DOLPHIN

Real-time Mapping Software

manual version 1.1

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QUICK START FOR RUNNING DOLPHIN MAPPING SOFTWARE WITH A YELLOWJACKET 802.11BG DEVICE

You will need:

1. Laptop or Desktop PC running Windows 2000 or Windows XP.
2. YellowJacket 802.11BG (including HP iPAQ device)
3. USB cradle which connects to your PC.

STEP 1

Connect the USB cradle to your PC.

STEP 2

Remove the iPAQ from the YellowJacket and connect to the cradle. Make sure that you leave the compact flash serial cable connected to the iPAQ as well.

STEP 3

Make sure that you have the GPS antenna provided connected to the YellowJacket.

STEP 4

If you have ActiveSync running, make sure you disable the 'connect via USB' checkbox in the Connection Settings.

STEP 5

Start the YellowJacket software on the iPAQ. Verify that you see a valid serial number (not 'XXXXXX') on the main menu screen. Go to the Access Point List screen to begin collecting MAC data.

STEP 6

Go to the option screen on the YellowJacket. This is the toolbar option with an icon that contains the letters A,B,C, and D. Check the option 'Enable Dolphin Port'. This will start sending data out of the USB port.

STEP 7

On your PC, run the Portal application. Choose USB as your connection. You should start seeing data appear on the screen within a few seconds.

STEP 8

Start the Dolphin application. Remember to follow the directions in the Dolphin manual for setting up maps and registration codes.

STEP 9

You should now see data points being plotted on the Dolphin software. Keep all applications running to continue collecting data.

BVS Dolphin Real-Time Mapping Tool
User Manual

Minimum System Requirements
Pentium II
500 MHz
64MB RAM
100MB free on Hard Drive
Operating System: Windows 95, 98, ME, 2000
BVS GPS receiver interface: 1 free serial port:

INTRODUCTION

The Dolphin real-time mapping tool is used as a companion to a BVS Receiver with GPS. This tool is used to display scanned points on a map at the location(s) scanned. The tool receives data from a BVS data logger that communicates with the BVS receiver.

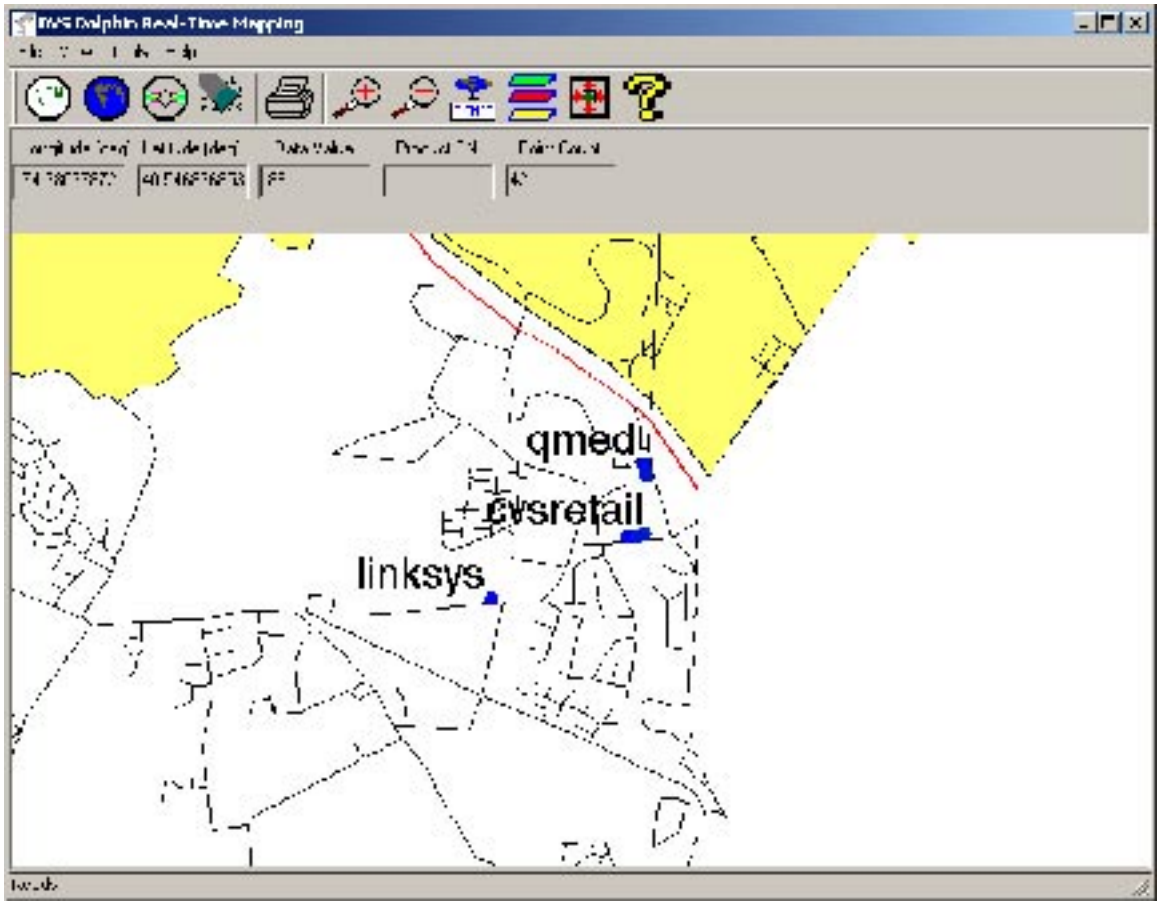

FIGURE 1 – BVS DOLPHIN

OVERVIEW

The Dolphin software receives data from the data logger for the individual product (see Figure 2). For example, if the Fox is the product, it would talk to the Fox Data Logger running on the PC. At the same time, the Dolphin software would also be running on the PC.

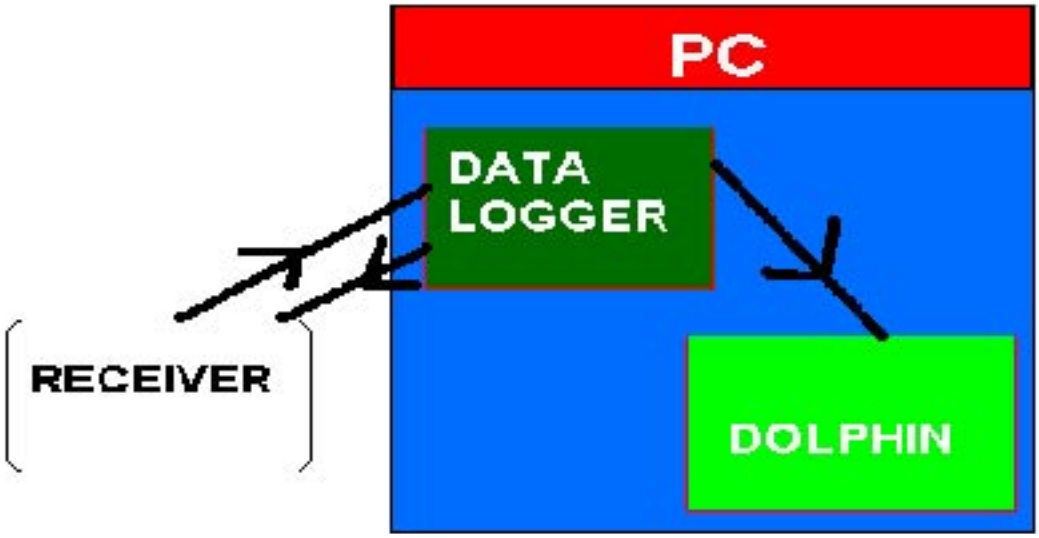

FIGURE 2 – DOLPHIN DATA FLOW

The Fox Data Logger would send data in a Windows message that includes information wished to be stored on the map as well as the GPS coordinates last stored by the data logger from the unit.

The information received would then be displayed on the Dolphin screen in the form of a colored circle. If text were also passed, it would be displayed next to the circle. The color of the circle represents the level of the data value (usually RSSI).

This process continues until the data logger or the receiver is terminated.

QUICK START

The following steps will guide you through setup and use of the Dolphin tool.

1. Make sure you have the product (e.g. Fox) connected to a serial port or USB port and turned on.

2. Make sure the GPS antenna is attached and GPS mode is enabled.

3. Start the Dolphin software. When using the Dolphin for the first time with this product, you must enter the registration code in order to receive data. See 'REGISTRATION' below.

4. Open an existing geoset or create a new geoset. See 'CREATING A GEOSET' or 'OPENING A GEOSET'.

5. Add layers to your geoset corresponding to the appropriate maps of the area that you are surveying.

6. Start the data logger for the product. Make sure any necessary steps to enable Dolphin connectivity from the data logger have been taken. Some products don't require any steps but others have an option to check for Dolphin connectivity.

7. You should now see data populating the maps. Some products output data at different rates.

Some 802.11b products only produce data when a new AP is found.

REGISTRATION
When using Dolphin with a product for the first time, the product must be registered with Dolphin. There is a registration letter that ships with Dolphin that shows the registration code to use to work with the product purchased. This code is matched against the serial number of the unit for verification. Use the TOOLS/PRODUCT REGISTRATION menu option to enter the correct code. This only needs to be done once and is stored in a file for recall on future uses.

DISPLAY FIELDS
Certain fields are displayed as data records come into the Dolphin system. These fields are (from left to right):

Longitude (in decimal degrees)
Latitude (in decimal degrees)
Data Value (usually RSSI in dBm)
Product Serial Number
Point Count (current count of points plotted on the map)

These always reflect the last data record to come into the Dolphin system.

CREATING/OPENING A GEOSET
When starting up the Dolphin system, a Geoset must be open in order for the data points coming in to be properly attached to map layers. You can open an existing geoset or create a new geoset.

An existing geoset will have the map layers already set up. When creating a new geoset, the layer dialog will appear. Choose layers from the maps that were purchased for use with the Dolphin. There will already be a 'DOLPHIN' layer. DO NOT REMOVE this layer. This is needed to store the data points.

After choosing the map layers, the geoset is now ready to accept points.

NOTE: The maps may not be visible until the first data point comes in to center the coordinates.

SAVING A GEOSET
Pressing the toolbar button that looks like a spinning CD allows you to save the geoset loaded. Save it to any filename for use in later Dolphin sessions.

NOTE: Data points will not be saved. Only the map layers.

CLEARING DATA POINTS
If you wish to clear the existing data from the geoset at any time, use the toolbar button that appears to be an eraser wiping off data. The next point taken in will be considered the first point again.

PRINTING A MAP
You may print out a copy of the map by pressing the printer icon on the toolbar.

ZOOM MODE
You may zoom in or out on the map by selecting the magnifying glass icon with a '+' sign for zooming in or a '-' sign for zooming out. This will turn the cursor into the appropriate magnifying glass.

Simply click on the area to zoom in/out on and the map will adjust accordingly.

SAVE AS BITMAP
The map may be exported to a bitmap format by selecting the icon on the toolbar with a globe on the top and the word 'BITMAP' on the bottom.

LAYER DIALOG
The layer dialog is used to add or remove layers from the geoset. Layers can include landmarks, streets, water, etc. Choose the layers for the appropriate driving area from the maps that were purchased for use with the Dolphin.

RECENTERING FREQUENCY
The re-centering frequency icon looks like four arrows heading in from a square on the toolbar. This lets you choose how often you would like the map re-centered on the current point.

Depending on the rate of data coming into the Dolphin, the re-centering of the map may start to slow down the system and/or cause flicker. This option allows you to limit the number of times the screen is recentered.

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DOLPHIN™

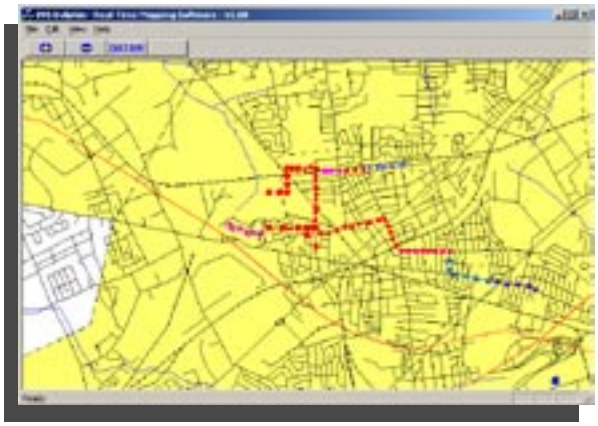
Real-time Mapping Software

How It Works:

- Hookup up a BVS product with GPS to your laptop
- Turn on equipment
- Run BVS Data Logger software on your laptop
- Start BVS Dolphin software and select maps (MapInfo® Street Map product required)
- Measurement data appears on the selected maps with GPS encoding in real-time!!!

Features:

- Takes GPS data from BVS Data Logger software
- Color-codes RSSI, (Ec/Io) and other values
- Real-time updating
- Uses any MapInfo® compatible maps
- Tracks drive-study path
- Windows® 98, 2000 & ME compliant
- Print resulting maps
- Display text information on certain points (e.g. WLAN SSIDs)
- Export maps as a picture files in formats such as bitmap, GIF, JPEG, Photoshop, Metafile or PNG



Works With The Following BVS Instruments:

- FOX
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- COYOTE
- PANTHER
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- YELLOWJACKET PLUS
- SUPER EAGLE
- EAGLE
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