File Menu

Network related group
New networks
Erases all data from memory, removes pictures and set most parameters to default values.

Open networks
Opens a dialog box in order to load a previously saved project file. This project file contains units, nets, and system data. It also contains the map and pictures filename and path. The map file and pictures files are loaded automatically if they are found.

Save networks as
Opens a dialog box in order to save the networks data to a project file on disk.

Networks properties
Opens a window containing all the necessary controls to perform network edition (see How to create a network).

Map related group
Open map
Opens a dialog box in order to load a previously saved map file. The map file contains elevation data, and is normally associated with a bitmap picture file. Format conversion from earlier program version is performed when necessary.

Save map as
Opens a dialog box in order to save map data into a file. The file, is named with the map name followed by a .MAP extension, and contains elevation data. Contrary to older version, the map picture will not be saved, because program allows multiple pictures per map. Each picture must be saved with the Save picture as command.

Map properties
Opens a form in order to define the map coverage boundaries and select the elevation database (see How to acquire elevation data).

Picture related group
New picture
Opens the Picture properties form in order to create a new map picture.

Open picture
Opens a dialog box in order to load a picture file from disk (BMP, GIF or JPEG). Picture files are associated with a properties file named with the picture followed by a .DAT extension. If the properties file is not found, the file is considered as a user picture that can be scaled manually (see Import and scale user pictures).

Save picture as

Opens a dialog box in order to save a bitmap picture file (BMP only). Conversion to GIF or JPEG can be performed with another program to reduce the file size.

Picture properties
Opens the appropriate form (Map, User or 3D type) that can be used to create or modify a map picture (see How to create a map picture
, How to create an ADRG picture, How to import and scale user pictures, and 3D, panoramic, and strereoscopic views).

Propagation related group
Propagation model
Toggle between Normal or Interference propagation mode. For interference studies, the model is optimistic.

Print related group
Print
Prints the active picture on a printer device. The picture is scaled and oriented to fit paper size.

Program related
Files list
Files shown are recent networks project files that can be recalled.

Exit
This command aborts program execution upon confirmation.

Edit Menu

Copy
Copies the active picture to the Clipboard.

Paste
Inserts the contents of the Clipboard in the active picture.

Paste as a new picture
Creates a new picture window where is inserted the contents of the Clipboard.

Merge a Quo Vadis map
Enable the selection of a picture file calibrated in the Quo Vadis format in order to merge it to the active picture, by copying, adding, or multiplying the colors.

Merge from MapBlast
Open an Internet connection in order to get a picture that will be merged to the active picture, by copying, adding, or multiplying the colors.

Merge pictures
Opens a form where 2D source and destination pictures can be selected, in order to perform copy or merge (source picture is stretched or rotated to fit destination coverage).

Draw grid
Draws a geodesic, a UTM, or a range ring grid over a 2D picture.

Draw objects

Select Lines, Filled areas, Labels, Cities or All to add graphic objects to the active picture.

Edit objects
Open a window in order to edit object files.

Flood
Flood all map pixels surrounding cursor position that share the same elevation.

Stratification
Open a window used to color a stratum of elevation.

Rotate/Stretch
Opens a window with rotation angle and stretch factor inputs that will be used to create a new picture on activation of the Apply command.

Projection

Draw a new picture according to a trapezoidal projection offering less distortion.

Fit map to picture/selection
Open the Map properties window in order to extract elevation data according to the picture or selection.

Unit properties
Open a form in order to edit units data (see How to position units).

View Menu

Radio link
Opens a form with a picture box that shows earth profile, radio performance, and observation features between each pair of units (see Radio link and system performance).

Radio coverage
Opens a form in order to initiate radio coverage drawing on a map picture (see How to perform radio coverage).

Visual coverage
Opens a form in order to initiate visual coverage drawing on a map picture (see How to perform visual coverage).

GPS tracking
Opens a form in order to initiate GPS position acquisition via a serial port and enter Internet addresses at which position will be reported (see How to use a local GPS and report position).

Multicast Monitor
Opens a form displaying the last messages received on the multicast channel defined in GPS tracking.

APRS
Opens a form in order to initiate reception from the Automatic Position Reporting System.

Report

Opens a form in order to show or print the performance matrix of all network links.

World map
Opens a new picture window with worldwide coverage.

Elevation grid
Opens a small window that shows 5x5 elevation data records centered at cursor position along with cursor coordinates.

Show networks
Initiates drawing of the performance for all links of all visible networks.

Hide networks
Hides network performance and unit labels on all pictures.

Networks autoredraw

If checked and if the computer is fast enough, the network drawing will be refreshed on exiting the Networks properties form.

Flight
Opens the last flight animation generated with the Radio link form.

Toolbar
If checked, shows the buttons under the menu bar.

Status bar
If checked, picture, cursor, and progress information will be shown at the bottom of the main form.

Full screen
Maximize the active window to the maximum screen size. If the picture is larger than the screen, use keyboard arrows or mouse to move the picture.

How to acquire elevation data

Things to know first

Maps
Maps are based on a matrix of up to 2000x2000 elevation records (meters above sea level), which can be saved in a file with a .MAP extension. Map data can be viewed with the Elevation grid.

Terrain Elevation Data
Digital Terrain Elevation Data (MIL-D-89020 AMENDMENT 1).
Maps are based on digital terrain elevation data. The program can actually access a resolution of 1, 3, or 30 seconds of an arc, which corresponds to a spacing of approximately 30m, 100m, or 1 km between records. The program can read GTOPO30 elevation data available at http://edcwww.cr.usgs.gov/landaac, and DTED level 0, 1, or 2 files.

Interpolation
Maps are of variable dimension. Interpolation is needed to adjust the database records to those of the program. This process is performed through a fast routine in a DLL along with data extraction.

Deployment area
The deployment area is a rectangular zone with horizontal coordinates for the center position and a size in kilometers that should be large enough to contain all units.

Step by step

1. In View menu, select World map. On the world map picture, click on the desired position for the map center position.

2. In File menu, select Map properties. This will open a form with all the necessary controls to create a map. Click on Use cursor position button.

3. Optionally use city or DMS (Latitude and longitude in degree, minute, second) to enter a more precise position for the center of the map.

4. Select the database and associated logical drive.

5. Select 400x400 pixels and 100 km size.

6. Click on the Apply button.

7. If an error message occurs, verify the database drive and redo from step 2.

8. In File menu, select New picture (See How to create a map picture).

How to create a map picture

Things to know first

Picture size
Picture size is equal to the elevation matrix pixel size defined in Map properties. It has a direct impact on program performance. The amount of calculation increases by the square of picture side, as well as the memory needed. First try small pictures (400x400) to test your machine.

Video settings
The best compromise is definitively 16-bit color setting (65536 colors). Some function gives poor results at 8 bits color setting (256 colors). More colors such as 24 bits kills memory.

Draw mode
Each mode can be used to enhance terrain characteristics. The most common draw mode is Gray scaled slope, because networks features are better seen.

About Picture properties

Gray scaled slope
This option is used to draw the topographic map using a gray color scale according to the terrain slope. In this mode, the map is drawn as if lighted from the azimuth entered in the Light Azimuth entry box, such that slopes facing the direction of the light source are the lightest, and slopes facing away from the light source are darker. Horizontal terrain is drawn with the average color shade given by the Brightness entry box. The range from lightest to darkest shade is prescribed by means of the Contrast entry box.

Colored slope (absolute)
This option is similar to the Gray scaled slope option with the exception of the color. In this mode, the color is related to the elevation (h) above sea level according to the following scale:

Elevation range   Color

Elevation range	Color
h < 0m	Magenta
0m <= h < 100m	Cyan
100m <= h < 300m	Green
300m <= h < 700m	Yellow
700m <= h < 1500m	Orange
h >= 1500m	Gray

Colored slope (relative)

This option is similar to the Colored slope (absolute) option with the exception of the elevation range. The colors are the same, but they are scaled to the Bottom elevation and Top elevation entries.

X-ray

This option is used to draw the topographic map using a gray scale. In this mode, the map is drawn in relation to elevation, with the highest points the darkest and the lowest points the lightest. The gray scale is relative to the Bottom elevation and Top elevation entries.

X-ray (inverted)

This option is similar to X-ray, but with the highest points the lightest and the lowest points the darkest.

Rainbow

This option combines shadows with a user defined color in order to produce a million colors picture if the video mode enables it. Activate the Colors button to open the color edit form.

Bottom elevation

Minimum elevation threshold in meters.

Top elevation

Maximum elevation threshold in meters.

Contrast

Percentage of contrast.

Brightness

Percentage of brightness.

Light Azimuth

Azimuth in degrees from which an imaginary light source illuminates the terrain.

10 meter contour intervals

This option generates darker contour curves at every 10m of elevation.

100 meter contour intervals

This option generates darker contour curves at every 100m of elevation.

500 meter contour intervals

This option generates darker contour curves at every 500m of elevation.

Draw objects

This option will exhibit roads, lakes, boundaries and labels defined in .plt files (OziExplorer format) located in a sub directory object if they are within the map limits.

Show cities

This option will exhibit cities defined in file cities.dat if they are within the map limits. If selected, font and back style can be selected with the Font button and Transparent checkbox.

Step-by-step

1. In File menu, select New picture.

2. Select Grey scaled slope, 30% contrast, 70% brightness, 335 deg. Light azimuth, no Cities, and no Contours.

3. Click on the Apply button.