



Getting Shape format data into your ENC Chart

By Bill Bergmann

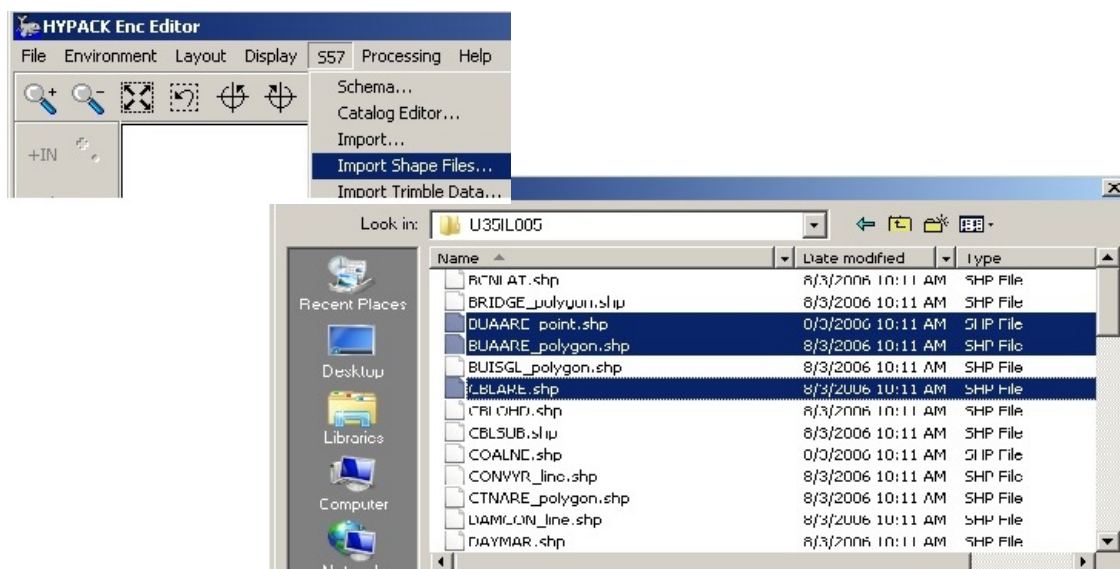
A popular format for storing and transmitting vector data is the Shapefile. This format was developed by ESRI in the 1990s and is analogous to the Autocad DXF format in that it facilitates exchanging information between ESRI products and other software systems in a mostly opaque manner. The Shapefile format encodes information about an entity in several files. Each file contains one row of information per entity. Matching rows in files act as the primary / foreign key, in database lingo, to logically associate the information. The .SHP file stores geometric location information for an entity while a .DBF file can store attributes for it. There can also be a number of associated index files designed for performance enhancement, but these are ignored by the HYPACK® software.

This setup is simple but at the same time complete enough for the purposes of an ENC chart, since the S57 format also treats entities as a combination of spatial information and attributes. The idea is that the encEditor can create S57 objects from the geometry in the .SHP file and add attributes from the .DBF file.

A WORKING EXAMPLE

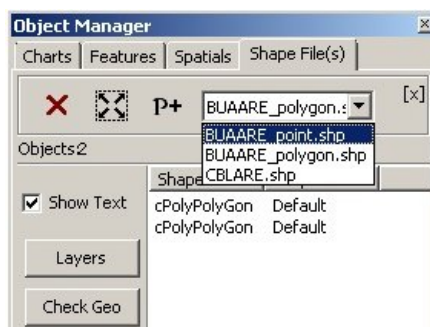
Launch the Shape File import from the menu (S57-IMPORT SHAPE FILE). Unlike the other import formats, e.g. .DXF, .TGT, .XYZ, multiple files may be selected at once. A tab in the Object Manager of encEdit is created.

FIGURE 1. Importing Shape Files in the ENC EDITOR--Menu Selection (top), Multiselection of Files (bottom)



To switch among files, use the drop-down list box.

FIGURE 2.

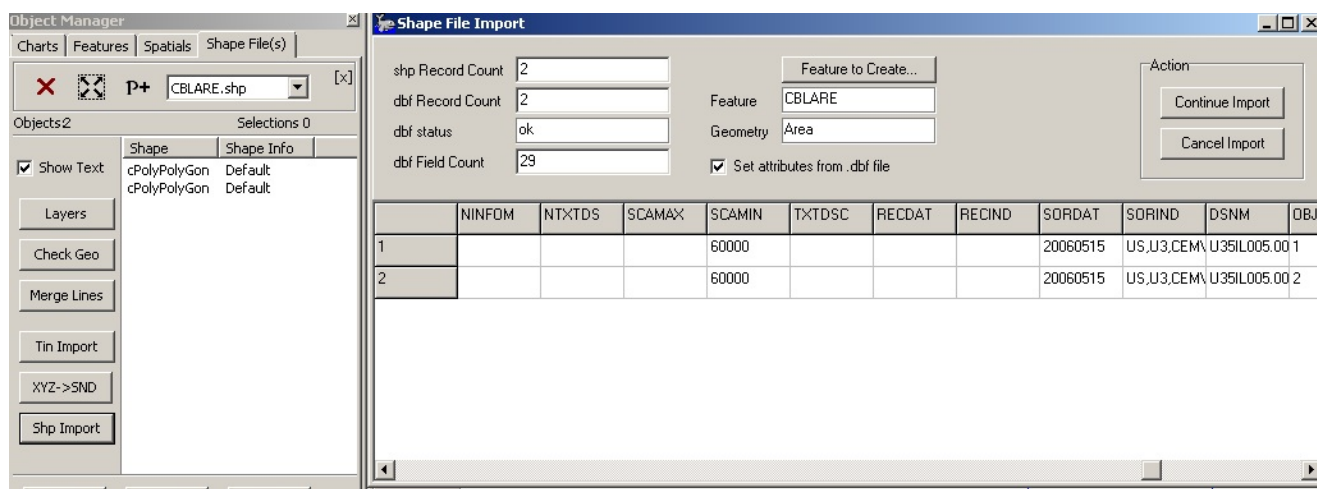


HANDLING THE MESSY BITS...

Each particular .SHP file will contain a single geometry type, one of Point, Line or Area. This narrows down what kind of S57 Feature could possibly be created from the given file.

Press [SHP Import] in the Object Manager to open the Shape File import dialog.

FIGURE 3. Shape File Import Dialog



Here you can specify precisely which S57 Feature to create for each entry. If the file name contains the 6 character acronym of an S57 Feature, the active Feature will be filled in AUTOMATICALLY. If an attribute file is found (same name as .SHP file but with a .DBF extension), its contents will be displayed in a grid. Again, if the columns of the grid contain the 6 char acronym of an S57 Attribute, the software can automatically populate the attribute data for the features it creates.

The key to a rapid and successful import of shape data into an ENC is the use of S57 Acronyms for both the .SHP file and the attributes. This results in a tremendous time savings by alleviating manual entry of information. It also eliminates transcription errors.

THE RESULTS

The three files originally selected produce the results seen in Figure 4. I have zoomed in on one of the features created, a 'Built-up Area' area feature, to visually see the import worked correctly. Also the Attributes tab shows that ENC EDIT did good job importing the attribute data.

FIGURE 4. Imported Shape in the ENC EDITOR

