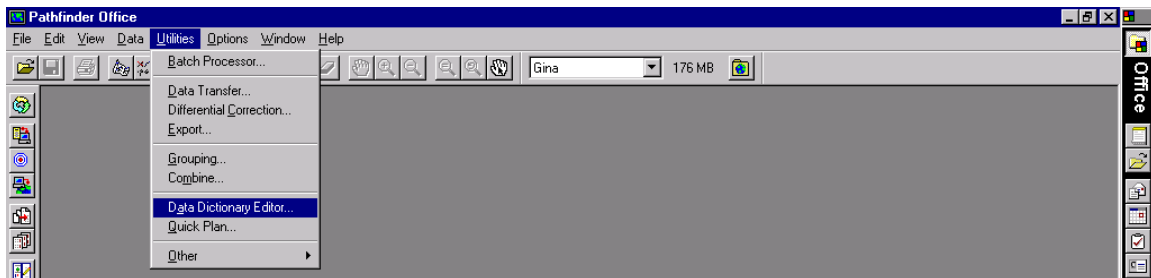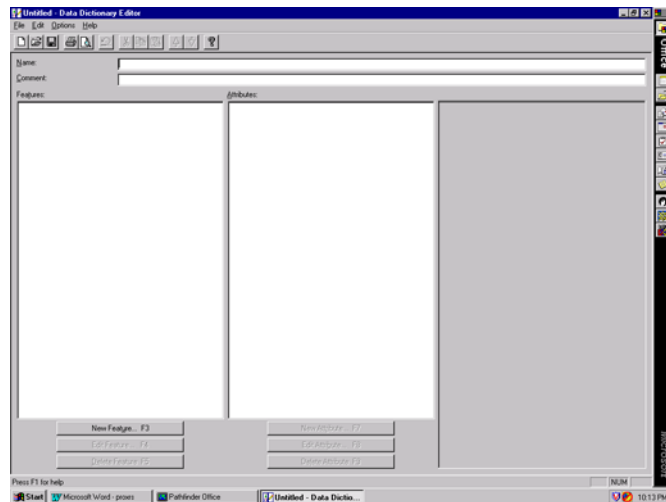# Create a Data Dictionary in Pathfinder Office

A data dictionary is a custom made database for your data. A data dictionary simplifies data collection and stores the collected data in a form that is useful for later analysis. Before you create a data dictionary you need to consider what kind of data you are going to collect. Data can be collected as points, lines or polygons. You can enter your attributes as text, numbers or menus. When the data dictionary is completed in Pathfinder Office you will transfer it to your GPS receiver. As you collect data it will be stored in the data dictionary database on your GPS receiver for later export to ArcView or Arc/INFO.
The Geoexplorer II units can only store one data dictionary at a time while the Geoexplorer 3 and the ProXRS can store several data dictionaries.
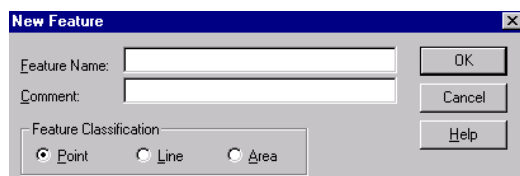
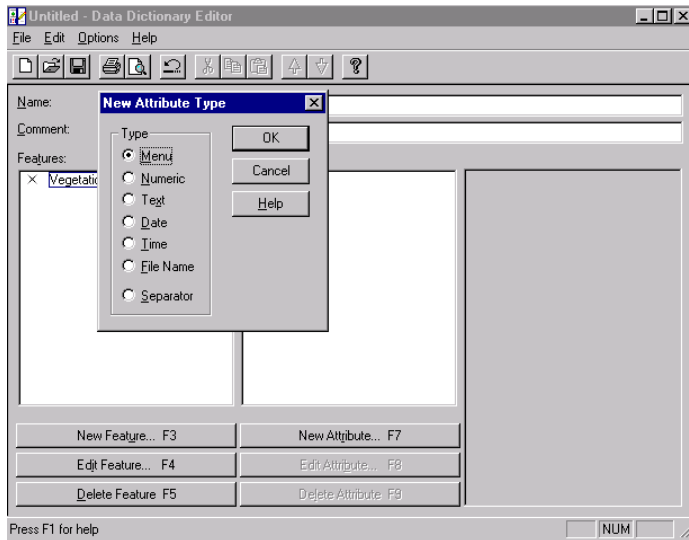a) Select *Utilities/Data Dictionary Editor* to begin creating a data dictionary.

b)   Select *File/New* and type in a data dictionary name and comment. Click on the *New Feature* button to the lower left.

c) In the Feature name field, type the first feature name. This could be for example vegetation type, canopy cover, soil type, snow depth, bird specie etc… Select *Point, Line or Area* in the *Feature Classification* dialog box and click OK.
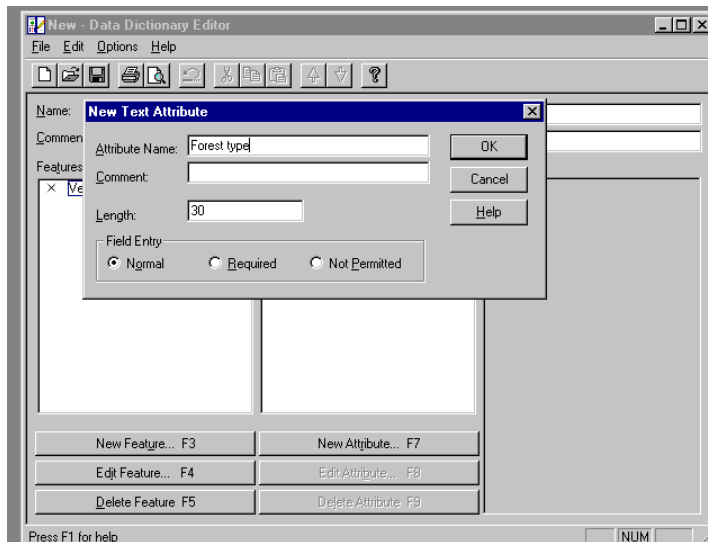
d) In the Data Dictionary Editor screen, click New Attribute. Here you can select the desired entry form for your data in the data dictionary. Choose between menu, numeric, text, date, time, file name and separator. Select *Text* in the *Type* dialog box and click OK.
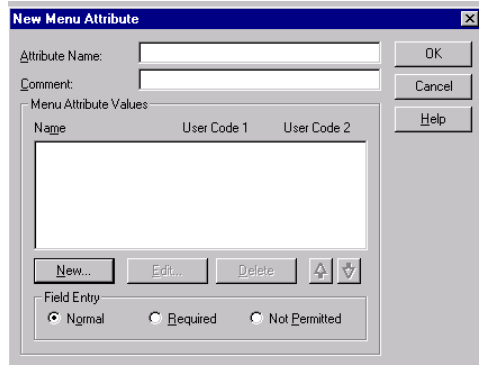
e) Enter Attribute Name, Comment and the maximum Length of your text string. The default length of a text string is 30 but you can make this number larger or smaller to suit your needs. Also, specify your *Field Entry* as *Normal, Required or Not Permitted*. Click OK to create this new attribute.

You can add several attributes to the same feature by clicking on the *New Attribute* button in the Data Dictionary Editor again. For example for a feature named Vegetation you may want to enter attributers such as dominant overstory specie and dominant understory specie or for a feature named Buildings you could enter attributes such as height, number of stories etc.
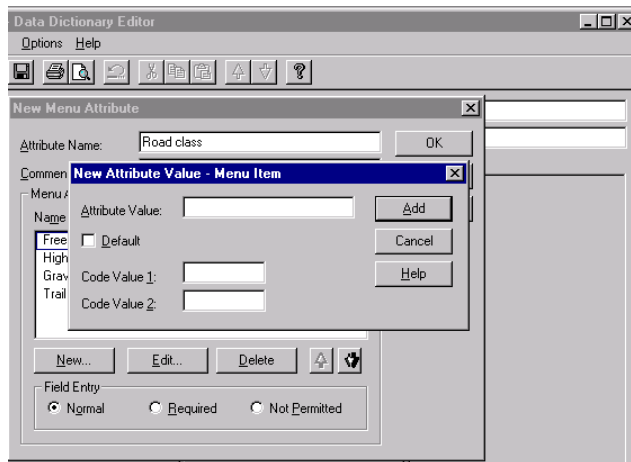

Numeric attributes are created much like the text attributes, however you also enter minimum and maximum values and specify the number of decimal places to display.
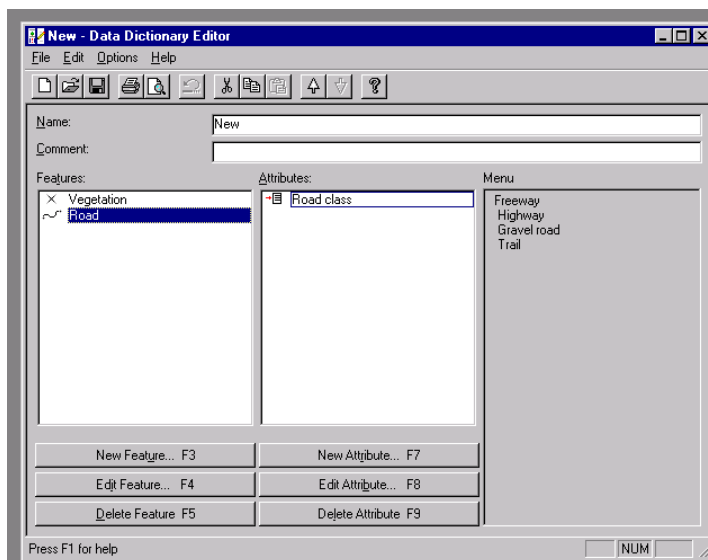
f) Create a Menu attribute by selecting *Menu* in the New Attribute dialog box. The New Menu Attribute dialog box will appear.
Enter *Attribute Name* and *Comment* and click New to enter a new attribute value for your menu.

g) Enter an appropriate attribute name in the New Attribute Value – Menu Item dialog box and click Add. Keep entering menu item names until you are satisfied with your menu. Click OK.

For a line feature called Road you may have a menu attribute called RoadClass with the menu items Freeway, State Highway, Gravel Road and Trail.

> After entering all attribute values you can rearrange their order in the New Menu Attribute dialog. Highlight the attribute you want to move and then click the arrow below indicating the desired direction.

h) To create a Date Value
- In the *New Attribute Type* dialog, select *Date* and click OK.
- Type an *Attribute name*
- Select *Auto Generate* if you want the date to be transferred automatically from the GPS receiver to the data dictionary at the time of data collection. If the date is not automatically generated you must enter the date yourself every time you take a position reading.
- Select *Format*
- Select a *Field Entry*. Make sure you select *Not Permitted* for the *Field Entry* if you use *Auto Generate*
- Click OK

i) To create a Time Value
- In the *New Attribute Type* dialog, select *Time* and click OK.
- Type in the *Attribute Name*
- Select (or deselect) *Auto Generate*
- Select *Format* as 24 hour or 12 hour clock
- Select a *Field Entry*. Make sure you select *Not Permitted* for the *Field Entry* if you use *Auto Generate*
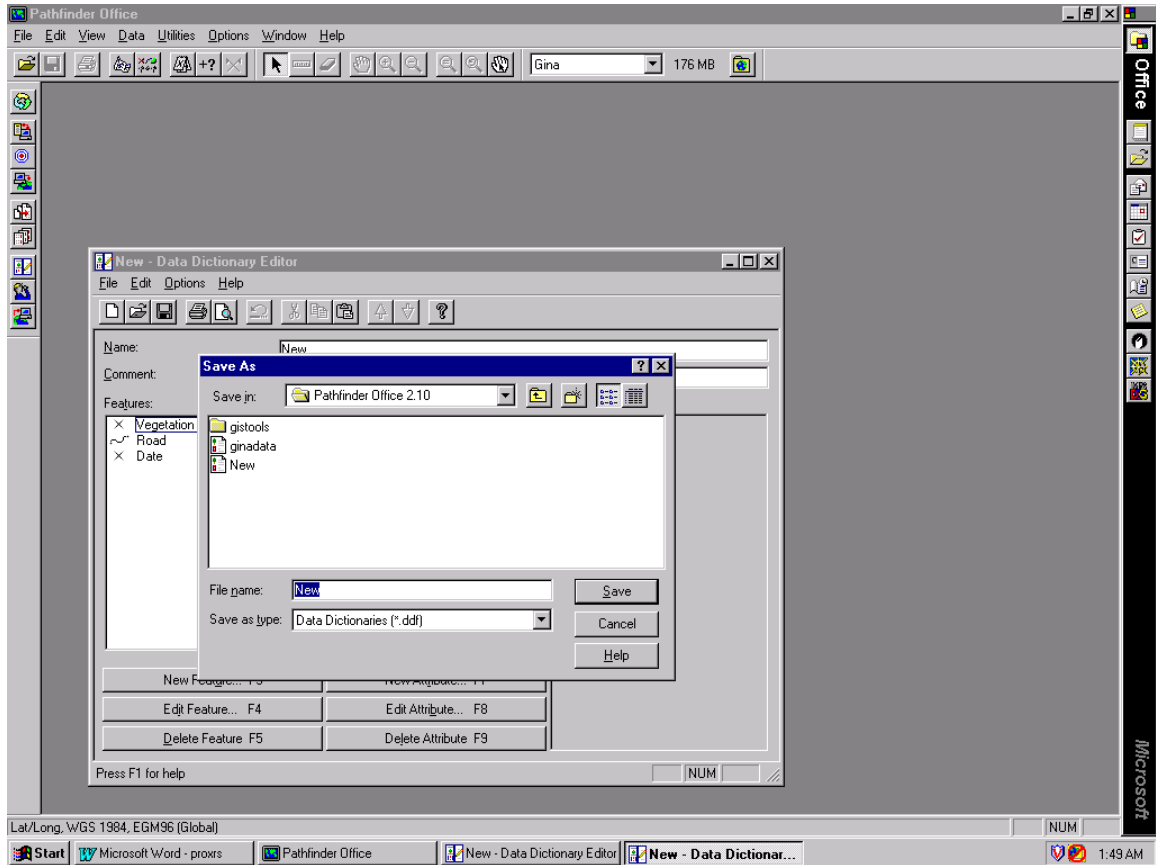- Click OK

j) A *File Name* attribute is interpreted as a text attribute (for example, to reference the file name of a digital photograph taken in the field) .To create a *File Name* value
- In the *New Attribute Type* dialog, select *File Name* and click OK.
- Type an *Attribute Name*
- Select a *Field Entry*
- Click OK

k) The *Separator* attribute provides a heading or allows you to group similar attributes together. It is intended to provide visual organization, and is not an actual attribute – no values are entered. To create a Separator
- In the *New Attribute Type* dialog, select *Separator* and click OK
- Enter a *Separator Name*
- Click OK

l) When you are done entering attributes to your data dictionary select *File/Save* in *the Data Dictionary Editor* window. Make sure you save the file as a Data Dictionary File (*.ddf)

Select *File/Exit* to close the Data Dictionary.
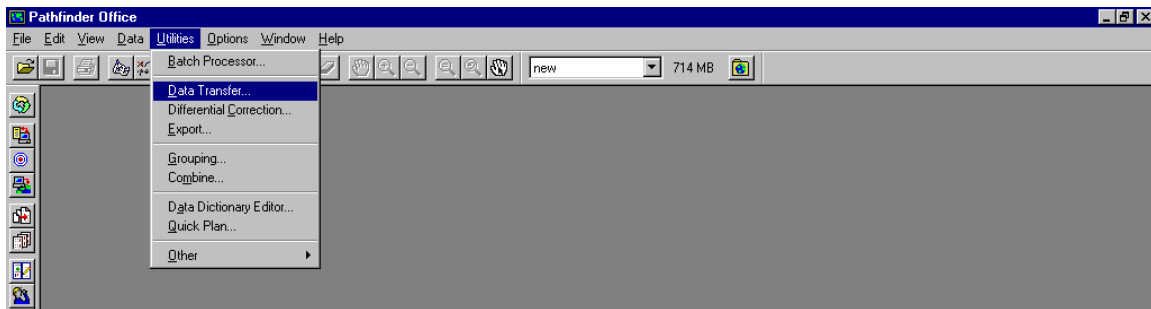
Transfer the Data Dictionary to the Data Logger

a) Make sure the batteries and the GPS unit is charged (Geo II only uses the external batteries, no need to charge the receiver.

b) Connect the Data Logger with the computer using the appropriate cable.
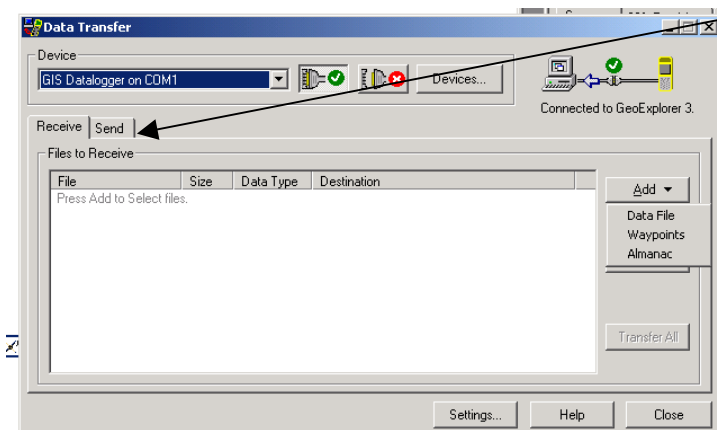

The picture to the left shows how the ProXRS is connected to the computer.
The Geo II and 3 has different cable connections.

c) Turn on the GPS receiver. Select the *File Manager* and *then File Transfer* (on the ProXRS) by using the Up/Down arrow round key. *Esc* always takes you back to the previous menu. Select *Data Transfer* on the GeoII. The Geo 3 does not have a transfer mode – simply turn on the unit.

d) In Pathfinder Office select *Utilities/Data Transfer*

e) Pathfinder Office will connect to the GPS receiver and the *Data Transfer* screen will appear. Select *Send* and then *Data Dictionary* in the drop down menu.

f) Click on the Data Dictionary listed under *Available Files* and then click *Transfer All* in the lower right corner of the screen. The Data Dictionary is not transferred to the Data Logger.

g) Make sure the data dictionary works on your Data Logger before you go to the field. If changes need to be made you have to do that in Pathfinder Office. No changes can be made to the data dictionary on the Data Logger for the Geo II and the ProXRS. You can modify data dictionaries on the Data Logger in the field if you are using a Geo 3.
   It is also a good idea to download the collected test point to the computer to see the results and make sure the data dictionary works according to your plans.