C:\dvhost>**dvhost** <Enter>

Windows: double click on DVHost icon

NOTE: Ensure that your handheld is connected to the PC before proceeding.

On the Husky Handheld

2. On the HANDHELD, at the C:\> prompt, create a directory called DV.
DOS commands are summarized in the appendix.

C:\>**md dv** <Enter>

3. Type
HCOM <Enter>

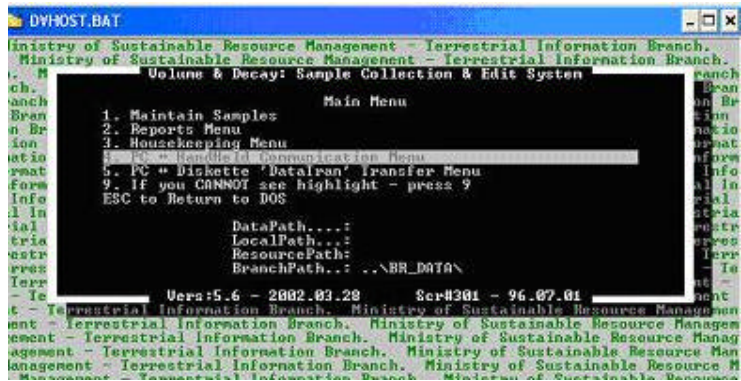
you should see this screen.

```
Husky File Transfer Utility V0.06
Husky FS3 Portable Computer
© Copyright Husky Computers Ltd
```

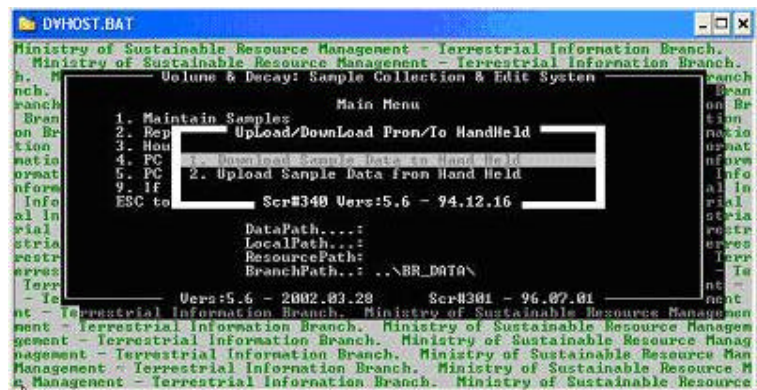
Press ESC to exit.

On the PC

4. Use the arrow keys and select:
PC Handheld-Communications Menu <Enter>

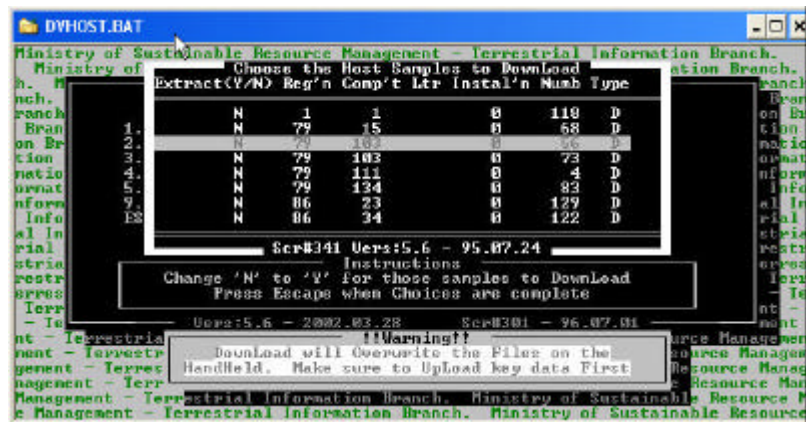


- Select:
Download Sample Data to Hand Held <Enter>



- Do not choose any samples and ensure that "N" is in each row.

Ensure that "N" is at the beginning of all samples.



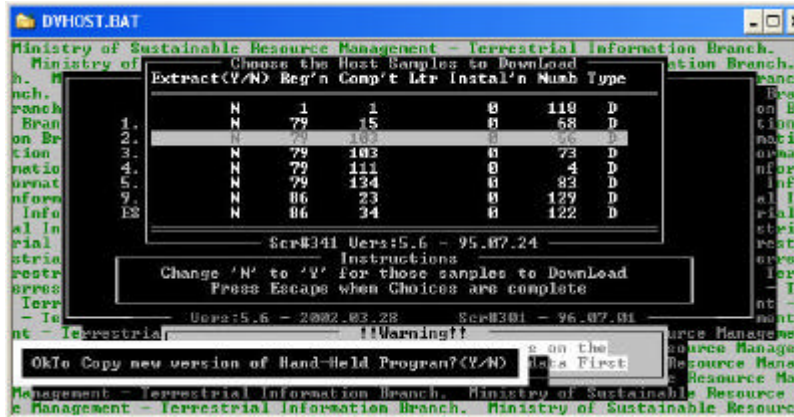
- At the following prompt type <Y> <Enter> to continue



WARNING!

If this is not a first time installation, ensure that no key data is stored in the handheld or it will be overwritten.

8. At the following prompt type <Y> <Enter> to continue:



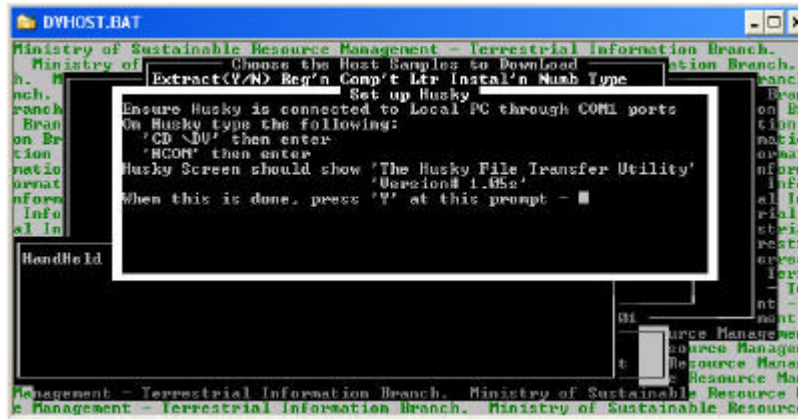
9. Select from menu below:

- If Husky Handheld and Windows other then XP: Ministry Handheld <Enter>.
- If Husky Handheld and Windows XP: Any Other <Enter>
- If not a Husky Handheld: Any Other <Enter>



(A) Ministry Handheld Option (If Husky Handhelds and Windows Operating System other than XP)

10. Once the ministry handheld is selected, this prompt will be displayed. Enter <Y> for yes once the handheld is properly set up.



11. This screen will be displayed



NOTE: Baud setting can be as high as possible as long as transmission is successful.

12. Press <Enter> to confirm Baud Rate (connects at 38400bps with the Husky). To change any of the settings, press the <Tab> key, scroll to a different setting and press <Enter> .



10. Press <Enter> to confirm the default COM1 port

11. If your COM port is not COM 1 a menu will appear after pressing <Enter>. Select your COM port from the menu and press <Enter> .

12. Press <Enter> at the <Y> prompt to continue.
13. The file transfer process will commence. The Husky screen will show the status of the transfer of each file. The list of files that are transferred are:

COLOURS.DBF	DV.BAT	DV_HAND.EXE
FLAG	HANDMESS.DBF	HELPTXT.DBF
LOOKUP.DBF	MOFFILES.DBF	PCIKGRP.DBF
PICKLIST.DBF	PLOT.DBF	PUBLIC.DBF
RULES.DBF	SAMPLE.DBF	TL_DECAY.DBF
TREE.DBF	TRLEADER.DBF	TR_PATH.DBF
TR_SEG.DBF	TS_DECAY.DBF	VALID.DBF
VAL_FIELDS.DBF	WINDOW.DBF	WINDOW.DBT

NOTE: Note that all of the files to be downloaded are first sent to a PC subdirectory named 'handheld', and then are sent off to the handheld. This subdirectory is automatically emptied of its contents at each download.

14. Press <Esc> when the reception is complete to get back to the DOS prompt on the handheld.

(B) Other Handheld (if non Husky Handhelds)



10. Once the Other Handheld option is selected, the cursor will appear opposite a DOS prompt in the Handheld subdirectory



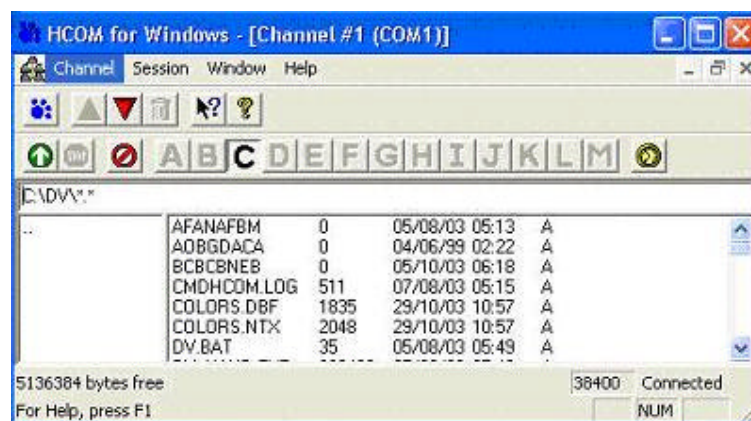
11. Follow the installation instructions provided with your handheld and copy the files listed above to the handheld.

NOTE: Note that all of the files to be downloaded are first sent to a PC subdirectory named 'handheld', then the files are sent off to the handheld. This subdirectory is automatically emptied of its contents at each download.

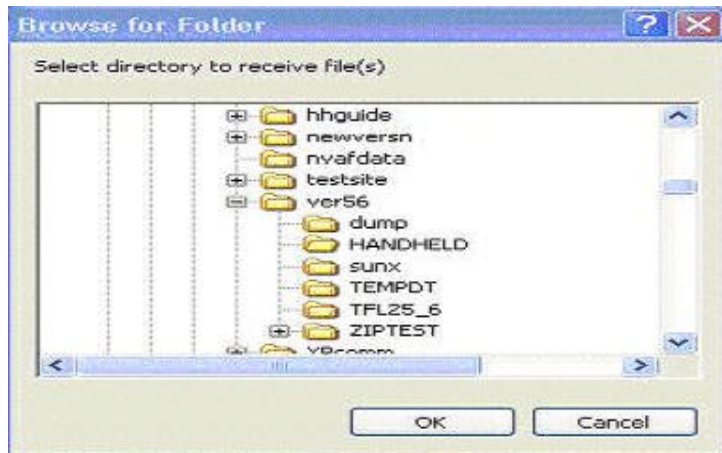
12. Once the file copy is completed, enter 'exit' at the DOS prompt to return to the DVHost software. The download process is complete.

(C) Other Handheld (Husky Handheld and Windows XP)

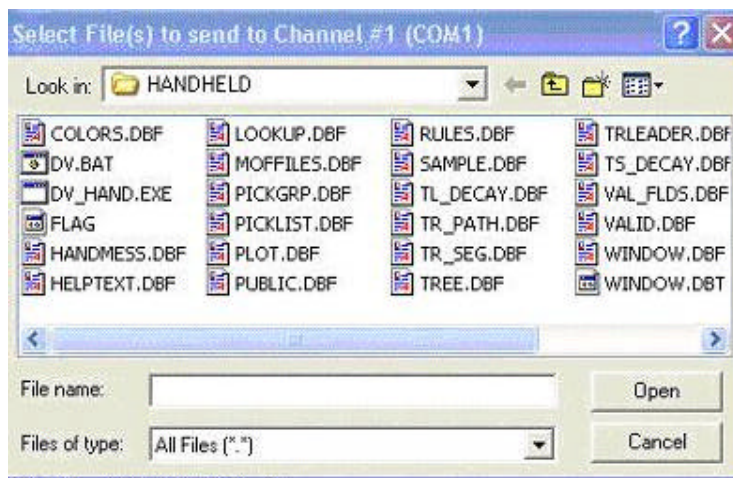
10. As in Section B above, select the Other Handheld option to get to the DOS prompt in the Handheld subdirectory
11. Go to Windows and start the HCOM for Windows program by selecting Start, All Programs, HCOM for Window.
12. Ensure the Com port is the correct one.
13. Click on the button with the white arrow to connect if not already connected. The display will show all the files currently on the Husky.



14. Click on the button with the red arrow pointing down to start the transfer of files to the Husky. Navigate to the Handheld subdirectory.



15. Select all the files and click on <Open>. If similar files already exist on the handheld, you will see a prompt to overwrite existing files, click yes to all.

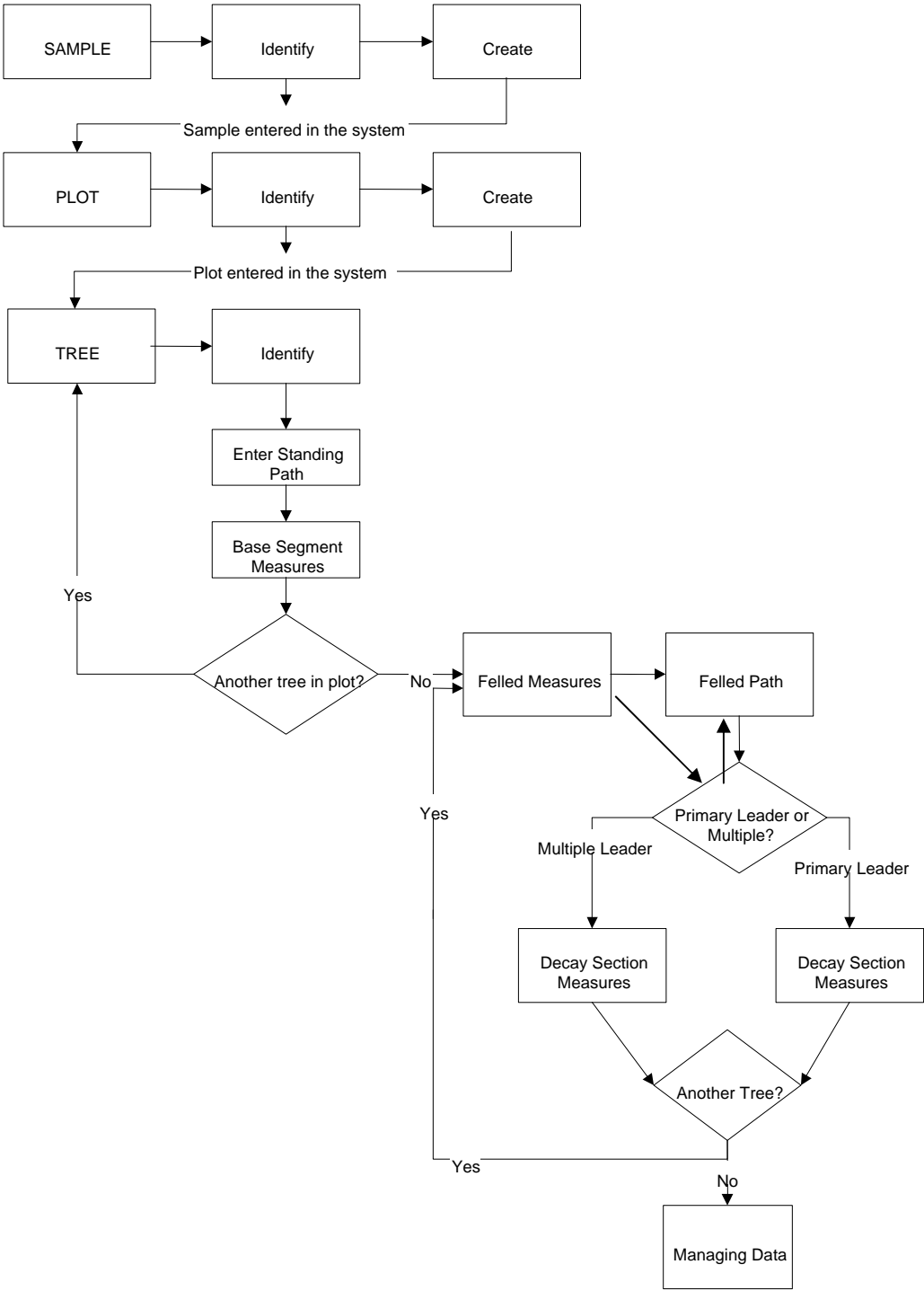


NOTE: Note that all of the files to be downloaded are first sent to a PC subdirectory named 'handheld', and then are sent off to the handheld. This subdirectory is automatically emptied of its contents at each download.

16. After the file transfer is complete, return to the DOS window in DVHost and type <Exit> and any other key to continue. At this stage the file transfer process is complete.

Functional Overview

Using the Handheld



Using the Handheld

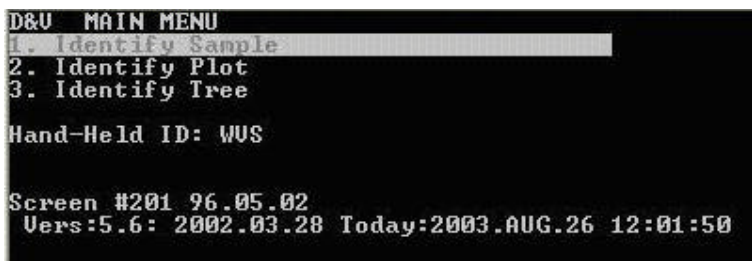
Starting the DVHand Program on the Handheld

1. Change to the DV directory
C:\>**cd dv** <Enter>
2. At the c:\dv> prompt type:
C:\dv>**dv** <Enter>
3. When the Hand-Held ID screen appears, enter your 3 digit alphanumeric ID then press <Enter>

NOTE: If you do not already have an ID, enter a new ID by typing any combination of three letters and/or numbers. The ID has no functional purpose but serves as another way to identify the handheld.



4. You will be in the Main Menu, which is the start of the Standing Assessment



Standing Assessment

The Standing Assessment Phase involves:

1. Entering a sample
2. Entering a plot
3. Entering trees
 - Standing Path
 - Base (Butt taper) Measures

Entering a Sample

Entering a sample involves:

1. Creating a sample
2. Identifying a sample
3. Describing a sample

Creating a Sample

1. From the Main Menu select:
Identify Sample <Enter>

```
IDENTIFY SAMPLE
Reg Cmp L Ins Samp
 0 0 0 0
-----
Project#: XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
Sample Type(D/U/B) X
Samp Date YYYY.MM.DD
Enter Sample Key
Screen #202 94.10.18
Vers:5.6: 2002.03.28 Today:2003.AUG.27 09:25:01
```

Information is entered in Reg, Cmp, L, Ins, and Samp to create a sample.

2. **Reg** - Enter the Provincial Region Nmber or press <F2> to make a selection from the pick list <Enter>
3. **Cmp** - Enter the Provincial Compartment Number <Enter>
4. **L** - Enter the compartment letter or leave blank <Enter>.

NOTE: The compartment letter field 'L' (Step 4) is usually left blank.

5. **Ins** - Enter the Installation Code - 0-99 <Enter>

NOTE: The installation field 'L' (Step 5) is usually left blank.

6. **Samp** - Enter the Sample Number <Enter>

NOTE: The sample number field 'Samp' (Step 6) is usually the VRI ground sample number.

7. Choose "Y" at the following prompt:
Create Y/N?

```
IDENTIFY SAMPLE
Reg Cmp L Ins Samp
 5 16 A 0 20
-----
Project#: XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
Sample Type(D/U/B) X
Samp Date YYYY.MM.DD
Create (Y/N)? :
Screen #202 94.10.18
Vers:5.6: 2002.03.28 Today:2003.AUG.26 14:12:16
```

N - will close screen, return to Main Menu

Y - will create the new sample and proceed to sample memos fields and sample type.

NOTE: If sample already exists press <Esc> to move ahead quickly

8. Your cursor will be located in the memo field. Enter a memo comment or simply press <Enter> to move to the Project # field. This memo field is used for miscellaneous comments about the sample.

```
IDENTIFY SAMPLE
Reg Cmp L Ins Samp
 5 16 A 0 20
-----
Project#:
Sample Type(D/U/B)
Samp Date 2003.08.26
Enter Sample Key
Screen #202 94.10.18
Vers:5.6: 2002.03.28 Today:2003.AUG.26 14:12:16
```

9. **Project#** - Enter the Project Number <Enter>

NOTE: The project # identifies the data collection project and is usually named after the inventory unit being sampled, such as 'Okanagan TSA NVAF'.

10. **Sample Type (D/U/B)** - Enter the Sample Type ('D'ecay, 'V'olume or 'B'oth) <Enter>.

NOTE: NVAF samples are all Decay samples and require the code 'D'.

11. **Sample Date** - Enter the Sample Date or press <Enter> to accept the default
12. At the following prompt, press <Enter> to move to the next screen.

Screen OK (Y/N)? Y

N - returns to the comment field at the top of the screen.

Y - saves the entered fields and moves to the next screen.

```
Reg Cmp L Ins Samp
 5 16 A 0 20
Qualicum training site
Project#: ARROWSMITH TSA NVAF
Sample Type(D/U/B) D
Samp Date 2003.08.26
Screen OK (Y/N)? :
Screen #202 94.10.18
Vers:5.6: 2002.03.28 Today:2003.AUG.26 14:12:16
```

Identifying an Existing Sample

Identifying an existing sample is done by either entering the sample region, compartment and sample number or by selecting the sample from a pick list.

1. Place the cursor at the Region field and press <F2> to access the pick list. Scroll down the list and make selection by pressing <Enter>.

```

Reg Cmp L Ins Samp
7 16 A 0 15
79 15 0 68
79 103 0 56
79 103 0 73 TSA NUAF
79 111 0 4
79 134 0 83
Enter Sample Key
Screen #202 94.10.18
Vers:5.6: 2002.03.28 Today:2003.AUG.26 14:36:42

```

2. Once the sample selection is made, the cursor will drop down to the sample memo field. Move the cursor through the remaining fields by using the down arrow key.

3. At the bottom of the screen will be the prompt
Screen OK(Y/N)? Y

N - returns to the comment field at the top of the screen.

Y - saves the entered fields and moves to the next screen.

NOTE: There is a shortcut that bypasses the fields inbetween the sample id and the 'screen OK prompt'. Press <Escape> after entering the sample id and the cursor will move straight to the 'screen OK prompt'.

Describing a Sample

ID is entered by default using the data from the Identify Sample screen.

```

SAMPLE SITE DESCRIPTION:
ID: 5 16 A 0 20D
-----
Composite Zone-SubZone-Var-Ph: CDF mn
BGCZ SubZ Variant Phase (C)oast/(I)nt
CDF mn 0 C
Screen #203 95.05.02
Vers:5.6: 2002.03.28 Today:2003.AUG.28 12:40:17

```

1. **Composite Zone-SubZone-Var-Ph** - Enter Biogeoclimatic Zone or <F2> for pick list. Data will automatically be entered in the next four fields by the program.

NOTE: If sample already exists press <Esc> to move ahead quickly.

2. **(C)oast or (I)nterior**

Enter C or I <Enter>

3. Press <Enter> at the following prompt to save the data and move to the DVHand main menu.

Screen OK(Y/N)? Y

N - returns to the comment field at the top of the screen.

Y - saves the entered fields and moves to the next screen.

Entering a Plot

In order to enter a plot into the program, you are required to identify the plot. If the plot is new, it must be created.

Entering a plot involves:

1. Creating/Identifying the plot
2. Describing the plot (if the plot is new).

Creating/Identifying a Plot

1. From the Main Menu select:
Identify Plot <Enter>

```
D&U MAIN MENU
1. Identify Sample
2. Identify Plot
3. Identify Tree
Hand-Held ID: WUS
Screen #201 96.05.02
Vers:5.6: 2002.03.28 Today:2003.AUG.26 14:53:37
```

2. **ID** - Default data will be inserted. An existing plot can be selected by using pressing <F2> and selecting from the pick list.
3. **Plot#** - Enter a Plot number.
Enter a number, then press <Enter>

A plot number is comprised of a number followed by a letter. Since VRI ground sample plot are identified by their cardinal direction from the center of the sample, convert the letter as follows:

North plot	plot 1
East plot	plot 2
South plot	plot 3
West plot	plot 4

```
IDENTIFY PLOT
ID:5-16-a-0-20
Plot# 1-F
-----
Aspect... 999 Slope%. 999
Elevation. 9999 Sl Pos. X
Site Unit. 99
Create (Y/N)? :
Screen #204 96.05.01
Vers:5.6: 2002.03.28 Today:2003.AUG.27 09:28:16
```

4. Enter **F** then press <Enter>

"F" refers to a full measured plot. "A" and "B" are count plots and are no longer used

5. To accept the data, press <Enter> at the following prompt:
Create(Y/N)? : **Y**

Describing a Plot

Press <F2> to access the pick list, which displays a list of previously created plots.

NOTES: If plot already exists press <ESC> to move ahead quickly. If the plot has already been created and identified then press <F2> to access the picklist, which displays a list of previously created plots.

1. **Aspect** - Enter a value between 0-360⁰ <Enter>
2. **Elevation** - Enter a value between 0-5000m <Enter>
3. **Slope%** - Enter average slope percent as a value between 0-999 <Enter>
4. **Sl Pos** – Slope position. Press <F2> to obtain a pick list <Enter>
5. **Site Unit** - Enter a value between 0-99 <Enter>
(Refer to BEC book)
6. Press <Enter> to move back to the Main Menu.
Screen OK (Y/N)? : Y

```
ID:5-16-A-0-20
Plot# 1-F
-----
Aspect... 270  Slope%.  5
Elevation.  50  Sl Pos. F
Site Unit.  5
Screen OK <Y/N>?:
Screen #204 96.05.01
Vers:5.6: 2002.03.28 Today:2003.AUG.27 09:28:16
```

Entering Trees

Entering trees involves:

1. Identifying the tree
2. Entering the standing path
3. Entering base segment measures

NOTE: You MUST enter the required data in the Standing Path Survey and Base Segment Measures screens for ALL trees in the plot before proceeding to Felled Measures.

Identify Tree

1. From the Main Menu select:
Identify Tree <Enter>

```
D&U MAIN MENU
1. Identify Sample
2. Identify Plot
3. Identify Tree
-----
Hand-Held ID: WUS
Screen #201 96.05.02
Vers:5.6: 2002.03.28 Today:2003.AUG.26 15:02:52
```


Trees that are redone are assigned the original tree number plus 100.

For example,

Initial tree = Tree#8

Must be redone = Now#108.

Tree#108 must be redone = Now#208

1. **Tree#** - Enter a Tree number <Enter>

NOTE: Use the arrow keys to check for trees already identified in the current plot.

2. **Species** - Enter a Species Code or press <F2> to select a species from the pick list <Enter>
3. **Date** - Enter the date or press <Enter> to accept the default date
4. **D/V/B** - Enter decay, volume or both <Enter>
5. **(A)ct/(E)st** - Select (A)ctual or (E)stimate <Enter>
This field applies to actual or estimated DBH.

```

ID TREE Plot:1-F
Tree#: 1 Species CW
Date:2003.08.27 D/U/B:D
DBH: 0.0 (A)ct/(E)st.:A <new>
Nominal Decay Seg. Lgth: 0.00 +- 0.00
Felled?:N Bucked?:N
MaxSeg#:- D: U:
Screen OK (Y/N)?:
Scrn #206 2002.03.24
Vers:5.6: 2002.03.28 Today:2003.AUG.27 09:31:47
  
```

6. Confirm the data by pressing <Enter> at the following prompt:
Screen OK (Y/N)?: **Y**

N - Moves cursor to the Tree number field

Y - Moves to the Standing Path Survey screen.

Standing Path Survey

```

PATH Decy Tree#: 1
D/B:D ID: 1 Ldr:0 StSeg:
S/F Path StrHt EndHt Wdth
S | SCAR | -0.20 | 2.57 | 25.0
  |      | 0.00 | 0.00 |
  |      |      |      |
Path. Type
Screen #207 96.04.22
Vers:5.6: 2002.03.28 Today:2003.AUG.29 12:38:06
  
```

S indicates Standing Path.

Measurement units are shown at the bottom of the screen.

NOTE: You must enter standing path for ALL trees in the plot before proceeding to Felled Measures.

1. **Path** -Enter the Pathological code or press <F2> to select from the pick list, then press <Enter>
2. **StrHt** -Enter the Start Height, then press <Enter>
Start height is the bottom height of indicators with a definite length and the average height of indicators without a definite length.
3. **EndHt** -Enter the End Height, then press <Enter>
End height is the top height for all indicators with a definite length: Frost crack and Scar. Note this is different for Fell Path.

4. **Width** -Enter the average width of the SCAR path, then press <Enter>
5. For each additional Path, scroll down to the next blank row and repeat steps 1 to 4.

```

PATH Decy Tree#: 1
D/B:D ID: 1 Ldr:0 StSeg:
S/F Path      StrHt EndHt Wdth
S | SCAR      -0.20 2.57 25.0
S | FK        7.20 0.00
S | FK        13.70 0.00
S | DT        23.50 27.00
Path. Type
Screen #207 96.04.22
Vers:5.6: 2002.03.28 Today:2003.AUG.27 11:12:01

```

```

PATH Decy Tree#: 2 U/B:D
D/B:D ID: 1 Ldr:0 StSeg: 1
S/F Path      StrHt EndHt Wdth
S | SC        0.34 4.67
S | BT        14.80 25.00
Path. Type
Screen #207 96.04.22
Vers:5.6: 2002.03.28 Today:2003.AUG.27 09:31:47

```

6. To continue press <<- Clr> to validate data and move to the next screen.

NOTE: Additional Standing Paths can be entered as long as you have not completed Step 4 of Base Segment Measures and felled the tree.

NOTE: You can cycle between the path and butt taper screens by pressing escape to go to the previous screen or by pressing backspace to go to the next screen.

Base Segment Measures

1. **CumHt** – Cumulative height from high side is fixed for the heights of 0.3 to 1.3 m, but there is an optional height between 0 and 0.3 m that can be entered by overriding the 0.0 height. If the optional height is not measured, then skip the 0.0 row and move the cursor to the DOB at 0.3 m height.

```

BASE SEGMENT MEASURE
D/U/B:D Tree# 1
Seg# CumHt DOB DBT
1 | 0.00 0.0 0.0
2 | 0.30 58.4 3.6
3 | 0.60 56.2 3.5
4 | 0.90 55.7 3.2
Cumulative Height to Top of Section
Scrn #208 2002.03.23
Vers:5.6: 2002.03.28 Today:2003.AUG.26 15:02:52

```

NOTE: The 0.0 height is an optional height that can be changed to any value from 0.0 to 0.29 to allow for an additional bottom taper measures below 0.3 m.

```

BASE SEGMENT MEASURE                               U/B:D
D/U/B:D Tree# 2
  Seg# CumHt  DOB  DBT
  1 | 0.15 | 38.2 | 2.4
  2 | 0.30 | 36.9 | 2.3
  3 | 0.60 | 36.2 | 2.3
  4 | 0.90 | 35.9 | 2.2
Section Number
Scrn #208 2002.03.23
Vers:5.6: 2002.03.28 Today:2003.AUG.27 09:31:47

```

2. **DOB** - Enter Diameter of outside bark <Enter>
3. **DBT** - Enter Double Bark Thickness and press <Enter>
4. When last field is entered <← Clr>

Warning! Ensure that your data is correct. If you select "Y" at the prompt in Step 5, the data can no longer be changed and CANNOT be DELETED from the database. Therefore, if you need to correct the tree data you MUST REDO the tree. **This is the LAST opportunity to change any of the data for the standing tree.**

4. Fell Tree (Y/N)?

```

BASE SEGMENT MEASURE
D/U/B:D Tree# 1
  Seg# CumHt  DOB  DBT
  2 | 0.30 | 58.4 | 3.6
  3 | 0.60 | 56.2 | 3.5
  4 | 0.90 | 55.7 | 3.2
  5 | 1.30 | 55.1 | 3.2
Fell Tree(Y/N)?
Scrn #208 2002.03.23
Vers:5.6: 2002.03.28 Today:2003.AUG.26 15:02:52

```

- Choose "N" if you have more trees to identify within the sample plot.
- Choose "Y" if you have identified all the trees in the sample plot.
- N - Saves the data and moves back to the Identify Tree screen (i.e., Standing Assessment is not complete.)
- Y - Saves data (data cannot be changed) and moves to Felled Measures for the current tree.

End of Standing Assessment

Felled Measures

NOTE: Felled Measures are done after the sample tree has been felled. All measurements are actual, except where a broken top is projected.

```
FELLED MEASURES      Tree#: 1  D/U/B:D
Counted StumpAge: 0   Stump Ht: 0.00
Miss.Wood Rad...: 0.0  SoundRad: 0.0
AgeBfrCorr:9999 Corr: 0 TotalAge:9999
CrwnHt: 0.00 BrkHt: 0.00 DIB@Br: 0.0
UTop??: 0.00
Tot Ht.: 0.00      #Vol Sects.: 0

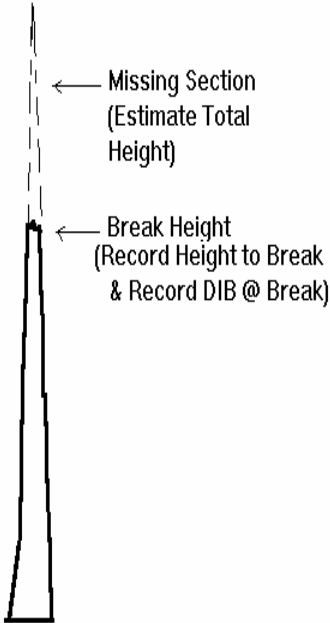
Screen #209 96.04.24
Vers:5.6: 2002.03.28 Today:2003.AUG.26 15:02:52
```

Missing wood radius
when applicable.

Sound wood radius
when applicable.

1. **Counted Stump Age** - Enter a value between 10 – 150 yrs <Enter>
2. **Stump Ht** - Enter Stump Height where age is counted <Enter>. Usually this height is 1.3m.
3. **Miss.Wood Rad** - Enter missing wood radius in centimeters <Enter>.
4. **SoundRad** - Enter the Sound Wood Radius <Enter>. Sound wood radius is only measured if there is a missing wood radius.
5. **AgeBfrCorr** - Age Before Correction will be calculated by the system.
6. **Corr** - Enter Age Correction then press <Enter>. Obtain age correction from site index tables.
7. **TotalAge** - Total Age will be calculated by the system
8. **CrwnHT** - Enter the Crown Height - 0.1 - 999.99m <Enter>. If the tree is dead, then enter a height immediately below the break or total height.

NOTE: Crown Height MUST be less than Total Height and must be entered even if there is no crown.



9. **BrkHt** – Enter Broken Height for the primary leader ONLY if broken <Enter>. (Defaults to 0.0 if there is no break).

```

FELLED MEASURES      Tree#:  1  D/U/B:D
Counted StumpAge: 237   Stump Ht:  1.30
Miss.Wood Rad...:  0.0   SoundRad:  0.0
AgeBfrCorr: 237  Corr: 12  TotalAge: 249
CrownHt: 12.00 BrkHt: 26.89 DIB@Br:  7.8
Utop15: 23.61
Tot Ht.: 30.00          #Uol Sects.:20
Screen OK (Y/N)? : Y
Screen #209 96.04.24
Vers:5.6: 2002.03.28 Today:2003.AUG.26 15:02:52
  
```

NOTE: If break is below the Utop, no Utop should be entered.

10. **DIB@Br** - Enter a Diameter Inside Bark at Break <Enter> (ONLY if there is a broken top. Defaults to 0.0 if there is no break.)
11. **Utop15** - Enter length to Utop <Enter> (If a broken top is below the Utop enter at the default value of 0.0). Note that there is Utop 10 for immature coastal trees > 120 years and all trees in the Interior.

NOTE: DO NOT enter a projected Utop length if the top is broken.

12. **Tot Ht** - enter the length measured or “projected” height in the case of broken top Top Height - 3 - 100m. Round off to the nearest 0.5m.
13. To move to the next screen, press <Enter> to accept the "Y" default.
Screen OK (Y/N): Y?
- N – Moves the cursor to Counted Stump Age for correction
Y - Moves the cursor to the Leaders and Utop screen (i.e., the beginning of the Marking Phase on page 28.)

Felled Path

Felled Path can be completed at any time after you have commenced the marking of the sections of a leader. Any standing path that is confirmed as felled path must be re-entered.

NOTES: F will now show in left column to indicate Fell Path.

Felled path can be added at any time after the tree is felled.

Felled path can be deleted by pressing the delete key.

Felled path in secondary leaders is entered when in the specific secondary leader section screen. Leader number is displayed in the screen header.

```
PATH Decy Tree#: 1
D/B:D ID: 6 Ldr:3 StSeg:34
S/F Path StrHt EndHt Wdth
F BT 26.89 30.00
F DT 23.17 26.89
F CK 10.91 11.24
F DT 15.41 21.00
Path. Type
Screen #207 96.04.22
Vers:5.6: 2002.03.28 Today:2003.AUG.27 14:48:24
```

Use <F2> to access the Fell Path screen and <Esc> to exit

S in first column is for Standing Path. The F in the first column is for Fell Path.

The units for each column entry appear next to the column description.

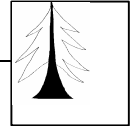
```
PATH Decy Tree#: 2
D/B:D ID: 4 Ldr:1 StSeg:12
S/F Path StrHt EndHt Wdth
S FC 0.34 4.67
S BT 14.80 25.00
F FC 0.34 4.52
F BT 14.73 25.00
Path. Type
Screen #207 96.04.22
Vers:5.6: 2002.03.28 Today:2003.AUG.27 14:48:24
```

Enter newly observed path on the felled tree and re-enter Standing Path measurements that have been verified now that the tree is felled.

1. **Path** - Press <F2> and select a pathological code from the list <Enter>
2. **StrHt** - Enter lower height of path in meters <Enter>
Start height is the bottom height of indicators with a definite length (e.g., SCAR and frost crack) and the average height of indicators without a definite length (e.g., conk, blind conk, rotten branch.)
3. **EndHt** - Enter upper height <Enter>
End height is the top height for all indicators with a definite length: Frost crack, scar, fork, crook, broken top, dead top. The start and end heights of forks and crooks correspond to the heights sectioned on the

leader. The end height of broken tops is the projected height of the tree.

4. **Wdth** - Enter width of path (in cm) - only required for SCAR
5. For each new entry scroll down.
6. When you have finished entering data, press <Esc> to exit.



Marking Phase Primary Leader

The Marking Phase for a Primary Leader involves:

1. Identifying secondary leaders (if any) and their heights and Utops
2. Entering segments

WARNING!

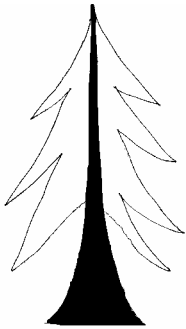
Identify whether you have a tree with a PRIMARY leader ONLY or a tree with MULTIPLE leaders.

- **Primary Leader Only** - Go to page 28.
- **Multiple Leaders** - Go to page 30.

Primary Leader Only

For trees with a primary leader only

Identify Leader and Utop



```

LEADERS AND UTops      Tree#:  2  D/U/B:D
Leader Height UTop10 Estimated Fork Ht
PRIMARY 25.00  0.00          0.00

Screen #213 96.07.02
Vers:5.6: 2002.03.28 Today:2003.AUG.28 13:14:08

```

Fields are filled by default (display screen only)

1. Move to the next screen (DecaySec Screen) by pressing <← Clr>

```

DecaySec Tr2  D Ldr  UTop  Ht
Primary Leader
Ready to Buck?
Escape Back to Leaders & UTops

Scrn #211 2002.03.28
Vers:5.6: 2002.03.28 Today:2003.AUG.28 14:24:52

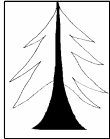
```

You are now ready to enter the marking phase

Entering Cumulative Length Segments

Top height and Utop height are cited in right hand corner.

At any time during this process, press <F2> to complete Felled Path . Refer to page 26 for additional information on Felled Path



1. Use the down arrow key to scroll to segment #6.

```
DecaySec Tr1      D Ldr0 UTop23.61 Ht30.00
Seg CumLen      SegLn DIB-1 DIB-2 DBT  Fk?
 2   0.30        0.30  54.8  54.8  3.6
 3   0.60        0.30  52.7  52.7  3.5
 4   0.90        0.30  52.5  52.5  3.2
 5   1.30        0.40  51.9  51.9  3.2
 6   0.00        0.00   0.0   0.0   0.0
Cumulative Length to Top of Section
Scrn #211 2002.03.28
Vers:5.6: 2002.03.28 Today:2003.AUG.26 15:50:07
```

2. **CumLen** - Enter the Cumulative length of the next segment <Enter>.

```
DecaySec Tr1      D Ldr0 UTop23.61 Ht30.00
Seg CumLen      SegLn DIB-1 DIB-2 DBT  Fk?
 5   1.30        0.40  51.9  51.9  3.2
 6   2.30        1.00   0.0   0.0   0.0
 7   4.30        2.00   0.0   0.0   0.0
 8   7.17        2.87   0.0   0.0   0.0
 9   7.02        0.00   0.0   0.0   0.0
Only Fork can be Outside Length Range? <9107>
Scrn #211 2002.03.28
Vers:5.6: 2002.03.28 Today:2003.AUG.29 12:38:06
```

NOTE: If a segment entered is longer or shorter than 2m, or in segment #6, 1m, you will be asked to verify the segment length.

SegLn - the segment length will be calculated automatically by the system.

3. Press the down arrow and,

WARNING!

The Section # and CumLen of the Utop is automatically entered by the system when you enter a CumLen greater than the Utop. If the Utop height does not appear or is accidentally deleted, it must be manually entered or the tree redone.

4. Repeat steps 2 and 3 until all the segments are entered.
5. Enter the Top height or the “estimated” top height, then press the <← Clr> button to validate the data.

NOTE: If the primary leader is broken, the second to last section will be the section ending at the broken top. The final section is the projected height.

```
DecaySec Tr1      D Ldr0 UTop23.61 Ht30.00
Seg CumLen      SegLn DIB-1 DIB-2 DBT  Fk?
17  22.53        2.00   0.0   0.0   0.0
18  23.61        1.08  15.0  15.0   0.0
19  26.89        3.28   0.0   0.0   0.0
20  30.00        3.11   0.0   0.0   0.0
Is Section#20 the top of Leader<Y/N>
Scrn #211 2002.03.28
Vers:5.6: 2002.03.28 Today:2003.AUG.29 12:11:13
```

```

DecaySec Tr2      D Ldr0 UTop 0.00 Ht25.00
Seg CumLen      DIB-1 DIB-2 DBT  Fk? Dec?
 9      8.30      28.1  27.4  0.0  |      |
10     10.30      25.6  24.9  0.0  |      |
11     12.30      23.5  23.3  0.0  |      |
12     14.73      22.1  21.5  0.0  |      |
13     25.00      0.0   0.0  0.0  |      |
Larger Inside Bark Diameter (cm)
Scrn #211 2002.03.28
Vrs:5.6: 2002.03.28 Today:2003.AUG.27 14:48:24

```

WARNING!

Ensure that the cumulative length data is correct by scrolling through the CumLen column. Once you select "Y" in the next step, the data CANNOT be changed.

- To move to the next screen, enter <Y> at the prompt "Is Section #_, the top of the Leader (Y/N)?"

```

DecaySec Tr1      D Ldr0 UTop23.61 Ht30.00
Seg CumLen      SegLn DIB-1 DIB-2 DBT  Fk?
17     22.53      2.00  0.0  0.0  0.0  |
18     23.61      1.08  15.0  15.0  0.0  |
19     26.89      3.28  0.0  0.0  0.0  |
20     30.00      3.11  0.0  0.0  0.0  |
Is Section#20 the top of Leader(Y/N) Y
Scrn #211 2002.03.28
Vrs:5.6: 2002.03.28 Today:2003.AUG.29 12:11:13

```

N - Saves data and moves to the Identify Tree screen (i.e., Marking Phase is not complete.)

Y – Saves Data and moves to the screen #211 in preparation for the **Bucking Phase**.

End of Marking Phase for Primary Leader Only

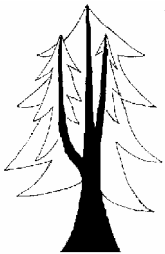
Marking Phase Multiple Leaders

For trees with more than one leader

Multiple Leaders

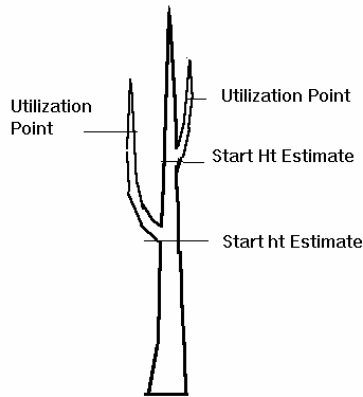
The marking phase for Multiple Leaders includes:

- Identifying secondary leaders
- Entering primary leader segments
- Assigning secondary leader/s



Identifying Secondary Leaders

SECONDARY LEADER IDENTIFICATION



1. **Leader** - The primary leader is listed by default.

```
LEADERS AND UTops      Tree#: 1 D/U/B:D
Leader Height UTop15 Estimated Fork Ht
Primary 30.00 23.61 | 0.00
Screen #213 96.07.02
Vers:5.6: 2002.03.28 Today:2003.AUG.27 09:31:47
```

2. Scroll down to create a secondary leader/s and enter "1" for the first secondary leader (limit of 9) <Enter>

```
LEADERS AND UTops      Tree#: 1 D/U/B:D
Leader Height UTop15 Estimated Fork Ht
Primary 30.00 23.61 | 0.00
1 0.00 0.00 | 0.00
Screen #213 96.07.02
Vers:5.6: 2002.03.28 Today:2003.AUG.26 15:50:07
```

3. **Height** - Enter length measured <Enter>

NOTE: If a secondary leader top is broken, enter the actual broken top height (and not the projected height)

4. **Utop10** - Utilization Height <Enter>

NOTE: If a secondary leader is broken below the utop height, enter 0.0 as the utop height.

5. **Estimated Fork Ht** - Fork Height is the height where the secondary leader approximately joins the primary leader. This height is only used to allow the sampler to keep track of the leaders and to aid in the assignment of leaders to sections of the primary leader.

```
LEADERS AND UTops      Tree#: 1 D/U/B:D
Leader Height UTop15 Estimated Fork Ht
Primary 30.00 23.61 | 0.00
1 26.50 21.14 | 13.00
2 15.41 14.82 | 7.00
Estimated Fork Height
Screen #213 96.07.02
Vers:5.6: 2002.03.28 Today:2003.AUG.29 12:38:06
```

2. Move to the next screen (DecaySec Screen) by pressing <<- Clr>

```

DecaySec Trl   D Ldr UTop   Ht
Primary Leader
Secondary Leader #1
Secondary Leader #2
Ready to Buck?
Escape Back to Leaders & U Tops

Scrn #211 2002.03.28
Vers:5.6: 2002.03.28 Today:2003.AUG.27 11:12:01

```

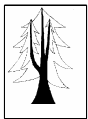
3. Select the primary leader for section marking. The secondary leaders are listed but are not available for section marking until the primary is first marked.
4. Follow the primary leader section marking procedures cited above.
5. Once the primary sections have been marked, the secondary leaders can be assigned to the forked sections on the primary leader. Select the correct primary leader section by placing the cursor at the section that bounds the fork.

```

DecaySec Trl   D Ldr0 UTop23.61 Ht30.00
Seg CumLen   SegLn DIB-1 DIB-2 DBT  Fk?
7  4.30      2.00  0.0  0.0  0.0
8  7.17      2.87  0.0  0.0  0.0
9  7.82      0.65  0.0  0.0  0.0
10 9.82      2.00  0.0  0.0  0.0
11 11.82     2.00  0.0  0.0  0.0
Cumulative Length to Top of Section
Scrn #211 2002.03.28
Vers:5.6: 2002.03.28 Today:2003.AUG.29 10:56:12

```

6. Press the <F4> key to start the leader assignment sequence. The <F4> key will access the Decay Fork Identification screen for the selection of the correct leader. Scroll down to the correct leader – it will be the one with a similar estimated fork height.



```

DECAY FORK IDENTIFICATION Tree#1   D/U/B:D
Par Ldr:1 Par Seg:9
Leader Parent Section Height Est.Fork Ht
1  0  26.50  13.00
2  0  15.41  7.00
Leader Number
Screen #220 96.05.02
Vers:5.6: 2002.03.28 Today:2003.AUG.29 10:56:12

```

7. Press << Clr> and then press 'Y' to assign the secondary leader.

```

DECAY FORK IDENTIFICATION Tree#1   D/U/B:D
Par Ldr:1 Par Seg:9
Leader Parent Section Height Est.Fork Ht
1  0  13.00
2  0  7.00
OkTo Assign leader?(Y/N)
Leader Number
Screen #220 96.05.02
Vers:5.6: 2002.03.28 Today:2003.AUG.29 10:56:12

```

- The assignment of leader can be confirmed by the presence of a tick mark in the leader column at the forked section.

```
DecaySec Tr1    D Ldr0 UTop23.61 Ht30.00U/B:D
Seg CumLen  SegLn DIB-1 DIB-2 DBT  Fk?
 7    4.30    2.00    0.0    0.0    0.0
 8    7.17    2.87    0.0    0.0    0.0
 9    7.82    0.65    0.0    0.0    0.0  1
10    9.82    2.00    0.0    0.0    0.0
11   11.82    2.00    0.0    0.0    0.0
Cumulative Length to Top of Section
Scrn #211 2002.03.28
Vers:5.6: 2002.03.28 Today:2003.AUG.29 10:56:12
```

- Repeat the above steps for all remaining secondary leaders.
- Once all the secondary leaders have been assigned, the first secondary leader is ready for marking and must be selected in the leader and utops screen. Note that the next leader to be marked is in bold. Place the cursor on the leader and press <<- Clr>.

```
DecaySec Tr1    D Ldr  UTop    Ht    U/B:D
Primary Leader
Secondary Leader #1
Secondary Leader #2
Ready to Buck?
Escape Back to Leaders & UTops

Scrn #211 2002.03.28
Vers:5.6: 2002.03.28 Today:2003.AUG.27 11:12:01
```

- Commence marking out the sections by scrolling down to the first blank row below the first section.

NOTE: The height of the first section is equal to that of the height of the primary leader forked section.

NOTE: The first segment number is the next consecutive number after the top segment of the previous leader.

```
DecaySec Tr1    D Ldr1 UTop21.14 Ht26.50U/B:D
Seg CumLen  SegLn DIB-1 DIB-2 DBT  Dec?
21   14.53    0.74    0.0    0.0    0.0
 0    0.00    0.00    0.0    0.0    0.0
Cumulative Length to Top of Section
Scrn #211 2002.03.28
Vers:5.6: 2002.03.28 Today:2003.SEP.02 09:28:25
```

- Section the secondary leader using the same process as the primary.

```

DecaySec Tr1    D Ldr1 UTop21.14 Ht26.50U/B:D
Seg CumLen  SegLn DIB-1 DIB-2 DBT  Dec?
21  14.53   0.74   0.0   0.0   0.0
22  16.53   2.00   0.0   0.0   0.0
23  18.53   2.00   0.0   0.0   0.0
24  21.14   2.61  15.0  15.0   0.0
25  26.30   5.36   0.0   0.0   0.0
Is Section#25 the top of Leader(Y/N) Y
Scrn #211 2002.03.28
Vers:5.6: 2002.03.28 Today:2003.SEP.02 09:28:25

```

NOTE: If a secondary leader is broken, the final section will be the one ending at the broken top – the height is not projected.

- Once the first secondary leader is marked and its top section is identified, the cursor automatically returns to screen #211. Now the next secondary leader is now ready for selection and marking.

```

DecaySec Tr1    D Ldr UTop    Ht    U/B:D
Primary Leader
Secondary Leader #1
Secondary Leader #2
Ready to Buck?
Escape Back to Leaders & UTops

Scrn #211 2002.03.28
Vers:5.6: 2002.03.28 Today:2003.SEP.02 09:28:25

```

- Section the next secondary leader using the same process used to section the primary and first secondary leaders.
- After all sections on all secondary leaders are entered and the cursor has returned to screen #211, scroll to "Ready to Buck" in preparation for the Bucking phase.

End of Marking Phase for Multiple Leaders

Bucking

Bucking commences the final phase of the sample and allows for the entry of section DIBs and decays.

- At Screen #211, Scroll to "Ready to Buck?" then press <Enter>

```

DecaySec Tr1    D Ldr UTop    Ht    U/B:D
Primary Leader
Secondary Leader #1
Secondary Leader #2
Ready to Buck?
Escape Back to Leaders & UTops

Scrn #211 2002.03.28
Vers:5.6: 2002.03.28 Today:2003.AUG.27 11:12:01

```

- To continue select the appropriate leader (Primary or Secondary) <Enter>

```
DecaySec Tr1    D Ldr  UTop    Ht    U/B:D
Primary Leader
Secondary Leader #1
Secondary Leader #2
Tree ID
Escape Back to Leaders & UTops

Scrn #211 2002.03.28
Vers:5.6: 2002.03.28 Today:2003.AUG.27 11:12:01
```

Post Bucking - Entering Decay Section Measures

Entering Gross Measures

NOTES: Enter a section DIBs first before entering the decay measures.

- Move the cursor to the segment #6 row by scrolling down with the down arrow key.

```
DecaySec Tr1    D Ldr0 UTop23.61 Ht30.00U/B:D
Seg CumLen  SegLn DIB-1 DIB-2 DBT  Fk?
3 | 0.60 | 0.30 | 52.7 | 52.7 | 3.5 |
4 | 0.90 | 0.30 | 52.5 | 52.5 | 3.2 |
5 | 1.30 | 0.40 | 51.9 | 51.9 | 3.2 |
6 | 2.30 | 1.00 | 50.8 | 50.8 | 0.0 |
7 | 4.30 | 2.00 | 0.0  | 0.0  | 0.0 |
Larger Inside Bark Diameter (cm)
Scrn #211 2002.03.28
Vers:5.6: 2002.03.28 Today:2003.AUG.27 11:12:01
```

- DIB-1** - Diameter Inside Bark <Enter>
Note that DIB1 is the long axis.
- DIB-2** - Diameter Inside Bark <Enter>
Note that DIB2 is the short axis.

```
DecaySec Tr1    D Ldr0 UTop23.61 Ht30.00U/B:D
Seg CumLen  SegLn DIB-1 DIB-2 DBT  Fk?
3 | 0.60 | 0.30 | 52.7 | 52.7 | 3.5 |
4 | 0.90 | 0.30 | 52.5 | 52.5 | 3.2 |
5 | 1.30 | 0.40 | 51.9 | 51.9 | 3.2 |
6 | 2.30 | 1.00 | 50.8 | 50.8 | 0.0 |
7 | 4.30 | 2.00 | 0.0  | 0.0  | 0.0 |
Smaller Inside Bark Diameter (cm)
Scrn #211 2002.03.28
Vers:5.6: 2002.03.28 Today:2003.AUG.27 11:12:01
```

WARNING!

DIB1 must be larger or equal to DIB2.

- DBT** - Double Bark Thickness <Enter>. This is an optional measurement and the cursor must be moved over to the DBT column in order to input data.
- Repeat steps 2 to 4 for each segment.

6. AT UTOP:

⇒ Confirm the DIB-1 (15.0 cm) and the DIB-2 (15.0 cm) data by pressing <Enter>.

NOTE: Do NOT change the DIB-1 and DIB-2 values at Utop.

7. AT THE TOP OF THE PRIMARY LEADER:

- Do not press <Enter> at the DIBs of the top of the tree.
- Press << Clr>.

8. Enter "Y" or "N" at the following prompt:

```
DecaySec Tr1      D Ldr0 UTop23.61 Ht30.00
Seg CumLen      SegLn DIB-1 DIB-2 DBT Fk?
1 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
Have You Completed Felled Path?(Y/N)
5 | 1.30 | 0.40 | 51.9 | 51.9 | 3.2 |
Larger Inside Bark Diameter (cm)
Scrn #211 2002.03.28
Vers:5.6: 2002.03.28 Today:2003.AUG.27 15:08:33
```

If N - Press <F2> to complete Felled Path

If Y - Proceed to the Leader Selection screen.

For Multiple Leaders, select next leader and continue entering measurements as per steps 1 through 8.

WARNING!

If a secondary leader is broken, the final section DIBs will be those of the broken top, instead of 0.0 by 0.0. The validation routine will create an Error message when << Clr> is pressed. A workaround fix is to press <Escape> to return to screen #211.

```
DecaySec Tr1      D Ldr2 UTop14.82 Ht15.41U/B:D
Seg CumLen      SegLn DIB-1 DIB-2 DBT Dec?
28 | 10.91 | 1.09 | 22.8 | 22.7 | 0.0 | 1
29 | 11.24 | 0.33 | 19.6 | 18.7 | 0.0 | 1
30 | 13.24 | 2.00 | 17.1 | 16.8 | 0.0 | 1
31 | 14.82 | 1.58 | 15.0 | 15.0 | 0.0 |
32 | 15.41 | 0.59 | 12.1 | 12.1 | 0.0 |
Last Segment must have DIB's = 0 !!
Scrn #211 2002.03.28
Vers:5.6: 2002.03.28 Today:2003.AUG.29 10:56:12
```

Entering Decay Measures

NOTE: Press <F3> to access the Decay Section Measures screen, <Esc> to exit, << Clr> to validate fields, and <F2> to access pick lists.

Note that the above image is a set of screens that you will see when completing this section.

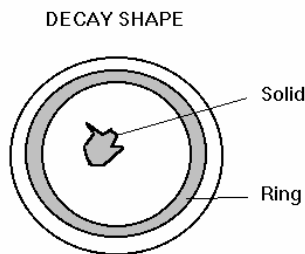
WARNING!

The sampler should assess the decay through a number of sections before deciding on a shape or a mixture. Once a shape or a mixture is selected, the selections cannot be changed. Measurement difficulty arises when a solid shape changes into a ring shape due to the large amount of coalescing that is required.

Where there is more than one decay: (e.g., decay 2,3.....etc.) a Decay ID can be created for each decay by scrolling down at D/S. When this field has been verified, the next consecutive number will be entered in the DecID field by default.

NOTES: If there is another occurrence of the same decay in a tree, the new occurrence is given a new decay ID and **MUST** be described as if it is a new decay.

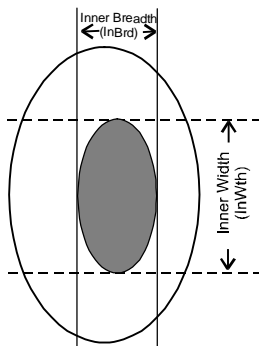
For Decay running through to Secondary Leaders, refer to **Identifying Decay Section Measures in Secondary Leaders**.



```
IDENTIFY DECAY Tree#2 Ldr:1 Seg:11
DecID DSU Sh InWth InBrd OutWth OutBrd
 3 | D | R | 3.4 | 3.2 | 23.5 | 23.3

Decay, Stain or Void <D/S/U>
Screen #212 99.07.19
Vers:5.6: 2002.03.28 Today:2003.AUG.27 14:48:24
```

Solid Decay



1. **DecID**- A numerical identification of decay will be entered by default.
2. **D/S/V** - Select (D)ecay, (S)tain or (V)oid <Enter>
3. **Sh** - Enter the Shape- (s)olid or (r)ing <Enter>
4. **InWth**- Enter the longer diameter <Enter>. For solid or ring decay.
5. **InBrd**- Enter the shorter diameter <Enter>. For solid or ring decay.

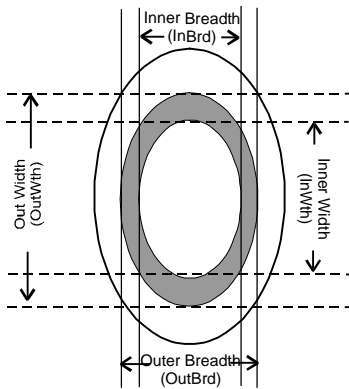
NOTE: If decay is solid, the program will move from the Inner Breadth field to the T.Ht field by default.

```
IDENTIFY DECAY Tree#1 Ldr:1 Seg:2
DecID DSU Sh InWth InBrd OutWth OutBrd
 1 | D | S | 15.6 | 14.7 | 0.0 | 0.0
 2 | D | S | 16.3 | 4.9 | 0.0 | 0.0

Decay, Stain or Void <D/S/U>
Screen #212 99.07.19
Vers:5.6: 2002.03.28 Today:2003.AUG.27 13:13:01
```

6. **OutWth** -Enter the Outer Width of the ring decay <Enter>
7. **OutBrd** - Enter the Outer Breadth of the ring decay <Enter>
8. **T.Ht**-Enter the top height of decay in the section <Enter>
9. **B.Ht**-Enter the bottom height of decay in section <Enter>

Ring Decay



NOTE: If decay runs through a section, B.Ht will enter by default. Top height and bottom height are entered by default, except for the segments where decay starts and stops.

10. **S/M** - Single or mixed decay <Enter> .
11. **%**- If there is mixed decay, then indicate the % of one decay in the cross sectional area. If there is no mixed decay press <Enter> to accept the 100% default and move to the next field.

```
IDENTIFY DECAY Tree#2 Ldr:1 Seg:3
DecID DSU T.Ht B.Ht S/M % Ent Comp
1 D 0.00 0.30 M 25 BS
2 D 0.00 0.30 M 75 F DBC

Entrance
Screen #212 99.07.19
Vers:5.6: 2002.03.28 Today:2003.AUG.27 14:48:24
```

NOTE: For single decay, accept the 100% default. Mixed decays MUST have the decay measures duplicated for each decay in the mix.

```
IDENTIFY DECAY Tree#2 Ldr:1 Seg:3
DecID DSU Sh InWth InBrd OutWth OutBrd
1 S 8.7 8.4 0.0 0.0
2 D S 8.7 8.4 0.0 0.0

Decay, Stain or Void (D/S/U)
Screen #212 99.07.19
Vers:5.6: 2002.03.28 Today:2003.AUG.27 14:48:24
```

NOTE: If one of the decays in a mix terminates while the other decay(s) continue, continue the mix until the other decay(s) terminate and enter a mix % of 1% for the terminated decay.

```
IDENTIFY DECAY Tree#2 Ldr:1 Seg:7
DecID DSU OutBrd T.Ht B.Ht S/M %
1 D 0.0 0.00 2.00 BS 99
2 D 0.0 0.00 2.00 M 1

(S)eparate or (M)ixed
Screen #212 99.07.19
Vers:5.6: 2002.03.28 Today:2003.AUG.27 14:48:24
```

12. **Ent** - Describe the entrance of decay. Press <F2> and make a selection from the pick list <Enter>

13. **Comp** - Compound decay description code. Press <F2> and make a selection from the pick list <Enter>. This field will populate all of the decay descriptor fields.

By default, the cursor will move to the Organ(ism) field.

14. The following decay descriptor fields will be automatically filled once the compound description field code is selected. The individual codes can be overridden if required by moving the cursor to the individual item, pressing <Enter> . Press <F2> to call up the pick lists.

Strn – Decay organism strength.

Tex – Decay organism texture.

Shde – Decay organism shade.

Col – Decay organism colour.

Stg – Decay organism stage.

Frq - Pit, Flecks and Spots frequency.

Shp - Pit, Flecks and Spots shape.

Shd - Pit, Flecks and Spots shade.

Col - Pit, Flecks and Spots colour.

Typ - Pit, Flecks and Spots type

Shd – Mycelium shade.

Col – Mycelium colour.

Typ – Mycelium type.

15. **Organ.** - Enter the Decay stain Organism code or press <F2> to select from the pick list <Enter>

16. When data entry is complete on this screen press <<- Clr>

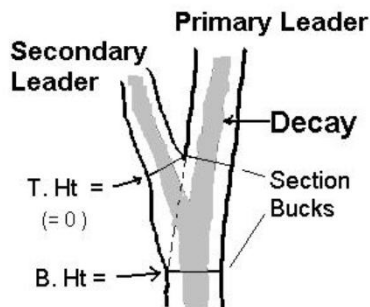
NOTE: The program ensures all required data are entered. If any required data item has been skipped, the user will be advised, and the cursor will be positioned at that field ready for data entry. If the validation is hung up, then press <Esc> to return to the section screen.

Decay Measurements in Successive Sections

For a decay that continues into successive sections, enter only the diameter measures and the T.Ht and B. Ht measures. If it is a mixed decay, also enter the percentage mix. No other fields need to be entered.

NOTE: The section screen will show a tick mark in the decay column opposite each section if decay has been entered for the section.

```
DecaySec Tr1      D Ldr0 UTop23.61 Ht30.00
Seg CumLen      DIB-1 DIB-2 DBI Fk? Dec?
4 | 0.90 | 52.5 | 52.5 | 3.2 | | 1
5 | 1.30 | 51.9 | 51.9 | 3.2 | | 1
6 | 2.30 | 50.8 | 50.7 | 0.0 | | 1
7 | 4.30 | 49.5 | 49.3 | 0.0 | | 1
8 | 7.17 | 47.2 | 46.8 | 0.0 | | 1
Larger Inside Bark Diameter (cm)
Scrn #211 2002.03.28
Vers:5.6: 2002.03.28 Today:2003.AUG.27 13:13:01
```



Identifying Decay Section Measures in Secondary Leaders

1. Enter decay in primary leader first as described above.
2. Select Secondary Leader #1 <Enter>
3. The first segment in the secondary leader(the parent segment) will come up
4. Enter decay identification data as per the previous section, except in the first shared fork segment the B.Ht must be entered as the length of the parent segment.
5. B.Ht will enter by default in the rest of the segments.
6. Press <Esc> to exit.

NOTE: The program will treat this segment as containing a new decay and assigned a new number.

End of Post Bucking Phase. Tree is complete.

Transporting the Handheld

WARNING!

It is essential to SHUTDOWN THE PROGRAM before transporting the handheld, since data can be lost or changed if buttons are inadvertently pressed.

When you are ready to leave the site, shutdown the program and turn off the handheld to make it safe for transport.

To shutdown down the program:

1. From the screen that you are in press <Esc> as many times as necessary to get to the get to the main menu.
2. Press <Esc> while in the DVHand Main Menu screen and you will see the following prompt:
Exit (Y/N)?

```

D&U MAIN MENU
1. Identify Sample
2. Identify Plot
OkTo Exit?(Y/N)
Screen #201 96.05.02
Vers:5.6: 2002.03.28 Today:2003.AUG.27 15:07:56
  
```

3. Press Y and you will be back at the C:\> prompt.
It is now safe to shutdown the handheld.
4. To turn off the handheld: On the Ministry Handheld, press the red button in top right hand corner.

Managing Data - Overview



Managing Data

Data Management is an essential process for transferring data to and from the PC and Handheld computers and in ensuring data is backed up, stored and reported properly.

It is important that the user understands that data can be overwritten on both the handheld and the PC during uploading and downloading processes. Warnings are indicated below.

Managing Data involves these steps:

1. PC/ Handheld data transfer
 - Uploading data from handheld to PC
 - Downloading data to the handheld from the PC
2. Data Backup
 - Transferring data to diskette and conversion to text file format.
 - Transferring data to other PC subdirectories.
3. Reports
4. Maintain Samples

It is mandatory to upload the data from the handheld and run the reports at the end of the day since data can be lost.

PC Handheld Data Transfer

The PC handheld data transfer process is also a database management process since the new data from the handheld is merged in with the existing sample data in the PC. In order to prevent the overwriting or copying over of existing files, a two step process occurs. The first step is the copying of selected handheld samples to a subdirectory on the PC named handheld. The second step is the merging of the data in the handheld subdirectory with the host data in the PC.

NOTE: This is the only place where individual trees can be brought over to the PC. In all other file transfer phases, all trees within a selected sample are transferred.

Uploading Data from Handheld to the PC

NOTE: Ensure that your handheld is connected to your PC before proceeding.

On the Husky Handheld

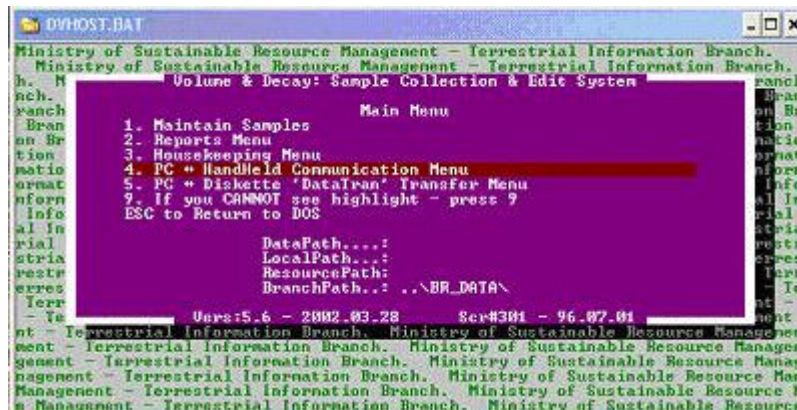
1. At the C:\> prompt change to the DV directory
C:\>**cd dv** <Enter>

On the PC

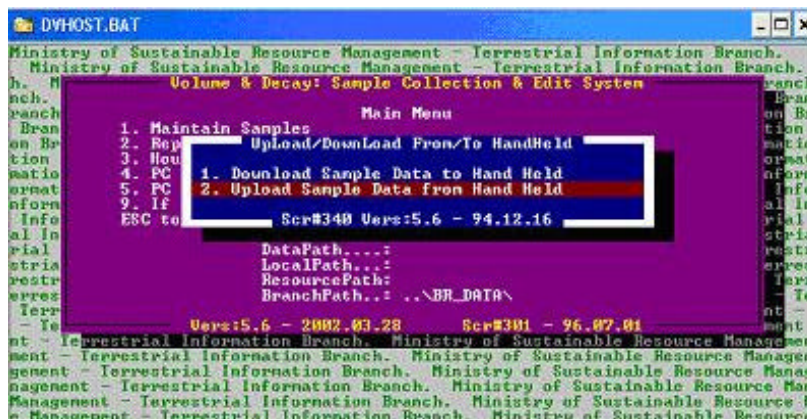
2. Type
HCOM <Enter>
3. At the C:\> move to the dvhost directory
C:\>cd dvhost <Enter>
4. Start the DVHost program by typing:
C:\dvhost>dvhost <Enter>

The Main Menu will appear

5. Select from the Main Menu
PC handheld communication menu <Enter>



6. Select from menu below:
Upload Sample Data from Handheld <Enter>

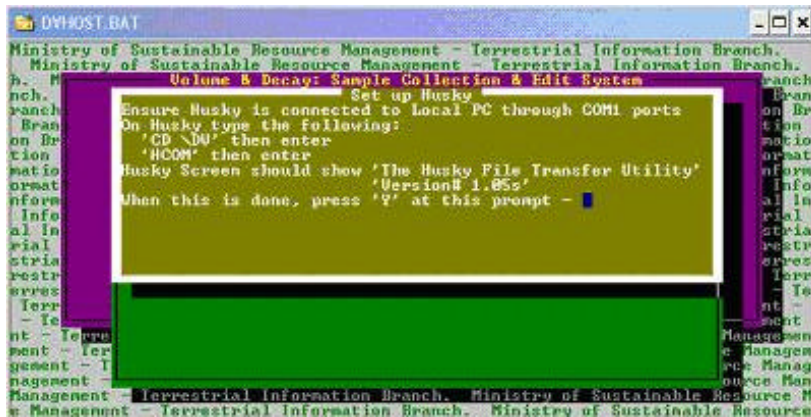


7. Select from menu below:
 - If Husky Handheld and Windows other than XP: Ministry Handheld <Enter>
 - If Husky Handheld and Windows XP: Any Other <Enter>
 - If not a Husky Handheld : Any Other <Enter>

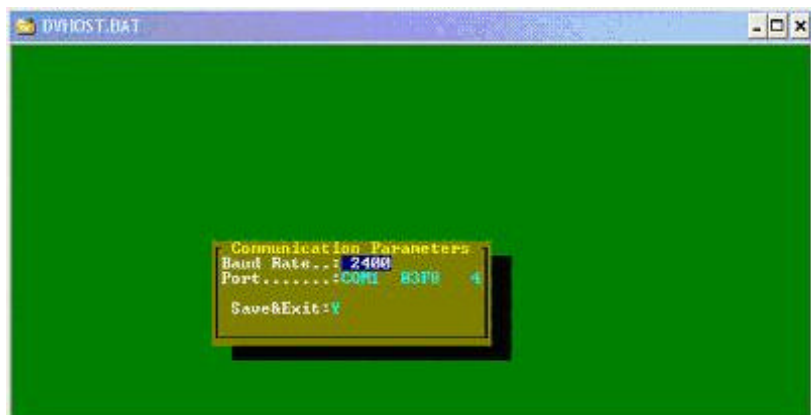


(A) Ministry Handheld Option

- Once the ministry handheld is selected, this prompt will be displayed.

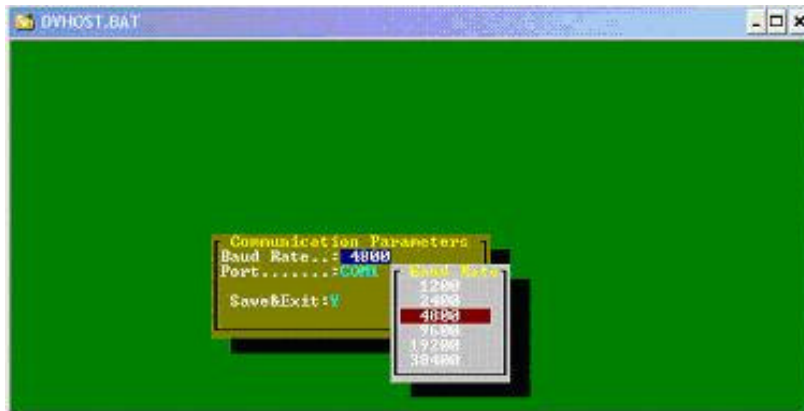


- Press <Y> at the prompt when you have completed the instructions. This screen will be displayed



NOTE: Baud setting can be as high as possible as long as transmission is successful.

- Press <Enter> to confirm Baud Rate (connects at 38400 with the Husky)



11. Press <Enter> to confirm the default Com1 port
12. If your COM port is not COM 1 a menu will appear after pressing <Enter>
13. Select your COM port from the menu <Enter>
14. Press <Enter> at the "Y" prompt to continue.

NOTE: Once the transfer process is started, a list of the files received by the PC will be displayed. There should be a total of 9 DBF files: TR_SEG, SAMPLE, PLOT, TREE, TRLEADER, TS_DECAY, TL_DECAY, TR_PATH and PUBLIC.

The handheld will indicate that it is transmitting files and when the transmission is complete.

Skip past the “Other Handheld” sections to step 16 for the rest of the upload process.

(B) For “Other Handheld” option.

8. Once the “Other Handheld” option is pressed, you will be at a DOS prompt as per the following screen:



At this stage activate the communications software for your specific handheld and copy over the data files from the Husky to the HANDHELD subdirectory.

NOTE: The 9 critical DBF files are: TR_SEG, SAMPLE, PLOT, TREE, TRLEADER, TS_DECAY, TL_DECAY, TR_PATH and PUBLIC.

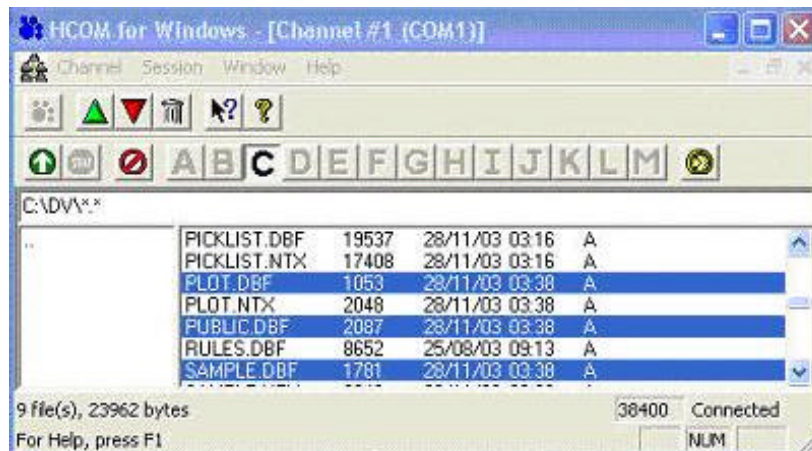
Skip to step 15 for the rest of the upload process.

(C) For Husky and Windows XP

9. In Windows, start the HCOM for Windows program by selecting Start, All Programs, HCOM for Window.
10. Ensure the Com port is the correct one.
11. Click on the button with the white arrow to connect if not already connected. The display will show all the files currently on the Husky.

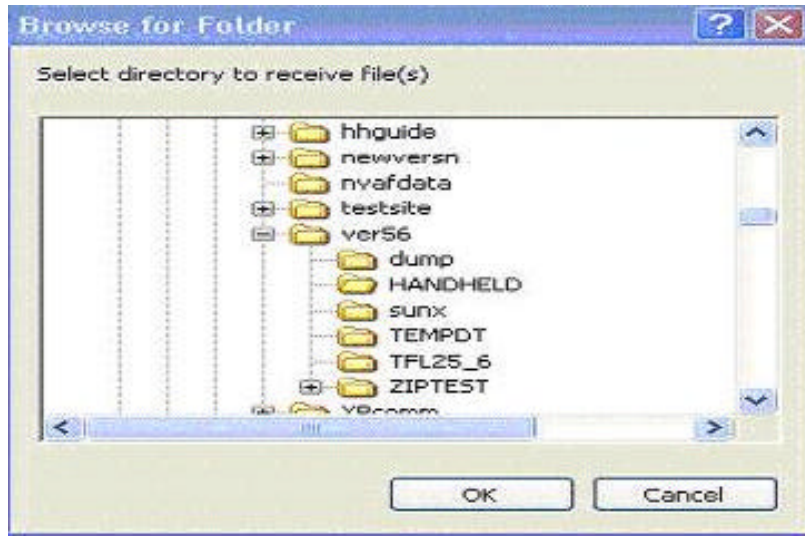


12. Select the 9 database files that are to be copied over to the PC. Click on the green arrow pointing up to initiate the transfer.



NOTE: The 9 critical DBF files are: TR_SEG, SAMPLE, PLOT, TREE, TRLEADER, TS_DECAY, TL_DECAY, TR_PATH and PUBLIC.

13. Once the green arrow is pressed, a popup window showing the PC file structure. Select the HANDHELD subdirectory off of the directory where the DVhost program resides (called VER56 in the example above).



NOTE: Note that all of the files to be uploaded are first sent to a DVHOST subdirectory named 'handheld'. From there, the uploaded data is merged with the data in the DVHOST directory. The HANDHELD subdirectory is automatically emptied of its contents at each download.

14. After the file transfer is complete, return to the DOS window in DVHost and type Exit and any other key to continue.
15. On the PC - Press <Esc> after transmission is complete. You will see the screen below.
16. Follow the instructions on the bottom of the screen.



Change 'Y' to 'N' for those Records NOT to UpLoad, then Press <Esc> when Choices are complete

NOTE: Records are set to 'N' if there already exists an up-to-date occurrence of the record in the PC.

WARNING!

A tree cannot be uploaded without its sample and plot data unless this data already exists in the PC.



17. Press <Esc>



18. Type "Y" at the prompt above.

The main menu will appear and a screen will appear on the right of the PC screen, this screen will show a series of files being opened, indexed and packed.

Downloading Data to the Handheld from the PC

NOTES: If a sample is to be revisited and further data collected, it is imperative that the original data collected from the sample, be downloaded from the PC to the handheld before returning to the sample.

Ensure that your handheld is connected to your PC before proceeding

WARNING!

If there is any data on the Handheld from the selected sample to be downloaded it will be overwritten and lost. Ensure that all data is uploaded from the handheld before proceeding.

1. Follow steps 1 to 5 found in the Installing DVHand Software onto the Handheld section at the beginning of this document.
6. Select Sample(s) to be downloaded by typing <Y> on the sample line.

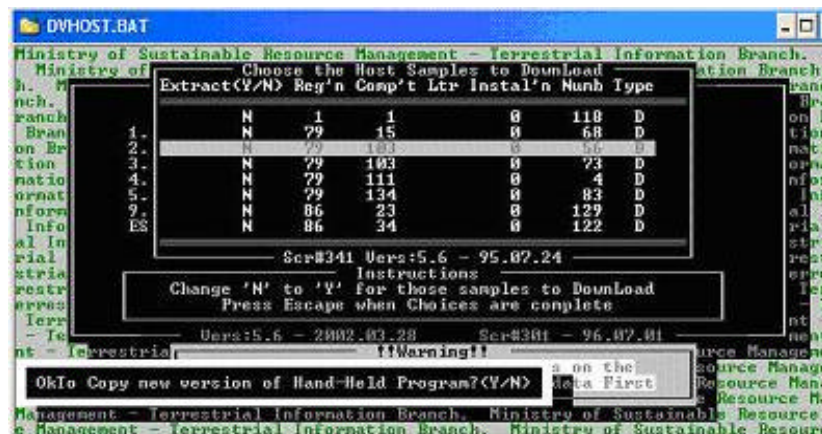


15. At the prompt Press <Esc> .

16. At the following prompt type <Y> to continue .



17. At the following prompt, OK to Copy New Version of Hand-held Program. Press <N> to continue.



NOTE: Files being transferred are displayed at the bottom of the screen.

18. Select from menu below:

- If Husky Handheld and Windows other than XP: Ministry Handheld <Enter>.
- If Husky Handheld and Windows XP: Any Other <Enter>
- If not a Husky Handheld: Any Other <Enter>

(A) Ministry Handheld Option



19. Follow steps 8 to 14 from the “Uploading Data from Handheld to PC” section to set up the communications link with the Husky.

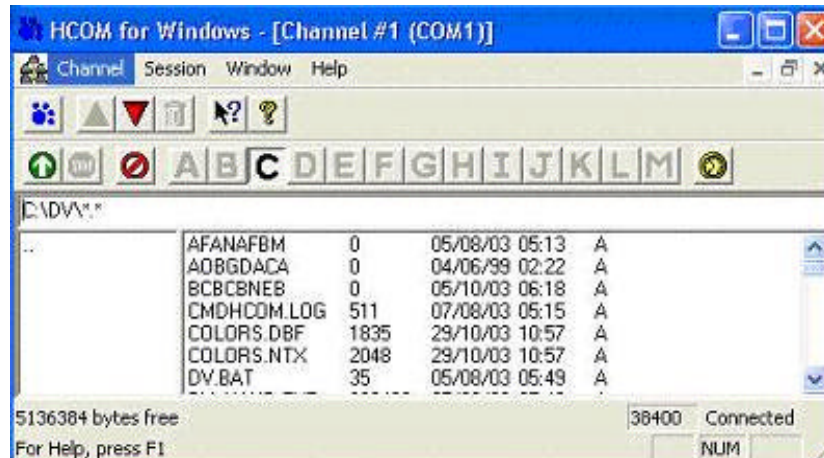
20. The files that are automatically transferred to the Husky are SAMPLE.DBF, PLOT.DBF, TREE.DBF, TRLEADER.DBF, TR_SEG.DBF, TL_DECAY.DBF, TS_DECAY.DBF, TR_PATH.DBF and FLAG. A status comment will appear on the handheld screen showing the progress of each file transfer. Once the download is complete, the following prompt will show on the PC: <Review Communications and Continue (R)etry, or anything else to exit communications>. If the communications is successful, press any key other than R to return to the Upload/Download screen. The download process is finished.

(B). Other Handheld Option (non Husky Handheld)

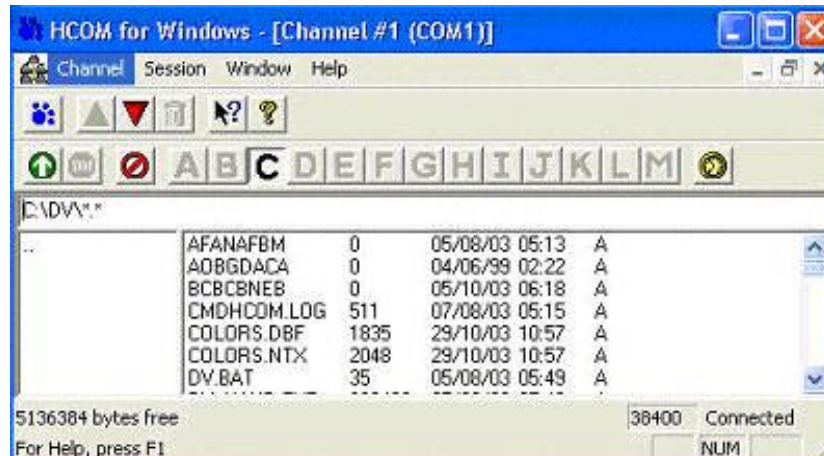
11. Once the Other Handheld option is selected, the cursor will appear opposite a DOS prompt in the Handheld subdirectory. See the section at the beginning of this user guide titled “Installation of DVHand Software onto the Handheld”
12. Follow the communications protocols for your handheld and copy all files in the Handheld subdirectory over to the handheld. These files are: FLAG, SAMPLE.DBF, PLOT.DBF, TREE.DBF, TRLEADER.DBF, TR_SEG.DBF, TR_PATH.DBF, TL_DECAY.DBF, TS_DECAY.DBF.
13. Once the file copy is completed, enter <exit> at the DOS prompt and return to the DVHost software. The download is now complete.

(C) the Handheld Option (Husky Handheld and Windows XP)

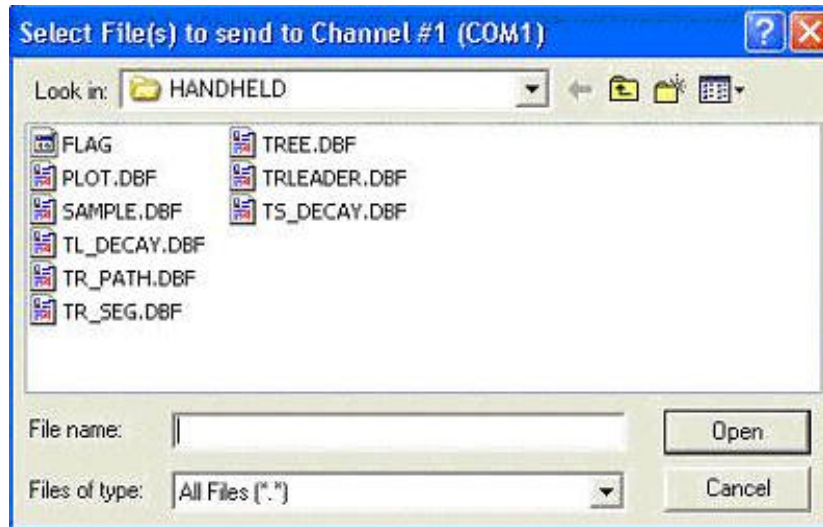
14. Once the Other Handheld option is selected, go to Windows and start the HCOM for Windows program by selecting Start, All Programs, HCOM for Window.
15. Ensure the Com port is the correct one.
16. Click on the button with the white arrow to connect if not already connected. The display will show all the files currently on the Husky.



14. Click on the button with the red arrow pointing down to start the transfer of files to the Husky. Navigate to the Handheld subdirectory.



15. Select all files in the HANDHELD subdirectory. These files are: FLAG, SAMPLE.DBF, PLOT.DBF, TREE.DBF, TRLEADER.DBF, TR_SEG.DBF, TR_PATH.DBF, TL_DECAY.DBF and TS_DECAY.DBF.



16. After the file selection, click <open> . You will then see a prompt to overwrite existing files, click <yes to all> . At this stage the data files from the PC will overwrite the data files in the handheld and the download process is complete.

Data Backing Up

Transferring data to diskette

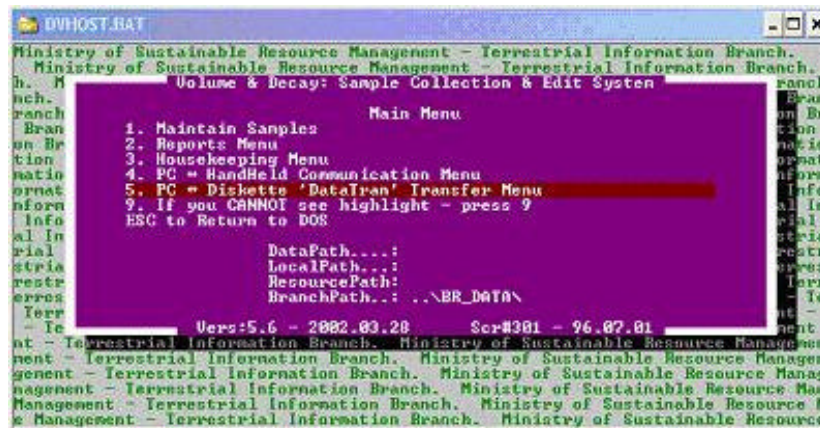
This process reformats the 8 essential data base files produced by the handheld to a text (ASCII) format. The 8 database file names remain the same but the file extension is renamed from DBF to one of your choosing.

NOTE: Ensure that there is a diskette in drive A before proceeding.

On the PC

1. At the C:\> move to the dvhost directory
C:\>**cd dvhost** <Enter>
2. Start the DVHost program by typing:
C:\>**dvhost** <Enter>

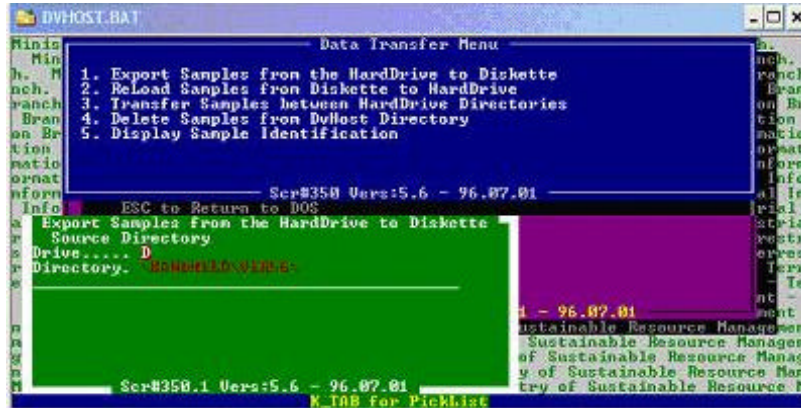
The Main Menu will appear
3. From the Main Menu select:
PC - Diskette "DataTran" Transfer Menu <Enter>



4. From Data Transfer Menu select:
Export Samples from Hard Drive to Diskette
<Enter>



5. Select source drive. i.e. Drive...D
6. Press <Enter> to confirm the drive



7. Select the source directory, i.e. \HANDHELD\VER56\
8. Press <Enter> to confirm the directory

Press <Tab> pick list will display a list of created samples

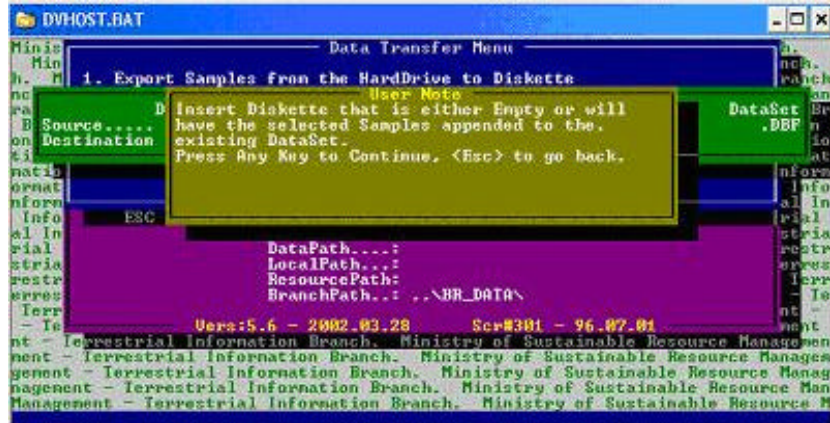


9. Select the Samples you wish to transfer by pressing Y <Enter>

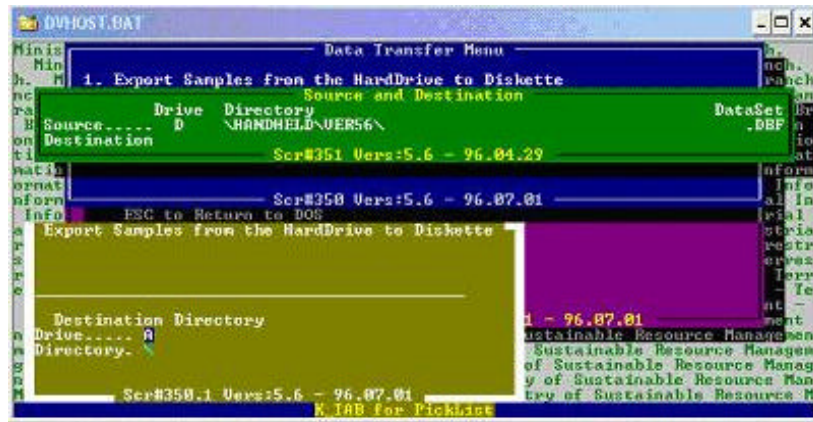


10. Follow instructions on the screen. Press any key to continue.

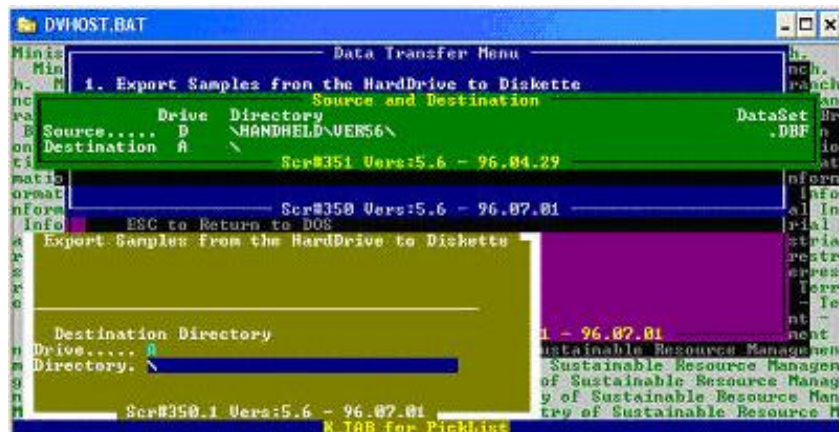
NOTE: Ensure that there is a disk in Drive A.



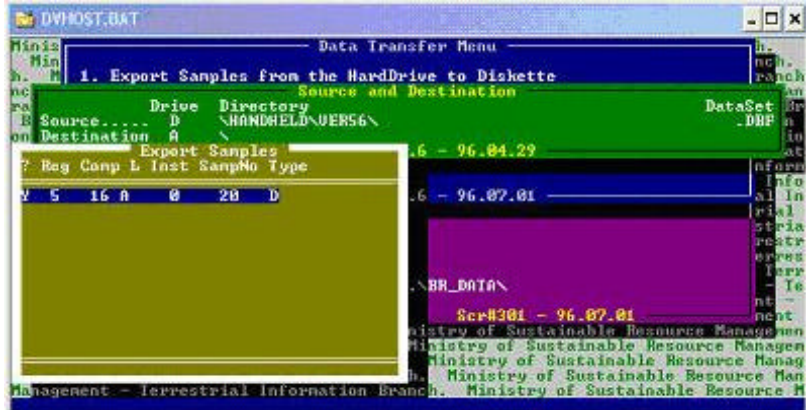
11. Press <Enter> to confirm drive A.



12. Select a directory and press <Enter> to confirm.

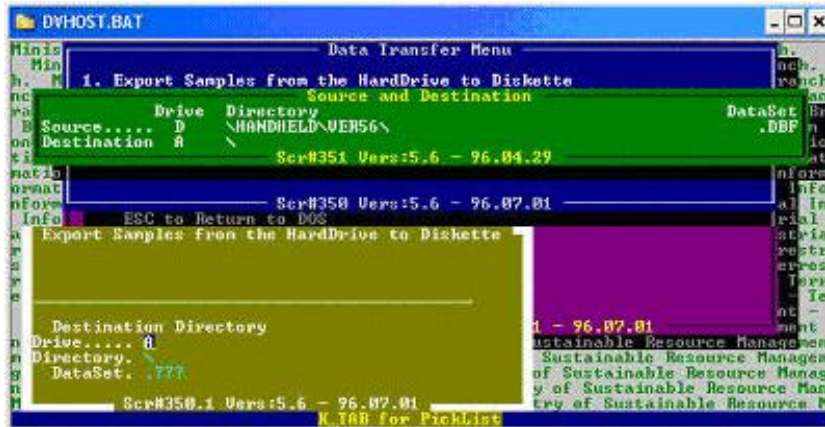


13. Press <Enter> on the Export Samples screen.



Files being transferred are displayed at the bottom of the screen.

14. Reconfirm the drive, press <Enter>



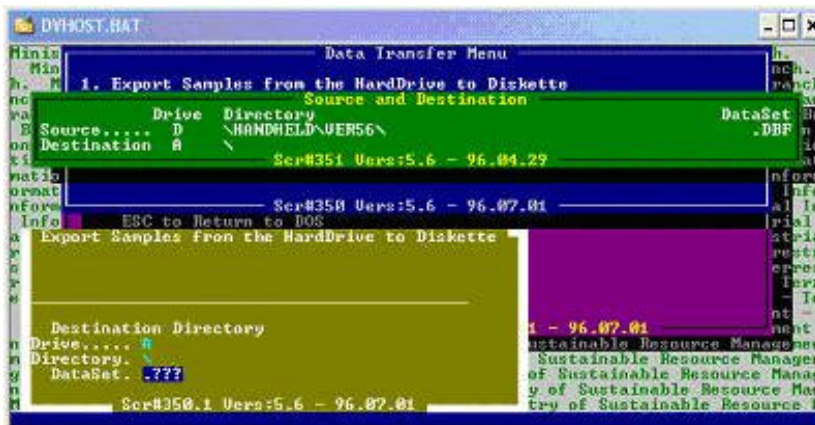
15. Reconfirm the directory <Enter>



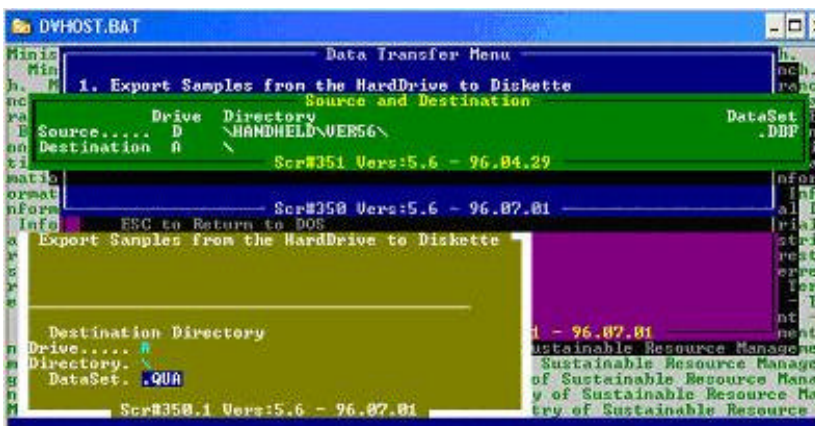
WARNING! If a sample with the same file extension name is already on the disk it will be overwritten and lost. Ensure that the file extension name is not already being used.

16. **Data set** - Type in a three character file extension of your choice, press <Enter>

The file extension that you enter will be applied to all files in the sample placed on the disk.



WARNING! Do not overwrite the ".", instead overwrite the question marks.



17. On next the screen, note at the bottom, Export Complete

18. Press <Esc> to exit to the Main Menu.

WARNING! Make more than one copy and store the copies in separate locations to ensure data is not lost.

A list of files copied onto the A drive, will be as follows:

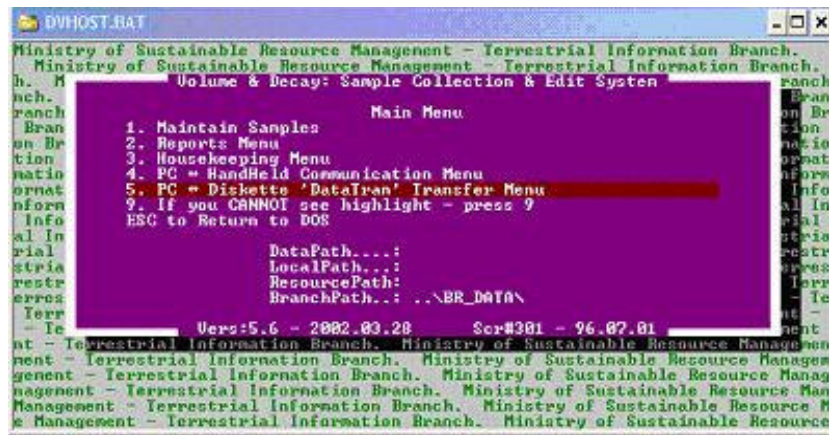
SAMPLE.QUA	PLOT.QUA
TREE.QUA	TRLEADER.QUA
TR_SEG.QUA	TR_PATH.QUA
TL_DECAY.QUA	TS_DECAY.QUA

Transferring data to other PC subdirectories

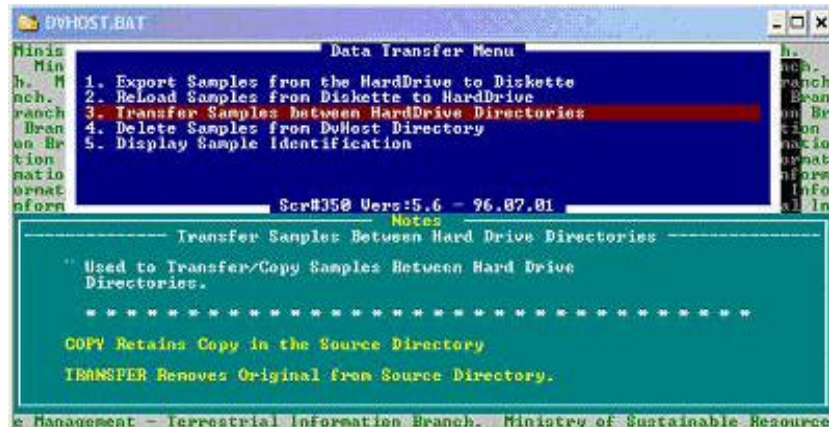
This process copies selected samples to other subdirectories. Copies of the 8 essential data base files are moved over to the subdirectory. If samples already exist in the subdirectory, the new sample data will merge with existing data.

On the PC

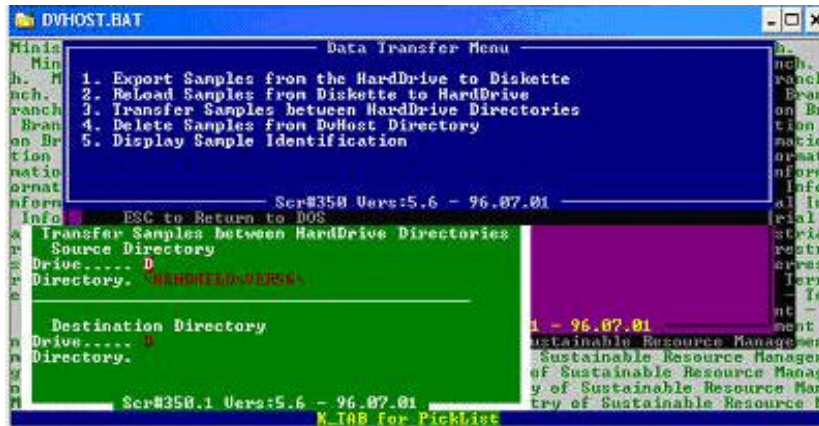
1. At the C:\> move to the dvhost directory
C:\>**cd dvhost** <Enter>
2. Start the DVHost program by typing:
C:\>dvhost>**dvhost** <Enter>
The Main Menu will appear
3. From the Main Menu select:
PC - Diskette "DataTran" Transfer Menu <Enter>



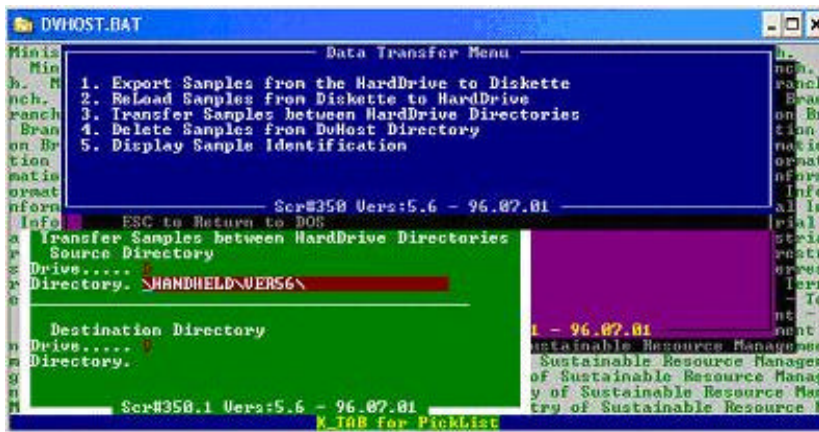
4. From Data Transfer Menu select:
Transfer samples between hard Drive directories <Enter>



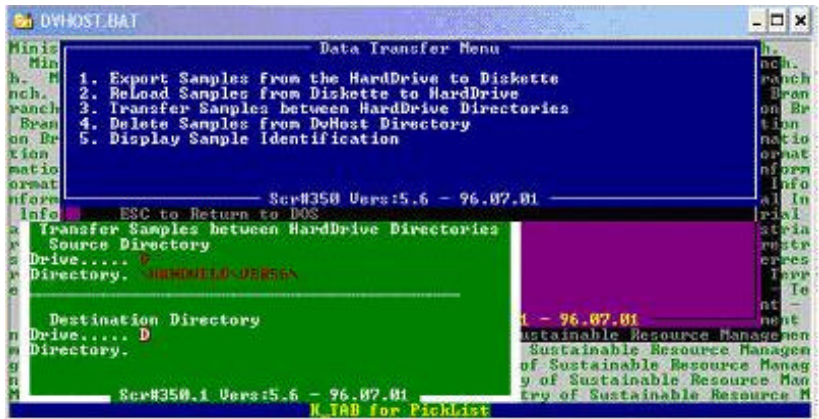
5. Confirm source drive <Enter>.



6. Confirm source directory <Enter> .

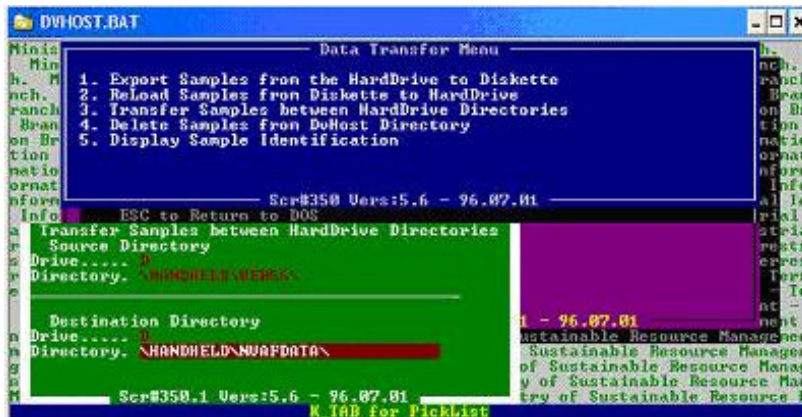


7. Select destination drive <Enter> .

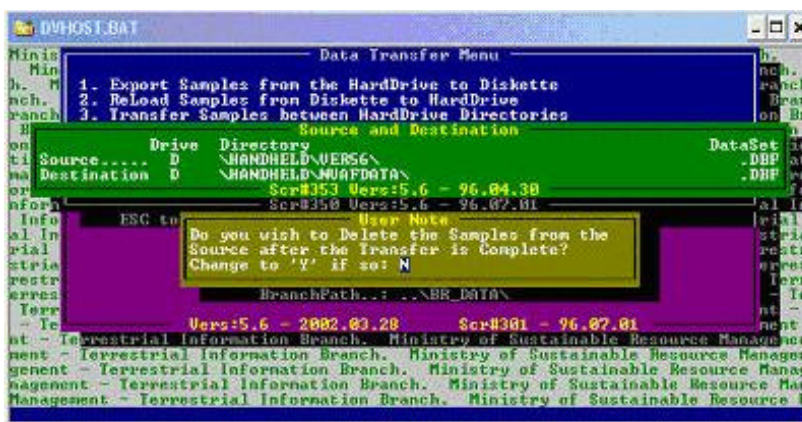


8. Select destination directory <Enter> .

Press <Tab> for a list of directories that are available



9. User note - at the prompt, ensure that N is indicated at the cursor press <Enter> .



10. Select the samples you wish to transfer by pressing Y <Enter> .



11. Transfer progress report will be displayed at the bottom of the screen, once transfer is complete it will be noted at the bottom of the screen.
12. Press <Esc> to exit to the Main Menu.

Reports

Reports are sample specific and include all plots and trees in the specified sample. You have the option of producing reports for one or all samples.

NOTE: Reports form the basis of the quality assurance process and also represent another form of data backup. It is recommended to save the reports to a disk and also the hard drive as a default.

Creating Reports involves these steps:

1. Creating Reports
2. Copying a Report File onto a disk

Creating Reports

To produce reports information can be sent:

1. To a file
2. To the printer, or
3. To the screen

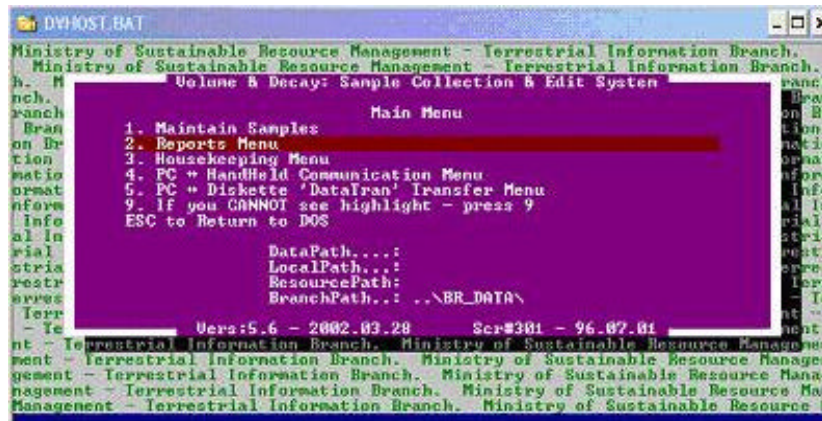
Sending a Report to a File

On the PC

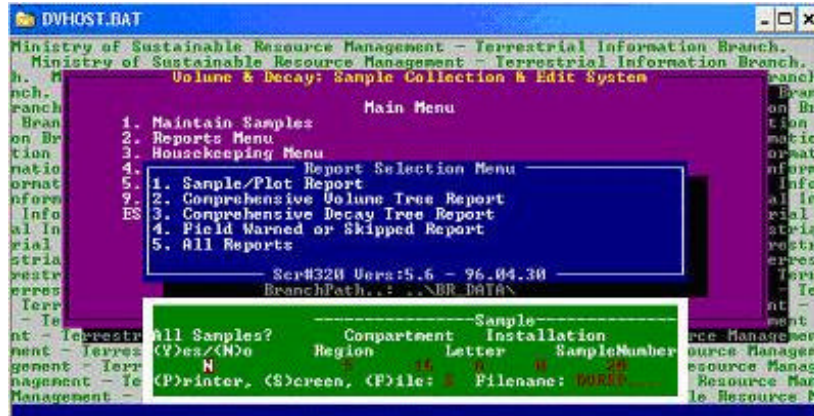
1. At the C:\> move to the dvhost directory
C:\>**cd dvhost** <Enter>
2. Start the DVHost program by typing:
C:\>**dvhost** <Enter>

The Main Menu will appear

3. Select Reports Menu from the Main Menu <Enter> .



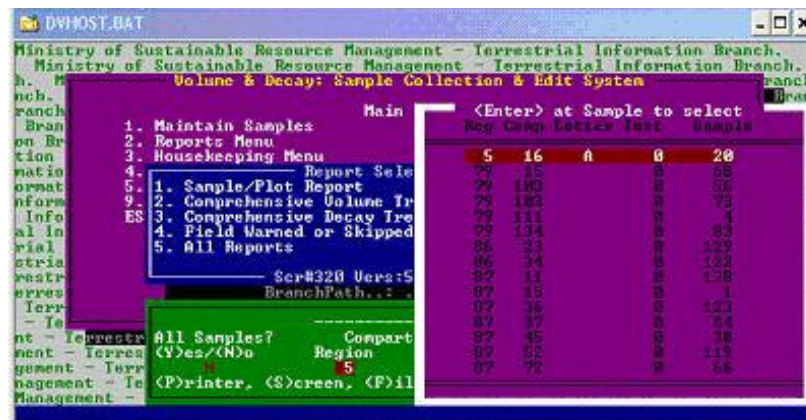
4. Enter "Y" for all samples or "N" for only selected samples
<Enter> .



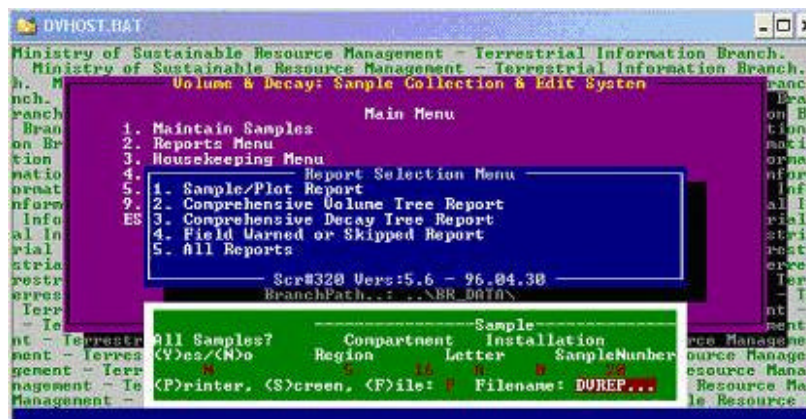
If you select N you must confirm each component number, by pressing <Enter> at Region, Compartment, Letter, Installation, and Sample Number or select a sample by pressing <F2> where a pick list will display a list of created samples.

Press <Tab> pick list will display a list of created samples.

5. Confirm sample identification numbers <Enter>.

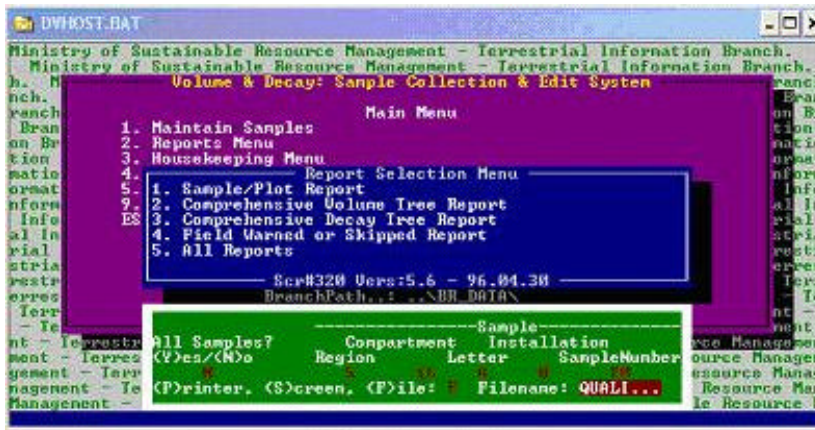


6. Select F (for File) <Enter>
Do not select printer at this point.



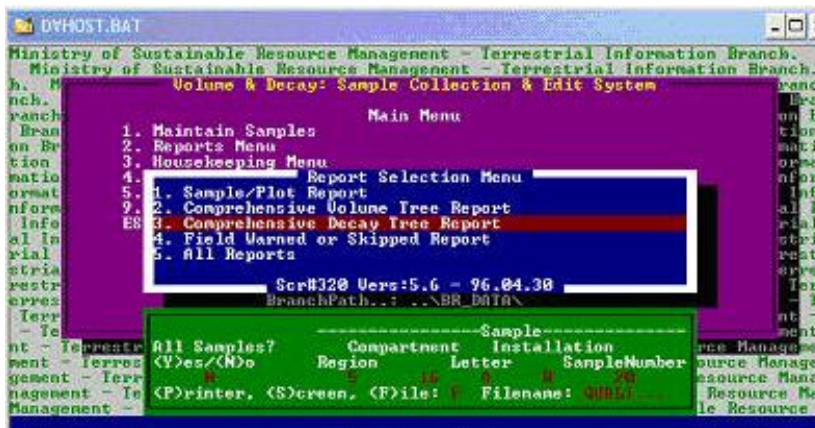
7. Enter a file name with up to 5 alphanumeric characters <Enter> (For example: the date or location of sample).

The file name in the sample will be displayed as QUALI00#.TMP where the number # corresponds to the type of the report produced.



8. Select a Report from the Report Selection Menu:
Comprehensive Decay Tree Report <Enter>

This Report is the most commonly used. See sample report in appendix.



Note file being transferred is displayed at the bottom of the screen.

9. The file will be put in your DVHost directory where the file name will be QUALI003.TMP.
10. Press <Esc> to move back to the Main Menu

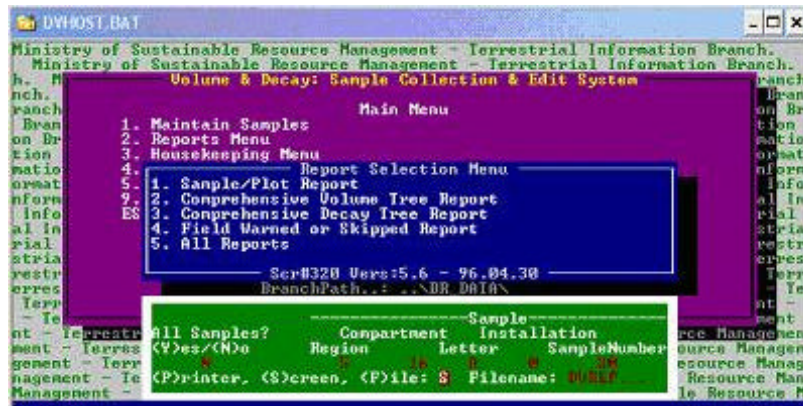
NOTE: It is recommended to open the report using WORD and select a Courier type face as it will allow for the proper alignment of the columns of numbers. An example of the report is located in the Appendices.

Sending a Report to the Printer

NOTE: DVHost software configures the report file for printing to a default printer, the printer drives have not been maintained and will likely not be suitable for your printer. It is recommended to send the report to the file and print it using WORD.

Sending a Report to the Screen

1. Complete Steps 1 to 3 of "Sending a Report to a File" on page 62.
2. Select "S" for screen <Enter>



3. Select "Comprehensive Decay Tree Report" <Enter>
4. Refer to the commands at the bottom of the screen to move through the report.



5. Press <Q> to quit.

Maintaining Samples

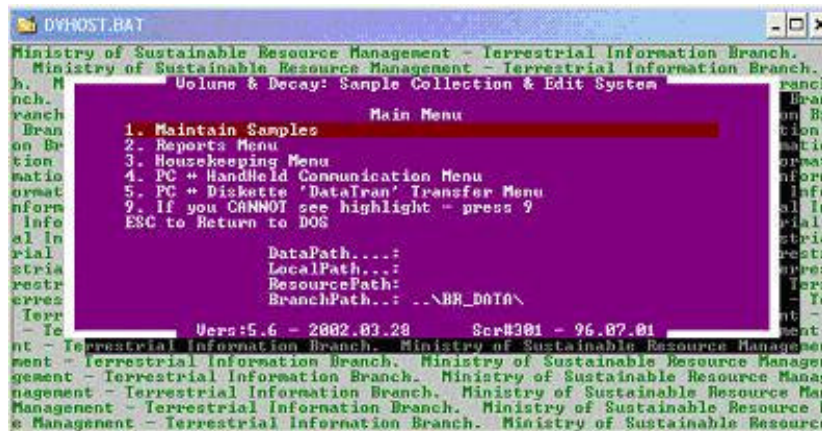
This facility allows for the input (seldom used) of sample header information and provides a quick review of plot and tree details for selected samples.

On the PC

1. At the C:\> move to the dvhost directory
C:\>**cd dvhost** <Enter>
2. Start the DVHost program by typing:
C:\dvhost>**dvhost** <Enter>

The Main Menu will appear

3. At the Main Menu select
Maintain Samples <Enter>

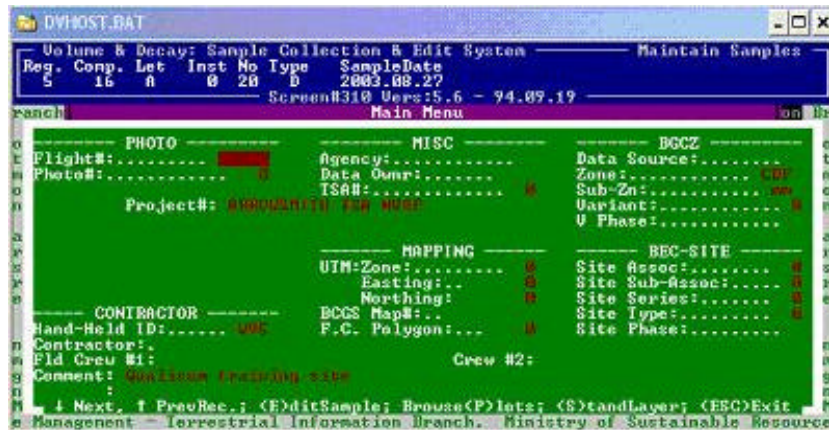


Press <Tab>
pick list will
display a list of
created
samples.

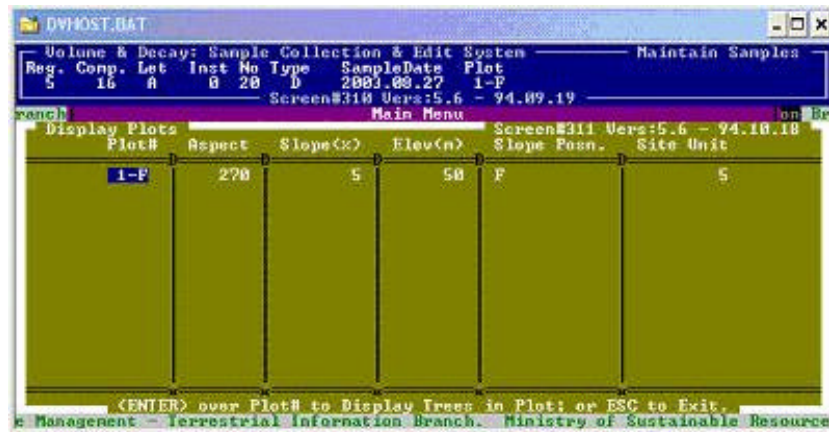
4. Confirm or change sample ID <Enter> .



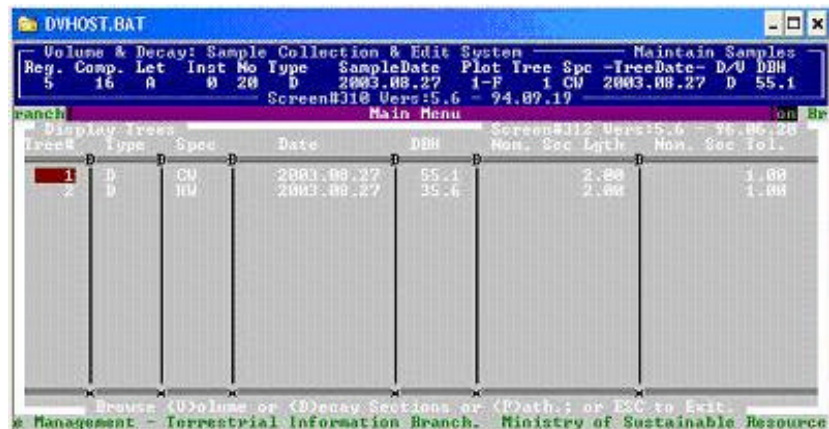
5. Select (E) for edit.
6. Fill in the applicable fields.



7. Press <Esc> to exit.
8. Enter <P> to review plot and tree information.



9. Press <Enter> to display tree information.



10. Press <P> to review path data for a selected tree.



- Press <Esc> to return to previous screen and press <D> to review tree details. Press <Tab> to cycle through the various tree detail components.



- Press <Esc> four times to return to the main menu.

Troubleshooting

There are several facilities that can be used to correct for common problems. These include:

Purging the Handheld: Cleaning out the existing data from the handheld without deleting files.

Reindexing Files: Reindexing amounts to a resort of all of the data files.

Deleting trees: Due to data input errors that cause a reentry of a sample tree with a tree number 100 higher than the original number, the replaced trees will require deleting.

Purging All Data

NOTES: Purging the handheld is required periodically to free up memory space. How often you purge the handheld depends on the memory capacity of your handheld. Most handhelds now have the space capacity to allow

for an entire project's sample trees but the performance may be unduly slow or create performance problems. Purging the handheld will remove all data from the files while maintaining the directory structure.

WARNING!

Ensure that you have completed the Data Backup section before proceeding. Purging the handheld will remove ALL sample data.

On the Handheld

1. You must be in the C:\dv> directory
2. Type:
C:\dv>**dv purge** <Enter>
3. When purging is complete you will be returned to the Handheld ID screen.

Reindexing Data Files

All of the data files are linked through indexing. Sometimes the links may be broken and cause the program to crash.

On the Handheld

1. You must be in the C:\dv> directory
2. Type:
C:\dv>**dv reindex** <Enter>
3. When reindexing is complete you will be returned to the Handheld ID screen.

Sample Tree Deletion

NOTE: Sample trees can only be deleted using the sample handheld to PC upload process. Follow that process and de-select the superseded trees.

NOTE: If the sample tree data is only available as text files on a diskette, the Ministry Other Handheld option can be used to simulate the upload process.

Using the Ministry Other Handheld option:

1. Convert the text files to DBF files using the "Reload Samples from Diskette to HardDrive" facility found at the "PC - Diskette 'DataTran' Transfer Menu' selection at the Main Menu.
2. Transfer the sample to a subdirectory using the "Transferring data to other PC subdirectories" facility.
3. Copy PUBLIC.DBF from the DVHOST directory to the subdirectory using the regular PC file copy process.

4. Delete the sample from the DVHOST directory using the DVHOST sample deletion facility found at the "PC - Diskette DataTran' Transfer Menu" selection at the Main Menu.
5. Use the PC Upload process but select the Ministry Other Handheld option.
6. At the prompt, type in `copy D:\TESTDELETE*.dbf`, where the D:\TESTDELETE is the name of the subdirectory that has the sample with the extra trees.
7. You should see a notice of the files that have been copied to the DVHOST directory. These files should be: SAMPLE.DBF, PLOT.DBF, TREE.DBF, TRLEADER.DBF, TR_SEG.DBF, TR_PATH.DBF, TL_DECAY.DBF, TS_DECAY.DBF and PUBLIC.DBF.
8. Follow the instructions on the screen and de-select the trees should be deleted.

Bugs

Primary Leader Duplicates: An unfixable bug has dogged this program since its inception, where duplicate primary leaders are created. These leaders show up at the "Leaders and Utop" screen and cannot be removed. The only recourse is to re-enter the tree. This error appears to occur at the beginning of sampling projects when the operator is still unfamiliar with the program and the handling of the handheld.

Utop Insertion Failure: On an occasional basis, the utop section will fail to be inserted in the section screen. The operator must be vigilant and be prepared to manually insert the utop height.

Edits

Some measurements can be readily edited in the DVHand program. Others can only be altered while in certain phases of the process.

Measurements to Edit

Attribute	Edits	Comments
Sample Id	No	Must re-enter sample trees using new id.
Sample BEC zone	Yes	
Plot Id	No	Must re-enter sample trees using new id.
Plot Descriptors	Yes	
Tree ID	No	Must re-enter sample tree using new id.
Standing Path	No	Must re-enter sample tree
Butt Taper Measures	No	Must re-enter sample tree using new butt taper measures.

Felled Tree Measures	Yes	Note that section heights cannot be altered.
Section Heights	No	Can only be changed when still in marking phase.
Section DIBs	Yes	
Decay	Yes	Entire decay can be deleted
Section Decay shape	No	
Decay diameters	Yes	
Decay T.Ht and B.Ht	Yes	Note that decay in any section cannot be deleted.
Decay Mix	Yes	
Felled Path	Yes	Path can also be deleted.
Secondary Leader	No	

Appendices

Basic DOS Commands

The following table outlines the basic DOS commands that are used throughout this document.

Command	Description
cd	change directory
cd..	move up a directory level
copy	copy file or directory
md	make a directory
exit	exit from DOS

DVHand Installation Files

The following files will be installed on the handheld during the installation process:

1. COLORS.DBF
2. DV.BAT
3. DV_HAND.EXE
4. FLAG
5. HANDMESS.DBF
6. HELPTTEXT.DBF
7. LOOKUP.DBF
8. MOFFILES.DBF
9. PICKGRP.DBF
10. PICKLIST.DBF
11. PLOT.DBF
12. PUBLIC.DBF
13. RULES.DBF
14. SAMPLE.DBF
15. TL_DECAY
16. TREE.DBF
17. TRLEADER.DBF
18. TR_PATH.DBF
19. TR_SEG.DBF
20. TS_DECAY.DBF
21. VALID.DBF
22. VAL_FIELDS.DBF
23. WINDOW.DBF

SAMPLE DECAY REPORT – Format report using word processing program.

REPORT No: 3 Ministry of Forests - Inventory Branch Page:1
 Volume and Decay Section
 2003 Sep 3 Sample Collection and Edit System
 14:11:29
 Version 5.5 COMPREHENSIVE DECAY TREE DETAIL REPORT
 (2000.03.19)

----- S A M P L E -----
 Reg Comp Let Inst Sample Type
 Plot Number: 1-F 5 16 A 0 20 D

Tree Number: 1
 Species...: CW Age Before Corr'n.: 237
 Date.....: 2003 Sep 2 Age Correction....: 12
 DBH.....: 55.1 Total Age.....: 249
 Bucked?...: Yes Total Tree Height.: 30.00

Nom. Decay Section Length: 2.00 UTop Diameter.....: 15
 Num. of Decay Sections...: 32 Crown Height.....: 12.54
 Counted Stump Age.....: 237 Break Height.....: 26.89
 Stump Height.....: 1.30 DIB at Break.....: 7.8
 Missing Wood Radius.....:
 Sound Wood Radius.....:

Standing Pathological Occurrences:
 (F)elled/(S)tanding PathID Type StartHt EndHt. Width
 S 1 SCAR -0.20 2.57 25.0
 S 2 FK 7.20
 S 3 FK 13.70
 S 4 DT 23.50 27.00

Felled Pathological Occurrences:
 (F)elled/(S)tanding PathID Type StartHt EndHt. Width
 F 5 FK 7.17 7.82 25.0
 F 6 FK 13.79 14.53
 F 7 BT 26.89 30.00
 F 8 DT 23.17 26.89
 F 9 SCAR -0.20 2.57 25.0
 F 10 CK 10.91 11.24
 F 11 BT 15.41 21.00

Primary Leader
 Number of Sections...: 20
 Leader Start Height...: 0.00
 Leader UTop.....: 23.61
 Leader Top Height.....: 30.00

Decay Occurrences in Leader:
 ----- Decay Desc ----- ---PFS--- -MYC- ----Codes---
 ID DSV S/M Shape Strn T S C Ds cCde S N S C T S C T Ent Organism
 1 D S S B F Z E E YL Z Z Z Z Z Z Z Z Z D 999999
 2 V S S Z Z Z Z Z VOD Z Z Z Z Z Z Z Z Z D 999999
 3 D S S D B B G C BP Z Z Z Z Z Z Z Z Z E 999999

Decay Section Details: ----- Decay Instances in Section -----
 --- Sec Top --- - Inner - - Outer -
 Sec CumLn SecLn DIB#1 DIB#2 DBT Fk ID TopHt BotHt Lngth WdthBrdth WdthBrdth Mx%
 1 0.00 0.00 0.0 0.0 0.0 1 0.00 0.30 0.30 15.6 14.7 0.0 0.0 100
 2 0.30 0.30 54.8 54.8 3.6 2 0.00 0.30 0.30 16.3 4.9 0.0 0.0 100
 3 0.60 0.30 52.7 52.7 3.5 1 0.00 0.30 0.30 14.5 14.2 0.0 0.0 100
 2 0.00 0.30 0.30 12.3 4.1 0.0 0.0 100
 4 0.90 0.30 52.5 52.5 3.2 1 0.00 0.30 0.30 13.9 13.7 0.0 0.0 100
 2 0.00 0.30 0.30 11.8 3.7 0.0 0.0 100
 5 1.30 0.40 51.9 51.9 3.2 1 0.00 0.40 0.40 9.8 8.4 0.0 0.0 100
 2 0.00 0.40 0.40 10.7 3.8 0.0 0.0 100
 6 2.30 1.00 50.8 50.7 0.0 1 0.00 1.00 1.00 7.6 5.9 0.0 0.0 100
 2 0.01 1.00 0.99 0.0 0.0 0.0 0.0 100
 7 4.30 2.00 49.5 49.3 0.0 1 0.00 2.00 2.00 4.2 4.1 0.0 0.0 100
 8 7.17 2.87 47.2 46.8 0.0 1 0.52 2.87 2.35 0.0 0.0 0.0 0.0 100

9	7.82	0.65	45.1	44.9	0.0														
10	9.82	2.00	44.2	43.6	0.0														
11	11.82	2.00	43.7	42.6	0.0														
12	13.79	1.97	42.3	41.8	0.0														
13	14.53	0.74	27.2	26.7	0.0														
14	16.53	2.00	24.5	24.2	0.0														
15	18.53	2.00	22.9	22.5	0.0														
16	20.53	2.00	20.4	19.8	0.0														
17	22.53	2.00	17.6	17.1	0.0														
18	23.61	1.08	15.0	15.0	0.0														
19	26.89	3.28	7.9	7.7	0.0														
20	30.00	3.11	0.0	0.0	0.0														

Secondary Leader No: 2
Number of Sections...: 5
Leader Start Height...: 13.79
Leader UTop.....: 21.14
Leader Top Height....: 26.50
Bottom Fork Height...: 13.79
Top Fork Height.....: 14.53

No Decay Occurrences in this Leader

Decay Section Details: ----- Decay Instances in Section -----
--- Sec Top --- - Inner - - Outer -
Sec CumLn SecLn DIB#1 DIB#2 DBT Fk ID TopHt BotHt Lngth WdthBrdth WdthBrdth Mx%
21 14.53 0.74 26.8 26.2 0.0
22 16.53 2.00 23.1 22.5 0.0
23 18.53 2.00 19.7 19.3 0.0
24 21.14 2.61 15.0 15.0 0.0
25 26.50 5.36 0.0 0.0 0.0

Secondary Leader No: 3
Number of Sections...: 7
Leader Start Height...: 7.17
Leader UTop.....: 14.82
Leader Top Height....: 15.41
Bottom Fork Height...: 7.17
Top Fork Height.....: 7.82

Decay Occurrences in Leader:
----- Decay Desc ----- ---PFS--- -MYC- ----Codes---
ID DSV S/M Shape Strn T S C Ds cCde S N S C T S C T Ent Organism
4 D S S B E B G E BS Z Z Z Z Z Z Z Z Z C 999999

Decay Section Details: ----- Decay Instances in Section -----
--- Sec Top --- - Inner - - Outer -
Sec CumLn SecLn DIB#1 DIB#2 DBT Fk ID TopHt BotHt Lngth WdthBrdth WdthBrdth Mx%
26 7.82 0.65 26.3 25.9 0.0
27 9.82 2.00 24.6 24.1 0.0
28 10.91 1.09 22.8 22.7 0.0 4 0.00 0.41 0.41 8.2 4.1 0.0 0.0 100
29 11.24 0.33 19.6 18.7 0.0 4 0.00 0.33 0.33 6.2 6.1 0.0 0.0 100
30 13.24 2.00 17.1 16.8 0.0 4 1.12 2.00 0.88 0.0 0.0 0.0 0.0 100
31 14.82 1.58 15.0 15.0 0.0
32 15.41 0.59 12.3 12.1 0.0

----- S A M P L E -----
Reg Comp Let Inst Sample Type
Plot Number: 1-F 5 16 A 0 20 D

Tree Number: 2

Species...: HW Age Before Corr'n.: 87
Date.....: 2003 Aug 27 Age Correction...: 9
DBH.....: 35.6 Total Age.....: 96
Bucked?...: Yes Total Tree Height.: 25.00
Nom. Decay Section Length: 2.00 UTop Diameter.....: 10
Num. of Decay Sections...: 13 Crown Height.....: 14.72
Counted Stump Age.....: 68 Break Height.....: 14.73
Stump Height.....: 1.30 DIB at Break.....: 21.8
Missing Wood Radius.....: 3.6
Sound Wood Radius.....: 13.1

Standing Pathological Occurrences:
(F)elled/(S)tanding PathID Type StartHt EndHt. Width

S	1	FC	0.34	4.67
S	2	BT	14.80	25.00

Felled Pathological Occurrences:

(F)elled/(S)tanding	PathID	Type	StartHt	EndHt.	Width
F	3	FC	0.34	4.52	
F	4	BT	14.73	25.00	
F	5	SCAR	14.27	14.73	4.0

Primary Leader

Number of Sections...: 13
 Leader Start Height...: 0.00
 Leader UTop.....: 0.00
 Leader Top Height....: 25.00

Decay Occurrences in Leader:

		----- Decay Desc -----										---PFS---			-MYC-			----Codes---	
ID	DSV	S/M	Shape	Strn	T	S	C	Ds	cCde	S	N	S	C	T	S	C	T	Ent	Organism
1	D	M	S	B	E	B	G	E	BS	Z	Z	Z	Z	Z	Z	Z	Z	F	999999
2	D	M	S	B	D	B	G	D	DBC	Z	Z	Z	Z	Z	Z	Z	Z	F	999999
3	D	S	R	D	B	B	G	C	BP	Z	Z	Z	Z	Z	Z	Z	Z	E	999999

Decay Section Details:

----- Decay Instances in Section -----

		--- Sec Top ---					- Inner - - Outer -												
Sec	CumLn	SecLn	DIB#1	DIB#2	DBT	Fk	ID	TopHt	BotHt	Lngh	Wdth	Brdth	Wdth	Brdth	Mx%				
1	0.15	0.15	35.8	35.8	2.4		1	0.00	0.15	0.15	5.1	4.8	0.0	0.0	20				
							2	0.00	0.15	0.15	5.1	4.8	0.0	0.0	80				
2	0.30	0.15	34.6	34.6	2.3		1	0.00	0.15	0.15	6.3	5.8	0.0	0.0	25				
							2	0.00	0.15	0.15	6.3	5.8	0.0	0.0	75				
3	0.60	0.30	33.9	33.9	2.3		1	0.00	0.30	0.30	8.7	8.4	0.0	0.0	25				
							2	0.00	0.30	0.30	8.7	8.4	0.0	0.0	75				
4	0.90	0.30	33.7	33.7	2.2		1	0.00	0.30	0.30	2.3	2.1	0.0	0.0	50				
							2	0.00	0.30	0.30	2.3	2.1	0.0	0.0	50				
5	1.30	0.40	33.4	33.4	2.2		1	0.00	0.40	0.40	5.2	5.1	0.0	0.0	90				
							2	0.00	0.40	0.40	5.2	5.1	0.0	0.0	10				
6	2.30	1.00	31.9	31.7	0.0		1	0.00	1.00	1.00	3.5	3.4	0.0	0.0	99				
							2	0.00	1.00	1.00	3.5	3.4	0.0	0.0	1				
7	4.30	2.00	30.5	30.2	0.0		1	0.00	2.00	2.00	1.6	1.1	0.0	0.0	99				
							2	0.00	2.00	2.00	1.6	1.1	0.0	0.0	1				
8	6.30	2.00	29.2	28.9	0.0		1	1.87	2.00	0.13	0.0	0.0	0.0	0.0	99				
							2	1.87	2.00	0.13	0.0	0.0	0.0	0.0	1				
9	8.30	2.00	28.1	27.4	0.0														
10	10.30	2.00	25.6	24.9	0.0														
11	12.30	2.00	23.5	23.3	0.0		3	0.00	0.87	0.87	3.4	3.2	23.5	23.3	100				
12	14.73	2.43	22.1	21.5	0.0		3	0.00	2.43	2.43	4.2	3.9	22.1	21.5	100				
13	25.00	10.27	0.0	0.0	0.0														