

GEOPACKS

THE GEOGRAPHY SPECIALISTS

SLOPES

**An application for investigating slopes and slope variables
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GeoSoft SLOPES

This application allows the user to process field data gathered on slopes and display or interrogate that data in a number of ways.

It can be used for small micro-slopes only a few metres in length, beach profiles of say 30 to 40 metres or the longer distances involved in scree slopes or dune transects.

Data is entered at the keyboard via a number of pre-formatted data-entry screens; each tailored to suit the users requirements. It is a flexible package supporting a variety of commonly used data formats.

To enable the application to do this certain basic initial information is required (see Initial Data section) and then the user is led through a sequence of events, which record all necessary information.

The notes, which follow outline the procedures available for creation, display, storage and retrieval of this information together with advice on other facilities, which may be of use such as "help" files and the "notebook".

To allow easy access the notes are divided into a number of sections;

Section	Topic
1 - 4	Gathering data in the field
5	Initial data entry
6 - 7	Main profile data entry
7- 10	Displaying and scaling profiles
11	Correlating Calculated Variables
12	The Notebook facility
12	Help
12	Saving, Loading and Printing
13 – 14	Multi Profile Display

Information on saving, loading from disk and printing data and screen displays is also included in the relevant topic sections.

These notes are also available via the on-screen help file. Simply click on **Help** using the menu options provided with each display.

1 Gathering data in the field

Firstly, a word of caution. **Slopes** will handle and draw scaled slope profiles of any length but it must be understood that **working on steep or unstable slopes can be dangerous and extreme care must be taken.**

The following precautions should be taken;

- a. **Check out the location before embarking on the measuring.**
- b. **Check for obstacles, loose or slippery rock which could pose a threat.**
- c. **Avoid working alone (measuring is easier in twos or threes anyway)**
- d. **Always leave a note with someone as to where you intend to be working.**
- e. **Check with the landowner that it is all right to be on his/her land especially if collecting samples or digging soil pits is involved!**
- f. **If in doubt, miss it out! Don't push the boat out!**

2 Data Formats

There are a variety of formats in which data can be recorded. Each has its merits depending on how much detail your project requires and the techniques by which you hope to gather your slope data.

Distance

Distance can be measured in metres using either a **tape** or a **Geopacks Gradometer** or, if preferred, by **pacing**, although the horizontal scale on the drawn profiles is always expressed in metres.

Gradient

Gradient can be recorded using a **clinometer**, a **Geopacks Gradometer** or by noting **height gain or loss** over a known distance.

Variables

Slopes allow information for up to four **variables** other than distance and gradient to be included. The sample data file *Dartmoor.slp* makes use of four; Grass cover, Rushes, Woodland and Heather

Labels

Up to ten locational markers such as key changes of slope, vegetation, sediment type or mans' activities can be added to the profile at intervals if required

3 Field recording options

There are several decisions to be made **before** embarking on the field recording;

- a. Which slope recording method do you favour, bearing in mind the length of slope, equipment available and time?
- b. How will you record gradient? Clinometer or height gain/loss?
- c. If using height gain/loss what units will the vertical changes be recorded in? The choice is between metres, centimetres and millimetres.
- d. Do you wish to include any other variables in your data if so which?
- e. Which method will be the most appropriate in terms of time taken and accuracy needed?

Possible Options - methods, advantages and disadvantages

Tape and clinometer - The slope, once selected, is divided up into logical "slope segments" each using breaks of slope as boundaries. If considering other variables it is perfectly possible to use changes in them as boundaries as well. Beach profiles work well using changes of slope and changes of sediments size as segment boundaries. On regular, or regularly convex/concave slopes a standard unit of length can be effectively used. The choice is yours. The example below, from the sample data file *dartmoor.slp* uses variable segment boundaries based on vegetation changes.

Tape and clinometer cont.

Advantages - Flexibility and speed, it allows large areas of similar terrain to be included in one logical unit. On beaches and in dunes there may be sections many tens of metres in length, which can be

No.	From	To	Slope	grasscov	heather	rushes	woodland
1	0.00	5	-5.00	83.00	.00	17.00	.00
2	5.00	15.00	5.00	25.00	4.00	21.00	.00
3	15.00	30.00	7.00	88.00	9.00	3.00	.00

Tape and Clinometer format (4 variables)

taken as one with the finer detail of ridges and hollows recorded using shorter segments. It is the most useful for long transects.

Disadvantages - The use of clinometers can be limited by strong winds or unstable footing and it is sometimes necessary to measure the gradient several times to be sure.

Geopacks Gradometer - This simple but effective device comprising of a hinged frame with a clinometer attached uses a standard one metre slope unit. It is fast and easy to use with its standardised length and simple clinometer reading.

No.	From	To	Slope
1	0.00	1.00	2.00
2	1.00	2.00	5.00
3	2.00	3.00	13.00
4	3.00	4.00	1.00
5	4.00	5.00	-5.00

Geopacks Gradometer format (Profile only)

height between each station is recorded.

Advantages - Very accurate

Disadvantages - Unless good ranging poles and proper levelling instruments are available the user is limited to shorter slope segments, however, with a little care, superb results can be obtained using a simple spirit level and some poles.

Advantages - Ease, speed and accuracy

Disadvantages - Better over the shorter distances although slope units are limited to one metre, anything less is missed.

Height gain and loss - Uses simple levelling techniques. A slope segment, either of a variable or fixed length is measured and the vertical difference in

No.	From	To	+/- cms
1	.00	5.00	14.00
2	5.00	10.00	10.00
3	10.00	12.00	-5.00
4	12.00	17.00	1.00
5	17.00	20.00	22.00

Height gain/loss format

Variables

The inclusion of variables in your field data allows relationships between slopes and other factors to be investigated in detail. Two variables are automatically available whichever option is chosen namely distance along slope and gradient.

Up to FOUR other variables can be included but it is important to collect data on each variable in each slope segment even if a zero value is recorded. For this reason the Geopacks Gradometer option does not allow the inclusion of variables. This processing method is best reserved for longish complex slopes (up to 200 metres) and, as it uses one metre segments, data recording of variables for a large number of components such as that would prove time consuming and cumbersome.

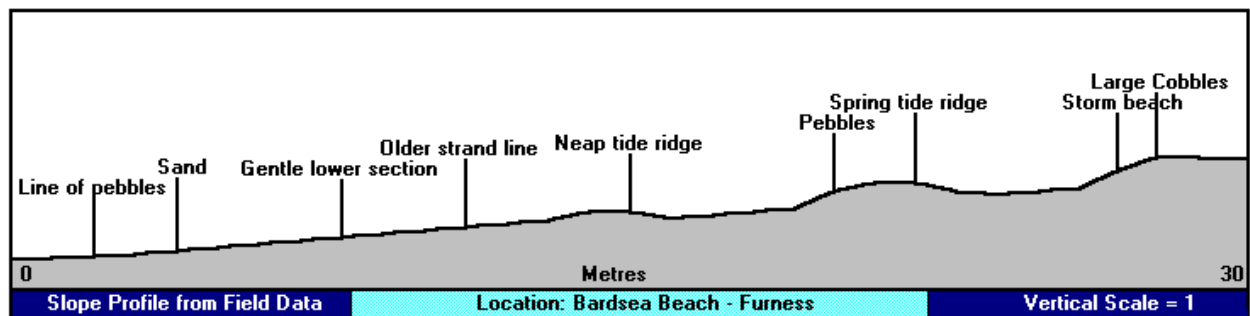
However, it is perfectly possible to use the Geopacks Gradometer with variable data if you wish. Simply opt for *Clinometer readings* together with *Profile + n variables* (n = number of extra variables used) and use the standard recording sheet instead of the Geopacks Gradometer sheet. The choice is yours. The Gradometer sheet is reserved for Gradometer profiles only and saves a bit of recording time.

There are a wide number of ways in which variables can be used in SLOPES for example;

- Scree Slopes By recording pebble size, shape, vegetation cover it is possible to effectively investigate the relationships between distance up slope and pebble size, gradient and size, pebble size and vegetation colonisation etc.
- Beaches A similar investigation can be carried out on a smaller scale on shingle beaches. The profile will allow the identification of tidal ridges, the labels (see later) pinpoint strand lines and data on pebble size and shape allows analysis of sorting or roundness.
- Sand Dunes A cross-profile from beach to dune meadow can make use of data such as % vegetation cover, % bare sand, wind speeds, infiltration rates, "soil" pH, or, maybe in a separate data file using the same profile data, information on % cover of selected plant species.
- Soils By collecting data on soil depth, pH, moisture, infiltration rates, organic content a wide range of inter-related hypotheses can be investigated. SLOPES allows not just the relationships between slopes and the variables to be interrogated but inter-variable patterns as well. (See Correlation later).
- Vegetation As with soils, collection of data regarding light penetration, plant cover, biomass, diversity indices, % of different species etc. could allow some quite detailed work to be done on the influence of slopes on the distribution and diversity of plants and plant communities.
- Erosion Why not investigate the influence of gradient on either mass movement or erosion by developing your own "erosion/movement index" based on intensity or extent and recording this together with say, number of people trampling the area?

The list goes on and a wide range of studies are possible.

The use of labels



Beach profile-using labels

The example above shows a simple beach profile (no variables) using labels to highlight key points along the profile. Up to TEN labels can be added, but it is best to avoid the very start and very end of the profile as they can get 'lost' off the edge of the display when printed.

Master recording sheets are included in the package and these may be copied by purchasers of the Slopes application for use by individuals or purchasing institutions.

Entering data into the Slopes application

4 Initial Data Entry

From the main menu select **File** then **Type in New Data** or select **Data** and **Enter New Data**. After checking to see that there is no un-saved active data, which could be overwritten, the following Initial Data Entry screen will appear.

Data Entry [Initial information]

Select the options from the various boxes to format up your data set. Once you are happy with your selection confirm by pressing "Confirm" key below.

Select Options from those below

Profile Only

Profile + 1 Variable

Profile + 2 Variables

Profile + 3 Variables

Profile + 4 Variables

Press one bar to select

Confirm **Cancel**

Enter location and Grid Reference

Location

Grid Reference

Gradient Recording Method

Recording Method

Clinometer Readings

Height Gain or Loss

MJP Gradometer

Units of height gain/loss

Millimetres

Centimetres

Metres

Press button(s) to select

Initial Data Entry Screen (1)

Simply complete all the details by either typing in replies (Location and grid ref.) or pressing the various buttons and bars and press **Confirm**. Slopes checks for "sensible" combinations and, as mentioned earlier, rules out the use of variables if MJP Gradometer is selected. If you wish to use a Gradometer with variables just select Clinometer Readings and the number of variables you wish to use and take that route.

According to the Initial Data entered here *Slopes* will then present you with a second window into which information on any variable names to be used and the number of readings involved must be entered. (See next page)

Please check carefully as it is not possible to make changes to this formatting data once main data entry has started.

Setting Slope Variables

You have chosen to add 4 variables to your data set. Please enter the names you wish to give these variables, using up to 10 letters or numbers, in the spaces below.

Variable 1	%Veg Cover
Variable 2	%Bare Sand
Variable 3	Soi
Variable 4	

Number of Readings (max 200)

Type in replies end press ENTER key

Initial Data Entry Screen (2)

The screen above is set up to receive 4 variables and, on completion of these entries together with the required number of readings, pressing Confirm will present you with the main Spreadsheet data entry screen duly formatted and labelled.

5 Main profile data entry

Field Data - Sandscale Haws

Profile Locations Correlate Print Notes Close

Location: Sandscale Haws

Cell contents

No.	From	To	Slope	%Veg	%Bare	Soil pH	Wind
1	0.00						
2							
3							
4							
5							
6							

Main data entry Spreadsheet

Main data entry cont.

The main data entry spreadsheet allows data to be entered via a "data cell" above the main spreadsheet. It is then automatically entered into the main sheet. "Cells" on the sheet can be selected by clicking on the desired location and the sheet can be navigated using the mouse, cursor control keys or by pressing the ENTER key after typing in a reading. If the ENTER key is pressed an auto check is performed on the data to check its validity and then the next logical cell is selected for data to be inserted.

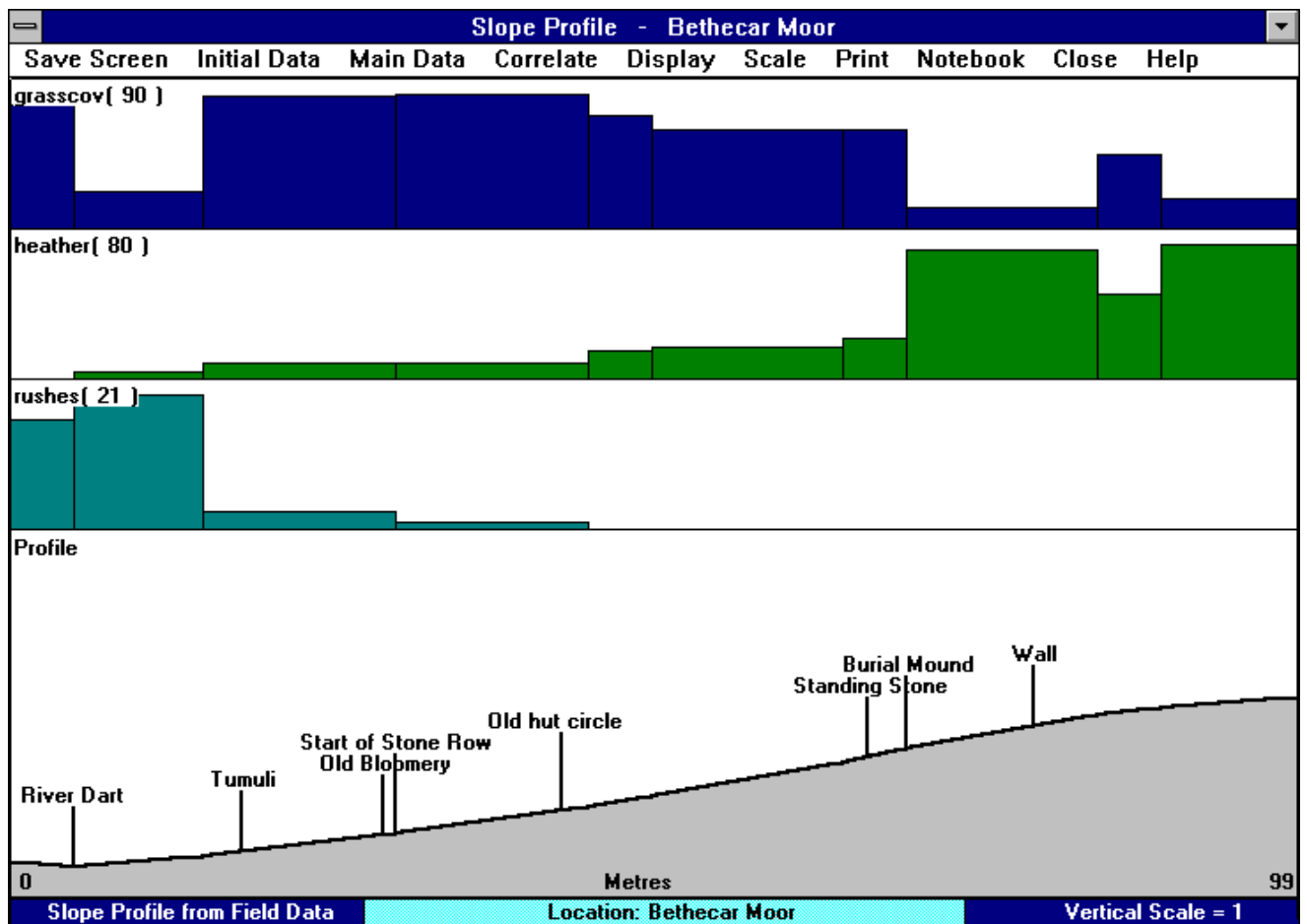
As data entry progresses the "From" column is automatically calculated and filled using the previous "To" reading. In the case of the Geopacks Gradometer option, all "From" and "To" cells are filled automatically assuming a standard one metre slope unit.

Certain "safety-checks" are performed, such as assessing whether you are trying to enter text when a number is necessary or trying to go back on yourself. However, garbage in, garbage out, so care is necessary to ensure that the data you enter is that which you wish to process! It is possible to re-call the data to edit using the sheet; so don't panic if you hit a problem.

See also *Data Formats - Section 1.2 on page 2 and 3* for examples of spreadsheet layouts.

6 Displaying Profiles

Simply click on **Profile** in the spreadsheet window menu to display the profile.

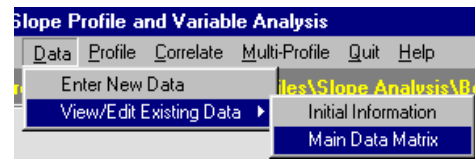


Main profile display screen

To add labels to a Slope Profile

To add labels...

1. Access the Main Data editing screen by selecting
This will display your main data spreadsheet.



2. Now select **Labels** from the menu bar on the data entry window

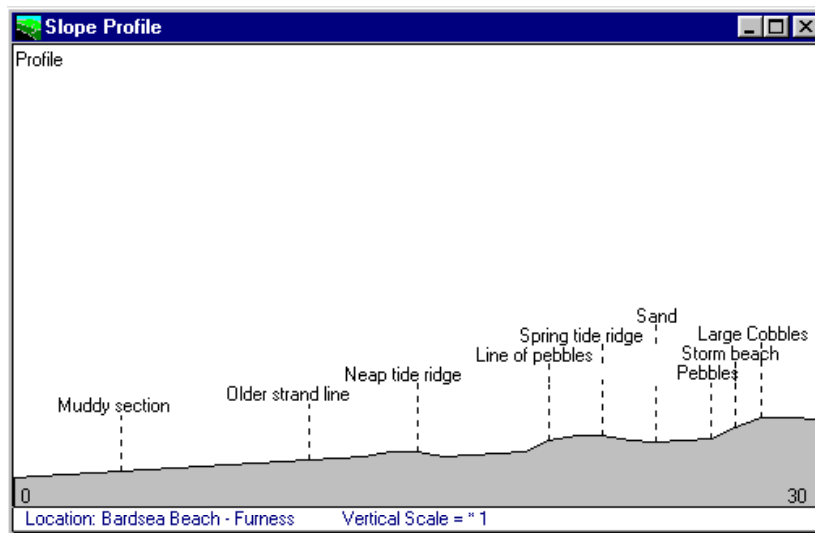


3. This will open the Labels Window

4. Enter your Label in the 'Features' column and its position along the profile in the 'Location' column. For example, on this profile (a shingle beach), the Neap Tide Ridge was found 15 metres up the beach.

Feature	Location
Muddy section	4
Older strand line	11
Neap tide ridge	15
Spring tide ridge	22
Storm beach	27
Line of pebbles	20
Sand	24
Pebbles	26
Large Cobbles	28

Displaying the profile (by Confirming the Entries... then Closing the main data spreadsheet) will then show the labels in their correct places along the profile.

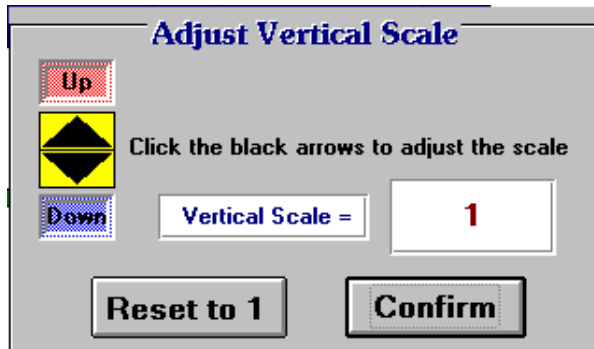


Data or labels can be edited at any time.

7 Changing the display options - Scaled Profiles

By default, all displays use pre-set scales. Slope Profiles use a horizontal scale, which utilises the full width of the display window (that is fixed and cannot be changed). The vertical scale is set at 1.0. This factor is displayed in the status panel at the right hand side of the blue display bar at the foot of the window (see previous page).

It is possible to change the vertical scale of the slope profile to highlight certain features or simply make a clearer display. To do this select **Scale** from the menu bar.



Vertical scale changes

The panel opposite will present itself and by clicking the mouse on one of the two black triangular arrows the vertical scale can be adjusted in increments of 0.5. There is an upper limit of 5.0 on the exaggeration factor available.

To return to the main profile screen simply click on **Confirm**.

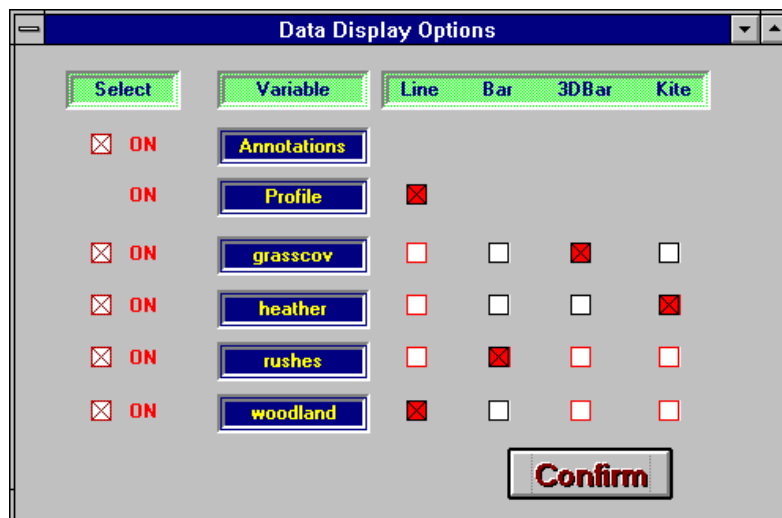
Reset to 1 does exactly that before returning you to the profile screen.

8 Changing the display options - Variable Displays

On first viewing all variables are automatically displayed in simple bar chart format with all on show. However, it is possible to tailor your variable display in two main ways;

1. You can "switch off" variables and hide them.
2. You can change the graphing style.

The screen below shows the options available.



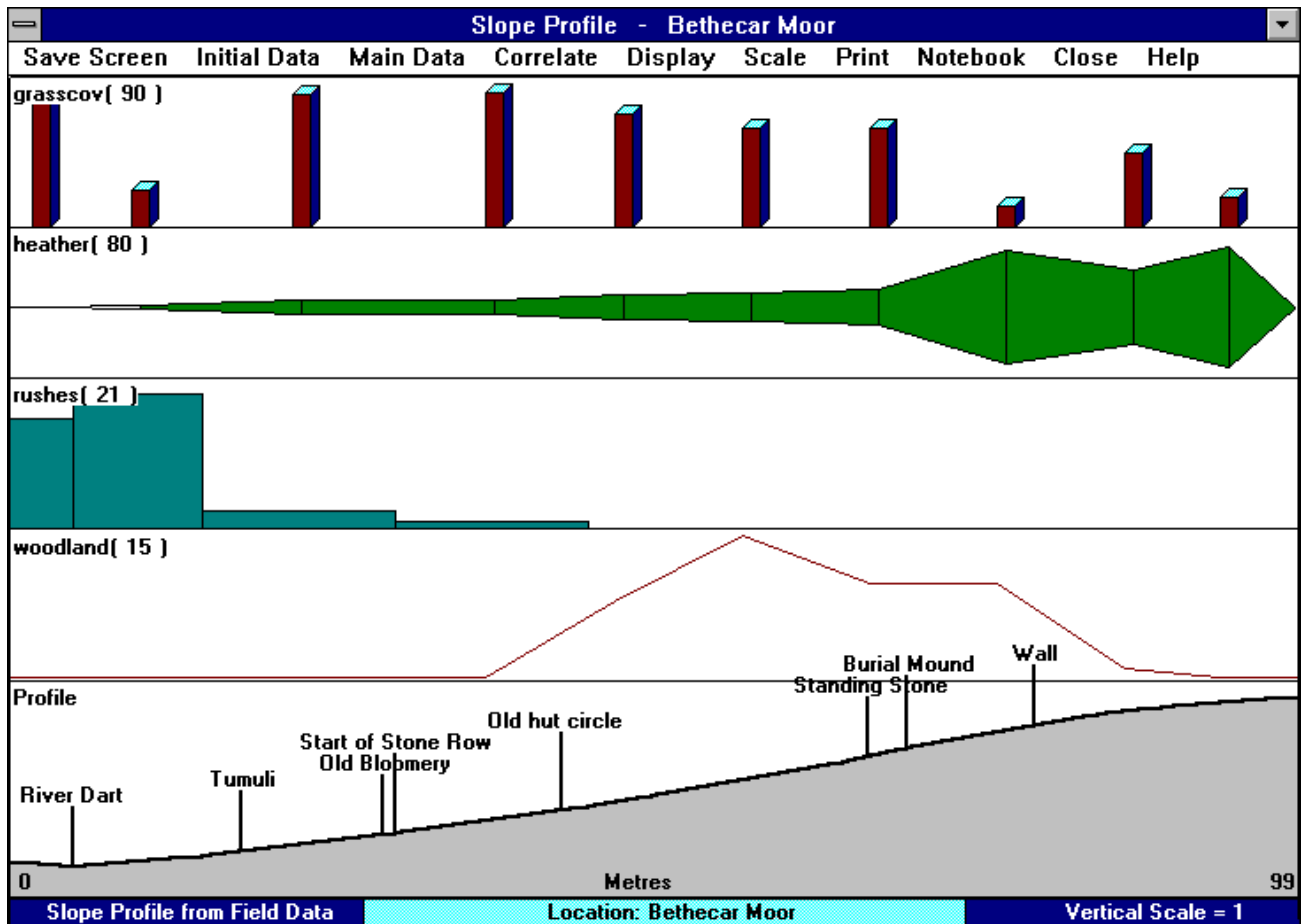
Screen display option panel

Variable display options cont.

The buttons on the left-hand side of the control panel turn displays on and off. Their status is clearly displayed alongside. The profile cannot be turned off and is simply displayed for the sake of completeness.

The buttons on the right allow a variety of graphical display formats to be mixed. Click to select, then **Confirm** re-displays the profile screen.

The screen below (from the sample file Dartmoor.slp) shows this selection in action.



Dartmoor.slp - a four variable data set

Careful use of these facilities can produce a wide variety of displays. It is worth playing with both the vertical scale of the profile together with a mix-and-match of graphs until you get a clear display, which suits your project needs.

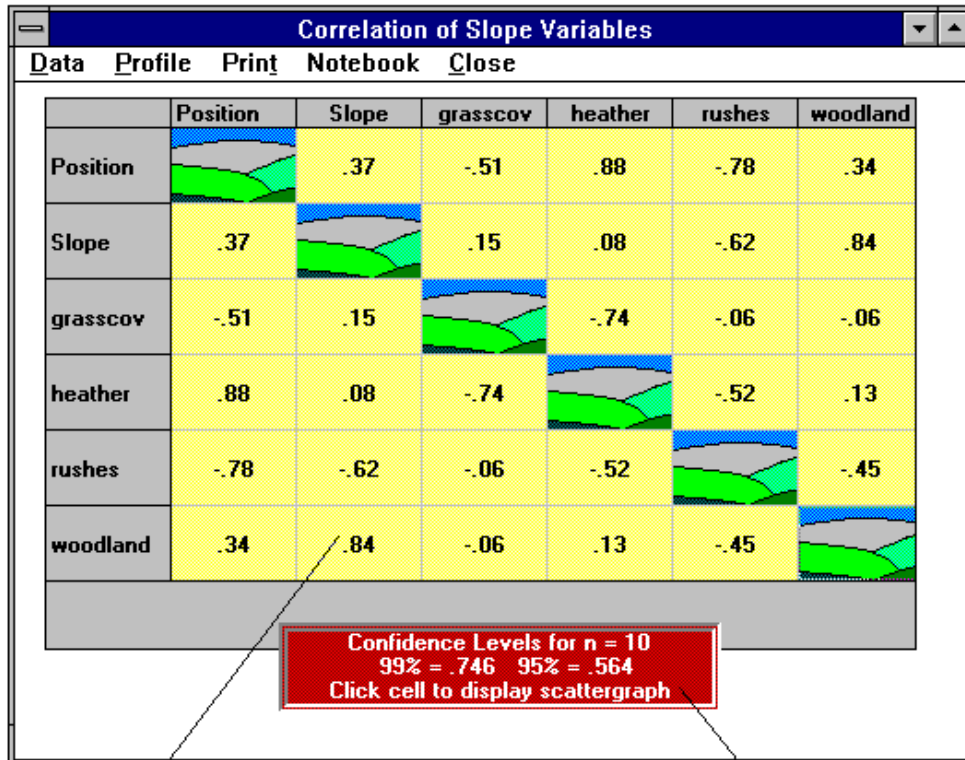
Once created the screen display can be saved to disk as a bitmap (.bmp) file if you wish to embed it into another document at a later date. Select Save Screen in the profile menu and use the standard Windows file dialog box to enter a filename and select a drive or directory. Don't forget to add the **.bmp** identifier to allow other applications to find and load it if required.

(See Saving, Loading and Printing later for further details and other ideas)

9 Correlating Calculated Variables

Selecting CORRELATE displays a matrix of correlation coefficients using the variables for the currently active data. The Pearson Product Moment test is used to cross correlate all slope variables for each slope segment in the data set.

Correlation Matrix of slope variables

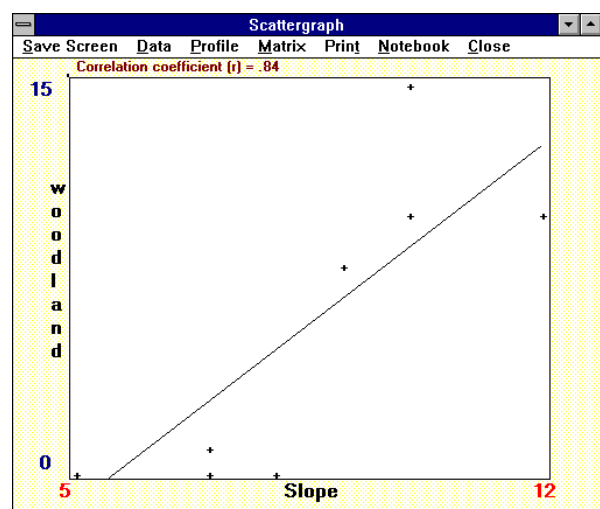


Click on cell to display scattergraph

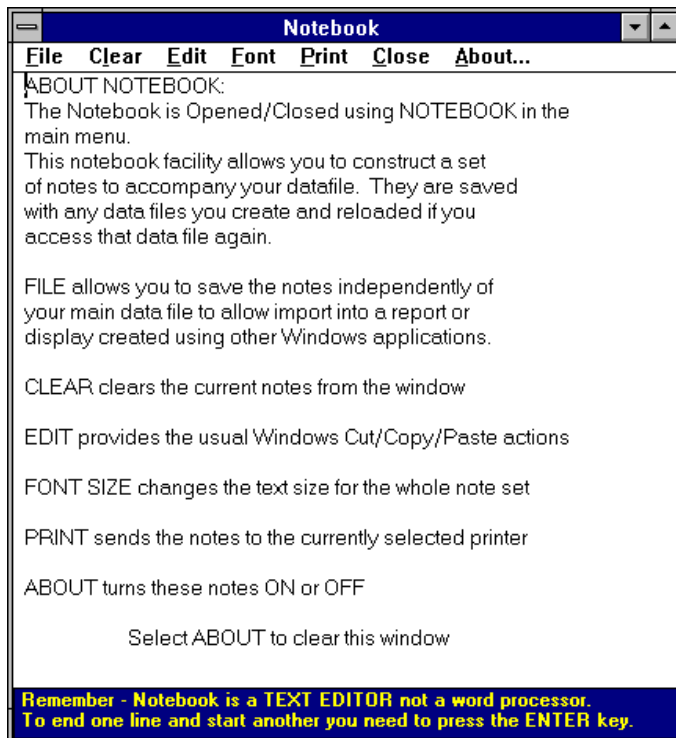
Confidence levels clearly displayed

Levels of confidence are clearly stated based on the number of readings in the data set and scattergraphs of any two variables can be displayed by clicking on the appropriate cell in the correlation matrix.

This allows relationships within the data set to be investigated such as distance up slope against the distribution of vegetation or, if beach profiles are being processed, beach gradient against pebble size.



Scattergraph of variables



Notebook Text Editor

10 The Notebook

The notebook can be accessed at any time by clicking on Notebook from the menu. Any notes created using the notebook are saved as standard TEXT files with the identifier **.nts**

These can be imported into any text editor capable of using .txt files using import or retrieve (or similar) depending on which text editor you use. Once imported the text can be reformatted as you wish using your editor and then processed as you would any other document.

However, please note, the Notebook is not a word processor more a "traditional" electric typewriter and it is necessary to insert carriage returns (Enter key) to start a new line. The Notebook screen is set up to roughly approximate to an A4 page in width so if you are nearing the right hand margin then start a new line. If you don't, and it is perfectly possible to just carry on, then if you print out your notes using Print in the Notebook menu then you will lose text off the page.

11 Help

A fully illustrated HELP file exists which can be accessed during the running of Slopes. Simply click on Help from the menu. Remember to close the Help window when you have finished using.

12 Saving Data

To save the currently active data simply select File and go for the Save As (or Save) option. This accesses the standard Windows file menu and allows you to select the drive and path onto which you wish to save your data. See Windows documentation for further details.

The **.slp** identifier should be included after the main filename to enable *Slopes* to locate compatible files for you. It is not compulsory but is recommended. The sample data files such as **Dartmoor.slp** make use of this facility.

13 Loading Data

The same applies here. Click on Load from the File menu and select the drive, path and filename which you wish to access. *Slopes* searches for files with the **.slp** identifier and displays them unless told otherwise.

14 Printing displays or data

Clicking on **Print** will send either an image of the currently active window or a pre-formatted printout of your data to the currently selected printer. To ensure that the printer is the one you wish to use select it using the **Windows Print Manager** before running *Slopes*.

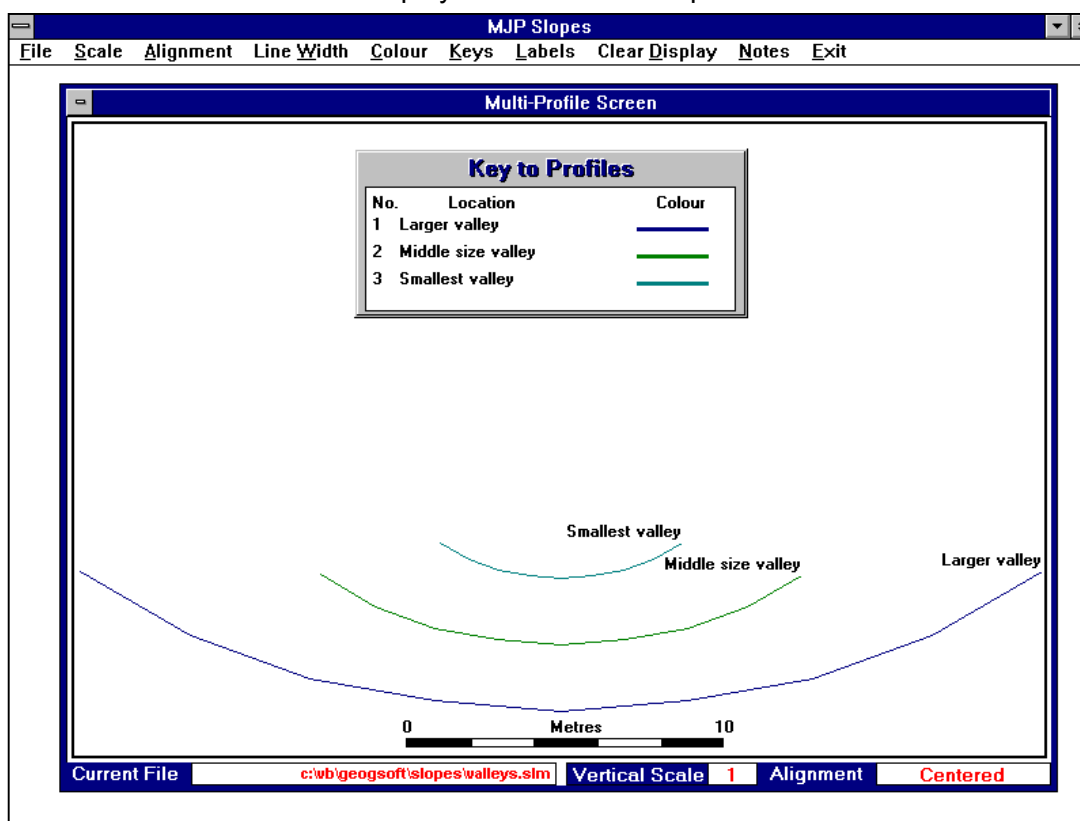
15 Multi-Profile

This latest addition to "Slopes" allows you to load in up to TWELVE data files for display as a multi_file.

15.1 Displaying multi profiles

A number of DISPLAY OPTIONS exist for you to tailor-make your presentation

- Scale:** Allows you to set the vertical scale (min 0.5 max 5.0)
- Alignment** The profiles can be aligned to the left, centre or right of the screen. A vertical offset can be created to aid clarity by separating profiles from one another.
- Line width** Lines used for profiles can be thin or thick (one pixel width or two)
- Colour** when colour is on then each line is drawn in a different colour. This info. is added to the key.
- Key** The key panel can be turned on or off, it can also be dragged to a new location by clicking on
The white key panel and dragging to a new place.
- Scale bar** The scale bar can also be turned on or off and dragged. Simply click and drag.
- Labels** It is possible to use either labels of the location at the right end of the profile or, if you prefer a number. This information is reproduced in the key.
- Clear Display** This does what it says after warning that active data is aboard! A chance to opt out and save the display can be taken if required.



Above: Multi-Profile Display – Centered with a Vertical Offset

15.2 Creating a multi-profile display

A multi-profile display is created by loading in data files previously saved from the main "Slopes" application. To do this select **File** from the menu bar, then **Load Profile**. Select the .slp file you require, the file will load and the profile will be displayed using the default settings of;

Scale	- normal
Alignment	- left aligned
Line width	- thin
Colour	- coloured lines
Key	- visible
Scale bar	- visible
Labels	- lines labeled with location (at the right hand side)

To build up a screen display simply continues to add files (up to 12). As files are added "multi-profile" will automatically scale the screen for you and adjust the scale bar and key accordingly.

15.3 Saving your display

Select **File** then **Save Screen Display**. You can now save the whole display data set for future use without having to re-build it each time. It is saved with the default extension of **.slm** for ease of identification by both you and the program. The screen format codes are not saved, just the raw data. On re-loading you will need to reset any non-default components of the display.

15.4 Loading a screen display

Simply select **File** then **Load Screen Display**. Select the **.slm** file and away you go. The screen will be scaled automatically, the scale bar drawn and the key updated.

15.5 Printing multi-profile screens

Select **File** then **Print Display**. The default screen is of a size which will print on an A4 page the "normal" way round (portrait) however, if you wish to use a bigger display, it is possible to maximize the screen using the control box in the top right corner of the profile display window.

If this option is used then it is best to change to a landscape format by going for **Printer Select** and re-setting the printer before printing out. This will ensure that, in most cases, you will not lose the right hand side of your display off the edge of the page.

15.6 Notebook

The notebook function can be used in this section as well. A summary of this information is also in notebook format (.nts) as a file called "readme.nts" in the "Slopes" directory so, if you want a quick reminder it's on hand.

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Site Information	
Location _____	Grid Ref _____

Recorded by _____
Shoot _____ of _____

No	+/-	deg°	No	+/-	deg°	No	+/-	deg°	No	+/-	deg°	No	+/-	deg°
1			41			81			121			161		
2			42			82			122			162		
3			43			83			123			163		
4			44			84			124			164		
5			45			85			125			165		
6			46			86			126			166		
7			47			87			127			167		
8			48			88			128			168		
9			49			89			129			169		
10			50			90			130			170		
11			51			91			131			171		
12			52			92			132			172		
13			53			93			133			173		
14			54			94			134			174		
15			55			95			135			175		
16			56			96			136			176		
17			57			97			137			177		
18			58			98			138			178		
19			59			99			139			179		
20			60			100			140			180		
21			61			101			141			181		
22			62			102			142			182		
23			63			103			143			183		
24			64			104			144			184		
25			65			105			145			185		
26			66			106			146			186		
27			67			107			147			187		
28			68			108			148			188		
29			69			109			149			189		
30			70			110			150			190		
31			71			111			151			191		
32			72			112			152			192		
33			73			113			153			193		
34			74			114			154			194		
35			75			115			155			195		
36			76			116			156			196		
37			77			117			157			197		
38			78			118			158			198		
39			79			119			159			199		
40			80			120			160			200		

Appendix 1

Installing Geopacks Software on a Network

Geopacks Software is written in Visual Basic and in order for it to run it is necessary to install files into specific locations on any computer that is running the software.

- There are the program (or application) files, which are installed into the folder chosen to hold the programs themselves. This is selected by the user when setting up the install sequence and prompts to this effect will be displayed.
- Other files (the 'system' files which actually run the code) are installed automatically into the Windows System folder on the host machine. On a standalone machine the files are installed into their correct locations automatically and after installing the programs should run with no extra 'tweaking'

However, installing on to a network is different to installing onto a standalone PC. Due to the way in which Windows locates the required files it is necessary to undertake a few extra steps during the installation process. If you have bought a network version of the software and do not have a network, but wish to install it on to more than one computer, please contact Geopacks.

To install on a network...

- 1) Install the software onto the server in the usual way.
- 2) If you use install software like Install Wizard or Winstall you will need to replicate the files installed in the \Windows\System folder into the equivalent folder of the client machines.
- 3) If you need to manually install the \Windows\System folder files, you need to copy the files listed in Table 1 on the next page from your \Windows\System folder on the server to the windows system directory on the client machine.

Table 1 on the next page identifies the 'System' files for each application in the current Geopacks Suite of software which need to reside in the \Windows\System folder of client machines which will run the software.

- 4) You will need to map a network drive from the client machine to the server. Make sure that applications are installed in a folder on the mapped drive but that the application folder is NOT the root folder of the mapped drive.
- 5) Create a shortcut from the client machine to the 'start-up' program for each application in the mapped drive and folder on the server where you installed the application software.

The start-up programs for the Geopacks Software are as follows...

Slope Analysis	Slopes.exe
Channel Analysis	Chan32.exe
Sediment Analysis	
Roundness Analysis	Cailleux.exe
Bedload Analysis	Bedload.exe
Orientation Analysis	Orient.exe
Sediment Analysis	Fines.exe
Full Fieldwork Suite	
Channel Analysis	channel.exe
Slope Analysis	slopes.exe
Mastering Mapwork	startup.exe
Down on the Farm (Main Program)	farm32.exe
Down on the Farm (File Manager)	FileEdit.exe
Slide Show Maker	Make32.exe
Slide Show Viewer	View32.exe
Coastal Manager	Coasts.exe

The software should now work from a client machine.

Table 1 – Files to reside in \Windows\System folder (or Microsoft Shared\DAO folder in the case of two files used by “Down on the Farm – shown at bottom of the list)

INSTALLED FILES	SLOPE ANALYSIS	CHANNEL ANALYSIS	SEDIMENT ANALYSIS	FIELDWORK FULL SET	MASTERING MAPWORK	DOWN ON THE FARM	COASTAL MANAGER	SLIDE SHOW
'RUN-TIME' FILES COMMON TO ALL APPLICATIONS								
Msvcrt40.dll	✓	✓	✓	✓	✓	✓	✓	✓
Msvbvm60.dll	✓	✓	✓	✓	✓	✓	✓	✓
Stdole2.tlb	✓	✓	✓	✓	✓	✓	✓	✓
Oleaut32.dll	✓	✓	✓	✓	✓	✓	✓	✓
Olepro32.dll	✓	✓	✓	✓	✓	✓	✓	✓
Comcat.dll	✓	✓	✓	✓	✓	✓	✓	✓
Asyncfilt.dll	✓	✓	✓	✓	✓	✓	✓	✓
Ctl3d32.dll	✓	✓	✓	✓	✓		✓	✓
EXTENSION FILES USED BY INDIVIDUAL APPLICATIONS								
COMCTL32.OCX						✓		
COMDLG32.OCX	✓	✓	✓	✓	✓	✓	✓	✓
EXPSRV.DLL						✓		
GAUGE32.OCX	✓	✓	✓	✓	✓		✓	
GRAPH32.OCX	✓	✓	✓	✓	✓	✓	✓	
GRID32.OCX	✓	✓	✓	✓	✓			
GSW32.EXE	✓	✓	✓	✓	✓	✓	✓	
GSWDLL32.DLL	✓	✓	✓	✓	✓	✓	✓	
MFC40.DLL	✓	✓	✓	✓	✓	✓	✓	✓
MSCOMCTL.OCX								✓
MSFLXGRD.OCX		✓	✓	✓		✓	✓	
MSJET35.DLL						✓		
MSJINT35.DLL						✓		
MSJTER35.DLL						✓		
MSMASK32.OCX	✓	✓	✓	✓	✓			
MSRD2X35.DLL						✓		
MSREPL35.DLL						✓		
MSSTDFMT.DLL							✓	
PICCLP32.OCX	✓	✓	✓	✓	✓	✓	✓	✓
RICHE32.DLL							✓	✓
RICTX32.OCX							✓	✓
SPIN32.OCX	✓	✓	✓	✓	✓			
TABCTL32.OCX						✓	✓	
THREED32.OCX	✓	✓	✓	✓	✓	✓	✓	✓
VB5DB.DLL						✓		
VBAJET32.DLL						✓		
FILES TO GO INTO 'PROGRAM FILES \ MICROSOFT SHARED \ DAO' FOLDER								
DAO350.DLL						✓		
DAO2535.TLB						✓		

This information can also be found on the CD in a Word file called “Network Installation.doc”

Batch copying of system files

There are two supplementary folders on the CD which are not used during the setup process. The files in these folders are extra copies of the System Files which are installed into the Windows System folder or, in two cases, the Program Files/Common Files/Microsoft Shared/DAO. As covered above, they need to reside on the hard drive of each workstation that will be used to run these Geopacks applications.

They are installed automatically onto the hard drive of the computer which is used for installing the applications. However, several network managers have suggested that it would be easier to have them all in one folder on the CD as well. This enables 'batch' copying onto the C:\ drive of workstations which will run the Geopacks applications.

So, there are two folders on this CD which contain these files. They can be found in the 'Files' folder. The SysFiles folder contains all files which reside in the System Folder. The ShareDOA folder holds the two files which go into the Program Files/Common Files/Microsoft Shared/DAO folder.

WARNING: Normal installation automatically checks to see if a file you are trying to install is already present or not. If the file to be installed is more up to date than the existing version it will update it with the later version. If it is older it will either leave it or gives you a warning and recommends that you retain the existing, newer, version.

BE CAREFUL if block copying not to overwrite newer versions of these system files as it may cause problems with other software on the machine. Geopacks software deliberately uses slightly older versions of some system files to ensure compatibility with as wide a range of Windows versions as possible. This does not affect the functionality of the software.

