

Radar Database Generation Workstation

A common thread throughout all of BCG’s simulator systems is the (GUI, PCS-100, PCS-200, PCRadar) database files used to establish the exercise training area. In the past BCG provided radar databases created by a digitizing system exclusive to BCG that utilized paper charts as the data source. Our more recent database files are created using custom designed software that reads and interprets DNC data for its source information. These new database files represent not only ‘fresher’ data than our paper chart versions, but the radar image also correlates more closely with ECDIS chart presentations that utilize the same or similar data for their presentation.

BCG still maintains the policy of creating and selling radar databases for our customers. Our normal turn around time is 2-3 weeks ARO. As customers use the PCS family of simulators, there may be a need for additional training areas (databases). Each port area serviced by a ship becomes a potential training area for the mariners aboard that vessel. As an option to our simulator product line, BCG now offers our Radar Landmass Database Generation (RLDG) Workstation to support this need.

The Radar Landmass Database Generation Workstation allows the operator to create a radar database for a specific geographical area he or she wishes to train in, and do so directly from a DNC (VPF) CDROM. Once the radar image is created by the RLDG, the operator will have the capability to customize the radar image to meet the exact training needs. The final database files can then be distributed to any BCG PCS-100, PCS-200, PCRadar, or PCS-100VMS simulator used by our customers.

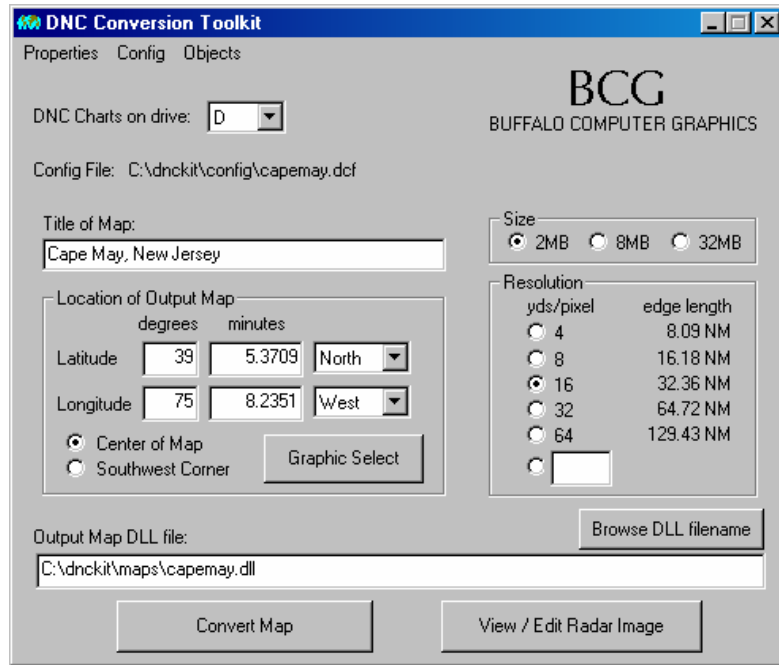


Figure 1

Primary Control Panel of RLDG

RLDG Features

With the RLDG the user has control over the following database parameters:

- Size of the operational area
- Selection of charts used to create the radar database
- Resolution used for the database generation
- Cultural and/or navigation aids to be included in the database
- Manual control to add or remove objects from the database (customize)
- Updates of existing databases due to buoy movement or other data changes as new DNC CDROMs are immediately available
- Maintain compatibility of radar databases across all BCG PCS simulation products

Product Details

The DNC Conversion Toolkit program is a Windows application that utilizes DNC vector data to create BCG radar databases suitable for use with BCG simulator products. The RLDG provides the user the flexibility to offer simulated training using any port in the world, thereby offering pre-mission familiarity to the student mariner.

The RLDG Control Window (Figure 1) contains three menus: The **Properties Menu** allows user to set parameters that affect how the final .dll is created during the conversion process. The **Properties Menu** contains two items: **Fill Options** and **Map Data Options**, each of which opens a dialog window. The **Fill Options** dialog window (Figure 2) contains the parameters as to how inland radar returns are to be created in the final database. The **Turn Fill Off** checkbox can be used to disable inland fill altogether. The **Map Options** dialog window (Figure 3) allows the user to select what level of DNC charts, and what available features will be incorporated into the output map during the conversion process. The **Config Menu** allows user to create, load and save database configuration file information (DCF). The **Config Menu** contains five items: **New, Load, Save, Save As, and Close**. The **Objects Menu** lists for the user, custom modifications made to a database. The **Objects Menu** contains one item: **Edit List**.

After setting the initial parameters in the Main Control Window, the user is provided with the Chart View Window (Figure 4). Here the selected area is shown as a box on a chart and allows the user to graphically select the exact location of the output map that is to be generated from DNC data.

Once the conversion process is started, another dialog window appears titled "Conversion Status" (Figure 5) showing the progress of the conversion process. The amount of time required for conversion to complete is variable, depending on several factors, such as: the speed of the computer, the amount of available memory, the size of the coverage area, the complexity of the DNC data, and whether the DNC data is being read directly from a CD-ROM. When the conversion has completed the user will return to the main dialog window to view and/or edit the new radar database in raster form (.dll). The file is then ready for simulation.

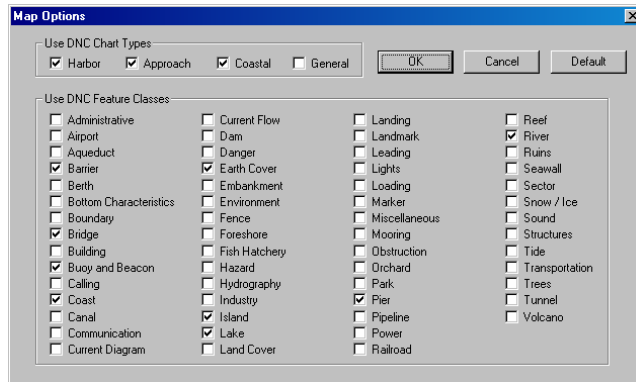


Figure 3

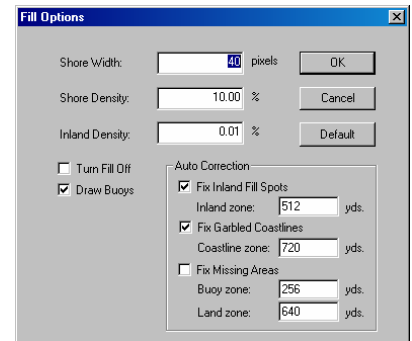


Figure 2

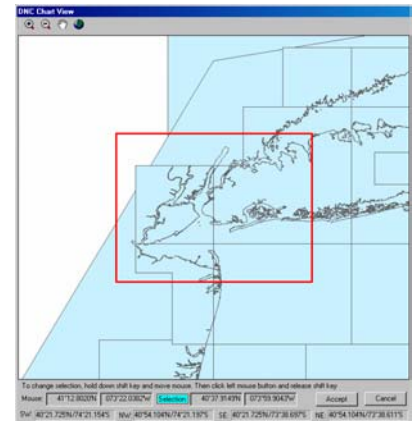


Figure 4

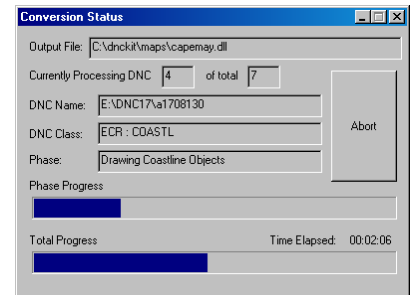


Figure 5

- ### User Advantages
- Ability to build training databases for any geographic area covered by DNC, at any time
 - Ability to maintain and control the distribution of all training databases used by BCG simulators
 - Ability to perform updates of radar image data as new DNC source is released
 - Ability to manually customize radar images for special man made radar reflectors not found within the standard DNC data source