



UI-View32 Quick-Start Guide

The Quick -Start Guide takes you through the basic steps of getting UI-View32 up and running. It is NOT intended to be a replacement for the main help. Use the "<< Prev" and "Next >>" buttons on the help window button bar to move through the various steps.

This guide should stay on top of other windows, so it is easy to read it while you are configuring UI-View. (If you don't want it to stay on top, then use "Options", "Keep Help on Top", "Not On Top".)

Step 1

Install the program and run it. (Presumably you have already done that!)

Provided you didn't get any error messages during installation, proceed to step 2.

Step 2

Open "Setup", "Comms Setup", and decide what comms mode you are going to use. The choices, and the corresponding host modes are:-

Use WinPack DDE	"WINPDDE"
Use BPQ host mode	"BPQ"
Use AGWPE host mode	"AGW"
Use a TNC in terminal mode	"NONE"
Use a TNC in KISS mode	"KISS"

If you already run BPQ or AGWPE with WinPack or another PMS program, then choose whichever one you run. UI-View32 will open its own host mode channel, and can be used at the same time as WinPack or other BPQ/AGWPE applications.

If you don't run either of those, and you want to run UI-View32 at the same time as WinPack, then your only choice is WinPack DDE. BUT NOTE - UI-View32 cannot transmit when used as a WinPack DDE application, so you lose a lot of the functionality of the program.

If you want to use UI-View32 on its own, with its own TNC, then KISS mode will usually give much better performance than using terminal mode.

Having decided what mode to use, go to the next step.

Step 3

Whatever host mode you have selected, PLEASE read the relevant parts of the Comms Setup help, it is accessible from the Help Contents or by pressing F1 when the Comms Setup dialogue is open.

If you have selected WINPDDE, AGWPE or BPQ for the host mode, then there is no further configuring of the Comms Setup to do, and all the other input boxes in the dialogue will be disabled. However, if you are using WINPDDE, you may need to make some changes to your TNC settings in WinPack, as explained in the Comms Setup help.

If you have selected NONE or KISS, then you must:-

1. Set Com Port to the port to which your TNC is connected.
2. Set Baud Rate, Data Bits, Stop Bits, Parity and to match whatever settings you are using with your TNC.

If you have selected KISS, then you need to click the "Setup" button and configure the KISS options. When the KISS Setup dialogue is displayed, press F1 and read the KISS Setup help.

Step 4

If you are using WINPDDE mode, then no further configuration is needed. If you have WinPack running, then UI-View32 will now be working and will display beacons from any stations that it hears transmitting UI-View32 compatible beacons.

You should now read at least some of the main help - start with the main screen and then work through the help on the various menu options.

If you are using any other mode, then continue to the next step.

Step 5

Open "Setup", "Station Setup". Press F1 and read the help. It explains what to put for each input box.

Once you've done that, you should have a working system!

At some stage you should look at the other options on the setup menu (although Wx Station Setup is unlikely to be of any interest unless you have a weather station and suitable software).

PLEASE, at some stage read the help!

Not only because it took me ages to write it, but because you are bound to miss some of UI-View32's features unless you read the help! For instance, you would never discover the "drag to show distance and bearings" feature if you didn't read the main screen help.

You can access the help either by using "Help", "Help Contents", or by pressing F1.



The Main Screen

The following is an Overview of the key features of the main screen, but see [Alternative Mouse Actions](#) for information about how some of the mouse actions can be changed.

The main screen shows a map on which are displayed icons for any [UI-View compatible station beacons](#) that have been heard. As you move the mouse around the screen, the [IARU locator](#) and the longitude/latitude of the point under the mouse cursor are shown in the bottom corners of the screen.

A [toolbar](#) is available which offers one click access to some of the UI-View32 menu options.

At the bottom of the screen there is a two line [monitor window](#).

If tooltips are enabled, then hovering the mouse over a station will produce a tooltip with information about the station. See [Tooltip Text Setup](#).

If you double-click on an icon on the map, then an information window for that station will be opened.

If you right-click on an icon, an [options menu](#) will be displayed.

If "Options", "Show Map Outlines" is checked, then the outlines of any maps that overlap the current map will be shown. Each outline will have a "hot" corner (a solid square). If you hold down Ctrl and double-click a "hot" corner, then that map will be loaded. If you hold down Ctrl and right-click a "hot" corner, then the name of the map will be shown as a one line menu. You can click it to load the map, or click anywhere else to clear it.

If the map has a blue square in the top left-hand corner, then holding down Ctrl and double-clicking that square will take you to the largest scale map that completely contains the current map. (A sort of zoom out.) Ctrl+PgUp performs the same function, as does clicking the toolbar button with an up-arrow on it.

Key point from the above - clicking without holding down Ctrl is for station functions, clicking and holding down Ctrl is for map functions, but see [Alternative Mouse Actions](#) for information about how some of the mouse actions can be changed.

If you hold down the left mouse button until the cursor changes to a cross, then a distance/bearings window will appear. You can drag the mouse between points on the map to find out distances and bearings.

If you hold down the Shift key and drag the mouse, then you can zoom in on an area of the map. See [The Zoom Window](#) for more information.

If you hold down the Ctrl key and drag the mouse, then you can "slide" the map.

Various function keys can be used from the main screen - see [UI-View32 Function](#)

Keys for more information.

If you connect to an internet server, then six green indicators will appear at the top of the map window. See IGATE Traffic Limits for an explanation of what these indicators mean.

Select A Map

The map list shows you all the maps available in your UI-VIEW\MAPS subdirectory. The information in the map INF files is displayed.

You can select a map by either double-clicking it or clicking the Ok button.

The Preview button shows the map in a small window. The first time you preview a new map, it creates a miniature version of it in the "MAPS\Mini Maps" directory, which may take a few seconds, future previews of the same map are instantaneous.

F2 provides a shortcut to this menu option.

You can also load maps by dragging them from Explorer and dropping them onto the map window - see Map Drag And Drop for more information.

See UI-View32 Maps for information on how to create maps.

PLEASE NOTE - One map behaves differently to all the others, it provides an interactive link between the DeLorme Street Atlas and UI-View32. See "Street Atlas Virtual Map" for more information.

Station List

This window displays a list of the stations that UI-View32 has heard sending APRS compatible beacons. The station type is derived from either the station's symbol character in its beacon, or from the SSID. See UI-View32 Symbols for information on how you can add additional symbols.

Stations marked with a '+' in the 'U' column are transmitting a beacon which includes a UI-View(32) tag, e.g. "{UIV32}", this shows they are running UI-View(32). Stations marked with a '-' are transmitting a beacon which includes a UI-View(32) tag with an 'N' suffix, e.g. "{UIV32N}", this shows they are running UI-View(32), but have checked "No UI-View(32) extensions" in the APRS Compatibility dialogue.

Stations suffixed with a '*' have been heard via a digipeater. Obviously some stations will be heard both direct and via a digi, therefore UI-View32 ignores beacons heard via a digi if the station has been heard direct during the preceding two minutes.

For a fixed UI-View32 station, the bearings and distances are calculated from the location specified in Station Setup, if you are operating mobile then your current position is used.

The functions of the buttons at the bottom of the window are:-

Details - opens a detail window with information about the station.

Message - opens the Message Window.

Track - enables/disables tracking of the station.

Km/Miles - toggle the display distance between kilometers and miles. Note - This option acts as a metric/imperial switch, and so affects some other display features, such as height in the station details window. See [Metric/Imperial Measurements](#).

Copy - copies the list to clipboard. (May not work if there are more than about 500 stations in the list.)

Snap - takes a snapshot of the list and saves in the SNAPSHOT directory. See [Snapshots](#).

Delete - removes the station from the map and from the station list. (Ctrl + Delete removes all stations.)

Ping - sends a ping to the station.

Query - sends a query to the station.

DX? - sends a DX query to the station.

Options - displays a menu with options for configuring the list. This menu can also be accessed by right-clicking the list. The only option that is not self-explanatory is 'Buffered Redraw' - If you find the list flickers as it is updated, then you can try enabling this option.

Other Features

The list columns can be reordered and resized by dragging them.

You can do an instant sort on any column by clicking the column header. Successive clicks on the same column reverse the sort order.

If you don't want a column to show in the list, drag the right hand edge of the column header until the width is zero, then resize the list window. You can easily restore all the columns with the "Default Size" option on the list options menu.

There is an auto-search facility. Click on the list, key in a callsign, and it's obvious how it works. The search is cancelled if more than three seconds elapses between keystrokes, or you press Esc or a cursor key. If for any reason the three second delay isn't enough, you can change it by editing the AUTO_SEARCH_DELAY parameter in the [STNLIST_GRID] section of UIVIEW32.INI. Don't make the delay too long, because UI-View32 holds off updating the list with new data as long as a search is active.

Columns on the left of the Station List can be "frozen" so they don't scroll horizontally. This is only of use if, for some reason, you want to make the list window significantly narrower than the default size, and lock the callsign column in position. You freeze columns by moving the cursor to the left edge of the list, on any row except the column header row, where it will display a padlock icon. Drag it across the columns you want to freeze. To unfreeze columns, move the cursor to the right edge of the frozen area, and drag back to the left.

If a station's callsign is being translated (see [Edit Translations](#)), then the translation

will be used as the tooltip, if you pause the mouse over the station in the Station List.

Station Setup

This dialogue is used to configure your UI-View32 station beacon. UI-View32 station beacons are compatible with APRS fixed position beacons, or APRS locator beacons, depending on what you input in this dialogue.

KEY POINTS

1. If you fill in the information on this screen, and you put a beacon interval other than '0', then UI-View32 is going to transmit a beacon at the specified interval, so make sure you understand what you are doing! Also, if you plan to send WX beacons, please note the comment below about the station beacon being used instead of the WX beacon when no WX information is available.

2. If you enable the beacon in UI-View32, **PLEASE** make sure you have disabled it in your TNC, BPO, WinPack, etc. Otherwise you will be needlessly transmitting two lots of BTEXT.

2. If you send your beacon via digipeaters, please be aware that it can create significant extra traffic, particularly if you use a generic repeater alias such as RELAY. The use of digipeaters in the beacon unproto address may not be appropriate in areas where the packet channels are very busy. DON'T let's get UI-View32 a bad name by generating too much beacon traffic! Of course this doesn't apply if you use the recommended 2m "unconnected nets" frequency, which is 144.800MHz.

3. If you are using WinpDDE mode, then UI-View32 cannot transmit and so any information input will not be used as a beacon. However, you should still input your location, either as longitude and latitude, or as an IARU locator in the beacon comment, so that UI-View32 can work out distances and bearings to stations that it hears.

Callsign - input your callsign.

Latitude - input your station latitude. The format is dd.mm.nn<NS>. "dd" is two digits for degrees. "mm" is two digits for minutes. "nn" is two digits for decimal minutes. NOTE - decimal minutes, not seconds. "<NS>" is either "N" for North or "S" for South. Example - 52.58.23N

Longitude - input your station longitude. The format is ddd.mm.nn<EW>. "ddd" is three digits for degrees. "mm" is two digits for minutes. "nn" is two digits for decimal minutes. NOTE - decimal minutes, not seconds. "<EW>" is either "E" for East or "W" for West. Example - 000.02.77W

Alternative method - You can set your longitude and latitude by holding down the Home key and double-clicking on your location on a suitably large scale map.

PLEASE NOTE - If you leave latitude and/or longitude blank, then your beacon will

be disabled. This applies even if you are operating mobile with a GPS attached. To enable your beacon, you **MUST** input a latitude and longitude.

Locator - this is your IARU locator. It is automatically calculated from your longitude and latitude. It is for information only - In the past I have often been asked to provide a utility for users to work out their IARU locator.

Compressed - If this option is checked, then your position is transmitted in APRS compressed format. Please note that some software can't decode compressed format, and also it makes your beacons completely meaningless to any casual observer using a simple terminal program, so use this option with caution.

Unproto port - the port on which you want the beacon to be transmitted. If you are using UI-View32 with a TNC, then you must put "1" for the port. If you are using it with BPQ or AGWPE, then you can put multiple ports separated by commas.

If "Unproto port" is left blank, then it will be defaulted to "1".

Unproto address - the unproto address used for your beacons. It consists of a destination address and optional digipeaters. The default is a destination address of "APRS" and no digipeaters. If you want to include digipeaters, then use commas as separators. E.g. "APRS,RELAY,WIDE" will send your beacon to APRS via RELAY and WIDE. See UI-View32 Destination Address for information about how UI-View32 regards "APRS" as a special address.

If you have used multiple ports then you can configure a separate unproto path for each port by using '|' (pipe character) as a separator.

Example - For unproto port you put "1,2,3". For unproto address you put "APRS,RELAY|BEACON,RELAY,WIDE|CQ". The result is that "APRS,RELAY" is used as the address for port 1; "BEACON,RELAY,WIDE" is used as the address for port 2; "CQ" is used as the address for port 3.

If "Unproto address" is left blank, then it will be defaulted to "APRS".

Beacon comment - The comment text at the end of your station beacon. NOTE - if longitude and latitude are left blank, then the beacon consist only of the comment. This allows you to send an APRS compatible locator beacon by putting the locator in the comment in an APRS compatible format. E.g. ">IO92XX/- Roger in Boston", or "[IO92XX] Roger in Boston". Please don't make the comment too long! UI-View32 will warn you if the comment exceeds the 43 characters allowed in the APRS specification.

Add Ui-View Tag - If this box is checked, then a tag showing that you are using UI-View(32), and what version you are using, is appended to your beacon. The format of the tag is e.g. {UIV32}. The numbers will change according to the version. UI-View32 identifies stations that send the tag by marking them with a '+' in the Station List, and using different colours for their callsign labels. Don't turn off this option unless you have a good reason, because other users' UI-View(32) systems use the tag as a way of telling that you are using UI-View(32).

Beacon interval (Fixed) - The interval in minutes at which your station beacon is transmitted. An interval of "0" disables the beacon. **DON'T** set an interval that is unnecessarily short! 30 minutes should be ok for most uses.

Beacon interval (Mobile) - if you have a GPS attached to UI-View32 - see [Using A GPS](#) - then UI-View32 will automatically go into mobile mode when it detects valid GPS data. The frequency of the mobile beacon is determined as follows:-

- The interval between beacons is never greater than the value put into the minutes box. (Putting '0' disables the mobile beacon.)
- If the miles/km box contains a value other than '0', then UI-View32 constantly calculates the distance traveled since the last beacon, and sends a beacon when the specified distance has been covered. This means that your beacon frequency will automatically vary according to your speed.

Beacon interval (Internet) - this is the interval at which the beacon will be sent to the internet if you are logged on to APRServe.

Symbol - allows you to select your station type, which determines the symbol character transmitted in your beacon. See [UI-View32 Symbols](#) for more information on station symbols.

O'ly - (if available) the overlay character you wish to use. Note that about half the symbols can have an overlay character, but overlay characters are normally only used with symbols that have a description starting with "No."

GPS Symbol and **O'ly** - the symbol and overlay character used when a GPS is attached to UI-View32.

NOTE - There is one situation in which the beacon will be transmitted, even if Beacon Interval is set to '0':-

If UI-View32 is configured to send WX beacons, but the WX data is out of date, then the station beacon will be sent instead, provided that sufficient information has been input.

WX Station Setup

This dialogue is used to configure your UI-View32 WX beacon. UI-View32 WX beacons are probably compatible with [APRS](#) WX beacons, but I haven't tested the compatibility in either direction.

KEY POINTS

1. To transmit a WX beacon, you must be running some sort of software on your PC that either gets information from a weather station or takes manually input data, and outputs it into a file in the correct format. UI-View32 does not directly support any sort of weather station. See [Weather Data Format](#) for more

information.

2. If you are using WINPDDE mode, then UI-View32 cannot transmit and so any information input will not be used.

Callsign - input the callsign for the WX station. If you are using host mode NONE, then it must be the same as the callsign set in Station Setup, otherwise it can be a different callsign.

Beacon comment - The comment text at the end of WX beacon. "/WX Report" is a good default.

Beacon interval (Radio) - The interval in minutes at which your WX beacon is transmitted. An interval of "0" disables the beacon. DON'T set an interval that is unnecessarily short! 15 or 20 minutes should be ok for most uses.

Beacon interval (Internet) - this is the interval at which the beacon will be sent to the internet if you are logged on to APRServe.

Add Ui-View Tag - If this box is checked, then a tag showing that you are using UI-View32, and what version you are using, is appended to your wx beacon. The format of the tag is e.g. {UIV10} for V1.0. The numbers will change according to the version. UI-View32 identifies stations that send the tag by marking them with a '*' in the Station List, and using different colours for their callsign labels.

Unproto port - the port on which you want the beacon to be transmitted. If you are using UI-View with a TNC in host mode NONE or host mode KISS, then you must put "1" for the port. If you are using it with BPQ or AGWPE, then you can put multiple ports separated by commas.

Unproto address - the unproto address used for your beacons. The default is "APRS". If you want to include digipeaters, then use commas as separators. E.g. "APRS,RELAY,WIDE" will send your beacon to APRS via RELAY and WIDE. See [UI-View32 Destination Address](#) for information about how UI-View32 regards "APRS" as a special address.

If you have used multiple ports then you can configure a separate unproto address for each port by using '|' (pipe character) as a separator.

Example - For unproto port you put "1,2,3". For unproto address you put "CQ,G4IDE|BEACON,G8MZX,G4GZL|CQ". The result is that "CQ,G4IDE" is used as the address for port 1; "BEACON,G8MZX,G4GZL" is used as the address for port 2; "CQ" is used as the address for port 3.

WX data file - Usually this will be a text file, made available by some other software, which contains the WX beacon information. (See "KEY POINT 1" above.)

However, it can also be a program that will create the wx text file. UI-View32 decides which it is by looking at the file extension. If the file extension is EXE, COM, BAT, VBS or JS, then UI-View32 will run the program, wait for it to finish executing, then

look for a similarly named TXT file that it has created. An example will make this more obvious -

If the wx data file is C:\WX\WXNOW.EXE then UI-View32 will run it and look for C:\WX\WXNOW.TXT which WXNOW.EXE must create.

NOTE - UI-View32 will wait for a maximum of 15 seconds for the program to finish executing.

Max age (mins) - the WX data file contains the time at which the information was written into the file. This parameter specifies how old the WX data can be before UI-View32 refuses to transmit the beacon.

NOTE - If the WX data is out of date, then UI-View32 will send the station beacon, provided that sufficient information has been input in Station Setup. This will happen even if Beacon interval in Station Setup is set to '0'.

Ping, Query and DX Query

The way these commands work depends on whether you have got UI-View(32) extensions enabled in APRS Compatibility, and whether the station on which you are using the commands is running UI-View(32).

UI-View(32) extensions enabled and the other station is using UI-View(32)

All the following queries are sent using UI-View message format.

Ping sends a message which contains only ASCII character code 254. The other system recognizes it as special message and does nothing more than send an ACK, it doesn't display the message in its message list. When your system receives an ACK, it will pop up a window saying how many times the ping was sent, and how long the round trip took for the successful ping. If five attempts fail, then the ping is abandoned.

You can input a digi path for the ping, which makes it useful for testing different paths to distant stations.

Query sends a message to another UI-View user, which contains only ASCII character code 253. The other system recognizes it as special message and sends back the Station Information.

DX query sends a message to another UI-View user, which contains only ASCII character code 252. The other system recognizes it as special message and sends back details of the best DX in its current station list, ignoring stations heard via digipeaters.

See UI-View32 Message Protocol for more information.

UI-View(32) extensions disabled or the other station isn't using UI-

View(32)

All the following queries are sent using APRS messages without a sequence number. The messages are only sent once, and the format means that the only acknowledgement you get from the other station is their response to the query.

Ping sends the APRS query "?APRST". This results in the other station responding with the path by which it received your query.

Query by default, sends the APRS query "?APRSS". This results in the other station transmitting its status text. However, you can make Query send any other APRS query by editing the QUERY entry in the [MESSAGES] section of UIVIEW32.INI.

DX query sends the UI-View specific query "?DX". This will currently only work if the other station is also using UI-View. It results in the other stations responding with the details of the best DX in its current station list, ignoring stations heard via digipeaters. Although currently only UI-View stations will respond to this query, I hope that eventually a DX query will become part of the APRS protocol. If it does, it is unlikely to be "?DX", but you can change the query message by editing the DX_QUERY entry in the [MESSAGES] section of UIVIEW32.INI.

If you try and use any of these options on station that isn't showing the UI-View32 flag in its beacon, then you will get a warning message.

If you are using any of these functions, and you are unsure what digi path (if any) to use, then you have two options available:-

- Double click in the Digi text box, or press Ctrl+D with the cursor in the box, and UI-View32 will insert the default digi path for the selected port, according to what you have configured in Station Setup.
- Press Ctrl+R with the cursor in the box, and UI-View32 will attempt to recommend a digi path based on traffic heard from the station.

KISS Setup

Into KISS - these settings allow you to input up to four commands that will be sent by UI-View to the TNC to put it into KISS mode. If you wish to put control characters in the commands, then, for example, "^M" (as used in some of the "Easy Setup" settings) will send a "control M" character (ASCII code 13), "^C" would send a "control C" (ASCII code 3), etc.

(See Exit Host Mode for how to avoid problems if you use your TNC with other software that leaves it in host mode.)

Exit KISS - specifies the ASCII character codes to be sent to the TNC to get it out of KISS mode when UI-View32 closes.

Easy Setup buttons - allow you to easily set the "Into KISS" and "Exit KISS" commands for various popular types of TNC. "D700" is for the Kenwood TM-D700, it

will put the radio into KISS mode without the user needing to manually switch it into "TNC PKT" mode.

Parameters - the default "Parameters" settings should be ok, but you can reduce "Tx Delay" to the lowest value that gives reliable operation with your radio. NOTE - the units are 10 msec. In the very unlikely event that your TNC needs any other KISS parameters sending to it, besides the four that you can specify from this dialogue, then you can put them in KISSPRM1.CMD for port 1 and KISSPRM2.CMD for port 2. There are comments in the sample KISSPRM1.CMD file explaining how to use it.

Full Dup - If you check this box, then the TNC will be set to full duplex. This means it will transmit even if the channel is busy. You should only ever use full duplex if you are taking part in meteor scatter tests on a special frequency (NOT the normal APRS frequency!), because you might then wish to transmit at the same time as other local stations. The setting of this parameter is not retained between program sessions, to make sure that you can't accidentally forget to turn it off.

Dual Port TNC - check this box if you have a Kantronics dual port TNC and you want UI-View to be able to support both ports. Port 1 will be the VHF port and port 2 the HF port. If you don't check this box, then only the VHF port is supported.

Station Information

NOTE - The station information is only sent in response to a UI-View format station query, There is no equivalent APRS query, and so for most users it serves no purpose. It is only left in for backward compatibility with old versions of UI-View.

You can input up to five lines of information about your station. If another UI-View32 user queries your station, then this information is automatically sent. If you don't input any information, then UI-View32 simply sends - "No information available".

When UI-View32 sends your information in response to a query, it adds a line saying "Start of information from <callsign>" before the information, and a line saying "End of information from <callsign>" after the information. (<callsign> is your callsign)

The Station Information is kept in a file called STNINFO.TXT and the file is read every time the information is sent. This provides the potential for an external program to update the file and so make real-time information available via the query function. (The file is limited to five lines.)

You can include the token \$VERSION in your station information. It is replaced with the program version before it is transmitted. E.g. If you were using UI-View32 V1.54, "Roger in Boston, running \$VERSION" would become "Roger in Boston, running UI-View32 V1.54".

Start Logging

The start logging dialogue allows you to select an existing log file from the list, or

input the name of a new log file. The default log file name is made up from today's date.

If you select an existing file, then you will be prompted as to whether you want to append to it or overwrite it.

You can delete log files from this dialogue by highlighting the name and pressing the Delete key.

Logging keeps a record of all station beacons, WX beacons and GPS mobile beacons heard by UI-View32.

Log Replay Toolbar

Use the drop down list to select the log file you wish to play, and select the speed at which you want to play it. Pressing the play button will play the file. The pause button will pause playing. The rewind button takes you back to the beginning of the file. The stop button will close the toolbar.

When a log is playing, the date/time of the log events is displayed in the "Replay date/time" box. A vertical white line on the box shows the current position in the log.

You can move earlier or later in the log by clicking or dragging on the "Replay date/time" box. This will cause the white line to move, and the replay pointer will be repositioned in the log. Note - the replay pointer will be positioned at the first valid log record after the position you select. If there are only a few records in the log, then the white line may appear to jump forwards.

The maximum speed attainable in playing a log depends to some extent on the PC processor, but the fastest speed possible is 4 log record per second times the setting of FAST_COUNT in the [USER] section of UIVIEW32.INI.

Two sample logs are included with UI-View32:-

G8MZX is a log of me driving around Boston and so is best replayed using the Boston map.

SLINCS is a short log of local activity in the south Lincolnshire / north Cambridgeshire area, and is best replayed using the "South East Lincolnshire" map.

See Log File Format for information about the structure of log files.

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Log Record

The pause button will pause the recording. When the recording has been paused the record button will restart it. The stop button ends the recording.

See [Log File Format](#) for information about the structure of log files.

Miscellaneous Setup

This dialogue allows you to configure various miscellaneous parameters.

Global Beacon Trigger - this is the message sent when you use "Action", "[Query All Stations](#)". Also, if your system hears this message, then it will send out its station beacon within one minute. (Assuming that you have configured a beacon and you are not using WINPDDE mode. If you check "No UI-View32 extensions", in the "APRS Compatibility" dialogue, then this option is not available, and the global trigger will be set to "?APRS?".

You can either select the UI-View32 default trigger message with the check box, or deselect the default and input a different message in the text box. To be compatible with [APRS](#), the trigger should be changed to "?APRS?".

Auto Refresh Mode - This allows you to select what mode to use for refreshing the screen when stations move, are deleted, or expire. The options are:-

- Immediate - the screen is refreshed every time a stations moves, is deleted, or expires. This is the default, and should be used until you have so many stations on the screen that refresh becomes noticeably slow.
- Timer - the screen is refreshed every "mins" minutes, if a refresh is needed. Between refreshes "dead" stations are marked with a cross and the label is grayed out.

Note - If you connect to an internet server, then Timer will be used, even if you have selected Immediate.

Station List Auto Sort - allows you to select what method you want UI-View32 to use to automatically sort the Station List whenever it is updated:-

- Sort by time - in chronological order with the most recent at the top.
- Sort by callsign - in alphabetical order of callsigns.
- Sort by distance - in order of distance, with the most distant at the top.

The default is that the Station List is not automatically sorted. If you connect to an internet server, then auto sort is disabled until you disconnect.

Beacon pause - if you send beacons on multiple ports, beacon pause specifies the delay in seconds between the beacons going out on the different ports. The default is 5 seconds, and there should rarely be a need to change it.

Random grid square plot - if this box is checked (the default) then a random element is added to the position of stations that transmit IARU grid square locators, before they are plotted. This is to avoid them being plotted on top of each other if two or more stations are heard in the same grid square. If the box is not checked, then

the stations are plotted in the centre of the square. NOTE - the position randomization is done when the stations are first added to the stations list. Therefore, if you change this setting, it may have no obvious immediate effect.

Put icon in SysTray - if this box is checked, then when you minimize the map window or the message window, they appear as an icon in the SysTray. (The SysTray is the collection of icons on the right hand end of the Windows taskbar.)

Translate to ASCII - by default UI-View32 will translate any Windows extended ANSI character codes to their ASCII equivalent. In countries where Windows uses a double byte character set (DBCS), it may be best to uncheck this option.

Expire time - this is the length of time since a beacon was last heard from it, that a station will be left on the display. The default is 60 minutes. This fits in nicely with a beacon interval of 30 minutes. If you don't want stations to ever be expired, then put '0'.

Object interval - this is interval at which information about any objects you own is transmitted. See Objects.

Label symbols - if this box is not checked, then station and object symbols aren't given labels when they are drawn on the map. See UI-View32 Symbols for more information about station symbols.

Only label translations - if you check this box, then only stations, for which a callsign translation has been input in the Edit Translations dialogue, will be labeled. This allows you to label stations that are important to you, but not label all the others. Note - you can translate a callsign to itself, and so this option can be used to filter the labeling, even if you wish to see the real callsigns on the map.

Show label background - if this box is checked, then the callsign labels on the map are displayed with a coloured background. Uncheck the box if you want the labels to be displayed with no background.

Relaxed locator check - if this box is checked (the default), then UI-View32 will look for a IARU locator anywhere in a station beacon. E.g. it will recognize the locator in "Roger in Boston, IO92XX" and plot the station. If this box isn't checked, then only locators inside "[]" at the start of the beacon will be recognized. E.g. "[IO92XX] Roger, in Boston". Relaxed checking makes it more likely that data will be recognized as a beacon that isn't, and so this option is available to turn it off. This option isn't available if you check "No UI-View32 extensions", in the "APRS Compatibility" dialogue.

Relaxed frame type check - By default UI-View always checks the frame type, and discards all frames other than UI frames. This is because the APRS protocol only use UI frames. (Most APRS software doesn't bother to check the frame type, and can be very easily fooled into processing invalid data.) To be able to check the frame type, UI-View needs to see frame headers that include frame type information, e.g. "<UI>". In certain exceptional circumstances this information isn't available, and so UI-View will discard all frames unless you check this option. **PLEASE NOTE** - with any sort of

normal TNC in terminal mode, or if you use KISS, BPQ or AGWPE modes, you **never** need to use this option.

Synth callsigns - if this option is checked, then UI-View32 will "speak" the callsigns of stations when it announces them by using the WAV files in the WAVBITS subdirectory. See Announce Stations.

"More" in detail windows - when a detail window is opened for a station by double-clicking it or selecting "Details" in a list, there is a More button which opens up the window to show extra information about the station. If this option is checked, then the More button is automatically clicked whenever a detail window is opened.

Show splash screen - this option allows you to enable/disable the splash screen that is shown when UI-View32 starts up.

Show start-up tips - this option allows you to enable/disable the tips that are shown when UI-View32 starts up.

Object auto update defaults to enabled - sets the default for "Auto update object posit" in the Object Editor.

Extra maps path - specify a path to be used for storing maps in addition to the default of the MAPS subdirectory. This option is intended for use if you want to put maps on a CD.

Don't label special symbols - This option was in Miscellaneous "Setup" in earlier versions of UI-View32, but it has now been removed. If you need to use it, you can access it by editing the DONT_LABEL_SPECIALS parameter in the [SETUP] section of UIVIEW32.INI.

Right-Click Menu

The following options are available on the right-click menu. Note that the options made available depend on whether you right-click on a station, an object or an overlay item.

Details (station) - display information about the station.

Delete Station/Object - removes the station or object from the map.

Send Message - opens the Message Window.

Edit Object - edit this object with the Object Editor.

Finger WxSvr - this option is only available if you right-click an object, and it appears to be a weather object output from KG5QD's WxSvr. Selecting the option sends a query to WxSvr to retrieve the full text of the NWS alert that generated the object.

Ping - sends a ping to the station.

Query - sends a query to the station.

DX? - sends a DX query to the station.

Track - enables/disables tracking of the station.

Callbook - look up the callsign in a callbook. (Only available if you have a callbook server installed.)

www.findu.com - if you select this option, it opens your default browser and connects to www.findu.com on the internet, with an appropriate query to find information on the selected station. Obviously this option can only be used if you have an internet connection available on your PC. See Right-Click URLs for more information.

www.qrz.com - if you select this option, it opens your default browser and connects to www.qrz.com on the internet, with an appropriate query to look up the selected station in the QRZ callsign database. Obviously this option can only be used if you have an internet connection available on your PC. See Right-Click URLs for more information.

Colours... - displays a sub-menu with options for setting the foreground, background and border colours of the callsign labels. (The default background and border colours are both white, so no border is visible until one of the two colours is changed.) Note that the colours apply to the callsign labels on all the stations, not just to the station that has been clicked.

Font - allows you to select the font used for the callsign labels.

If you check "No UI-View32 extensions", in the "APRS Compatibility" dialogue, then Ping, Query and DX? aren't available.

UI-View32 Beacons

UI-View32 can transmit three different types of position beacon - a fixed station beacon, a mobile station beacon and a weather station beacon. The format of all these beacons is compatible with APRS.

UI-View32 can receive all these types of beacons, plus IARU locator beacons, GPS NMEA 0183 beacons from mobile systems using a GPS connected to a TNC and radio, and Mic-E format beacons.

(NOTE - no transmission is possible if you are using WINPDDE host mode.)

Fixed and Mobile Station Beacons

You configure these beacons using the Station Setup dialogue. A "normal" fixed station beacon will include your latitude and longitude, however, if you wish, you can transmit only your IARU locator.

Weather Station Beacon

You configure the beacon using the WX Station Setup dialogue. To be able to transmit weather beacons, you need to have software on your PC which reads the data from the weather station and writes it into a file. UI-View32 does not directly support any weather stations. See UIWX.TXT for further information.

UI-View32 "understands" the above beacon formats and will display icons for stations transmitting those beacons. It also understands two additional types of beacon:-

Locator Beacons

If a station includes an IARU locator in its beacon text, then UI-View32 can display an icon for the station. Exactly how UI-View32 behaves depends on the setting of "relaxed locator check" (see Miscellaneous Setup). If "relaxed locator check" is enabled, then UI-View32 will look for a locator beacon anywhere within the beacon text. If it isn't enabled, then the locator must be at the start of the beacon text and enclosed in "[]".

Example - If the beacon text is "Roger in Boston - IO92XX" then the station will only be plotted if "relaxed locator check" is enabled. If the beacon text is "[IO92XX] Roger in Boston", then it will always be plotted.

When a station icon is plotted from a locator, it is plotted somewhere within the relevant square. Although the theoretically correct point to plot it is probably at the centre of the square, a degree of randomization may be applied so that multiple stations in the same square don't all plot on top of each other. Whether randomization is applied depends on the setting of "Randomize grid square plot" in "Miscellaneous Setup".

GPS NMEA 0183 Beacons

UI-View32 will display beacons transmitted by mobile stations using a GPS connected to a TNC and radio. (This type of station is sometimes called a tracker.) The mobile must be outputting the NMEA 0183 GPRMC, GPGGA or GPGLL sentences.

Mic-E Beacons

Mic-E (microphone encoder) beacons are a compressed format. They are transmitted by a special device, fitted between a microphone and a rig, which accepts GPS input. The Kenwood TH-D7 also transmits a Mic-E format beacon.

The Terminal Window

By default, the terminal window shows all traffic heard by UI-View32. However, it can also be used for monitoring the DX cluster - see DX Cluster Spy mode.

If you are using host mode NONE, and are therefore using a TNC in terminal mode, the terminal window has a command line at the bottom, which you can use for sending commands to the TNC.

UI-View32 leaves the TNC in converse mode, therefore, before you send any commands, you **must** first send Ctrl+C to put the TNC in command mode, and you **must** send "CONV" (or "K") to put it back in converse mode when you've finished. Buttons are provided for these two functions or you can key in the commands. Closing the Terminal window will also put the TNC in converse mode.

Please **do not** try and use the command line for making connections, UI-View32 frequently sends commands to the TNC and you will get in a big mess if you try and use the terminal window to make connections! The only reason the command line is available is so you can experiment with TNC settings if UI-View32 is not behaving as it should.

Menu Options

Clear - Clears the terminal screen.

Hide - Hides the terminal window.

Save - Saves the terminal window text in a file named according to the date and time at which it was saved. This is mainly intended for debugging, since it provides an easy way to collect some sample data for sending to me, if you are having a problem with UI-View32 not correctly decoding monitored data.

Options, Only Update When Visible - If this option is checked, then the Terminal window won't be updated if it is hidden. The only situation in which you might choose to select this option is if you find that UI-View32 struggles to keep up with the volume of incoming data when you are connected to the internet. Selecting this option and hiding the Terminal window can result in a significant reduction in the load UI-View puts on the PC processor.

Options, DX Cluster Spy - Enables DX Cluster Spy mode.

Options, DX Cluster Options - See DX Cluster Spy mode.

Options, Filter - The options on this sub-menu allow you to filter the traffic that is displayed in the Terminal window.

Options, Colours - Allows you to change the colour of the text.

Options, Log All Monitored Data - If this option is checked, then all data displayed in the Terminal window is saved to file, exactly as it is displayed. The files are put in the MonLog folder, and are name YYYYMMDD.TXT. For example, 20010926.TXT for 26th September 2001. The file name automatically changes at midnight. The log file buffer is flushed to disk at least every 5 minutes, and when UI-View32 is closed.

Note - This is a raw data dump, it isn't in UI-View32 log file formatted, and it is only intended to be used for special purposes.

UI-View32 Symbols

The Concept Of Symbols (also sometimes called icons)

A station includes in its beacon information one or more characters that identify the type of station. A station receiving the beacon uses that information to decide what graphic to use to represent the station.

The symbols are made up from three files - SYMBOLS.TXT, SYMBOLS.BMP and SYMBOLS2.BMP. Comments in SYMBOLS.TXT explain how it works. This system is very flexible and allows you to alter the symbol images if you should so wish - you don't have to put up with my fairly unartistic efforts!

The symbols are fully compatible with APRS.

Special Symbols

Besides using the symbols configured with the above files, UI-View32 also allows you to use special symbols for individual stations by putting suitable BMP files in the SYMBOLS subdirectory. The BMP files should be 256 colours and can be any size. Example - if you put a file called G4IDE.BMP in the SYMBOLS subdirectory, then that file would be used if you heard a beacon from G4IDE.

Translation

The [TRANSLATE] section of SYMBOLS.TXT allows you to specify types of callsigns or individual callsigns that will be represented by a particular symbol, irrespective of what symbol they transmit, or whether they are transmitting a full latitude/longitude beacon, or only a locator.

The "pattern matching" that can be used to specify callsign types is very powerful, however, normally nothing more will be required than to use '?' to mean "any character", and '*' to mean zero or more characters.

The default entries are -

```
[TRANSLATE]
GB7???=BBS
GB7??=NODE
```

They make sure that all GB7 + three letter stations will be shown as a BBS, and all GB7 + two letter stations will be shown as nodes. If you don't want that to happen, then simply delete these entries.

An example of putting an individual callsign would be -

```
G8MZX=NODE
```

That would ensure that G8MZX was displayed as a node.

Weather Data Format

Here, between the two lines of '*'s is the format of the file your wx software needs to create (the lines of '*'s are not part of the file).

```
*****
Jun 01 2003 08:07
272/000g006t069r010p030P020h61b10150
*****
```

272 - wind direction - 272 degrees

010 - wind speed - 10 mph

g015 - wind gust - 15 mph

t069 - temperature - 69 degrees F

r010 - rain in last hour in hundredths of an inch - 0.1 inches

p030 - rain in last 24 hours in hundredths of an inch - 0.3 inches

P020 - rain since midnight in hundredths of an inch - 0.2 inches

h61 - humidity 61% (00 = 100%)

b10153 - barometric pressure in tenths of a MILLIBAR - 1015.3 MILLIBARS

The first line is the time the file was created **in local PC time**. Please note that the day of the month, the hour and the minute must be padded to two digits with zeros if needed, **so this would be wrong - Jun 1 2003 8:7**.

The second line is the wx report, in the format used in APRS "complete weather reports".

Not all the values need to be sent, but you should at least include wind direction, wind speed, wind gust and temperature. If any of them are not available, then replace the value with three dots - "..."

If humidity and temperature are included, then a UI-View32 system receiving the beacon will also calculate and display dew point temperature. If temperature and wind speed are included, then a UI-View system receiving it will also calculate and display wind chill temperature.

UI-View(32) Messages

UI-View(32) messages are rather different to messages used in "normal" packet communication.

Usually, in order to send someone a message, you have to make a connection to their system. You then either chat "live" with them or leave a message in their PMS. Whichever you do, the exchange of information is made using AX25 connected mode.

UI-View(32) messages are much more casual. You can send another UI-View(32) user a message at any time, simply by putting his callsign in the "To" box, inputting some text and pressing <return>. The message is sent as a UI frame and the

acknowledgement is also by a UI frame. Connected mode is never used for UI-View(32) messages.

Any message text addressed to you will be saved in files named according to the sender's callsign if "Options", "Save To File" is checked.

UI-View(32) supports two formats of message - it's own format and also APRS format. Although UI-View(32) format has some advantages over APRS format, users of other APRS software will not be able to receive UI-View(32) format messages. If you operate in an environment where most users aren't using UI-View(32), then you should use APRS format.

UI-View(32) format messages have a very wide "window" and it is possible for lines to be received in the wrong order. If the lines are addressed to you, then missed lines will be shown as e.g. "seq. number 21" and filled in when the line is eventually received. APRS format does not support this option, therefore the message sequence number is shown when displaying APRS format messages, so that you can read them in the correct order, should they arrive out of sequence.

When using APRS format, a few messages are regarded as having a special meaning - see APRS Bulletins and also APRS Queries.

When using either UI-View32 or APRS format messages, some messages can be used as remote commands. See Remote Commands.

For technical information on UI-View(32) format messages, see UI-View32 Message Protocol.

See Message Menus for information on the menu options available on the message screen.

The Top Window

The top window on the message screen shows monitored message traffic. Several different display options are available, selectable via the tabs:-

- **All** - All message traffic is shown.
- **Mine** - Only messages addressed to you or from you are shown.
- **BLN** - Only APRS bulletins, announcements.
- **Other message groups** - As configured using the Message Groups on the Options menu.

All the displays are continually updated, irrespective of which one you are viewing.

If you double-click on a callsign in the "From" or "To" column of the window, then the callsign is automatically put into the "To" box, and the cursor is positioned in the "Text" box.

If you right-click on a message, then its date and time are shown. To clear the date/time, either left-click it or left-click somewhere else. I have used that method,

rather than adding a date/time column, because at 640x480 screen resolution (still used by many people) there isn't sufficient screen width available to add the extra column, unless I use a smaller font.

The Bottom Window

The bottom window shows lines of text that you have sent.

The Status column shows the status of each message line:-

Two digits - the number of times a message has been sent.

Y - an ack has been received for the message.

N - the message has failed.

H - (APRS format messages only) the message is held because a previous message to this station has not yet been acked.

BLN - the message is an APRS bulletin.

ANN - the message is an APRS announcement.

If a line has a status of 'N' then it can be resent by double-clicking it.

To

The callsign of the station to whom you are sending the message line. The drop-down combo box is automatically filled with the callsigns of all stations with whom you exchange messages.

Port

The port on which to send the message. (Only relevant on multi-port systems). It will default to whatever port is configured as the default message port, which can be changed from the Options menu. If you are logged on to APRServe on the internet, then you can specify a port of 'I' for Internet. If you use port 'I', then the Digi field is disabled.

Digi

The digi path (if any) that you want to use. UI-View32 saves the last successful digi path for each station. If you are sending a message to a station, and are unsure what digi path (if any) to use, then you have two options available:-

- Double click in the Digi text box, or press Ctrl+D with the cursor in the box, and UI-View32 will insert the default digi path for the selected port, according to what you have configured in Station Setup.
- Press Ctrl+R with the cursor in the box, and UI-View32 will attempt to recommend a digi path based on traffic heard from the station.

Text

Enter the text you want to send, then press <return>. The maximum line length is 67 characters for APRS format messages, 55 for UI-View format messages, and 45 for messages to a TH-D7 user. The number of characters still available in the current message is shown in brackets after the 'Text' label. If you try to exceed the maximum length, then what happens depends on the setting of Auto Wrap on the message

Options menu -

If Auto Wrap is checked, then lines are automatically split.

If Auto Wrap is not checked, then you cannot input any more characters.

If you press Ctrl+S, then a "start of message" line is created, pressing Ctrl+E creates an "end of message" line.

APRS

Check this box to use APRS format messages if the other station is running APRS. If you check "No UI-View32 extensions", in the "APRS Compatibility" dialogue, then this checkbox isn't available, because APRS format messages will always be used.

TH-D7

Check this box if the other station is using a TH-D7. It selects APRS and limits the line length to 45 character.

Name

This text box allows you to input the name of the station operator. It will be automatically saved and displayed the next time you send a message to the station. The name has no function other than to help you remember what people are called!

Round Table Discussions

If you conduct a discussion between more than two UI-View(32) users, then you will all see each other's message lines. However, only the person to whom your lines are addressed is guaranteed to see everything from you. They ack your frames, and if someone else misses a line from you, that line won't be resent. Therefore, for best results, you should address your frames to the person in the round table who has the worst link to you.

The Toolbar

The toolbar buttons are shortcuts to menu options. The options associated with each button, starting at the top of the toolbar, are:-

"Map", "Load A Map"

"Map", "Previous Map"

"Map", "Next Map"

Ctrl+PgUp (zoom out)

"Options", "Show Map Outlines!"

"Terminal"

"Stations"

"Messages"

"Action", "Object Editor".

You can move the toolbar by dragging the blue end with the mouse. Double-clicking the blue end rotates the toolbar between vertical and horizontal. If you pause the mouse over a button, then a "tool tip" is shown.

Clicking the 'X' on the toolbar hides it. To display it again, use "Options", "Show Toolbar".

If the Previous, Next or zoom out options are currently unavailable, then the arrows are "greyed out".

Extra buttons for loading specific maps can be added to the toolbar by creating BTN files. See "BTN Files" in [UI-View32 Maps](#). The [Make A Button](#) option on the Map menu can be used to create a BTN file and an associated BMP file for the currently loaded map. You can delete map buttons by right-clicking them.

Previous Map

This option will take you to the previous map that you were viewing in this UI-View32 session. The option is only available if there is a previous map. Ctrl+P and the left arrow on the toolbar are shortcuts to this option.

Next Map

For this option to be available, you must have previously used the Previous Map menu option. Next Map takes you to the map you were viewing before you used Previous Map. Ctrl+N and the right arrow on the toolbar are shortcuts to this option.

Exclude/Include Lists

IMPORTANT - These lists work differently to the excluded list in UI-View32 V1.75 and earlier. Also, there is a comment at the end of this section about an INI file setting that has an effect on exclusions.
--

The "Exclude/Include Lists" dialogue allows you to specify callsigns and destinations that you don't want plotted on your maps, or that you do want plotted to the exclusion of all others. There are also various other exclusion options available that will exclude all beacons of a specific type, or exclude message traffic received via certain routes.

When beacons are excluded, they are still stored in UI-View32's internal database, so if you clear the exclusions the stations will immediately appear.

NOTE - if you exclude internet traffic, your IGATE will continue to function normally.

If you click 'Ok', then any changes you have made are immediately applied. If you click 'Cancel', then any changes you have made are abandoned, including any changes you may have made in the [Exclude By APRS Symbol Type](#) dialogue.

The **Enable exclusions** checkbox provides an easy way to globally enable/disable the exclusions you have set.

The Lists

The Callsigns / Object Names and Destinations lists only affect position beacons and objects, they do not affect message traffic.

Input a callsign /object name or a destination address in the text boxes underneath the lists, and press <return> to add it to the list. Highlight a callsign / object name or destination address in the list and press the Delete key to remove it from the list. Double-click a callsign / object name or destination address to remove it from the list and put it in the text box for editing.

You can use '*' as a wildcard on the end of a callsign / object name or address, so **G4*** in the callsigns list would exclude all callsigns starting with **G4**.

You can also use the lists as "include" lists. If any entries in the lists are prefixed with a "!" then only those callsigns or destination addresses will be allowed, and all others will be excluded. For example, **!G***, **!M*** and **!2*** in the callsigns list, would result in all stations being excluded except stations with UK callsigns (and tactical callsigns starting with G, M and 2.)

If you input a destination address as an "include" address, then it effectively allows you to create an APRS ALTNET.

NOTE - because the APRS spec allows space characters in object names, the Callsigns / Object Names list will accept spaces. Make sure you do not accidentally put spaces in callsigns, because it will stop the exclusion from working.

Ignore destination with Mic-E - If you select this option, then filtering by destination address is not applied to Mic-E format position beacons. Explanation - In a Mic-E posit, the destination address forms part of the data, it is not something that the user can select.

Exclude By Posit Type

Separate checkboxes are available for stations and for objects. (Overlays are regarded as objects.)

Exclude fixed posits - Fixed stations are ignored.

Exclude wx posits - WX stations are ignored.

Exclude mobile posits - Mobile stations are ignored. (This includes all stations transmitting a posit beacon containing course and speed.)

Exclude By Traffic Type

Exclude digi'd stations - Beacons heard on RF, by an indirect path, are excluded. Note that this will also exclude IGATE'd traffic. This is useful if you want to use UI-View32 as a propagation indicator.

Exclude IGATE'd stations - Beacons that have been gated to RF from the internet

will be ignored.

Exclude internet traffic - When you are connected to the internet, beacons received from the internet will be ignored.

Maximum Distance

The "Exclude stations more than ? miles/km away" option allows you to ignore all stations greater than a selected distance away from your station. It is intended to be used if you are only interested in seeing local traffic.

The Messages Checkboxes

Exclude IGATE traffic - Messages that have gated to RF from the internet will be ignored, other than messages addressed to your station callsign or your wx station callsign.

Exclude internet traffic - When you are connected to the internet, messages received from the internet will be ignored, other than messages addressed to your station callsign or your wx station callsign.

Exclude By Symbol Type

If you click this button, the Exclude By APRS Symbol Type dialogue opens.

Clear All Exclusions

If you click this button, then any exclusions you have set are cleared, including any exclusions you have selected in the Exclude By APRS Symbol Type dialogue.

UIVIEW32.INI - DIRECT_MINUTES

Versions of UI-View32 before V1.82 behaved like this - If they heard a posit beacon from a station via an indirect path - digi, internet, or IGATE - and the same posit had been heard direct in the previous two minutes, then the indirect frame was discarded.

From V1.82 onwards, the two minute period can be altered by editing the DIRECT_MINUTES parameter in the [USER] section of UIVIEW32.INI. (You need to restart UI-View32 for the change to take effect.) Note - for most purposes the default setting of two minutes works fine.

Also, from V1.82 onwards, the period during which indirect frames are ignored is applied in a more sophisticated way -

1. If a posit is heard from a station via an indirect path - digi, internet, or IGATE - and the same posit has been heard direct in the previous DIRECT_MINUTES minutes, then the indirect frame is discarded.
2. If a posit is heard from a station via a digi, and you have checked "Exclude digi'd stations", and **any** posit has been heard direct from the station in the previous DIRECT_MINUTES minutes, then the digi'd frame is discarded.
3. If a posit is heard from a station via an IGATE, and you have checked "Exclude IGATE'd stations", and **any** posit has been heard direct from the station in the

previous DIRECT_MINUTES minutes, then the IGATE'd frame is discarded.

4. If a posit is heard from a station via the internet, and you have checked "Exclude internet traffic", and **any** posit has been heard direct from the station in the previous DIRECT_MINUTES minutes, then the internet frame is discarded.

One result of the above is that, by putting a large value in DIRECT_MINUTES, a station heard direct on RF will remain a direct station for a long period, which is useful if you are using UI-View32 to study propagation.

UI-View32 DDE

UI-View32 will act as a DDE source. It makes three items available to other applications, and one dummy item can be used to send a LinkExecute command:-

1. All data that appears in the monitor window is made available. NOTE - this is data appearing in the Monitor Window, i.e. data that UI-View32 understands, not data appearing in the Terminal Window.

Technical Details

DDE topic: UIVIEW32|UIVData

DDE Item: labDDE

Data format:: <01>frame header<CRLF>frame data<CRLF> "<01>" is a single character that alternates between a '0' and a '1'. "<CRLF>" is a carriage return / line feed pair. The destination application is guaranteed to receive the data as a pair of lines.

2. If the "DX Cluster Spy" option is enabled on the terminal window, then all DX spots received are made available.

Technical Details

DDE topic: UIVIEW32|UIVData

DDE Item: labDxSpot

Data format:: The information is supplied as a variable length record. The field separator is ASCII character code 255, and the record terminator is a carriage return/linefeed pair. The record contains the following fields -

- The complete DX spot line
- Callsign
- Frequency in kHz
- Latitude
- Longitude
- Beam heading
- Distance
- Distance units - '0' for km or '1' for miles

The last five fields are derived from the information in PREFIX.TXT. If a callsign prefix cannot be found, then latitude and longitude are both set to "-32,768" and the other fields are set to '0'.

3. A callbook server should use the item labCallbook to obtain information on callsign to lookup.

Data is passed to the server whenever a user selects "Callbook" on the Right-Click menu, or clicks the '?' Button in station details window. (The "Callbook" option and the '?' Button are only available when UI-View32 detects that a callbook server is running.)

Technical Details

DDE topic: UIVIEW32|UIVCallbook

DDE Item: labCallbook

Data format:: A record containing the following fields, all in ASCII and separated by ASCII character code 255 -

- Callsign (no SSID)
- X screen coordinate in pixels of the suggested location to place the callsign information window
- Y screen coordinate in pixels of the suggested location to place the callsign information window
- The window handle of the UI-View32 map window
- A field that is either a '0' or a '1'. It serves no purpose other than to ensure that the data cannot be the same twice in succession, and guarantees that it will always generate a change event with servers written in Visual Basic.

Use the coordinates with caution (or ignore them if you prefer). If the callbook server is called from the right-click menu, the coordinates are the location of the click. If it is called from a station details window, the coordinates are the top left corner of the window.

The window handle may be useful if you want to display a pop-up window and make it a child of the UI-View32 map window.

4. A Link Execute command can be used to ask UI-View32 to display a log file or Station List snapshot.

Technical Details

DDE topic: UIVIEW32|UIVData

DDE Item: labCommand

Data format:: Send a Link Execute command with the format **LOGPLAY** pathname where pathname is the full path name of a file containing a UI-View32 log or Station List snapshot. UI-View32 will auto-differentiate between the two file formats and makes its own copy of the file.

This Link Execute command is used by WinPack to ask UI-View32 to display log files or Station List snapshots contained in packet messages. See Using UI-View32 As A WinPack Viewer.

The Monitor Window

At the bottom of the main screen is a two-line monitor window. This window displays all beacon data that UI-View32 "understands".

Also, if any comms errors occur on the TNC COM port, they are displayed in this window.

The window can be zoomed up to full screen height by double-clicking it, by pressing Ctrl+Z, or by using "Options", "Zoom Monitor".

When the window is zoomed up, the following command buttons are available:-

Freeze the text in the window. This stops new text being added to the window until you **Unfreeze** it.

Search the text in the window - a dialogue opens allowing you to put in the text you want to find. NOTE - it's usually best to move the cursor to the start of the text in the window by using Ctrl+Home, before you search.

Shrink the window back down to two lines.

UI-View32 Quick Start Guide...

What Is UI-View32?

UI-View32 is an APRS application for 32 bit Windows. It differs from most APRS software in that it isn't designed just to be used with TNC's in terminal mode. It also supports TNC's in KISS mode, AGWPE host mode, BPQ host mode, WA8DED/TF host mode, and the variant of it used in the SCS PTC-II and PTC-Ile. The host mode support means that UI-View32 can be used with an extremely wide range of packet hardware and allows up to 100 RF ports to be used.

UI-View32 has a full-featured internal intelligent digipeater.

UI-View32 has full support for connecting to APRS servers on the internet.

UI-View32 has a wide range of mapping options available. It can use both bitmap maps, and maps provided by plug-in map servers that completely integrate into the main program. Servers are currently available for -

- Undertow Software's Precision Mapping CD atlas of the USA.
- DOS and WinAPRS maps.
- Online maps from MapBlast.

UI-View32 has an open architecture. It is designed to make it easy for other software

authors to write add-on applications that provide additional functionality, and a wide range of add-ons are available.

System Requirements

The minimum recommended hardware spec for running UI-View32 is at least a P120 and 32Mb of RAM. It will run on far less than that, but it will be slow and you would probably be better off using the 16 bit version. It also needs a graphics card that supports 16 bit colour or better. It isn't happy running in 256 colour mode.

Before You Move On...

If you haven't already read LICENCE.TXT, please do so now. (In order to install the program, you accepted what it says, so you really should read it some time!)

The best way to find out what a program does is, of course, by using it. For step by step "get you going" instructions, please read the Quick Start Guide.

OS Atlas

The sample UK maps supplied with UI-View32 were made using the OS Interactive Atlas of Great Britain CD. The Ordnance Survey very kindly gave me permission to use these sample maps.

The atlas is available from the Ordnance Survey web site - <http://www.ordsvy.gov.uk/>

Show Map Outlines

If this option is enabled, then the outlines will be shown of any maps that have at least one corner on the map currently being viewed. One corner of each outline is a "hot" corner and is drawn as a solid square. You can load the map by holding down Ctrl and double-clicking on the "hot" corner. If you hold down Ctrl and right-click on the corner, then a description of the map is displayed.

UI-View32 Maps

UI-View32 supports two types of maps - bitmap maps, and virtual maps, which are made available by plug-in map servers. For information about map servers see UI-View32 Map Servers.

UI-View32 bitmap maps can be BMP, PNG, GIF, JPG or EMF files. By default the maps live in the UI-VIEW32\MAPS folder, but you can also put maps in a folder specified in 'Extra maps path' in Miscellaneous Setup. (Extra maps path is intended for use if you want to put maps on a CD.)

Maps should have a colour depth of at least 256 colours. GIFs are much smaller than BMPs in terms of disk space, but BMPs load faster. For drawn images such as maps, JPG files often do not compress as well as PNGs and GIFs, and the lossy

compression of JPG can spoil the image quality.

UI-View32 assumes that North is the top of the map, that latitude changes linearly along the Y axis and that longitude changes linearly along the X axis. If the maps do not meet those conditions then inaccuracies in plotting will occur.

For each map BMP, PNG, GIF, JPG or EMF file, there must be a matching INF file. E.g. if you have a map called GB.GIF then there must also be a file called GB.INF. AN easy way to create the INF file is to create the map graphics file, save it in the MAPS folder, then drag it from Explorer and drop it onto the map window. The Create An INF File dialogue will then open.

INF File Format

First line - the longitude and latitude of the top left corner of the map, separated by a comma. It doesn't matter whether longitude or latitude is first on the line.

Second line - the longitude and latitude of the bottom right corner of the map, separated by a comma. It doesn't matter whether longitude or latitude is first on the line.

Third line - up to 30 characters of description.

Format of longitude and latitude - [dd]d.mm.n[n]<NESW>.

d[dd] = degrees, one to three digits.

mm = minutes

n[n] = decimal minutes, one or more decimal places (NOT seconds)

Example INF file:-

```
9.47.9W, 57.12.4N  
5.46.6E, 50.18.1N  
Great Britain
```

It is also acceptable to put latitude before longitude:-

```
57.12.4N, 9.47.9W  
50.18.1N, 5.46.6E  
Great Britain
```

BTN Files

You can add buttons to the toolbar for loading specific maps by creating BTN files. The BTN files live in the UI-VIEW\MAPS\BUTTONS folder and should have the same name as the map with which they are associated. A BTN file contains a single line of text, if the text is the name of a BMP or ICO file, then that image will be used as the picture for the button. (The BMP and ICO files must be in the same directory as the BTN files.) Otherwise the text is used as the caption text for the button. (You can only fit about four letters on the button!) The Make A Button option on the Map menu can be used to create a BTN file and an associated BMP file for the currently loaded map.

Example 1 - GB.BTN containing a single line -

GB

Will add a button to the toolbar for the "Great Britain" map (GB.GIF) with the caption "GB".

Example 2 - GBNORTH.BTN containing a single line -

GBNORTH.BMP

Will add a button to the toolbar for the "Great Britain (North)" map (GBNORTH.GIF) and use GBNORTH.BMP in the BUTTONS directory as the picture for the button.

A recommended format for the .BMP files use on the buttons is 20 pixels by 20 pixels, 256 colours, using the default Windows palette. Icon (.ICO) images are slightly too big to fit in the buttons, so some of the picture is lost. If you want to use them, you will need to experiment in order to produce a satisfactory appearance.

If you load the map for which you want to make a button image into PaintShop Pro and reduce the size to 20 pixels by 20 pixels, you may well find that the result is quite satisfactory to be used as a button image. (MAKE SURE you save it in the BUTTONS directory! One false click and you can lose your map!)

Making Maps From The OS Atlas

The UK maps supplied with UI-View32 were created from the OS Atlas CD. The following notes explain how to make extra maps using that CD. I have not tried to make maps from any other sources. **If you make extra maps for your own use, please respect the copyright of whatever source you use.**

1. Learn to use the atlas!
2. Select the area for which you want to make a map. Turn off the layers you don't want. I always turn off the media pins, boundaries and relief. Sometimes I also turn off minor roads.
3. Display the map full screen.
4. Move the mouse to the top left corner of the map and write down the longitude and latitude as displayed on the read out.
5. Move the mouse to the bottom right corner of the map and write down the longitude and latitude as displayed on the read out. **Note that you can drag the navigation box out of the way. If you don't, then you may get the wrong coordinatescoordinates.**
6. Use "Print", "Save To File", to save your map in the UI-VIEW32\MAPS folder as a BMP.
7. Use a plain text editor to create the INF file, with the format as described above. (The read-out in the atlas is decimal minutes, so no conversion from seconds to decimal minutes is needed.)

You now have a usable map. However, it is a very large BMP file and it can be converted to a much smaller GIF by using a graphics utility such as PaintShop Pro.

Palette Problem

USING UI-VIEW32 IN LESS THAN 16 BIT COLOUR IS NOT RECOMMENDED!
PROBLEMS WILL OCCUR WITH PALETTE AND THE MAPS WILL SHOW SOME
VERY STRANGE COLOURS!

Zoom Monitor

This option zooms the monitor window up to full screen height, or shrinks it back to two lines if it is already zoomed.

Query All Stations

(Shortcut F11)

This option sends out the global beacon trigger message. All other UI-View(32) stations which are able to transmit a beacon, will transmit it within one minute of hearing this message.

If your system has more than one port, then the trigger message is sent on all ports.

The trigger message used can be configured in the Miscellaneous Setup dialogue.

NOTE - please do not use this option too often, as it can generate a lot of traffic.

Acknowledgements

Due thanks and acknowledgement are given to the following:-

Steve McMahon of vbAccelerator, who wrote the SSubTmr.dll control used in UI-View32, and also the original version of CmDIgd2.dll.

GM4ANB who wrote the original versions of my functions for converting between latitude/longitude and NGR.

David Taylor (davidtaylor@write.me.com) for supplying the World In Colour map image for exclusive use with UI-View. David's satellite tracking program WXtrack and weather satellite decoding software can be found at <http://www.satsignal.net>.

The coloured relief maps of the USA supplied with the CD version of UI-View32 were created by Andrew Birrell. The originals are available on his web site -

http://www.research.digital.com/SRC/personal/Andrew_Birrell/reliefMaps

. The only changes I have made are to trim off the borders, and convert them from JPEG to GIF. Here is Andrew's copyright statement from his web site:-

Except as otherwise indicated elsewhere in the web page to which this notice is attached, the web page and its attached images and Acrobat files are copyright © 1994, 1995 Andrew D. Birrell. All rights reserved. Any person is hereby authorized to view, copy, print and distribute the material covered by this copyright notice, subject to the following conditions: The material may be used for educational or informational purposes only. Any copy of the material or portion thereof must include this copyright notice.

The Ordnance Survey for allowing me to include the sample UK maps, which were made using the [OS Interactive Atlas of Great Britain](#). The UK maps are based on Ordnance Survey map data which is © Crown copyright.

The Europe map supplied with UI-View32 is derived from data placed in the public domain by Fred Pospeschil and Antonio Riveria. Original coordinate data used in the map was created by the Central Intelligence Agency.

Kenwood Electronics UK Ltd for the loan of a TH-D7E and a TM-D700.

The many radio amateurs who have tested the alpha and beta versions of UI-View(32).

In the USA, [APRS](#) is a registered trademark of Bob Bruninga, WB4APR.

Show Toolbar

This option will show/hide [the toolbar](#).

Announce Stations Submenu

Every Time

If this option is selected, then every time a UI-View32 compatible beacon is received from a station, a WAV file will be played.

First Time Only

If this option is selected, then a WAV is only played for stations that aren't already in the stations list.

If you don't want any WAVs to be played, then uncheck both options.

Exactly what WAV is played depends on the setting of "Synth callsigns" in [Miscellaneous Setup](#):-

If there is a WAV file in the WAV subdirectory with the same name as the callsign of the station heard, then that WAV is played. UI-View32 will also do an intelligent search for a near match - e.g. if G8MZX-9 is heard, and there is no G8MZX-9.WAV, but there is a G8MZX.WAV, then it will play that WAV.

If there isn't a specific WAV file for a station (the normal situation), and "Synth callsigns" is checked, then UI-View32 will "speak" the callsign by building it from the WAV files in the WAVBITS subdirectory. If "Synth callsigns" isn't checked, then it will play DEFAULT.WAV.

Support

The main UI-View(32) web site is <http://www.UI-View.com>

The main method of support for UI-View(32) is via an internet mailing list. To subscribe to the list, goto:-

<http://groups.yahoo.com/subscribe/ui-view>

Or you can subscribe via email by sending a message to:-

ui-view-subscribe@groups.yahoo.com

You can put anything for the title and the message doesn't need any content.

UI-View(32) is, of course, a topic of discussion on the packet mailbox network from time to time. However, many of those joining in aren't the slightest bit interested in UI-View(32), and so, like many similar topics, it gets spoilt. Also, I no longer read packet bulletins, so I won't see any problems that are reported via packet!

The internet list also provides access to a files area which is beginning to accumulate a useful collection of maps and utilities.

Reporting Problems

Because UI-View32 has seven operation modes (WinPack DDE, TNC in terminal mode, TNC in KISS mode, BPQ, AGWPE, Flexnet and WA8DED) it is important, when reporting problems, to say what mode you are using!

If you are having problems with UI-View32 not recognizing beacons, it is very helpful if you include a sample of monitored data. You can do this by opening the Terminal window and using the Save option to capture some data into a file.

UI-View(32) Message Protocol

PLEASE NOTE - besides its own message format, described below, UI-View32 also supports APRS format messages. See Message Retries for some important information about configuring the way in which UI-View32 retries messages.

Message Structure

UI-View(32) messages consist of single lines, each line sent as an AX25 UI frame.

All traffic between any two stations using UI-View(32) can be regarded as a single continuous message, there is nothing in the protocol to mark the beginning and end of separate messages. Any such separation of messages must be done in the message text.

The AX25 unproto address for the message lines is the intended recipient, possibly via one or more digipeaters.

Line Structure

The structure of a line is:-

~<message text>~<seq.no>

'~' is the tilde character (ASCII 126)

<message text> is up to 55 characters of message text.

<seq.no> is a line sequence number consisting of two ASCII characters. A separate sequence number is maintained for every station to whom you send any message lines. The sequence number is maintained between program sessions.

An example message line:-

~This is a message line~01

Line Acknowledge

A station acknowledges the receipt of a line by sending back a tilde character followed by the received sequence number. E.g:-

~01

would acknowledge the receipt of a line with a sequence number of "01".

Retries

If an ack is not received for a line within a given number of seconds ('Retry interval' in Message Retries) then the line will be resent. The number of times it is resent is determined by 'Try times' in Message Retries.

Ping

A ping has the structure of a normal UI-View(32) message line (as described above in Line Structure) but the message text contains only a single ASCII character 254.

The receiving station does nothing other than acknowledge the message, it is not displayed in the Message window.

Query

A query has the structure of a normal UI-View(32) message line, but the message text contains only a single ASCII character 253.

The receiving station replies by sending its Station Information.

DX Query

A DX query has the structure of a normal UI-View(32) message line, but the message text contains only a single ASCII character 252.

The receiving station replies by sending details of the best DX in its current station list, ignoring stations heard via digipeaters.

Global Query

A global query consists of a frame containing only the character sequence specified in the Global Beacon Trigger field of Miscellaneous Setup. The default is the three character sequence:-

~<ASCII character 253>~

This is like a normal query, but there is no line sequence number. The unproto address of the frame is ignored. All stations hearing a global query frame respond by sending their station beacon within one minute of hearing the frame.

The global beacon trigger can be changed to accommodate operating with stations who are not using UI-View(32), or to separate different groups of stations on the same frequency.

Digipeating

See Intelligent Digipeating for information on how UI-View32 decides the return path for messages received via one or more digipeaters.

Message Menus

File

[Read Messages](#) - Read messages saved in files named according to the callsign of the sender. See "Options", "Save To File" below.

[Delete Messages](#) - delete message files.

Options

[New Message Alert](#) - UI-View32 can sound an alert when message lines addressed to you are received. The alert consists of MESSAGE.WAV, followed by the WAV with the same name as the sending station's callsign, if such a WAV exists in your WAV subdirectory. For example if a message line was received from G8MZX, then the alert would be MESSAGE.WAV followed by G8MZX.WAV (if it existed).

[Every Line](#) - The alert is sounded for every message line received addressed to you.

[After Pause](#) - the alert is only sounded if a message line addressed to you has not been received for two minutes.

Speak Messages

These options are only relevant if you have installed and configured MS Agent for use with UI-View - see [MS Agent Setup](#). The first two options are mutually exclusive.

[Messages To Me Starting With '%'](#) - Only messages addressed to the station callsign that start with a '%' character are spoken. (Using '%' to mean "Speak this message" is an [APRS](#) convention.)

[All Messages To Me](#) - All messages addressed to the station callsign will be spoken.

[Speak Bulletins](#) - APRS bulletins and announcement are spoken. This option is independent of the first two options.

[Bring To Foreground](#) - The message window is brought to the foreground when a message line is received.

[Use Default Path For Acks](#) - If this option **is** checked, then UI-View32 will use the unproto path configured in [Station Setup](#) to send acks to received messages. If this option **is not** checked, then UI-View32 will use an unproto path derived from intelligently reversing the path by which the message was received.

[Don't Show From Me](#) - Don't display lines sent by me in the top window. (This option doesn't work if you are using host mode NONE.)

[Save To File](#) - Save all message lines addressed to me in files named according to the callsign of the sender.

[Save Bulletins](#) - If you check this option, then any APRS bulletins and announcements that you send are saved between program sessions.

[Auto Sort](#) - If this option is checked, then the BLN list, and any message groups for which sort has been specified, are automatically sorted whenever a new message is added.

[Auto Wrap](#) - This option affects what happens if you try to input more than the maximum number of characters in a message line. If this option is checked, then a new message line is automatically started. If it is not checked, then you cannot input more than the maximum number.

Setup

[Message Retries](#) - See [Message Retries](#)

[Default Message Port](#) - Allows you to change the default port used for sending messages.

[Auto-Answer](#) - See [Auto-Answer](#).

[Message Groups](#) - See [Message Groups](#).

[Text Colours](#) - Change the colour of the text in the various parts of the message window.

Clear Screen

Clear the top window.

Hide

Hide the message window. F6 is a shortcut key to this option.

Sort

Only available when you are viewing the APRS bulletins and announcements display (i.e. "BLN" is checked). It sorts the lines of text in the received window in alphanumeric order.

Intelligent Digipeating

If a UI-View32 message is sent to a station via one or more digipeaters and an ack is received, then UI-View32 records that route as being the current digipeater path for the station.

When UI-View32 sends an ack to a message received via a path that includes digipeaters, the route for the reply is decided as follows:-

The digipeater path of the received frame is reversed, but only the part of it that was used. For example, if the frame was addressed from G8MZX to "G4IDE via G4GZL, G0OPC, G7LSP, G4FIP" but only G4GZL and G0OPC had digipeated the frame when G4IDE heard it, then the ack will be sent to "G8MZX via G0OPC, G4GZL". Also, some common generic digipeater aliases are recognised, and occurrences of those aliases will not be reversed.

Command Line Options

Seven command line options are available. The first three are mutually exclusive and allow you to open one child window when UI-View32 starts:-

/T - open the Terminal window

/S - open the Stations List window

/M - open the Messages window

The others are:-

/EXIT n - closes UI-View32 'n' minutes after the program starts. E.g. "/EXIT 10". This option was put in so that UI-View32 could be started by another program and then run for only a few minutes before closing itself, mainly with the idea of catching MIR passes. Given that MIR has been abandoned, it probably isn't now a lot of use!

/LOOP - if you use this option and play a log, UI-View32 will play it continuously in a loop until you press the stop button, normally it stops when it reaches the end of the log file. Useful for demos.

/FULLINETLOG - Extra detail is included in CLIENTLG.TXT, which is the log of the

connections you make to APRS servers.

/NOSPLASH - suppress the opening "splash" screen.

/MIN - automatically minimize the map window when UI-View32 has started up.

Print UI-View32 Window

Selecting this option prints the entire UI-View32 window, in its current state.

When the printer dialogue opens, you can use the Setup option to select a printer other than the default printer, and to select the required orientation.

If you have problems with printing, please read [Printing Problems](#).

Print Entire Map

Selecting this option prints the map window. The whole of the map is printed, not just the part that is currently visible in the window client area.

When the printer dialogue opens, you can use the Setup option to select a printer other than the default printer, and to select the required orientation.

If you have problems with printing, please read [Printing Problems](#).

Printing Problems

I know that some people will have problems with printing! I have tested the printing with:-

- Windows 95, with both a Brother laser printer and an HP Deskjet printer, both as local printers and as network printers.
- Windows for Workgroups 3.11, with the Brother laser printer as a local printer and the HP Deskjet as a network printer.

If you have problems, check that:-

- The printer driver you are using is the correct one for your printer.
- The printer driver you are using is the most up-to-date one for your printer.
- That you have set the correct paper size in the printer set-up options.

Please note that, if you are running **BPQ** and using a 486 or less, it can seriously slow down printing in Windows. There's nothing I can do about that!

If all else fails, you can always use Alt+PrintScreen to copy the UI-View32 window to the clipboard, then paste it into Paint and print it from there.

Refresh Map

This option causes the map to be redrawn. Any stations that have been crossed out will be removed.

This option is only useful if you have either disabled Auto Refresh on the Options menu, or you have "Auto Refresh Mode" set to "Timer" in Miscellaneous Setup.

Auto Refresh

If this option is enabled (the default), then the screen will be refreshed according to the mode selected in "Auto Refresh Mode" in Miscellaneous Setup.

If this option is disabled (no tick against it) then the screen will only be refreshed if you use Refresh Map on the Action menu (shortcut F4).

You may wish to disable Auto Refresh in order to see the track of mobile stations, or so you can be aware of what activity occurs whilst you are away from the system.

Please note that any activity such as changing the map or changing the station label colours will always cause a refresh to occur.

Show Grid Squares

If this option is enabled, then the IARU locator squares will be drawn on the maps. The squares will be drawn to a resolution of either two or four characters (e.g. "IO" or "IO92") according to the scale of the map.

NOTE - In order to be able to scale the font used for the grid square labels, and to be able to make the text in all the labels the same width, it is necessary to use a fixed pitch TrueType font. The only suitable font that is present on most PCs is Courier New. If you don't like the font, the colour, or the sizes used, it is possible to change it by editing UIVIEW32.INI.

Look for the [MAPS] section. You can edit the following entries:-

```
GRID_FONT_NAME
GRID_FONT_SIZES
GRID_FONT_BOLD
GRID_COLOUR
```

The sizes listed in GRID_FONT_SIZES are the sizes that Ui-View can use to choose a suitable size for the labels. The algorithm is to use the smallest size listed that gives a label width equal to at least half the grid square width. Obviously the largest possible text is given by the largest size listed, and so you can limit the maximum text size by reducing the number of sizes specified.

GRID_COLOUR can be:-

```
BLACK
```

BLUE
GREEN
CYAN
RED
MAGENTA
BROWN
LIGHT GRAY
DARK GRAY
LIGHT BLUE
LIGHT GREEN
LIGHT CYAN
LIGHT RED
LIGHT MAGENTA
YELLOW
WHITE

TNC Command Files

The format of the commands in TNC command files is as follows:-

Lines commencing with ';' (semicolon) are comments and are ignored.

Lines starting with '@' specify the name of a command file to be included. Example -
@INITD7.CMD

Other lines consist of up to three parts -

- (a) A command to send to the TNC.
- (b) The response to wait for. This need not be the full response, it can just be some text that occurs somewhere in the response. NOTE - It is case sensitive.
- (c) The maximum amount of time, in seconds, to wait for the response.

The parts are separated with '!' (exclamation mark).

Only part (a) is required, and, for most TNCs, the other two parts of the command are never needed. If no response is specified, then UI-View32 assumes that the expected response is "cmd:". If no wait time is specified, then UI-View32 assumes it is one second. By default, all commands are terminated with a carriage return when they are sent to the TNC. You can tell UI-View32 not to add a return by putting a '~' (tilde) at the end of the command.

Control Characters

Control characters can be put in commands using '^' as a flag. The control character can be either a keyboard control character, e.g. ^A, ^B, etc, or it can be a numeric ASCII character code, e.g. ^001, ^002, etc. Numeric codes must consist of three digits and be less than 255. See below for examples of command lines containing control characters.

Example command lines

ECHO OFF - send the command "ECHO OFF", wait for up to one second for a response of "cmd:".

TEST!Ok - send the command "TEST", wait for up to one second for a response of "Ok".

TC 0!PORTOUT!4 - send the command "TC 0", wait for up to four seconds for a response of "PORTOUT"

TC 1! - send the command "TC 1", don't wait for a response.

^C^C^C~!cmd:!2 - Send Ctrl+C three times, without a carriage return on the end, and wait two seconds for a response of "cmd:".

^192Q^192~!cmd:!2 - Send the ASCII character code 192, then a 'Q', then the ASCII character code 192 again. Do not put a carriage return on the end, and wait two seconds for a response of "cmd:".

PK232 Parameters

If you use UI-View32 in WINPDDE mode, and you are using a PK232, or similar AEA/Timewave TNC, in terminal mode with WinPack, then the following TNC parameters should be used in WinPack:-

```
ECHO OFF
8BIT ON
ACRDISP 0
AWLEN 8
BEACON EVERY 0
HEADER ON
MFILTER $0
MON 6
MRPT ON
NEWMODE ON
NOMODE OFF
```

APRS Server Setup

(See the [APRServe](#) section for more information on using APRServe)

PLEASE NOTE - It is YOUR responsibility to ensure that if you operate an IGATE, it meets your local amateur radio licensing regulations!

Select A Server - Check the internet server(s) you want to use to connect to APRServe. The server(s) you check will automatically move to the top of the list. These are the servers that will be used when you use the "Connect To [APRS](#) Server" option on the Action menu. How the selected servers are used depends on how many you check -

If you check only one server, this is the only server that will ever be used. If a connection fails, and "auto reconnect" is enabled, then UI-View32 will attempt to reconnect to the same server.

If you check two servers, the first one in the list will be the primary server, but if a connection to it fails, and "auto reconnect" is enabled, then the second server will be used.

If you check more than two servers, one will be randomly selected. If a connection fails, and "auto reconnect" is enabled, then a different server will be randomly selected.

To add extra servers to the list, click on the list, press the Insert key on the keyboard, key in the new server name, and press Return. The format for a server name is "host_name:port", e.g. "ahubswe.net:2023", or "ip_address:port", e.g. "213.180.75.122:2023". If you wish, you can add a comment, which will be used as the tooltip text, by putting it after a semicolon, e.g. "ahubswe.net:2023;Full feed".

To remove a server from the list, highlight it in the list and press the Delete key.

You can rearrange the servers in the list by dragging them with the mouse but the selected server(s) will always be moved to the top.

If you want to replace the whole list with a more up-to-date list or servers, then use the "Download APRS Server List" utility, available on the File menu. PLEASE read the help for the download utility before you use it.

One server in the default list is special - AFilter:3033. This is KC9XG's AFilter program. If you wish to use this server, you must have AFilter installed and running on your PC. (The server address is automatically translated by UI-View32 to localhost:3033.)

Many servers have more than one port available, with different ports providing different feeds. The ports listed for the default servers should all provide an unbuffered "whole world" feed. Many servers have an associated web page with information about the server and the ports available - e.g. information about aprsca.net can be found on <http://www.aprsca.net>. Unfortunately sometimes the web page name isn't directly related to the server name, so a little searching of the net may be needed.

If you connect to a server and get a connection error, then the most likely problem is that the server isn't running, so select another server.

NOTE - some server ports provide an unbuffered feed (usually port 23, 2023 or 10152), but some ports provide a buffered feed (e.g. port 10151), which means that, when you first connect, you will immediately receive a large amount of buffered data. If you choose to use a buffered port, then it is very important that you follow the advice at the top of the [APRserve](#) section of the help!

APRServe logon required - this should be checked unless your server is a local server, such as another copy of UI-View32 with "local server" enabled.

Text to send on connection - This allows you to specify a command to be sent to the server when the connection occurs. It is designed for use when connecting via a proxy, and **should normally be left blank** - see "Connecting via a proxy" below.

Validation number - Input your APRServe validation number. See [APRServe Validation Numbers](#) for information on how to obtain one. This option is locked out (a) if "APRServe logon required" isn't checked. (b) if your UI-View32 isn't registered.

Enable auto reconnect - If you check this option, then UI-View32 will automatically attempt to reconnect to the APRS server if the connection is lost. (It won't attempt to reconnect if you use the Disconnect menu option, or cancel a connection attempt.)

Extra log on text - Any text you put here is sent to the internet APRS server when you log on. It is intended to be used with servers that support user-defined filters. For more information, see [FILTER.TXT](#).

Gateway - RF To Internet, Open the gateway - If you check this option, then, when you are logged on to an internet server, all APRS traffic heard on your radio port(s) will be sent to the server.

Gate local messages - If you check this option, then any messages seen in the internet data stream for stations local to you will be transmitted on the appropriate radio port. A local station is one that is being heard on a radio port but not being heard on the internet. When messages are gatewayed to RF, the format used is as described by Steve Dimse, K4HG in <http://www.aprs.net/inetmsg.html>. This format ensures that the frame transmitted by your station is addressed as coming from you, and the actual frame containing the message is encapsulated in the information portion of the frame you transmit.

Use reverse digi path - If you check this option, then messages gated for local stations will be transmitted using the reverse digi path of the last frame heard from the station. If the option isn't checked, then the default unproto path for the radio port is used. If most local digis support alias substitution, then it is worth experimenting with checking this option.

Transmit IGATE Status - If this option is checked, then, when UI-View32 is logged on to an internet server and operating as an IGATE, it will transmit IGATE capabilities frames. For more information see [IGATE Station Capabilities](#). If your server is another local system on your LAN, then you should uncheck this option.

Max silence - If UI-View32 is connected to an internet server, and hears no data for this number of minutes, then it will force a disconnect on the assumption that either the server or the connection has developed a problem. If you have checked "Enable auto reconnect", then a reconnection will occur. A value of zero disables the feature.

Enable local server - Check this option if you want UI-View32 to be able to act as a local APRS Server for other UI-View32 systems. See [Local APRS Server](#) for more

information.

Additional IGATE configuration options are available in IGATE.INI.

Connecting via a proxy

The only proxy I have ever used is Wingate, so the following is based on my experience with that, plus comments I have received about other proxies.

If you wish to connect UI-View32 to an APRS server via a telnet proxy on your LAN, then you must do the following:-

- Edit UIVIEW32.INI and put in the [APRS] section an entry for your proxy. Say the proxy is running on a machine called "master" and uses port 23 (the default telnet port), then the entry would be "master=23".
- In "Options", "Setup", "APRS Server", select your proxy as the server, and put in "Text to send on connection" the command that your server requires to connect to the real APRS server you wish to use. The documentation for your proxy will give the required command format. Using Wingate as a proxy server, an example command would be "aprs.net 23".
- You may find it necessary to put an entry for the proxy machine in the HOSTS file on the PC running UI-View32. (The Wingate help says you don't need to use the HOSTS file, but I can't get it to work as a proxy without it!) The HOSTS file lives in the Windows directory (Win95/8), or in the \system32\drivers\etc directory (NT). If it doesn't exist, you will need to create it. Put in a line like -

```
192.168.0.1 master
```

Where "192.168.0.1" is the ip address of the proxy on your LAN, and "master" is the proxy machine name.

Note that, when you connect to APRServe, all the text appears in the UI-View32 Terminal window, which can be useful when trying to sort out a connection via a proxy.

Line terminator - in sending the command to the proxy, UI-View32 uses linefeed (^J) as the line terminator. If your proxy requires something different, e.g. a carriage return, then edit UIVIEW32.INI and change LINE_TERMINATOR in the [APRSERVE] section to whatever is required. For carriage return you would put "^M".

Digipeater Setup

The UI-View32 digipeater has a wide range of features, and is probably more powerful than any other software based digipeater built into a packet application.

The basis principle of digipeating AX25 frames is to retransmit them if the next

address in the digipeater list in the frame header matches your callsign or alias. Digipeaters used on an "unconnected" network often have special features, such as support for multiple aliases, and alias substitution. The UI-View32 digipeater supports many of these special features.

IMPORTANT!! To avoid digipeating frames twice, if you enable the digipeater in UI-View32, please take note of the following:- If you use BPQ, please make sure you disable digipeating in the port definitions in BPQCFG.TXT you do that by removing any DIGIPLAG entries. If you use AGWPE, do not run AGWDigipeater.

A digipeater has to be able to send and receive raw AX25 frames, so the UI-View32 internal digipeater can only be used in KISS, AGWPE and BPQ32 modes, because those are the only modes in which raw AX25 frames are available.

Enable digi - this enables/disables the UI-View32 digipeater.

Alias(es) - the aliases that UI-View32 will digipeat on. NOTE - if you want it to digipeat on the station callsign, then you must put it in the list. It is recommended that you always do this.

Sub alias - substitution alias. This is used if "Alias substitution" is checked and also if TRACEn-n is enabled (see below).

UI Only - if this is checked, then only UI frames will be digipeated, which is the recommended setting.

Alias substitution - if this is checked, then "Sub alias" will be used to replace whatever alias is being digipeated on. Example:-

WIDE is in Alias(es)

Sub alias is set to G4IDE

UI-View32 hears a frame - G8MZX>CQ,RELAY*,WIDE

UI-View32 digipeats the frame, replacing WIDE with G4IDE -

G8MZX>CQ,RELAY*,G4IDE*

WIDEn-n - best explained with an example:-

WIDEn-n is enabled

UI-View32 hears a frame - G8MZX>CQ,WIDE7-7

UI-View32 digipeats the frame as - G8MZX>CQ,WIDE7-6

Another WIDEn-n digipeater hears the frame and digipeats it as -

G8MZX>CQ,WIDE7-5

Etc... When the SSID reaches 0, the digipeating stops. The first 'n' is the initial value of the SSID. The actual SSID counts down as each WIDEn-n digipeater digis the frame. The highest valid initial SSID is 7. WIDEn-n provides a way of passing a frame through up to seven digipeaters with only one digi address.

To prevent a frame bouncing backwards and forwards between two WIDEn-n digis, dupe suppression must be enabled if WIDEn-n is enabled, see "Dupe secs" below.

The alias name that performs the WIDEn-n function can be changed by editing the

UIFLOOD entry in the [DIGI_OPTIONS] section of UIVIEW32.INI. This would only ever be needed if you were operating on a network that used a different generic alias to perform the function of WIDEn-n. There is absolutely no point in changing it unless everyone else on the network is also using a different alias name! (Note that if you change the alias name, you don't need to put the "n-n" on the end.)

TRACEn-n - similar to WIDEn-n, but Sub alias is inserted into the digi addresses when the frame is digipeated. Example:-

TRACEn-n is enabled

Sub alias is set to G4IDE

UI-View32 hears a frame - G8MZX>CQ,TRACE7-7

UI-View32 digipeats the frame as - G8MZX>CQ,G4IDE*,TRACE7-6

Another TRACEn-n digipeater with a Sub alias of G4GZL hears the frame and digipeats it as - G8MZX>CQ,G4IDE*,G4GZL*,TRACE7-5

Note that Sub alias will not be inserted if there are already eight or more digipeater addresses in the frame.

TRACEn-n provides an excellent method of seeing the route a frame has taken.

The alias name that performs the TRACEn-n function can be changed by editing the UITRACE entry in the [DIGI_OPTIONS] section of UIVIEW32.INI. This would only ever be needed if you were operating on a network that used a different generic alias to perform the function of TRACEn-n. There is absolutely no point in changing it unless everyone else on the network is also using a different alias name! (Note that if you change the alias name, you don't need to put the "n-n" on the end.)

Dupe secs - if this is set to a value other than zero, then, every time UI-View32 is going to digipeat a frame, it checks to see if it has digipeated the same frame within the previous "Dupe secs" seconds. If it has, then it won't digipeat it again. The idea is, for example, to avoid digipeating a frame heard via one digipeater and then heard via another digipeater.

Deciding if a frame is a duplicate is not an exact science! For instance, message frames that fail to get an ACK will be resent; if "Dupe secs" is set too high, then the resend of the frame by the originating station will be regarded as a duplicate when in fact it isn't. A value of 15 seconds for "Dupe secs" is a reasonable starting point.

Digi routes (not enabled in single port KISS mode) - This shows the routes that will be used for digipeating frames. It provides a facility for cross-band digipeating. The format is -

<port on which frame is heard>=<port(s) on which it will be output>

Example - "1=1,2" means frames heard on port 1 that are digipeated by UI-View32 will be output on ports 1 and 2.

To edit a digi route, either highlight a line and press <return> or double click on a line. When you have input the required information in the text box, press <return> to put it in the list. The number of usable ports is two for a dual port KISS TNC, eight for AGW and 16 for BPQ. Please note - it is your responsibility not to specify output ports that don't exist on your system!

Excluding Callsigns From Your Digi

If you want to stop your digi digipeating certain callsigns, then you can put them in the **EXCLUDED** key in the **[DIGI_OPTIONS]** section of UIVIEW32.INI. Put them all on one line, separated by commas. E.g.

```
EXCLUDED=G4IDE,G8MZ,X,MB7UAA
```

Don't put an SSID, the callsigns are excluded irrespective of what SSID is used.

PLEASE NOTE - Use this feature with caution! With my knowledge of packet in the UK, and the various "packet wars" that have occurred in the past, I think it's a feature that could be badly abused. I put it in because users kept asking for it, not because I personally think it is a good idea.

GPS Setup

UI-View32 supports input from a GPS, see Using A GPS. This dialogue allows you to configure the link between the GPS and the PC, and to enable/disable use of the GPS.

Baud Rate - The baud rate used by the GPS. For most GPSs it should be 4800, but the Aisin (Mavin \$20) GPS and the Earthmate are exceptions to this (see below).

Com Port - The COM port used by the GPS.

Set PC Clock From GPS - If you check 'Enable', then UI-View32 will use the time from the GPS to set the PC clock. GPS time is always UTC, so, if you use local time on your PC, you must input the offset you want UI-View32 to apply to the GPS time before setting the PC time. If you are east of Greenwich then the offset will normally be positive, if you are west of Greenwich then it will normally be negative. I have made no attempt to use the PC time zone information, because on many PCs it is set incorrectly. UI-View32 will set the PC clock when it first receives valid data from the GPS, and then every minute.

PLEASE NOTE that if you leave the offset blank, which is the default, it has a special meaning - A blank offset assumes that your PC clock will never be wrong by more than plus or minus 30 minutes and it will correct the time based on this assumption, using only the minutes from the GPS. The advantage of using a blank offset is that, if you set your PC to local time, you don't have to alter the offset if you change the time zone or if you allow Win95/8 to manage daylight saving time changes. The disadvantage of using a blank offset is that if your PC clock ever develops an error of more than 30 minutes, then UI-View32 will not correct it.

Show GPS cross-hairs - If this option is checked, then cross-hairs are displayed on the map, showing the position information from the GPS in real time, (the position of your station icon on the map only updates each time you send a posit beacon). If you check this option, then the "Cross-hairs Setup" button appears. See GPS Cross-hairs Setup.

Aisin (Mavin \$20) GPS - Check this option to tell UI-View32 that you are using this particular GPS (see below.) If this option is checked, then the baud rate setting will be locked to 9600.

DeLorme Earthmate - **NOTE** - This refers to the old DeLorme Earthmate that output Rockwell binary data, NOT the USB Earthmate. Check this option to tell UI-View32 that you are using this particular GPS. If this option is checked, then the baud rate setting will be locked to 9600. The Earthmate outputs proprietary binary data rather than standard NMEA sentences, and so needs special processing by UI-View32. Also, UI-View32 will automatically send the required initialization commands to the GPS.

WGS-84 to OSGB-36 - If you check this option, then UI-View32 converts the GPS output from the WGS-84 datum to the OSGB-36 datum. WGS-84 is the datum commonly used in the USA, in the UK OSGB-36 is normally used. Most GPSs allow you to select which datum you wish to use, but some don't. There is a slight difference between latitudes and longitudes based on the two datum's - this results in an error of about 115m at my home location. The conversion between the two datum's is done using the Molodensky transformation.

Shared Port Setup - This button is only visible if you select the same COM port for the GPS as you have selected for the TNC. It allows you to specify what method you wish to use for sharing the port. Port sharing is always possible in host mode NONE and KISS modes. It cannot be used in AGWPE and BPQ32 modes because UI-View32 does not have access to the port. In WA8DED mode it can only be used if the sub-mode is set to PTC-II or PTC-Ile. See Shared COM Port Setup for more information.

GPS Output Setup - This option allows you to select a COM port on which UI-View32 will output the data it receives from an attached GPS. See GPS Output Setup.

GPS Input Enabled - enables or disables use of the GPS. F8 from the main screen provides a shortcut to this option without having to open the "GPS Setup" dialogue. (Useful if you often need to swap the output from your GPS between UI-View32 and some other application.)

UI-View32 assumes that the GPS will be outputting NMEA 0183 format sentences, and it uses the \$GPRMC sentence.

Support For The Aisin (Mavin \$20) GPS

This particular GPS has been sold by a company called Mavin in the USA for \$20, making it a very cheap GPS, and therefore popular with radio amateurs! The output from the unit is not NMEA, and so you need to tell UI-View32 that you are using this unit in order for it to correctly decode the data.

Please note the following points (this will be meaningless unless you have one of these GPSs):-

- You need to mod the GPS so that the output bypasses the onboard processor. I used the mod information that accompanied Tim Laren's test program for the unit. If you get the GPS working with Tim's program, then it will work with UI-View32.

- There is a PIC available to convert the output from the GPS to NMEA format. If you fit the PIC, it behaves like a normal GPS, so you **must not** then use the special Aisin option in UI-View32.

GPS Input

This window shows the input from your GPS. The window is only available if "GPS Input Enabled" is checked on the GPS Setup and Using A GPS.

The small button to the right of "Spd" allows you to select knots, mph or kmh for the speed display.

Status Text

The Status Text dialogue allows you to input an optional line of status text, which will be transmitted at the specified interval. To disable it, leave the text blank or put an interval of '0'.

To make it easy to change the status text, every time you put in a different text, it is added to the drop-down list, so you can easily recall a previous text from the list.

To delete an entry in the list, select it and then press Ctrl+D.

The default status text is "\$VERSION". This is a token that is replaced with the program version before the status text is transmitted. You can include \$VERSION in other text, e.g. If you were using UI-View32 V1.54, "Roger in Boston, running \$VERSION" would become "Roger in Boston, running UI-View32 V1.54".

There is no specific use for status text, but a suggested use would be to put in your BBS and email address.

Status text received from other stations will appear in the Details window for the station.

If you check the "Send best DX" box, then details of your best DX, i.e. the most distant station that you have heard direct, will be sent as your status text.

The time stamp is the time when you last changed your status text.

Unload Overlay

Select an overlay you wish to unload and click "Unload" (or double-click it) and it will be removed from the list. You can unload more than one overlay at a time. When you have selected all the ones you want to unload, click "Ok" and the symbols from those overlay files will be removed from the map.

For further information, see Overlays.

Lists

The options on the Lists menu allow you to list stations by type. You also have options to list Overlays and Objects, neither of which appear in the Stations List.

The available option buttons on the list window vary according to what type of list is displayed, but their functions should be obvious. The Copy button copies the list to the clipboard, and it may not work if there are more than about 500 stations in a list.

Note that, other than for the "Tracked Stations" list, the lists don't automatically refresh. Once the window has been opened you have to use the Refresh button. This is by design, because it gives you a stable list to look at, compared to the Station List which is constantly being updated. If you select an item from a list and it no longer exists, the list will automatically refresh.

The Direct Stations list shows stations that have been heard direct, i.e. Not via a digi and not via the internet. However, if the same station is heard both direct and via the internet, then whether it is in the Direct Stations list depends on how it was last heard.

The Objects And Items list has a **Finger** button, which is only available if the object appears to be a weather object output from KG5QD's WxSvr. Clicking the button sends a query to WxSvr to retrieve the full text of the NWS alert that generated the object.

If you check **Sort Lists** on the Lists menu, then the callsigns in the lists are sorted in alphanumeric order. On slow PCs this can cause a delay as the lists are displayed.

Please note - The width of the lists windows cannot be increased beyond the default width. Also, the maximize button on the windows is used in a slightly non-standard way - it restores the windows to their default size.

Object Editor

(For some further discussion of Objects and how they work, see Objects.)

The Object Editor allows you to create objects and to edit or delete existing objects. The editor can be accessed in several ways:-

- By selecting "Action", "Object Editor".
- By pressing F5.
- By clicking the bottom button on the toolbar.
- By right-clicking an object and selecting "Edit Object".
- By using the Edit button on the Objects List.

Creating an Object

To create a new object, first click on the map where you want to place the object, then open the editor. Fill in the information as follows:-

Identifier - the name you wish to give the object (up to nine characters). **PLEASE NOTE** - From V1.90 onwards, UI-View32 complies with the APRS spec requirement that "Object names are case-sensitive". Previous versions did not comply, because I think the spec has got it wrong! In the real world, most people would regard the "ambulance" and the "Ambulance" as being the same thing, but in the world of the APRS spec they are different objects.

Latitude and **Longitude** - the location of the object. They will have been filled in according to where you clicked, but you can change the information if you wish.

Comment - an optional comment of up to 40 characters.

Symbol - select the symbol you wish to use for the object.

O'ly - (if available) the overlay character you wish to use. Note that about half the symbols can have an overlay character, but overlay characters are normally only used with symbols that have a description starting with "No." (numbered).

Course - if the object is mobile, you can input its course. You can do it by (a) selecting a compass point from the drop-down list (b) inputting a direction into the text box (c) clicking on the compass dial.

Speed - again only relevant for mobile objects. If the object is mobile, then you can set a course and speed. NOTE that the speed is in knots (about 85% of the speed in mph). I've made it knots because, after looking at WinAPRS and reading the DOS APRS docs, I'm a little confused about APRS speeds! The docs say that all speeds are transmitted as knots, but in WinAPRS the input is mph, and it transmits whatever you put in without conversion. UI-View32 also currently transmits what you input without conversion, but I think that labeling it knots is correct. (If anyone understand that, and can offer any useful comment - let me know!)

Auto update object posit - This option only becomes available if you input a course and speed for the object. It specifies whether UI-View32 should update the object's position, based on the original course and speed, each time it transmits it. The default value for the option can be set via the "Object auto update defaults to enabled" option in Miscellaneous Setup.

Active object - check it to make the object active. Active objects are beamed, inactive ones aren't.

Click "Ok" to accept your input and put the object into the list of objects you own.

Editing An Object

You can edit an object by right-clicking it and selecting Edit from the popup menu, by using the Edit button when viewing the Objects List, or by opening the Object Editor and selecting the object from the drop-down list. NOTE that the list only shows objects you currently own.

If you attempt to edit an object that currently belongs to someone else, then you will be asked if you want to adopt it. NOTE that, if you adopt an object belonging to someone else, it will become inactive, and you must check the "Active Object" checkbox to activate it. (If it was left active, then your system could transmit the object while you were still making the required changes to it.)

Registration

The only people who may use this version of UI-View32 are users of the 16 bit version of UI-View who have registered the program. When you start UI-View32, it won't run unless you have input your UI-View registration information. Just to make sure that is clear, before you can use UI-View32, you need to:-

- (a) Obtain UI-View (16 bit).
- (b) Register it.

If you have a copy of 16 bit UI-View, and you want to register it, there are two methods available. Using either method, you receive from me a registration number, which you can input into both UI-View and UI-View32 using "Help", "Register UI-View(32)".

Online Registration

When you register online, you will receive your registration information by email. For information on how to register online via credit card payment, please go to <http://www.ui-view.com/uiview/uivreg.html>. For information on how to register via PayPal payment, please go to <http://www.ui-view.com/uiview/paypal.html>

Registration By Mail

Send £10 cash, cheque or UK Postal Order to:-

Roger Barker
79 South Parade
Boston
Lincolnshire
PE21 7PN
UK

Please include your callsign, name and address. You will receive your registration information by return post (or email if you send an email address),

If you would like to print off a registration form, please click [here](#).

Registering From Outside The UK

If you are outside the UK, then registering online may well be the easiest and cheapest method. Or you can either get an International Money Order for 10 UK pounds from your bank, or send me a personal cheque (check). If you do the latter, then please calculate the amount at the current exchange rate + 15% to allow for the cost of me negotiating the cheque.

I can also accept cash payment in the following currencies - US dollars, Australian dollars, and all major EU currencies. Again, please add on 15% to allow for the cost of me changing the money.

Many thanks for supporting UI-View.

UI-View Registration Form

This form can be printed by using "Print Topic" from the "File" menu at the top of this help window.

**To: Roger Barker, G4IDE
79 South Parade
Boston
Lincs PE21 7PN
UK**

I would like to register my copy of UI-View. I enclose a registration fee of £10. My registration information is as follow:-

Callsign: _____

Name: _____

Address: _____

(Please write clearly. Your registration number will be based on your callsign and name, so it is important that I can read it correctly!)

Register UI-View32

To use this option, you must be in possession of a UI-View (16 bit) Registration Confirmation letter or email.

Input your callsign, your name and the registration number, **exactly** as printed in the registration document, then click "Ok".

Objects

Objects in UI-View32 work very much like objects in APRS. You can add objects to your map, and those objects will be transmitted as beacons and appear on other users maps. Each object has a unique name.

An important concept of objects is that each object "belongs" to one user. If someone else changes one of your objects and transmits it, then it becomes his object and your system stops transmitting it. Objects appear on the map very much like stations, and can be listed by using "Lists", "Objects".

If you give an object a course and speed, then each time it is transmitted, its location is automatically updated based on its course and speed. UI-View32 uses great circle navigation to update the position, so the object will follow a great circle path based on its original course. In other words, it would eventually circumnavigate the Earth and finish up where it started.

(The following comments are made in the hope of preventing numerous reports of a non-existent bug!) The use of great circle navigation means that the course will change as the object moves. The change of course will usually be very slight, unless the object covers a large distance or starts its life close to the north or south pole. **So if you notice the course of an object has changed, it's a feature not a bug!** The alternative is to keep the course constant, which would be a very much easier calculation, but to do that results in objects following ridiculous paths if they travel a long distance, particularly if they get close to either pole.

Creating An Object

See Object Editor.

Editing An Object

See Object Editor.

Moving An Object

You can move an object by holding down the Alt key and dragging the object with the mouse - the cursor will turn into a sort of square. If you move an object that you don't own, then you will be asked if you want to adopt it. You will also be asked if you want to activate it. (See "Warnings" below.)

Deleting An Object

You can delete objects by using the "Delete Object" option on the right-click popup menu, or by using the Delete button on the Objects List. If the object is owned by someone else, then it is simply removed from the map and list. If you own the object, then it is also removed from the list of available objects in the Object Editor. (You can also delete objects you own by using the Delete button in the editor.)

If you delete an object you own, UI-View32 will ask you if you wish to inform other stations that you have deleted the object. If you say yes, then a special format object beacon is transmitted which will cause the object to disappear from other people's systems. This special beacon will be transmitted twice. This is obviously good practice, because, if you have created an object and beacons it, you should also beacon the fact that you have deleted it! NOTE - DOS APRS also supports this facility, but WinAPRS 2.2.8, which is the latest version I've tested, doesn't seem to do so.

Warnings

To prevent you adopting objects that don't belong to you without realising it, you are warned whenever you are about to adopt an object. If you adopt an object by moving it, then you are asked if you want to activate it. As you become more experienced with using objects, these warnings might well become a nuisance. If they do, then you can turn them off:-

1. Close UI-View32.
2. Edit UIVIEW32.INI with a plain text editor (Notepad or DOS Edit).
3. Look for the "[USER]" section.
4. Change TRUE to FALSE on "ASK_ADOPT" and "ASK_ACTIVATE" to disable the warnings.
5. Save UIVIEW32.INI.
6. Restart UI-View32.

Using A GPS

UI-View32 supports input from a GPS. You configure the GPS using GPS Setup.

When UI-View32 detects input from the GPS, it automatically switches into mobile mode. In this mode it transmits a location beacon derived from the GPS position and uses a different station symbol. The symbol used and other aspects of the mobile beacon are configured from Station Setup.

If no valid data is detected from the GPS for 10 minutes, then UI-View32 will go back to fixed station mode.

The incoming data from the GPS can be viewed using the Show GPS Input option on the Action menu.

Snapshots

Snapshots allow you to take a copy of the Station List and save it in a file. They are useful if you are interested in propagation and like to keep a record of what was being heard at a particular time.

You can take a snapshot by using the Snapshot button on the Station List window, or by using the SNAPSHOT schedule command - see Scheduling.

Snapshots are saved in the SNAPSHOT subdirectory. They are automatically put into files named according to the date.

Overlays

Overlay files consist of lists of items with their location and an optional status text line. When you open an overlay file, the items it contains appear on your maps, very much like stations, and can be listed by using "Lists", "Overlays".

You load an overlay file by using "Action", "Overlays...", "Load Overlay", and selecting a file from the dialogue.

You unload an overlay by using "Action", "Overlays...", "Unload Overlay".

Overlay files live in the OVERLAYS subdirectory and have an extension of ".POS".

The format of an overlay file is very simple. The first line is a description, subsequent lines are location lines or status text lines. Location lines consist of up to nine characters for a callsign/identifier, followed by a '!', followed by a position beacon. Status text lines consist of a callsign/identifier, a '>' , and some status text.

NOTE - UI-View32 overlay files are not fully compatible with APRS overlay files, because APRS doesn't support the status text lines. However, if you create overlay files for UI-View32 and include status text, anyone wanting to use them with APRS can easily remove the status text lines.

The Overlay Files Supplied With UI-View32

The **sample** overlay files supplied with UI-View32 are lists of UK mailboxes. I know they are inaccurate, which is why "sample" is emphasised! They were derived from the information available on the RSGB DCC's web site. The locations in the DCC information are given as post codes, I converted them to arbitrary latitude and longitudes using a conversion program I found, so they could be miles out!

Nothing in the overlay files could be regarded as confidential, because the information is freely available on the DCC web site for millions of people to see, I've simply presented the location information in a different way.

I also had a bit of a problem with the frequencies, because the DCC information doesn't differentiate between user and forwarding frequencies, so I had to make some guesses.

I know I could have asked the mailbox sysops to provide me with more accurate information, but anyone with access to the "SP SYSOP" messages on the UK network will appreciate why I didn't - Some of them would still have been going on about it six months later... ;-)

If anyone would like to attempt to draw up more accurate versions of these overlay files, and pass on the results to me for inclusion with future versions of UI-View32, that would be very useful.

Scheduling

UI-View32 supports a simple form of scheduling.

Creating And Editing The Schedule

The default is that there is no schedule. To create the schedule, or edit the existing schedule, you use the "Schedule Editor" option on the File menu.

You create a new entry in the schedule by using the New button. To edit an existing entry you highlight it in the list and click the Edit button. To put an entry you are editing into the list you use the Yes button. To abandon editing an entry you use the No button. To delete an entry you highlight it in the list and press the Delete key.

When you exit, the schedule is saved as SCHEDULE.TXT. Cancel abandons any changes you have made.

THIS IS IMPORTANT! If a file name used with the CAPTURE_MAP, COPY or RUN commands contains spaces, then it **MUST** be surrounded with ". E.g. COPY "C:\A FOLDER\TESTA.JPG" "C:\ANOTHER FOLDER\TESTB.JPG". Note that each individual file name is surrounded with ". (This is standard Windows practice when using long file names that contain spaces.)

Each schedule entry consists of a time and a command that you want to execute at the specified time.

There are three different formats for the time -

- **hh:nn** - The command will be executed at this time. E.g. "15:30".
- **+nnn** - The command will be executed this number of minutes after UI-View32 is started. E.g. "+30" means 30 minutes after UI-View32 is started.
- **Ennn** - The command will be executed every "nnn" minutes. E.g. "E10" means the command will be executed every 10 minutes.

Valid Commands

Commands can be selected from the drop-down list. Some commands take arguments.

APRSERVE_CONNECT - connect to the APRS server that you have selected in "APRS Server Setup".

APRSERVE_DISCONNECT - disconnect from the APRS server.

BCN_INTERVAL <number> - set the beacon interval to this number of minutes. The setting is not saved, so UI-View32 will revert to the value set in Station Setup if you restart the program.

CAPTURE_MAP <file_name> - Capture the current map image in one of the supported graphics formats (BMP, JPG, or PNG). If <file_name> is omitted, then a default name of Capture.PNG will be used. If the file name has an extension, then it

must be BMP, JPG, or PNG, if it doesn't have an extension, then PNG is used. If the file name doesn't have a path, then the Capture folder in the UI-View32 program folder is used. The following date/time tokens are supported in the file name:-

- \$yyyy** - the year as four digits
- \$yy** - the year as two digits
- \$mmm** - the month name abbreviated - e.g. "Jan"
- \$mm** - the month as two digits
- \$dd** - the day of the month as two digits
- \$hh** - the hour as two digits
- \$nn** - the minute as two digits
- \$ss** - the second as two digits

An example of a file name with tokens - If you input a file name of "\$yyyy-\$mmm-\$dd \$hh-\$nn-\$ss.PNG", when the file was saved, the name would be (at the current time) "2002-Feb-03 23-08-15.PNG".

COPY <file_name> <file_name> - copy a file. If the file names don't include paths, then the files are assumed to be in the UI-View32 program folder.

EXIT - close UI-View32.

RESTART - restart UI-View32.

RUN <program name> - run a program. Example - "RUN C:\RIG\FREQ.EXE". You should give a full path for the program.

SNAPSHOT <number> - take a snapshot of the station list if there are at least <number> stations in the list. If <number> is omitted then a snapshot is always taken.

START_METEOR_MODE <number> - enable meteor mode for this number of minutes. <number> must be between one and 30. If you wish to enable meteor mode for more than 30 minutes, then you can use a series of "START_METEOR_MODE 30" commands, with times separated by 30 minutes.

WX_INTERVAL <number> - set the WX beacon interval to this number of minutes. The setting is not saved, so UI-View32 will revert to the value set in WX Station Setup if you restart the program.

Extras

UI-View32 supports "extras". These are external programs that appear on the UI-View32 File menu. Their function will normally be related to UI-View32 in some way, but that isn't essential.

To add an extra to UI-View32 you obviously need a suitable program! You then create a file with an extension of ".XTR" in the UI-VIEW directory that provides UI-View32 with information about the program. The XTR file contains four lines:-

Line 1 - The description of the program that will appear on the File menu.

Line 2 - The program name, with any command line arguments. If the program isn't in the UI-View32 folder, the name must include the full path. If any part of the program name includes spaces, then the name must be enclosed in quotes.

Line 3 - "True" or "False" - indicates whether the program should be started when UI-View32 starts.

Line 4 - "True" or "False" - indicates whether the program should be unloaded when UI-View closes.

Example

The Schedule Editor, SCHEDIT32.EXE, is implemented as an extra. The ".XTR" file is SCHEDIT32.XTR, it contains the following lines:-

```
Schedule Editor
SCHEDIT.EXE
False
True
```

Send Beacon

This option allows you to send a station beacon at any time. The shortcut key is F9.

Query WX Stations

This options sends an APRS compatible WX stations query. All WX stations hearing it will respond by sending their beacon within a minute or two.

TH-D7 Configuration

COMMS Setup

```
Host mode NONE
Select the TH-D7 command file
9600 baud
8 data bits
1 stop bit
XON/XOFF handshaking
```

Make sure the TH-D7 is connected to the PC and is turned on.

Start UI-View32, if you have got it all set up correctly, the TH-D7 will emit several beeps as it initializes.

Once you've got it working, you can edit the command file and input the correct frequency, data band, etc.

Colours

This option allows you to change the colour of the text in the monitor window and the colour of the grid squares.

Show NGR

If this option is checked, then the panel in the bottom left corner of the map window will show UK National Grid Reference (NGR) instead of IARU locator. Ctrl+G is a shortcut for this option, or you can double-click the panel.

Tracking

You enable tracking for a station by selecting Track on the station Right-Click menu, or use the Track button on the Station List or one of the lists on the Lists menu. You can enable tracking for as many stations as you wish. UI-View32 makes sure that the stations being tracked are always visible on the current map, and it will draw a red circle round each tracked station.

Every time one of the tracked stations is heard, UI-View32 searches for the largest scale (most detailed) map that will display all the tracked stations. If this is not the current map, then the required map is automatically loaded. The map is also scrolled so that the centre of the group of tracked stations is as near as possible to the centre of the displayed area. Note it can't always be put right in the centre of the screen, because the scrolling of the map might not permit it. The only exception to this is if you are using the Street Atlas Virtual Map, in which case the map won't be automatically changed.

If you start playing a log when tracking is enabled, then it is automatically disabled, but you can select one or more stations to track while the log is playing.

If you manually select a different map, UI-View32 will warn you that tracking will be cancelled and ask you if you want to proceed. However, this behavior is affected by the settings of `LOADING_MAP_DISABLES_TRACKING` and `CANCEL_TRACKING_WITHOUT_ASKING` - see below.

There are five editable settings in the [USER] section of `UIVIEW32.INI` that affect how tracking behaves:-

LOADING_MAP_DISABLES_TRACKING - This defaults to TRUE, which means that if you manually change the map when tracking is enabled, then tracking will be disabled. (You are first warned about it.) This is because there is little point in loading a different map only to have UI-View32 switch back to the previous map when it next

hears a tracked station. If you set it to FALSE, then manually changing the map won't disable tracking.

TRACKING_BORDER_PERCENT - In selecting the best map, UI-View32 obviously ignores maps that won't display the tracked stations. It also ignores maps where any tracked station is in the map border. The border is defined as a percentage of the width/height of the map. The default is 10%, but it can be changed by editing this setting.

TRACKING_IMMEDIATE_BEST_MAP - By default, UI-View will search for the best map as soon as you enable tracking for a station. If you set this setting to FALSE, then it won't search for the best map until the next time it hears a tracked station.

TRACKING_FILL_CIRCLE - The default setting of FALSE means that the background of the circle drawn round tracked stations is transparent. If you change it to TRUE, then the circle will have a solid white background. This makes tracked stations easier to spot, but will obviously hide any map detail underneath the circle.

CANCEL_TRACKING_WITHOUT_ASKING - The default is FALSE. If you set it to TRUE then UI-View32 will cancel tracking when you manually select a different map without asking for confirmation.

Debug Mode

You put UI-View32 into Debug Mode by selecting "Debug Mode" on the options menu. This mode is really only of use if you have noticed a problem and you are trying to provide me with information about it.

The Debug Window shows all the frames that UI-View32 has been able to understand, and how UI-View32 has classified them. It also shows details of any minor internal errors that have occurred.

All the text that appears in the Debug Window is also written to DEBUG.TXT in the UI-VIEW directory. **PLEASE NOTE** - UI-View32 appends to this file, it never deletes it. If you regularly use Debug Mode, you should delete the file from time to time, otherwise it will get very **BIG!**

As every station beacon is processed, a PROCESSING message will be displayed, followed by either an ACCEPTED message or a REJECTED message giving a reason. If neither the ACCEPTED nor REJECTED message appears, then there should be an ERROR message. (The frame that was being processed is displayed **after** these messages.) If you get any ERROR messages, or you notice a PROCESSING message not followed by either ACCEPTED, REJECTED or ERROR, then please send me the relevant extract from DEBUG.TXT.

Statistics

This window shows various statistics accumulated during the program session. Please note that the received counts for Ping, Query All Stations, and Query WX

Stations cannot be exact, because they will count frames multiple times if they are heard via more than one path.

Tile Windows

Selecting this option tiles the Map, Station List, Terminal and Message windows on the screen. Note that this is not a true Windows tile, because, for several good reasons, UI-View isn't an MDI application.

Cancel Ping

This option allows you to cancel a Ping. The option is only available if a Ping is active.

APRS Compatibility

This dialogue allows you to control the level of compatibility between UI-View32 and APRS.

PLEASE NOTE! - If you enable the UI-View(32) extensions, you will have features available that do not form part of the APRS protocol. The recommendation is that you do **NOT** enable UI-View(32) extensions, unless you are operating in a network where most other stations are using UI-View(32), and where compatibility with the APRS protocol is not important.

UNPROTO address - the address to which APRS format messages are sent. Use CQ, APRS, or BEACON. Don't use UIVIEW, because APRS programs only recognize a limited number of addresses. The default is the special address "APRS", see UI-View32 Destination Address for more information.

Default message type APRS - When sending messages to a station you haven't previously contacted, UI-View32 will use APRS format messages. By default it uses UI-View(32) format messages.

Enable UI-View(32) extensions - If this option is not checked, then any aspect of UI-View32 not compatible with APRS is disabled:-

- APRS message format is always used and incoming UI-View(32) format messages are ignored.
- The global beacon trigger is locked at "?APRS?"
- The UI-View32 "tag" on the beacon is suffixed with 'N' e.g. {UIV32N}.
- In the Station List on other UI-View(32) systems your callsign will be prefixed with a '-' to show that you have disabled extensions.

Note - In some previous versions of UI-View32, there was a "Per-station message seq.no." checkbox. This option now defaults to being off, and can only be changed by editing UIVIEW32.INI and changing PER_STATION_SEQNO in the [USER] section.

APRServe

The following point is mentioned below, but I'm also putting it at the top, because experience has shown that a lot of users ignore it and then report poor performance.

Because of the speed of the incoming data from the internet servers, you might find it best to uncheck both options on "Options", "Announce Stations". If you leave the speech enabled, and mute your PC sound, then you are wasting some processor time. If your PC is slow, then, to reduce the load on the processor, you can select "Only Update When Visible" on the Terminal window Options menu, and keep the window hidden. You can also uncheck "Show Monitor Window" on the main window Options menu.

APRServe is a system of interconnected servers on the internet. It is written by Steve Dimse, K4HG. It makes available to connect-ed users APRS data from other connected users and also from IGATEs - gateways between radio ports and the internet. The result is an internet data stream containing hundreds of APRS position beacons from all over the world, plus status text, messages, etc. UI-View32 supports connection to APRServe and can also be used as an IGATE.

For a detailed description of APRServe, see <http://www.aprs.net/aprserve.dcc.html>

For a description of how APRServe handles internet to RF messaging, see <http://www.aprs.net/inetmsg.html>

To connect to APRServe use "Action", "Connect To APRS Server" (the menu option then becomes "Disconnect From APRS Server" so you can use it for disconnecting).

You will be asked if you wish to log on when you connect. (This assumes that you have checked "APRServe log on required" in APRS Server Setup.) If you select 'No', then you won't be logged on to the server, and you will only be able to receive data, you won't be able to send data.

If you select 'Yes', then you will be logged on to the server using the callsign specified in 'Station Setup', and your APRServe validation number. If you use the default validation number of "-1", then you will be allowed to send data to the server, which can be seen by other directly connected users, but you will not be allowed to act as an IGATE, and any data you send to the server will not pass through any other IGATEs. **Please see APRServe Validation Numbers for information on how to obtain a number.**

Once you are logged on, your station beacon will be sent to APRServe at the interval specified in 'Station Setup', you will be able to send messages by specifying port 'I' for Internet in the message window, and you will be able to act as an IGATE according to the settings that you have put in [APRServe Setup](#).

"Connect to APRS Server" can also be used to connect to a local server, such as another copy of UI-View32 running on your LAN with "Local server" enabled. If you use such a server, then the only difference is that you should not check "APRServe log on required" in [APRS Server Setup](#).

All connections to and disconnections from an APRS Server are logged in CLIENTLG.TXT in the main UI-VIEW directory. If you run UI-View32 with a command line option of /FULLINETLOG, then a more detailed log is kept, which includes a record of all attempted connections, and all error messages from the Windows Winsock API.

It is possible for UI-View32 to automatically start an external program when it connects to an APRS server. This feature is designed to be used with the internet time client, but it could also be used with other programs. See [Internet Time Client](#) for more information.

If you connect to APRServe, there are a few points you need to be aware of:-

(a) Unless the server is on your LAN, you **MUST** connect your PC to the internet before you try and connect from UI-View32 to APRServe. With Win31 this means starting your Winsock, with Win95 it means starting a suitable Dial-Up Networking connection.

(b) The data from APRServe can come in very fast! You'll soon have a few hundred stations in the list. A P200MMX easily copes with it, slow PCs might not.

(c) Because of the speed of the incoming data from APRServe, in "Miscellaneous Setup" turn off "Automatically sort station list". Set "Auto Refresh Mode" to Timer and set a value of a few minutes, or uncheck "Auto Refresh" on the Options menu and refresh manually as required by using F4. Not so important, but you might find it best to uncheck both options on "Options", "Announce Stations", or UI-View32 can sound like it's "rapping" as it attempts to speak the stations. (Although some people quite like it!) To further reduce the load on the PC processor you can select "Only Update When Visible" on the Terminal window Options menu, and keep the window hidden. You can also uncheck "Show Monitor Window" on the main window Options menu.

APRServe Validation Numbers

Access to the internet [APRS](#) servers is controlled with validation numbers. Without a validation number, you can send data to the server, which can be seen by other directly connected stations, but your data will not be allowed to pass through IGATEs, and your own system cannot act as an IGATE.

Most users of UI-View32 will have received an APRS server validation number with their registration, but it was not included with the early registrations.

If you did not receive an APRS server validation number with your registration, and you want to use the internet servers, then contact me, but I am not prepared to issue validation numbers other than to users of UI-View32 who hold a valid amateur radio callsign.

PLEASE NOTE - for the purpose of connecting to the internet APRS servers, the registered UI-View32 callsign must match the callsigns configured in "Station Setup" and "WX Station Setup". (SSIDs are ignored.) If the callsigns don't match, then you won't be able to input the validation number in "APRS Server Setup", and the default validation number of "-1" will be used when you connect to an APRS server. If you now use a different callsign to the one under which you registered UI-View32, then let me know and I will issue another registration.

AGWPE Setup

This dialogue allows you to configure how UI-View32 connects to the SV2AGW Packet Engine. If AGWPE and UI-View32 are running on the same PC (the normal situation) then no configuration is required. The TCP/IP interface also allows you to connect UI-View32 to AGWPE running on another PC accessible on a network. That PC would usually be on your LAN, but it could be many miles away and accessed by a connection across the internet.

Host machine - Input either the domain name or the IP address of the machine on which AGWPE is running. It may be advantageous to put an entry in your HOSTS file for the machine to which you are connecting if it is on your LAN, even if it is your own machine (localhost).

The HOSTS file lives in the Windows directory (Win95/8), or in the \system32\drivers\etc directory (NT). If it doesn't exist, you will need to create it. Some example entries:-

```
# Localhost is always 127.0.0.1.  
127.0.0.1    localhost  
# Another PC on your own LAN.  
192.168.0.2  packetpc
```

(Advanced feature) The host machine entry can also be used to specify a file containing the host machine name. If the last four characters of the host name are ".ADR" then it is assumed to be the name of a file in the UI-View32 folder. The file should contain one line, which should be either just the host name, or the host name followed by a colon, and then a port number.

Port - The port will normally be 8000, unless you are connecting via a telnet proxy server, or the default port number has been changed in AGWPE for some reason.

Password - For normal use of AGWPE on your own PC you do NOT need to input a password. From V2000.78 onwards, AGWPE supports user names and passwords, so the operator can control who connects to his AGWPE system via the internet. If you connect to remote AGWPE systems via the internet, then the

operators of those systems will give you a password if one is needed. (UI-View32 will always use the station callsign, without SSID, as the user name.)

Text to send on connection - The text to send when a connection occurs, only relevant if you are connecting via a proxy server.

Remote - If remote is checked, then UI-View32 will regard this AGWPE system as not being on your own PC and not on your LAN. See AGWPE Multiple Systems for more information on how Remote is used.

Multiple systems - Normally you will only connect UI-View32 to one AGWPE system. However, it is possible to connect to more than one system. **PLEASE READ AGWPE Multiple Systems** before you attempt to use this facility!

Enable this system - If this box is checked, then this system is enabled, and UI-View32 will try to connect to it. System 1 is always enabled, and so it does not have this option.

Port Mask - see Port Monitor Mask.

One further configuration option is available - If a connection to AGWPE fails, then a message box is displayed for 15 seconds informing you of the error. The length of time for which the message is displayed can be altered by editing the MESSAGE_DISPLAY_SECS entry in the [AGWPE] section of UIVIEW32.INI. A value of zero stops the message being displayed.

Connecting via a proxy server

If you wish to connect UI-View32 to AGWPE via a telnet proxy on your LAN, then you must do the following:-

- In "Host machine" and "Port" put the relevant values for connecting to your proxy.
- In "Text to send on connection" put the text to send to the proxy server to connect to AGWPE on the remote machine. Note that the port to use on the remote machine will always be 8000. This text will be sent to the proxy when the connection is made. It will, by default, be terminated with a linefeed character (^J). If your proxy requires something different, e.g. A carriage return, then edit UIVIEW32.INI and change LINE_TERMINATOR in the "[AGWPE]" section to whatever is required. For carriage return you would put "^M".

One complication of connecting via a proxy is that there is no indication from AGWPE that a connection has occurred, but you need to send some commands to AGWPE to initialize your connection. These commands are sent a fixed time after the connection is made to the proxy. The default is five seconds, but you can change it by editing the "PROXY_INIT_DELAY" entry in the "[AGWPE]" section of UIVIEW32.INI. (In use, UI-View32 rounds this entry to the nearest five seconds.)

Requirements for using the TCP/IP Interface

You will not get the AGWPE TCP/IP interface to work with UI-View32 unless your system meets these requirements:-

- You have AGWPE version 2000.13 with AGWPE dated 29th December 1999, or later. Earlier versions that supported the TCP/IP interface won't work with UI-View32, because a feature that UI-View32 needs was not available on the TCP/IP interface until this particular release of version 2000.13. NOTE - there was a previous version 2000.13 that won't work.
- You have enabled "Winsock Interface" on the AGWPE popup menu. (You access the menu by right-clicking "Packet Engine" on the task bar.)
- You are running Win95 with the Winsock 2 update, or you are running Win98.

There seem to be various versions of the Winsock2 update available. The one I used is called W95ws2setup.exe and I got it from the following URL. (Everything between the two lines of asterisks is one single line - in case it wraps when viewed in a help Window!)

```
*****
http://www.microsoft.com/windows95/downloads/contents/wuadmintools/s_wunetworkingtool
s/w95sockets2/default.asp?
*****
```

AGWPE Ports Info

This option is only available if you are using AGW host mode. It tells you what type of connection you are using to AGWPE and lists the available ports. It is only really of use if you are using a TCP/IP connection to AGWPE on a remote PC.

By default the window will be displayed for 10 seconds, but if you uncheck "Auto close", then it will remain displayed until you close it.

For more information about AGWPE options see AGWPE Setup.

The shortcut key for this menu option is F7.

Local APRS Server

UI-View32 can provide a local APRS Server so that other APRS systems on your LAN can connect to it as client and send and receive data.

You enable the server by checking "Enable local server" in APRS Server Setup. It will then listen for incoming connections on port 1448. That port was chosen because APRS in the UK is on 144.800MHz. If you want to use a different port, then edit the PORT entry in the [SERVER] section of UIVIEW32.INI.

The server works like this:-

- All APRS traffic heard via the radios connected to the server is passed to the clients.
- If the server is connected to an internet APRS server, then all traffic from the internet APRS server is passed to the clients.
- All APRS traffic from the clients is passed to other clients and it is also processed by the server like any other incoming data.
- If the server is connected to an internet APRS server, then traffic from clients is NOT passed to the internet server.
- Messages from the clients to local stations are gatewayed to RF following the same rules as messages to local stations seen in the internet data stream - see [APRS Server Setup](#) for more information about gatewaying.

All connections to the server are logged in SERVELOG.TXT in the main UI-VIEW directory.

HSP Switch

Click [here](#) to view the HSP Switch schematic in a separate help window.

Introduction

This circuit allows UI-View32 to share a PC COM port between a TNC and a [GPS](#). It is very much copied from WB4APR's HSP switch, detailed in his GPS.TXT file, which is distributed with DOS [APRS](#). I don't want to take any of WB4APR's credit for the design of the circuit, and his description of it is more complete than these notes, so I recommend that you have a look at GPS.TXT. Also, his original version has some optional features that I haven't included.

PLEASE NOTE - The switch can only be used if UI-View32 is used in host mode NONE or [KISS](#). It can't be used with [BPQ](#) or [AGWPE](#), because UI-View32 has no control of the COM port.

Description

Switching is accomplished using the RTS handshaking line. When RTS is asserted, the normal situation, TR2 is turned on and shunts the NMEA output from the GPS to ground. When RTS is lowered, TR2 is turned off, and the GPS data goes via the emitter follower TR1 to the PC. At the same time, because RTS is lowered, the TNC should stop sending data. DTR from the PC is used to provide a positive voltage for TR1.

When UI-View32 needs to sample the GPS data, it lowers RTS and waits until it has received a \$GPRMC sentence from the GPS. (With the Aisin GPS and the DeLorme Earthmate, it waits until the required binary data has been received.) It then asserts

RTS again. While the GPS data is being sampled, some data from the TNC can be lost, but sampling only takes an average of 1 second. Whenever a sample is taken, there is a small risk that UI-View32 will receive a corrupted frame from the TNC if you are using host mode NONE. If you use KISS mode then this risk is virtually zero.

I have reversed the functionality of DTR and RTS compared to WB4APR's original design, because RTS is more commonly used for flow control than DTR. However, it doesn't matter which way round you use the two lines, because UI-View32 can be configured to use either. The important point is that the connection labelled "TNC RTS" goes to whichever handshaking line is used for flow control with your TNC. E.g. with my KPC-3 and Tiny-2 Mk2, it goes to RTS, but with my BSX2 it needs to go to DTR. You should check the docs for your particular TNC.

A change to WB4APR's original design

The original design works fine with TNC's in terminal mode, but it has a problem with some TNC's in KISS mode. The problem occurs because TNC's in KISS mode are not supposed to use any handshaking, so they should ignore the state of RTS. Therefore, when RTS is lowered to sample the GPS data, a KISS TNC should continue to transmit, and so corrupt the data from the GPS. I fixed the problem by adding R4 and D3 (marked with a '*'). Now when RTS is lowered, if the TNC continues to send data, it is shunted to RTS, which is negative with respect to ground, via D4, and this stops the data appearing at the output.

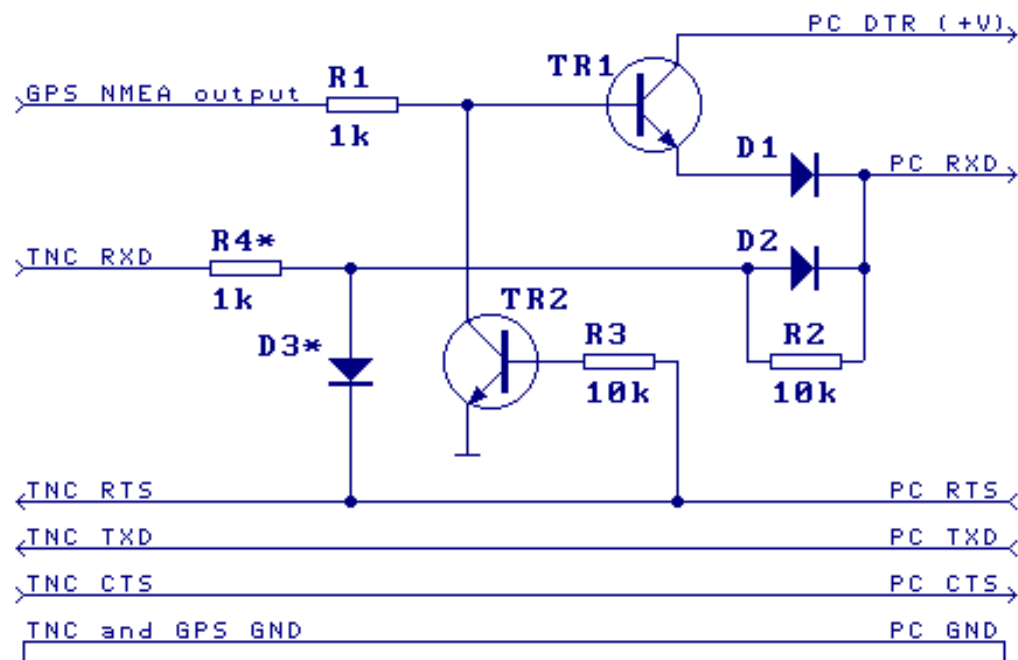
(In fact some TNC's in KISS mode, for example the KPC-3, continue to use hardware handshaking. If you have such a TNC, or you choose not to use KISS mode, then WB4APR's original design can be used without any problem.)

Construction

I built the switch in a small plastic box with a DB9 in each end (for UK users, the box I used was Maplin part number JM07H). I mounted the components on a small piece of strip board, fixed between the two connectors. I put the GPS connector on a lead coming out of the side of the box.

The transistors can be any small signal NPN devices. I would recommend picking something with a plastic case, to avoid the risk of the case causing a short in the limited space available. I used ZTX107's. The diodes can be 1N914 or similar.

HSP Switch Schematic



Meteor Mode Setup

UI-View32 Meteor Mode is a special mode in which the program can be used to transmit beacon frames very frequently. It is designed to be used for meteor scatter propagation tests.

Two different modes of operation are possible - "Interval" mode and "Burst" mode.

Interval Mode - A single beacon frame is transmitted at a specified time interval.

Burst Mode - Beacon frames are transmitted continuously for a period of seconds. You can specify how long the burst should be, and when you want it to start in terms of the number of seconds into each minute.

Port - The port on which you wish to use Meteor Mode.

UNPROTO address - The address to which you want to send the beacon frames, including any digis. The destination address and digis should be separated with commas, do not use 'V' or 'VIA'. Examples - CQ would address the beacon frames to CQ, CQ,RELAY would address the beacons to CQ via RELAY.

Beacon - The text of the beacon you want to send. For meteor scatter use, the beacon should be as short as possible. The shortest beacon that can usefully be interpreted by APRS software is probably your IARU locator surrounded by square brackets, e.g. "[IO92XX]", and that is the beacon you are recommended to use.

NOTE - The following four automatic beacon input buttons cannot be used until you

have input your latitude and longitude in Station Setup.

Grid - Automatically input a grid square beacon.

Grid-in-status - Automatically input an APRS "grid in status" format position beacon.

Posit - Automatically input a normal APRS position beacon.

Comp'd - Automatically input a compressed APRS position beacon.

Interval (only used in Interval mode) - The interval, in seconds, at which you wish to transmit a single beacon.

Start (only used in Burst mode) - The number of seconds into each minute at which you want the burst of beacon frames to start. You can specify more than one time, e.g. "0,30" would mean "start a burst at 0 seconds into each minute and another burst at 30 seconds into each minute". If you were conducting a trial with someone, then they might specify "15,45", so that your transmissions interleaved.

Duration (only used in Burst mode) - The length in seconds of each burst of frames. UI-View converts the specified duration into a number of frames to send. The calculation is accurate, but it makes two assumptions - (a) that you are using 1200 baud, and (b) that your TNC will transmit continuously when fed with a stream of frames. If your TNC releases the PTT every few frames (the TH-D7 appears to behave in this way.), then you will need to make allowances for it, because a specified duration of, say, 10 seconds, will result in an actual burst length of perhaps 15 seconds.

Shared COM Port Setup

UI-View32 supports four methods of sharing a single COM port between your TNC and GPS. What methods are available depends on what host mode you have selected in Comms Setup.

I have carried out extensive testing of all the methods, but I have a feeling that this facility could result in a large number of cries of "It doesn't work!". If you have problems here are a few obvious points to check:-

- That you have selected in GPS Setup the method you are trying to use!
- If you are using the HSP, that the TNC and GPS are both using the same terminal baud rate, almost always it should be 4800.
- If you are using a KPC-3 Plus, that the GPSPORT baud rate matches the GPS.
- If you are using a Kenwood TH-D7/TM-D700 or a KPC-3 Plus, that the TNC parameters listed below are being used.

- If you are using an SCS PTC TNC and a 'Y' cable, you must have a firmware version in the TNC that properly supports GPS input.

Hardware Single Port (HSP) Switch - This method uses a simple solid-state switch to allow the GPS data to be sampled at regular intervals. See [HSP Switch](#) for more information. If you are using [KISS](#) mode, or you are using an Aisin or Earthmate GPS, then this is the only option available.

If you build the switch according to the design that I supply, then it uses RTS as the switch control line. If you buy a switch or build a different design, then it might use DTR, in which case you must change "SWITCH_CONTROL_IS_DTR" in the "[GPS]" section of UIVIEW32.INI from "FALSE" to "TRUE".

See "Fine Tuning" below for some important comments about adjusting the set-up of HSP mode.

For HSP to work, your TNC and GPS MUST be configured to the same baud rate!

PLEASE NOTE - If you enable HSP, but your GPS isn't attached, then, every time UI-View32 tries to sample the GPS data, it will spend at least three seconds doing it before it gives up. This can result in unnecessary loss of data from the TNC. If you remove the GPS, you should disable the GPS input in UI-View32. (F8 is a shortcut for doing this.)

KPC-3 Plus - Check this option if you are using a KPC-3 Plus with a GPS attached to pins 2 and 6 of the radio port. (The KPC-3 Plus only has this facility available if the firmware is V8.3 or later.)

For this option to work properly, the following parameters should be set in the KPC-3 Plus.

(The selected NMEA sentences may need changing depending on the GPS being used.)

- **GPSHEAD 1 \$GPRMC** - Select the NMEA \$GPRMC sentence from the GPS to be put in LT 1.
- **GPSHEAD 2 \$GPGGA** - Select the NMEA \$GPGGA sentence from the GPS to be put in LT 1.
- **GPSHEAD 3** - Select nothing for the LT 3.
- **GPSHEAD 4** - Select nothing for the LT 4.
- **LT 1 %** - clear LT 1.
- **LT 2 %** - clear LT 2.
- **LT 3 %** - clear LT 3.
- **LT 4 %** - clear LT 4.

Stop the KPC-3 Plus automatically transmitting LT 1 to 4 on the radio.

- **BLT 1 E 00:00:00**

- **BLT 2 E 00:00:00**
- **BLT 3 E 00:00:00**
- **BLT 4 E 00:00:00**

- **GPSPORT 4800 NORMAL CHECKSUM** - Open the second serial port and set it to 4800 baud.

- **LGETCHAR \$05** - Set the "hot key" that will be used by UI-View32 to tell the TNC to send the GPS data to the PC. (\$05 is the default, so the command isn't really needed, but it does no harm to send it.)

The best way to set these parameters is to add them to KTRONICS.CMD.

D7/D700 - Check this option if you are using UI-View32 with a Kenwood TH-D7 or TM-D700 that has a GPS attached. UI-View32 will treat the NMEA beacons from the D7/D700 as if they are raw data from a GPS, rather than beacons. This allows you to send your mobile position beacons from UI-View32 rather than from the D7/D700. When this option is enabled the COM port is locked to the port you have selected in "Comms Setup" and the Baud Rate is locked to 9600, which is the speed used by the D7/D700.

For this option to work properly, the following parameters **must** be set in the TH-D7 or TM-D700 TNC:-

- **LOC E 0** - This stops the D7/D700 sending out its own beacon on its radio port, otherwise you would be sending position beacons both direct from the D7/D700 and from UI-View32.

- **LTMON 10** - this sets the rate at which the D7/D700 sends an NMEA beacon to UI-View. The "10" can be varied, but I don't think you would ever need the D7/D700 beacon to send the information more frequently than that.

- **LTMHEAD ON** - This is needed for the TM-D700. The TH-D7 I used for testing did not support the command, but some versions of the TH-D7 might.

- **GPSTEXT \$GPRMC** - to select the correct NMEA sentence for the D7/D700 to put in its beacon.

- **MYCALL** must be set to the UI-View32 station callsign. That is done automatically if the D7/D700 is connected to UI-View32 when you start the program.

The best way to accomplish the above is to put the above commands, other than MYCALL, in the TNC initialization CMD file. TH-D7.CMD and TM-D700.CMD supplied with UI-View32 contain the commands.

PTC - To use this option, you must be using an SCS PTC-IIe or PTC-II in WA8DED host mode, it must have firmware that properly supports GPS input, and you must have a suitable 'Y' cable.

Fine Tuning

Sampling interval - If you use the HSP Switch or a KPC-3 Plus, then UI-View32 will sample the GPS data as follows:-

If in Station Setup the Beacon interval (Mobile) miles/km box contains '0' (so the beacon rate is fixed), then the GPS data will be sampled about five seconds before each beacon is sent.

If the miles/km box contains something other than '0' (so the beacon rate is variable according to your speed), then the GPS data is sampled at the interval in seconds specified by SMART_SAMPLE_INTERVAL in the [GPS] section of UIVIEW32.INI. The default is every 30 seconds. You can change this value to sample more frequently if you wish, but, if you are using the HSP Switch, then a small amount of data from the TNC can be lost every time the GPS is sampled, so there is a trade-off between sampling rate and how much data you lose. If you are using KPC-3 Plus mode, then you can safely increase the sampling rate if required.

Spurious characters - If you use the HSP switch, then, after sampling the GPS data, a few spurious characters from the GPS can appear in the TNC output data stream. This happens because the characters are already in the FIFO of the PC COM port UART, but are only received by UI-View32 after it has stopped sampling the GPS data. This problem only occurs if you use TNC mode, if you use KISS mode then any such spurious characters will be automatically discarded.

To get round the problem, by default UI-View32 discards all characters received in the first 150 msec after GPS sampling has ended. This should be ok for most PCs, but the time period is adjustable via the SWITCH_DISCARD_MSEC setting in the [GPS] section of UIVIEW32.INI.

Make A Button

This option allows you to add a button to the toolbar for loading the current map. It creates a BTN file for the button, and makes a BMP picture for the button based on the map image. (See UI-View32 Maps for more information about BTN files.)

NOTE - BTN files live in a subdirectory called BUTTONS of the directory containing the maps. If you have put some maps on a CD, and are accessing them via the "Extra maps path", then you can't make buttons for those maps, because UI-View32 can't write to the CD! If you try, you'll get an error message.

The result of attempting to compress a large bitmap into a 20 x 20 pixel image is obviously not always going to be very satisfactory! In general, you will get a better button picture if you don't have anything displayed on the map when you use Make A Button - no map outlines, grid squares, overlays or station symbols. If you don't like the result, then you can always do one of the following:-

- Edit the button image produced by Make A Button.

- Create an entirely new image. One thing worth trying is to load the map into PaintShop Pro, and use the resize option to create a 20 x 20 image, the result may be better than what UI-View32 produces.
- Discard the image and put a short text caption in the BTN file. (You can only fit about four characters on the buttons.)

APRS Queries

UI-View32 supports the following APRS query messages. To send one of these queries to another station, simply key it in like a normal message. When receiving a query, UI-View32 responds as follows:-

?APRSP - sends a location beacon.

?APRSS - sends the status text.

?APRSO - sends your active objects.

?APRSD - sends a list of stations that have been heard direct.

?APRST (or ?PING?) - sends the route by which the query was received.

?APRSH <callsign> - sends information on when <callsign> was last heard.

?VER? (not an APRS query, but some APRS software supports it) - sends information on the software version in use.

Note that queries and responses are one-off transmissions. They are not retried and are not acknowledged.

APRS Bulletins

APRS supports both bulletins and announcements, to quote the draft APRS protocol specification:-

General bulletins are messages where the addressee consists of the letters BLN followed by a single-digit bulletin identifier, followed by 5 filler spaces. General bulletins are generally transmitted a few times an hour for a few hours, and typically contain time sensitive information (such as weather status).

Announcements are similar to general bulletins, except that the letters BLN are followed by a single upper-case letter announcement identifier. Announcements are transmitted much less frequently than bulletins (but perhaps for several days), and although possibly timely in nature they are usually not time critical.

Sending a bulletin or announcement is exactly the same as sending a normal message, but you address it to BLN1, BLN2, BLNA, BLNB, etc, and **the APRS box must be checked**. If your message spreads over several lines, then UI-View32 will automatically increment the last letter/digit of the address.

Bulletins are transmitted when they are first written, then the transmission period decays as follows (the values are minutes) 2, 5, 10, 20, and remains at 20 until you delete the bulletin from your Sent message list.

Announcements are transmitted when they are first written, then the transmission period decays as follows (the values are minutes) 2, 5, 10, 20, 30, 60, and remains at 60 until you delete the bulletin from your Sent message list.

NOTE - that you have to delete bulletins and announcements from the list to stop them being sent.

If you want to save bulletins and announcements that you send between program sessions, so they carry on being transmitted when you restart UI-View32, then you should check "Save Bulletins" on the message screen "Options" menu.

F1 - Help
F2 - Select a map
F3 - Find (when searching the monitor window)
F4 - Refresh map
F5 - Object editor
F6 - Toggle viewing message window
F7 - AGWPE ports info
F8 - Toggle GPS enabled
F9 - Send beacon
F11 - Query all Stations
F12 - enable/disable tracking GPS cross-hairs
Ctrl+F1 - Help contents
Ctrl+F2 - This help window
Ctrl+F4 - Enable/disable exclusions
Ctrl+F5 - Show/hide station symbols

Map Drag And Drop

Besides using the "Load A Map" menu option, you can also load maps by dragging them from Explorer and dropping them onto the map window. Maps loaded in this way can be in any folder, they don't have to be in the UI-View32 MAPS folder.

Three options are available:-

- If you drop an INF file, for which there is a matching BMP, PNG, JPG, GIF or EMF file in the same folder as the INF file, then the map is loaded.
- If you drop a BMP, PNG, JPG, GIF or EMF file for which there is a matching INF file, then the map is loaded.
- If you drop a BMP, PNG, JPG, GIF or EMF file for which there is **not** a matching INF file, then a dialogue window opens, which allows you to create the INF file - see Create An INF File.

Create An INF File

To access the "Create An INF File" dialogue, you must have dropped a BMP, PNG, JPG, GIF or EMF map image, for which there isn't a corresponding INF file, onto the map window. This dialogue allows you to easily create the INF file.

There is a choice of two methods - "Top left/bottom right", or "Two points".

Top left/bottom right

Input the latitude and longitude of the top left and bottom right corners of the map, which you should have noted at the time that you created the image.

Two Points

Hold down Ctrl and click on two points on the map for which you know the latitude and longitude. The nearer the points are to two diagonally opposite corners of the map, the more accurate the result is likely to be. The points will be marked with red crosses and labeled "Point 1" and "Point 2". When you have clicked the two points, you can input their latitude and longitude. If you decide you have clicked in the wrong place, use the "Clear" button to clear the markers off the map.

The format of longitude is ddd.mm.nn<EW>. "ddd" is three digits for degrees. "mm" is two digits for minutes. "nn" is two digits for decimal minutes. NOTE - decimal minutes, not seconds. "<EW>" is either "E" for East or "W" for West. Example - 000.02.77W.

The format of latitude is dd.mm.nn<NS>. "dd" is two digits for degrees. "mm" is two digits for minutes. "nn" is two digits for decimal minutes. "<NS>" is either "N" for North or "S" for South. Example -52.58.23N.

Description can be up to 30 characters long.

When you are happy with your input, click "Ok" and the INF file will be created in the same folder as the image file.

UI-View32 As An ActiveX Component

UI-View32 is an ActiveX EXE. It exposes various properties and methods to client applications. This allows other applications to receive data from UI-View32, look up information on stations, obtain the contents of various text windows, receive a notification when a beacon is received from selected stations, even draw on the map, create objects and send messages.

In the Develop folder of the main UI-View32 directory are three complete VB5 projects that show how to use the ActiveX interface:-

UIV32X.ZIP - this is a VB6 project that demonstrates the use of various aspects of UI-View32's ActiveX interface. UIV32X.TXT in the ZIP gives some more information.

MOVEALARM.ZIP - this is the source code for the "Station Movement Alarm" extra supplied with UI-View32. NOTE - this zip contains long file names, so you need to open it with WinZip or similar.

D700SWAP.ZIP - this is a VB6 project that demonstrates how an ActiveX client can access the TNC via UI-View32.

DX Cluster Spy Mode

DX Cluster Spy mode is selected from the Options menu of the Terminal window. When this mode is selected, the Terminal window will only display DX Cluster "spots", all other traffic is ignored. Dupe spots are suppressed, and there is an option for UI-View to speak the spots as they are received.

If you hold the mouse over the DX station callsigns, then a "tooltip" window will display information about the stations, including the beam heading and distance from your location. (This information is based on PREFIX.TXT, which is derived from K2DI's DXCC country list. PLEASE read the comments at the top of PREFIX.TXT!)

NOTE - to be able to use the "DX Cluster Spy" option, you must be able to hear DX cluster data! Also, UI-View doesn't allow you to connect to the cluster, you have to rely on hearing the data sent to other connected users. (In some countries DX cluster spots are broadcast as UI frames, but, to the best of my knowledge, this doesn't happen anywhere in the UK.) However, if you receive a reasonable signal from a cluster or cluster node that has a few regular users, then you should find that this facility works very well. DX cluster spots also appear in the internet data stream if you connect to an APRS server.

DX Cluster Options sub-menu on the Terminal window

Sound - You can select Beep - UI-View32 beeps whenever a new spot is received - or Speech - the UI-View32 speech engine is used to speak the spots.

Extra Info - The "tooltip" text always shows country, bearing and distance. IF this option is checked, then it also shows ITU zone, CQ zone and time zone.

Show Range Scale

If this option is checked, then a legend in the top right corner of the map window shows the centre and range scale of the current map view. See Range Scale for more information.

Range Scale

The idea of range scale is that any APRS user should be able to convey to another APRS user what he is looking at, even though they may be using different APRS software and the quality of their maps may be very different.

Range scale specifies a centre point of the current **view**, and the radius of the largest

circle that will fit into the view. **View** is emphasized, because the view will change if you change the size of the window, and so it is important to note that the range scale is based on the view, not on the whole of the current map.

Auto-Answer

This dialogue allows you to enable automatic reply to received messages, and to input the text you wish to send as the reply. The text can be up to 40 characters long, and will always be prefixed with "[AA] ". Note that Auto-Answer will not remain enabled between program sessions. Pressing Ctrl+A with the message window as the foreground window provides a shortcut to enable/disable auto-answer.

When auto-answer is enabled, "[AA]" is displayed on the caption bar of the Message window.

PLEASE NOTE - If you send a message when auto-answer is enabled, then it is automatically disabled.

Remote Commands

Remote commands allow you, or other users, to use messages to send commands to your UI-View32 system. The original idea was that remote commands could be used by someone using a TH-D7 within range of their own UI-View system, but I'm sure there are uses beyond that.

By default, remote commands are disabled, but you can enable them by using the "Options", "Remote Commands" sub-menu.

If you check "Only Me", then your system will only accept commands from the station callsign, ignoring SSID. For example, if the station callsign is G4IDE-1, then it will accept remote commands from G4IDE-2, G4IDE-7, etc.

If you check "Anyone", then your system will accept commands from any callsign, but note the comments about LGS and LGX.

There are two sorts of remote commands - internal commands and external commands:-

Internal Commands

Six internal commands are supported:-

QAS - causes your system to Query All Stations.

QWX - causes your system to Query WX Stations.

BCN - causes your system to send a beacon.

LGS (or LG1) - enables logging, using a log file named according to the date. (This command must come from the station callsign.)

LGX (or LG0) - disables logging. (This command must come from the station callsign.)

DX - causes your system to send an abbreviated best DX report.

External Commands

External commands are programs that you put in the **RCOMMAND** folder (but note the comments below about ActiveX clients processing external commands). They can be COM files, EXE files, BAT files, PIF files, or any document type that has a file association, so you could even use a remote command to start an Excel spreadsheet! (Don't ask me why you would want to do that!) Possible uses for external commands would be to run programs that controlled equipment.

The format of an external command is '! Or '?' Followed by the program name. For example, if you put TEST.EXE in the RCOMMAND folder, then to run it you would send the command **!TEST** or **!TEST.EXE** or **?TEST** or **?TEST.EXE**. (The file extension is only needed if you have two programs in the folder with the same file name.)

If the program requires command line arguments, then put them after the program name in the normal way, for example **!TEST ARG1 ARG2**. (Because everything after the first space is regarded as program arguments, you should not use program names with spaces in them.)

Whenever UI-View32 executes an external remote command, it first creates a file in the RCOMMAND folder called RCOMMAND.TXT, which provides information about the message that contained the command. The information in the file can be used by the command program. There are five information lines in the file, each preceded by an explanation line. The five lines are:-

- The sender's callsign
- The effective digi path
- The suggested return digi path
- Message type - 'U'I-View or 'A'PRS
- The complete message

UI-View32 waits for up to 15 seconds for the command program to finish executing, but it is strongly recommended that command programs should be small and execute almost instantaneously.

If the command program wants to send text back to the station that executed the command, then it can write one line of text in a file called **RREPLY.TXT** (note the two 'R's) in the RCOMMAND folder. If the command program doesn't send any reply text, then UI-View32 sends an "Ok" message. If the reply text is longer than 55 characters, it will be truncated, because UI-View32 messages have always been limited to 55 characters. (Although this is shorter than the maximum allowed in the APRS spec, it is about 10 characters longer than can be displayed with a TH-D7, and so you should aim to keep the text length to a maximum 45 characters.) If the command program puts more than one line of text in RREPLY.TXT, then each line is sent as a separate message.

A simple example external command program is included with the UI-View32 distribution, it is **HELP.EXE**, and it sends the text in **HELP.TXT**. You can easily create other external command programs by making copies of HELP.EXE. For

example, if you make a copy called QTH.EXE, then it will send the text in QTH.TXT (which you must, of course, create).

If you add external commands to your system, then you should change HELP.TXT to give a list of the commands available.

Note for programmers - If an external command program needs to create an object, then it should do it via the UI-View32 ActiveX interface. I would recommend that the command should consist of two parts -

- The command EXE file in the RCOMMAND folder.
- A second application that can interface with the command EXE file and control the objects. Only one copy of this application should ever be running, and it should be responsible for removing the objects after a predetermined length of time has elapsed.

Servicing External Commands Via An ActiveX Client

UI-View32 allows ActiveX clients to service external commands. This is a very powerful feature, and means that external commands can do such things as creating objects. Before UI-View32 looks in the RCOMMAND folder for a program to process an external command, it checks to see if any ActiveX client wants to handle it. If an ActiveX client signals that it has handled the command, then no further processing takes place. **Note for programmers** - see the sample UIV32X application for an example of how to process external commands.

MS Agent Setup

UI-View32 supports speech via MS Agent. To be able to use this feature, you must have MS Agent installed on your PC. See [Installing MS Agent](#) for more information.

This dialogue allows you to configure UI-View32's use of Agent. Besides opening the dialogue from the Setup menu, if the Agent character is visible on the screen, it can be opened by right-clicking the character and selecting Setup from the pop-up menu. Please note that speaking messages via Agent is configured on the "Options", "Speak Messages" menu of the Message window.

Language - Select the language you want Agent to use. The list only includes the Agent languages installed on your PC.

Character - Select the Agent character you want to use. Two very basic Agent characters that I have created are supplied with UI-View32 - they reflect my artistic ability! The default character is called Phoebe, she is rather shy, so she doesn't appear on the screen. The other one is called Tony, he appears, but lacks animation. **Much** better characters are available for download from Microsoft's Agent web site and from other sites, see [Installing MS Agent](#) for more information.

Message preamble - When UI-View32 speaks a message, the format is, for example, "From G4GZL, Hello Roger". The Message Preamble is the word, or words, that precede the callsign, and you may want to change it if you use a language other

than English.

MHz - is the word "megahertz" spoken at the end of DX spots, for example "G4IDE on 144.800 megahertz". You may wish to change it or remove it.

C'sign Sep. (Callsign Separator) - To force Agent to spell callsigns, the characters of the callsign are separated by another character or characters. The default separator is a space, so "G4IDE" would become "G 4 I D E". If the space is changed to a comma followed by a space, then the spelling is slower. Because a space character on its own would give the appearance that the input box was empty, space characters are displayed as asterisks.

Use for beacons - If this option is checked, Agent is used for announcing the callsigns of station beacons that are received. How often the beacons are announced depends on the setting of "Announce Stations" on the Options menu.

Use for DX Spots - If this options is checked, then Agent is used to announce any DX Spots that are received. (This option is only relevant if you have enabled "DX Cluster Spy" on the Terminal window.)

Test - Click this button and the selected character will speak the Test text in the selected language.

Installing MS Agent

Please read the following carefully! If you have problems getting MS Agent to work with UI-View32, then you have almost certainly not installed one of the required files.

If you want to use MS Agent speech in UI-View32, and Agent isn't installed on your PC, or if you have an old version installed (the current version is V2), then you need to download and install several files from - <http://www.microsoft.com/msagent/>

The files needed are -

- The Agent core components.
- A speech Engine.
- A language, if you don't want to use English.
- SAPI runtime binaries (but see the comment on the web page).
- A character or two. (Not strictly needed because two characters are supplied with UI-View32, but the ones available for download are much better!

For "English (British)" I downloaded -

- MSagent.exe
- lhttseng.exe
- spchapi.exe
- All the characters.

Once you've downloaded the various files, you must install them by running them.

Extra Agent characters

An excellent collection of characters can be found at -
<http://www.msagentring.org/chars/>

The MS Agent Character

UI-View can use an MS Agent character for speech, see [MS Agent Setup](#) for more information. The character has a right-click popup menu with the following options:-

Hide - Hide the character.

Repeat - Repeat the last thing the character said.

Setup - Open the [MS Agent Setup](#) dialogue.

Help - Open this help window.

You can move the character by dragging it, the screen position is remembered between program sessions.

MS Agent

UI-View32 supports speech via Microsoft Agent.

To be able to use this feature, you must have MS Agent installed on your PC. See [Installing MS Agent](#) for information on how to install it, and [MS Agent Setup](#) for information on how to configure it.

AGWPE

UI-View32 can be used with SV2AGW's Packet Engine (AGWPE).

Using [AGWPE](#) allows UI-View32 to be used with a very wide range of packet hardware. It supports TNCs, Baycom modems, YAM modems, USCC cards, sound card "TNCs", etc.

Connections to AGWPE are made via TCP/IP, and so the AGWPE system used does not have to be on the same PC as UI-View32. It could be on another PC on a LAN, or it could even be on the other side of the world and reached via the internet! If the connection to the AGWPE system should fail for some reason, then UI-View32 attempts to reconnect at two minute intervals.

For information on using AGWPE with UI-View32, see [Comms Setup](#) and [AGWPE Setup](#).

AGWPE can be downloaded from SV2AGW's web site, which is currently -
<http://www.elcom.gr/sv2agw/>

Flexnet

An Important Point

I cannot offer "get you going" support for Flexnet, because I usually Don't run it. If you have Flexnet 3.3G or later installed and working with Windows, then you should find that UI-View32 will work with it. There is absolutely no point in trying UI-View32 with Flexnet before you are sure that your Flexnet system is working properly, and that it supports Windows applications.

Setting It Up

1. Copy FLXAPI32.DLL from your Flexnet folder to the Windows SYSTEM folder.
2. Add a line like this to AUTOEXEC.BAT -
SET FLEXNET=C:\FLEX32
(Obviously you change C:\FLEX32 according to the folder in which you have installed Flexnet!)
3. Reboot.
4. Select host mode FLEXNET in UI-View32 "Comms Setup", and it should work.

NOTE - Flexnet ports number from 0, but UI-View32 ports number from 1, so you need to add on one to the Flexnet port to get the equivalent UI-View32 port.

Shortcomings

I have found two problems with Flexnet 3.3G, which, at the time of writing these notes, is the latest version on the Flexnet web site. However, neither problem seems to occur with the new Flexnet/32, which was released in June 2000.

1. Only one application seems to get a copy of monitored frames, so if you are running another Flexnet application at the same time as UI-View32, then UI-View32 might not see the monitored frames. For an APRS type application, it is important that it sees all monitored frames.
2. The FLXAPI32.DLL version of the Flexnet function for sending UI frames - `l2_send_ui()` for anyone who is interested - seems to always send the frames on port 1 (port 0 in Flexnet terminology). The problem might be in my code, but it doesn't happen with the new version of Flexnet, and it also doesn't happen when calling the function from a DOS application. Obviously it is only a problem if you run more than one port.

One other shortcoming of using Flexnet, compared to KISS, AGWPE and BPQ host modes, is that the UI-View32 internal digipeater cannot be used, because UI-View32 does not use raw AX25 frames when running with Flexnet.

Flexnet Software Licensing Conditions

Here are the Flexnet licensing conditions from the Flexnet web site. If you think that

using UI-View32 with Flexnet infringes these conditions, then you should not use it.

Note: This is a translation of the German legal terms. It is for informational purposes only, they have, however, no legal significance. The German terms are the only applicable terms.

The following legal terms govern the use of PC/FlexNet and its modules. Different modules from other authors may use different terms, which should be read in the documentation of the modules!

RMNC/FlexNet, PC/FlexNet and the accompanying utilities and documentations are a product of Gunter Jost, DK7WJ. Exceptions are marked. All rights remain at the author. The user has the right to use the software under the following conditions:

The software may only be used noncommercially for amateur radio. Every Other use, especially in other radio services, needs in every case the written consent of the author.

The legal regulations concerning amateur radio are met.

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The software must not be patched or changed. Changing parameters however is allowed.

Copyright notices must not be removed or changed from the software modules and documentation.

The software must not, neither in part nor wholly, published over PBBS systems or publicly accessible mailboxes.

The software may be distributed freely. One must, however, always distribute the complete package, without any change. File dates and times must not be changed, so that different versions can easily be distinguished. Own extensions have to be clearly marked, at least with the callsign. (Note: This paragraph does not apply to the network node version!)

The authors or distributors of this software assume no responsibility or liability for any harm that results from using this software. The use of this software implies accepting the above legal terms.

Show Monitor Window

If this option is checked (the default), then the Monitor window is visible.

The only situation in which you might choose not to have this option checked is if you

find that UI-View32 struggles to keep up with the volume of incoming data when you are connected to the internet. Hiding the Monitor window can result in a significant reduction in the load UI-View puts on the PC processor.

Meteor Mode

This option enables meteor mode. See [Meteor Mode Setup](#) for more information on how meteor mode works.

Port Monitor Mask

This dialogue allows you to select the ports you want UI-View32 to monitor. Normally you should leave all the ports checked, even if your system has only got one port. The only situation in which you might want to uncheck a port is if your host system (AGWPE, [BPQ32](#) or Flexnet) is used for other purposes and it hears large amounts of traffic on channels that do not carry any [APRS](#) activity.

The mask only covers the first 16 ports. If you have more than 16 ports (only possible with [AGWPE](#)), then the ports above 16 will behave as if they are checked.

Internet Time Client

UI-View32 has an internet time client that can connect to time servers on the internet and accurately set the PC clock, it is available from the File menu as "Internet Time Client".

Get Time - connects to a time server and sets the PC clock, allowing for the difference between local time and GMT.

Change - allows you to change the time server(s). You can input one or more servers separated with commas. If InetTime fails to connect, it will try the next server in the list. It will try 10 times to connect to a server before it gives up.

If you check '**Chime on update**', then InetTime will chime whenever it updates the PC clock. The default WAV file is CHIMES.WAV in the Windows MEDIA folder, but you can change it by editing INETTIME.INI.

If you run InetTime with a **command line option** of AUTO, then it runs minimized, connects to the server, sets the PC clock, then exits.

The default servers (the first two in the list below) work well in the UK, but won't be suitable for other parts of the world. However there are a great many other internet time servers available, you just need to find one that is easily accessible from your location. The five servers I have found to work most reliably in my own particularly situation are -

- ntp1.pipex.net
- clock.psu.edu
- canon.inria.fr

- black-ice.cc.vt.edu
- ntp0.strath.ac.uk

Running the time client automatically

UI-View32 has a mechanism for automatically starting an external program when it connects to an APRS server on the internet. This can be used to automatically run the time client. To enable it, you need to do the following:-

1. Edit UIVIEW32.INI and look for the [USER] section.
2. Change the INET_PROGRAM_NAME entry so it says "INET_PROGRAM_NAME=INETTIME.EXE AUTO".
3. INET_PROGRAM_DELAY specifies how many minutes after connecting to the internet server the external program will be started. It's best to wait for a few minutes, to allow for the initial rush of APRS data from the server, because it can slow down the response from the time server. A delay of three or four minutes should be ok.
4. INET_PROGRAM_REPEAT_INTERVAL specifies the interval in minutes after which you want the program to be run again, provided that you are still connected to the internet. Unless your PC clock is particularly inaccurate, you probably won't need to run the time client again, in which case you should leave this setting at the default value of 0.

Network Time Server

I have included with UI-View32 a network time server - TIMESERVER.EXE. It allows the PC on which UI-View32 is installed to act as a time server for other PCs on a LAN. It runs as a systray icon. Other PCs can use any time client that supports internet time protocol, and configure it so the time server it is using is the PC running TIMESERVER.EXE.

Default Message Port

This dialogue allows you to change the default port on which messages will be sent to stations to which you have never previously sent a message. (If you have previously sent a station a message, then the port defaults to the one you previously used.)

Refresh Map List

If you create new maps while UI-View32 is running, this option forces UI-View32 to rescan the Maps folder and rebuild its internal list of available maps.

WX Station Details

This window shows detailed information for a weather station.

The More/Less button allows you to vary the amount of information displayed, the

default setting for the button can be selected with the Miscellaneous Setup, "More in detail windows" option.

If a callbook server is running, then there will be a '?' Button next to the More button, clicking it sends the station callsign to the server.

The button next to the rain information allows you to cycle through rain in the past hour, rain in the past 24 hours, and rain today. (Obviously this is dependent on whether the station is transmitting the measurements.)

The button between the metric Speed and Gust allows you to change between m/sec and kmh.

Note - In the "More" part of the window is a text box labeled Name. This shows the Name, if any, that you have input for the callsign in the Message Window, it is not part of the off-air information received from the station!

Mobile Station Details

This window shows detailed information for a mobile station.

The More/Less button allows you to vary the amount of information displayed, the default setting for the button can be selected with the Miscellaneous Setup, "More in detail windows" option.

If a callbook server is running, then there will be a '?' Button next to the More button, clicking it sends the station callsign to the server.

The button next to the height information allows you to cycle through current height, maximum height, and the time at which the maximum height occurred.

Note - In the "More" part of the window is a text box labeled Name. This shows the Name, if any, that you have input for the callsign in the Message Window, it is not part of the off-air information received from the station!

Fixed Station Details

This window shows detailed information for a fixed station.

The More/Less button allows you to vary the amount of information displayed, the default setting for the button can be selected with the Miscellaneous Setup, "More in detail windows" option.

If a callbook server is running, then there will be a '?' Button next to the More button, clicking it sends the station callsign to the server.

Note - In the "More" part of the window is a text box labeled Name. This shows the Name, if any, that you have input for the callsign in the Message Window, it is not part of the off-air information received from the station!

Street Atlas Virtual Map

PLEASE NOTE - The Street Atlas Virtual Map does not represent the best support I could ever offer for Street Atlas in UI-View32. Together with the SA Map Grabber utility, it represents the best support I can offer at the moment, given that I have been unable to obtain any technical information from DeLorme about the external application interface of Street Atlas, or about the structure of the MapDoc files.

The Street Atlas Virtual Map provides an interactive link between the DeLorme Street Atlas USA and UI-View32. Obviously you must have Street Atlas installed on your PC to use it! It should work with Street Atlas V4, V5, V6, V7, V8 and V9. **It will not work with any of the new style versions of Street Atlas, e.g. Street Atlas Deluxe, Street Atlas 2002 and Street Atlas 2003.** These programs have a completely different structure to the old versions of Street Atlas. Even if it was possible to work out the format of the saved map files (Delorme do not publish it), it is impossible for an external program to feed in key strokes, which the Virtual Map needs to do.

When you select Street Atlas Virtual Map from the Select A Map list, Street Atlas will start. It should stay in the background, but if it doesn't, then click on UI-View32 on the task bar to bring it to the foreground again. You may also wish to minimize Street Atlas until you need to use it.

To change the displayed map in UI-View32, you should display the required map in Street Atlas, and then click the Save button, or select Save on the File Menu. UI-View32 will come to the foreground, and the map selected in Street Atlas will be displayed. To maximize the map area, you should always use Street Atlas full screen, and you may find it beneficial to hide at least some of the toolbars.

It is also possible to change the map directly from UI-View32, but it is rather "clunky" even on a fast PC, and it probably isn't really usable on a slower PC. Also, to change the display, Street Atlas has to be brought to the foreground, which isn't ideal. If you want to try it, the following commands in UI-View32 will result in the map display changing:-

- **Zoom Out** - zooms out.
- **Ctrl+PgDn** - zooms in.
- **Ctrl + the cursor keys** - moves the map display about half a screen in the direction of the selected cursor key.

IGATE.INI

This file provides additional gateway configuration options. It has three sections. IGATE.INI is reloaded every time you connect to an APRS Server and whenever it is edited, you don't need to restart UI-View32 to effect any changes you make.

Please note - From V1.90 onwards, an editor is provided with UI-View32 for editing IGATE.INI. It is accessed from 'Edit IGATE.INI' on the File menu.

[SETUP] - The following are the comments from IGATE.INI about the [SETUP] section:-

```
[SETUP]
;GATE_ALL_PORTS specifies the ports on which to output
;traffic from the stations you put in [INET_TO_RF] below.
;Separate multiple ports with commas. E.g. 1,2,3.
;
GATE_ALL_PORTS=1
;
;USE_DEFAULT_PATHS - If this is checked, then traffic
;output on GATE_ALL_PORTS is sent via the default unproto
;paths for those ports as configured in Station Setup.
;If it is not checked, then the unproto paths specified
;in GATE_ALL_PATHS are used.
;
USE_DEFAULT_PATHS=True
;
;GATE_ALL_PATHS - see USE_DEFAULT_PATHS above. If you
;specify more than one port in GATE_ALL_PORTS, then you
;can specify a different path for each port. You separate
;multiple paths with '|' (pipe) characters. E.g.
;RELAY,WIDE|WIDE3-3|WIDE,WIDE. Please note - The path does
;not include the destination address, because the
;destination address for gated traffic is always the
;address configured in the UI-View32 'APRS Compatibility'
;dialogue.
;
GATE_ALL_PATHS=""
;
;MAX_DIGIS_FOR_LOCAL specifies how many digis a frame
;can pass through and the sender still be regarded as a
;local station. The default of 0 means that only
;stations heard direct are regarded as local. You can
;effectively disable the checking by putting any number
;greater than eight, because no AX25 frame should ever
;pass through more than eight digis.
;
MAX_DIGIS_FOR_LOCAL=0
;
;NOGATE - If a frame has any of the digi aliases
;specified by NOGATE in its unproto path, then a UI-View
;IGATE will not pass it to the internet servers. This
;provides a mechanism for APRS users to stop their frames
;being gated to the internet via your IGATE.
;
NOGATE=NOGATE,RFONLY

;SHOW_INET_ENTRY_POINT_CALLSIGN - If this option is set
;to TRUE, then the IGATE's callsign is inserted in all
```

```

;frames passed to the internet servers. It is inserted
;as an extra digi, and is suffixed with the text specified
;in INET_ENTRY_POINT_TAG. Note - this option can be set
;via 'Insert station callsign' in the 'APRS Server Setup'
dialogue.

```

```
;
```

```
;An example:-
```

```
;G4IDE's IGATE hears this frame:-
```

```
;   G8MZXX>APRS,RELAY,WIDE*:>Some text
```

```
;
```

```
;If SHOW_INET_ENTRY_POINT_CALLSIGN is set to TRUE, the
;frame header is altered before the frame is passed to
;an internet server:-
```

```
;   G8MZXX>APRS,RELAY,WIDE*,G4IDE,I:>Some text
```

```
;(The 'I' is a symbolic digi address for the internet.)
```

```
;
```

```
;INET_ENTRY_POINT_TAG is made editable, because exactly
;how this feature should work is still being discussed by
;the various APRS authors.
```

```
;
```

```
SHOW_INET_ENTRY_POINT_CALLSIGN=FALSE
```

```
INET_ENTRY_POINT_TAG=,I
```

```
;
```

```
;GATE_LAN_TO_INET - If UI-View32 is being used as a local
;server, and it is also connected to an internet server,
;then setting GATE_LAN_TO_INET=TRUE allows traffic heard
;on the LAN to be gated to the internet. NOTE - unless
;you are sure you understand what this means, then keep
;the default setting of FALSE!
```

```
;
```

```
GATE_LAN_TO_INET=FALSE
```

```
;
```

```
;GATE_ALL_RF_TO_INET - By default UI-View32 only gates
;APRS packets from RF to the internet, and it does not
;gate digipeated copies of your own packets. If you check
;this option then -
```

```
;   1. Non-APRS frames are gated.
```

```
;   2. Digipeated copies of your own packets are gated.
```

```
;This option is designed to be used when an IGATE is on a
;satellite RF frequency. It is recommended that you do not
;select this option for a normal IGATE.
```

```
;
```

```
GATE_ALL_RF_TO_INET=FALSE
```

[CONVERT_PNTS] - There is a system used in Japan called NAVITRA that sends information in \$PNTS frames. UI-View32 understands the \$PNTS posit frames, and can optionally convert them to normal APRS format when they are gated. This section allows you to say whether you want to convert them.

```
[CONVERT_PNTS]
```

```
;The following determine whether $PNTS format posits (used
```

```
;in Japan) are converted to APRS format when they are gated.
INET_TO_RF=FALSE
RF_TO_INET=FALSE
```

[INET_TO_RF] - You use this section to specify callsigns that will have all their traffic, not just messages for local stations, gatewayed from the internet to RF. You can also use it to specify callsigns that will never have any traffic gatewayed. **NOTE** - think at least twice about what traffic you gate to RF! If you misuse this feature, then you will make yourself very unpopular with the local APRS community! The following are the comments from IGATE.INI:-

```
[INET_TO_RF]
;In this section you can specify callsigns that will
;have all their traffic gated, callsigns that will have
;their position beacons but not messages gated, and
;callsigns that will never have any traffic gated.
;You can use '*' to mean anything, so "G4*" means any
;callsign starting with "G4". NOTE - use this feature
;with caution, or you may generate an awful lot of
;traffic on RF!
;
;Examples:-
;G4IDE=ALL      means gate all traffic from G4IDE.
;G8MZX=NONE    means gate no traffic from G8MZX.
;G4GZL=BEACONS means gate beacons but not messages
;              from G4GZL.
;G4*=ALL       means gate all traffic from callsigns
;              starting with "G4".
;ABC*=OBJECT   means gate objects with names starting
;              with "ABC".
```

[INET_TO_RF_LIMITS] - This sections is used to specify limits on the number of frames your system will gate from the internet to RF. Limits are specified for the maximum number of frames that will ever be gated in one minute, two minute and three minute periods. There are two sets of limits, one for all frames except messages for local stations, and one for messages for local stations. When you connect to an internet server, six green indicators will appear at the top of the map window. The top row is for frames other than local messages, the bottom row is for local messages. In each row one indicator is for each time period. They will turn red if the limit for a time period is exceeded. The Statistics window shows how many frames your system has gated, and how many have been dropped because the limits were exceeded.

The following are the comments from IGATE.INI:-

```
[INET_TO_RF_LIMITS]
;In this section you can specify limits for the number
;of frames that your system will gate from the internet
;to RF. The idea is that it will stop your system
;hogging the RF channel.
;
```

```
;You specify the maximum number of frames that will
;ever be gated in a one minute, two minute and three
;minute period. Once any of these numbers are exceeded,
;frames are discarded until the rate drops back below
;the limit. The default values allow a short term peak,
;but a lower rate over a longer period.
;
;PLEASE NOTE - The capacity of a 1200 baud RF channel
;is around 30 frames a minute (obviously it depends on
;frame length, TXD settings, etc). To gate 6 frames in
;a minute means that you are taking up around 20% of
;the channel capacity, and that's not allowing for your
;frames being digipeated! So before you increase these
;numbers, please bear in mind that many APRS experts
;would say that the defaults are too high. You should
;always try to use values that are appropriate for
;local conditions.
;
;If you wish to disable the limits, you can put a '0'
;for all three values, but PLEASE don't disable the
;limits without first thinking very carefully about
;what you are doing and why you are doing it!
;
;The first three values apply to frames other than
;messages to local stations - i.e. frames that are
;gated as a result of entries in the [INET_TO_RF]
;section of this file.
;
ONE_MINUTE=6
TWO_MINUTES=9
THREE_MINUTES=12
;
;The next three values apply to messages to local
;stations. (A local station is one that your system has
;heard on RF.) These limits are really only guarding
;against abuse, and so can be more generous.

LOCAL_MESSAGE_ONE_MINUTE=8
LOCAL_MESSAGE_TWO_MINUTES=12
LOCAL_MESSAGE_THREE_MINUTES=16
```

Show IGATE Traffic

If this option is checked, then a window opens that shows all traffic passing through your IGATE. Obviously this option is only of any use if you are using UI-View as an IGATE!

IGATE Traffic Window

The IGATE traffic window shows all RF<>internet traffic that passes through your gateway. Obviously it is only useful if you are using UI-View32 as an IGATE.

The "Local stns" list shows the stations that UI-View32 regards as being local to your IGATE. It is updated every 30 seconds, and also when IGATE.INI is reloaded as a result of you editing it.

There are options to log the traffic - the logs are saved in the UI-View32\lgateLogs folder.

Start-Up Tips

This window shows a tip each time you start UI-View32. You can stop it appearing by unchecking the "Show Tips on Start-Up" box. You can also enable/disable it from Miscellaneous Setup.

AGWPE Multiple Systems

UI-View32 allows you to use radio ports on more than one AGWPE system. This is really only useful if you have a LAN with radio ports on more than one PC. However, because the connections are made via TCP/IP, it is possible to make a connection to a distant AGWPE system via the internet.

If you check "Multiple systems" in the AGWPE Setup dialogue, then tabs will appear on the dialogue labelled "System 1" and "System 2". To configure System 2, click its tab. Note that on System 2 you have an option to enable/disable the system, but System 1 is always enabled.

If you enable System 2, then, when you exit Comms Setup, UI-View32 will open TCP/IP connections to both systems. The UI-View32 ports will be numbered logically in sequence from '1' upwards, with the ports on System 2 coming after the ports on System 1. The "AGWPE Ports Information" (F7) option will show which ports are on which system.

If you want to connect to more than two systems, you can edit the SYSTEM_COUNT entry in the [AGWPE] section of UIVIEW32.INI. The maximum systems UI-View32 will support is 16.

How Remote Is Used

If a system is marked as being Remote in AGWPE Setup, then any traffic you send via ports on that system has TCPIP* inserted in the unproto path. This is to make sure that you don't appear as a local station many miles from your true location, and so mess up everyone's best DX!

Unless a system is on your own PC or it is on your LAN, then Remote must always be checked.

If you are only connecting to one AGWPE system, and that system is on your own PC, which will normally be the case, then you should not check Remote.

Choose A Station

You have double clicked or right clicked on the map, and your click has hit more than one station. Please select the station of interest from the list. The first station in the list is the one that was heard most recently, the others are in alphabetical order.

You can select a station by double clicking it, or highlighting it and clicking the Select button, or highlighting it and pressing return.

The Zoom Window

The idea of the ZoomWindow is that it allows you to enlarge a section of the map, and so separate stations that are displayed on top of each other at normal resolution.

PLEASE NOTE - The performance of the Zoom window is very much dependent on the speed of the PC processor and the quality of the video card and drivers. If you find it very sluggish in its round mode, then try switching to square mode (see below).

To open the Zoom window, hold down the Shift key, and drag the mouse on the map to mark the area of interest. When you release the mouse, the Zoom window opens showing an enlarged view of the selected area.

To move the Zoom window, drag it by its border. To close the window, either double click the border, press Escape with the focus on the window, or right-click in the window (not on a station) and select Close on the popup menu.

To change between the circular and square window options, right-click in the window (not on a station) and select "Circular Window" or "Square Window" on the popup menu.

Within the Zoom window, right-click, double-click and zoom work as on the main map. If you zoom farther in, then PgUp and PgDn can be used to move through the previous zoom levels that you have selected.

If you change the map, the Zoom window will close, because it uses the currently loaded map picture as the source of its image.

The Zoom window and overlay icons

Overlay icons behave differently in the Zoom window to station icons and object icons. When UI-View32 loads an overlay, the overlay icons are made part of the map image. It does that so when the map window is cleared to redraw the station and object icons, the overlay icons don't have to be redrawn. The result is that if you zoom an area, then the overlay icons get bigger just as all the other map features get bigger.

Message Groups

Message groups allow you to filter messages addressed to specific topics or callsigns into separate windows. By default UI-View32 only has one message group, which is NWS-*

You configure message groups using the Message Groups dialogue, which is accessed from the Message window Options menu.

Add message groups to the list by entering them into the text box and pressing <return>. Delete them by highlighting them in the list and pressing the Delete key. Change the order by dragging them up and down the list.

If you check the checkbox, then the Sort menu option will be available when the group is viewed in the Message window.

If you suffix a group with a '*', then it specifies a partial key.

Some examples - **ALL** would display messages addressed to ALL, **CQ** would display messages addressed to CQ, **M*** would display messages addressed to any callsign starting with M.

Comms Setup

This dialogue allows you to configure the communications for UI-View32.

The key setting in the dialogue is "Host mode", the default being NONE, because most users will probably want to initially try UI-View32 with a TNC in terminal mode. However, if you use UI-View32 with a TNC that supports KISS, and you aren't using BPQ32 or AGWPE host mode, then **the recommended mode is KISS**. If you use an SCS PTC-IIe or PTC-II TNC, then the recommended mode is WA8DED.

A common problem

Please read this section if you use a Kantronics or AEA/Timewave TNC! Some programs, that use TNCs in a proprietary host mode, default to leaving the TNC in host mode when the program closes. Examples are the old AEA Pakratt program, and programs from Creative Services Software (CSS).

If a Kantronics or AEA/Timewave TNC is being left in host mode by another program, then the default UI-View32 initialisation routines will fail. However, it is a simple matter to modify the default routines to take the TNC out of host mode. See Exit Host Mode for more information.

Host mode NONE

If no host mode is selected, then UI-View32 needs its own TNC. The TNC should be in terminal mode, and you must configure the other comms options to match the settings of your TNC.

When UI-View32 starts, the settings in the [INIT_COMMANDS] section of the selected command file will be sent to the TNC. You should select the most suitable

command file for your TNC, and the Edit button allows you to edit the commands. See [TNC Command Files](#) for information on the format of the commands. If you do edit the settings, please note that a few points are critical, and, if you get them wrong, UI-View32 will not work!

- The TNC must have monitor on and the monitor mode must include information on the frame type in the frame header. With a TNC2 compatible this is accomplished by having "MON ON" and "MCOM ON". (For PK232s and some other AEA/Timewave TNCs, "MON ON" and "MCOM ON" are replaced by "MON 6".)
- It is recommended that the TNC should show the frame header on a separate line to the data in the frame. With a TNC2 compatible this is accomplished by having "HEADER ON". However, this is not essential because UI-View32 can normally auto-detect whether HEADERLN is ON or OFF.
- The TNC must be outputting 8 bit data. With a TNC2 compatible this is accomplished by having "8BIT ON" and "AWLEN 8"

Note that no TXD setting is included in the command files supplied with UI-View32, because the correct value is completely dependent on the rig you use. If the default TXD value for your TNC is not suitable for your rig, then you should add a TXD command to the command file.

If you need to include control characters in a command file, you put them in as a caret character followed by the required control character, e.g. ^C.

When UI-View32 closes, the settings in the [EXIT_COMMANDS] section of the selected command file are sent to the TNC.

If you edit a command file, then find you have created problems, copies of the original command files can be found in the CMD folder with suffixes of ".ORG".

Host mode WINPDDE

In this mode, UI-View32 needs WinPack to be running. UI-View32 functions as a WinPack [DDE](#) application. None of the other comms settings are relevant in this mode. **UI-View32 cannot transmit in this mode.**

If you use this mode, and you are using a TNC in terminal mode in WinPack, then you must make sure that your TNC settings in WinPack are suitable for UI-View32. In particular, you must have -

```
ECHO OFF
8BITCONV ON
HEADERLN ON
MON ON
MCOM ON
```

Please note - some different settings to the above are needed with a PK232 or similar AEA/Timewave TNC. See [PK232 Parameters](#) for more information.

Host mode KISS

If you select KISS mode, then, besides configuring the TNC comms settings you must also click the 'Setup' button and configure the TNC KISS options. Note that in KISS mode handshaking will always be set to NONE.

Host Mode BPQ32

In this mode you must have the 32 bit version of the G8BPQ switch installed. Once you have selected BPQ32, you can click Setup and select which BPQ32 ports you want UI-View32 to monitor for APRS traffic. See Port Monitor Mask.

UI-View32 will automatically open a connection to the switch and close it when you close the program. Installation of the 32 bit version of BPQ is currently not well documented, but it appears that BPQ32.DLL can go in the Windows SYSTEM directory or in the application directory, but BPQCFG.BIN needs to be in the application directory.

Host Mode AGWPE

To use this mode, you must be running the SV2AGW Packet Engine. Once you have selected AGWPE, you can click the Setup button and configure the TCP/IP connection. For a connection to AGWPE on your own PC, the default settings should be correct. You **MUST** have AGWPE V2000.15 or later. See AGWPE Setup for more information. In use, UI-View32 will automatically open a connection to the Packet Engine and close it when you close the program.

Host Mode FLEXNET

IMPORTANT!! PLEASE READ the Flexnet section of the help! It contains important information about using Flexnet with UI-View32, and it also contains a copy of the Flexnet licensing conditions.

To use this mode, you must have PC/Flexnet, with support for Windows, properly installed and working on your PC. Once you have selected FLEXNET, you can click Setup and select which Flexnet ports you wish to monitor. See Port Monitor Mask.

Host Mode WA8DED

To use this mode, you must be using a TNC that supports WA8DED host mode or one of its variants, e.g. TF host mode. This mode can also be used with the SCS PTC-IIe and PTC-II TNCs. When used with these TNCs, it supports input from a GPS connected to the TNC by means of the SCS 'Y' cable.

See WA8DED Setup for information on configuring WA8DED host mode.

Use binary filter

If the host mode is BPQ32, AGWPE, KISS or WA8DED then, by default, UI-View32 will attempt to filter out frames that appear to be binary data. This feature was put in because, in the early days of APRS in the UK, RF channels were shared with mailboxes. In countries where Windows uses a double byte character set (DBCS), it may be best to uncheck this option.

Receive only

If this option is checked, then UI-View32 will not transmit anything. **PLEASE NOTE - This does not necessarily mean that your TNC will not transmit anything!** For example, if you use host mode NONE, and have the digi in the TNC enabled, then your TNC will transmit digipeated packets.

WA8DED Setup

THIS IS IMPORTANT! WA8DED host mode requires the software to continuously poll the TNC. In Windows this is a very good way to stress test the comms! It only needs one overrun error to occur on the COM port, and the polling loop breaks down. UI-View32 can recover from this, but if it occurs frequently, then it is a sign that your Windows setup has problems. (If you are watching the Terminal window when the polling loop breaks down, then you will see a message "Attempting to restore communications with the TNC".) When WA8DED host mode is selected, the Statistics screen will show a Resync value - this is the number of times the polling loop has had to be restarted. On all my test systems the value is always zero. If you get a lot of Resyncs, then it's not a UI-View32 problem, it's a problem with your Windows setup, and there's nothing I can do about it.

Sub-Mode

UI-View32 supports three sub-modes of WA8DED host mode:-

Early DED - I don't know if firmware for the very early versions of WA8DED will still be in use, but they didn't support persist and slot time, instead they supported DWAIT. Unless you are sure you have a very early version, you should assume that your WA8DED firmware is one of the later versions that support persist and slot time.

DED/TF - Most versions of WA8DED and all versions of TF firmware. This is the default sub-mode.

PTC-IIe - The SCS PTC-IIe TNC.

PTC-II - The SCS PTC-II TNC.

When you change sub-mode, UI-View32 will offer the option of initialising the parameters with default values.

Pre-Host Commands

Up to five commands may be sent to the TNC before it is put into host mode.

Parameters

With the exception of TXD, which may need changing depending on your rig, it is recommended that you use the default values.

Post-Host Commands

Up to five commands may be sent to the TNC when it is taken out of host mode before UI-View32 closes.

PTC GPS Support

When used with either of the SCS TNCs, WA8DED host mode supports input from a GPS connected to the TNC with the SCS 'Y' cable. To enable GPS support, in the GPS Setup dialogue, set the GPS COM port to the same port as the TNC, and select PTC in Shared COM Port Setup, it should be the only option available. **PLEASE NOTE** - not all versions of the SCS firmware support GPS input.

UI-View32 Destination Address

The default AX25 destination address, used by UI-View32 for all APRS compatible packets, is "APRS". This is regarded by UI-View32 as a special address, and is replaced by "APU2" plus the program version encoded into two characters. E.g. "APU24A".

You can, if you wish, use a different destination address, but it is strongly recommended that you use the special address of "APRS", unless you have a good reason to use something different.

It is necessary to encode the program version, because the address cannot be more than six characters, and "APU2" takes up four of them. "APU" is the agreed destination APRS address prefix for all versions of UI-View, and the '2' identifies it as UI-View32. ("APU1" is used for 16 bit UI-View.)

The encoding system is as follows, using V1.54 as an example:-

- Take the program version and multiply it by 100 (154).
- Divide it by 36 (4, remainder 10).
- Convert each number into a single character, where 0 to 9 are '0' to '9', and 10 to 35 are 'A' to 'Z' ('4' and 'A').
- The destination address for our example is therefore "APU24A".

Send Objects

Selecting this option causes UI-View32 to do an immediate transmission of any objects that you own.

Right-Click URLs

The station Right-Click Menu has, by default, two options that allow you to look up information about the selected station on internet databases. The options are www.findu.com and www.qrz.com.

If you wish, you can add further internet lookup options, or remove these two options, by editing the [RIGHT_CLICK_URLS] section of UIVIEW32.INI.

Format of the [RIGHT_CLICK_URLS] entries

Each entry consists of a caption for the right-click menu, followed by a '=' followed by

the internet URL. If you precede a letter of the caption with a '&', then that character will be underlined in the menu and can be used as a speed key.

The callsign of the selected station can be inserted into the URL by the use of two keywords:-

\$CALL - insert the full callsign.

\$CALLNOSSID - insert the callsign with any SSID removed.

You can remove unwanted entries from the section by preceding them with a ';' (semicolon).

Sound Enabled

If this option is checked (the default), then UI-View32 will use the PC sound card for station announcements, message alerts, warning beeps, etc. The only reasons for not checking this option would be if you wanted UI-View32 to be silent, or you were using AGWPE with the sound card modem.

PLEASE NOTE - Sounds associated with message boxes will still occur, even if Sound Enabled isn't checked, because they are a function of Windows. They can be turned off in Sounds in Control Panel.

Using UI-View32 As A WinPack Viewer

(This help section is only of interest if you use WinPack.)

UI-View32 can be used as viewer with WinPack. UI-View(32) Station List snapshots or log files, sent as packet bulletins, can be automatically passed from WinPack to UI-View32, and displayed without any user intervention. (Station Lists are automatically converted into a dummy log file so the stations can be plotted.)

All the setting up needed to use this facility is done in Winpack, there is nothing to set up in UI-View32. To use this feature, you must have WinPack V6.63 or later.

Configuring WinPack to use UI-View32 as a viewer

1. Run WinPack.
2. On the File menu select **Viewers Editor**. (Note that help for the Viewers Editor is available if you press F1.)
3. Click the **New** button.
4. Enter **UIV** In the small input box.
5. Click the **Browse** button to open the "Select a file to use as the viewer" dialogue.
6. Browse to UIVIEW32.EXE in its program folder. NOTE - WinPack only shows short file names.
7. Click **Ok**. Depending on where UI-View32 is installed, you should now have something like
C:\PROGRA~1\PEAKSY~1\UI-VIE~1\UIVIEW32.EXE in the large input box.
8. Click **Yes**, and the viewer information appears in the top list.

9. Click **Ok** to close the Viewers Editor.
10. On the WinPack Options menu, select **Viewers...**, and make sure that **Use Viewers** is checked. If you also check **Auto Viewers**, then WinPack won't ask you before it uses a viewer.

If you now receive a packet message with ".UIV" in the title, WinPack will use UI-View32 to view it. The message can contain either a log or a Station list snapshot. Also, because WinPack treats UI-View32 as a special viewer, any message can be viewed using UI-View32 if you press Ctrl+U when reading the message. (If the message doesn't contain either a log or a station list, then UI-View32 will start but nothing will be displayed.)

NOTE - Every time you view a new WinPack message, it will create a log file in the UI-View32 LOGS\AUTO folder. If you don't want to keep these logs, then you should occasionally delete all the files in the folder.

Log File Format

The format of the UI-View32 log files is two lines for each frame. The first line has a time stamp and the frame header, the second line has the frame information field.

Frames received from the internet in single line format are split into two lines, and a "<UI>" frame type identifier added to the frame header, before being put in the log.

The format of the time stamp is:-

YYYY-MM-DD HH:NN:SS@

YYYY = year
MM = month
DD = day
HH = hour
NN = minute
SS = second
@ = a space

The time stamp is immediately followed by the frame header.

A START line is written to the log file every time a logging session starts, with the following format:-

YYYY-MM-DD HH:NN:SS START UTC

"UTC" denotes that the time stamps are in UTC. UI-View32 always writes the time stamps in UTC, but external applications might not. If the UTC is not present, then any application reading the log file should assume that the times are local time. I suggest that any application not outputting UTC should replace "UTC" with "LOCAL TIME".

Capture The Map Image

This option allows you to capture an image of the current map, and save it as a graphics file.

File name

The first time you use this option, the file name defaults to MapImage.PNG in the Capture folder in the UI-View32 program folder. After the first time, the file name defaults to the last file name you input.

You can change the file name by using Browse button. A file dialogue opens, and you can select an existing file, or input a name for a new file.

Graphics format

Three graphics formats are supported - **BMP, PNG, JPG, GIF or EMF**. The recommended format to use is PNG, because it is a lossless compression. JPG is a lossy compression, it is excellent for photographic images, but will usually be inferior to PNG for map images. BMP creates huge files compared to the other two options.

NOTE - Saving the images in GIF format is not supported. This is because GIF is no longer supported by most graphics libraries, as a result of the Unisys patent problem. (PNG is technically superior to GIF.)

Colours

The default is to save 256 colour images, unless you use JPG. The default setting saves the image at whatever colour depth your graphics card is using.

Capture the screen

If this option is checked, then the whole screen will be captured, not just the map window.

Saving the image

When you have selected the file name, graphics format, and colour depth, click the Ok button and the file will be saved. The next time you use this option, your selections will be the defaults.

Automatic capture

The map image can be captured automatically using the Schedule Editor. For more information see the [Schedule Editor help](#).

UI-View32 Map Servers

UI-View32 supports plug-in map servers. A map server provides a map that allows the user to change the map view interactively.

Map servers are installed as separate applications, but integrate seamlessly with UI-View32. Map server maps appear in the 'Load A Map' menu exactly the same as normal bitmap maps.

At the time of writing these notes, only one map server is available - PmapServer, which provides maps based on Precision Mapping V5.

Alternative Mouse Actions

If you check "Alternative Mouse Actions" on the Options menu, then some changes are made to the mouse actions in the map window. The idea is to make the mouse actions more user-friendly when using a map server. The following are the actions affected:-

Normal Mouse Actions

- Invoke the distance measuring tool - left button down and drag.
- Open a zoom window - Shift and left button down and drag.
- Slide the map on the screen - Ctrl and left button down and drag.
- Pan the map (map server only) - Ctrl and click near the edge of the map when the pan arrows show.

Alternative Mouse Actions

- Invoke the distance measuring tool - Shift and left button down and drag.
- Open a zoom window - left button down and drag.
- Slide the map on the screen - right button down and drag.
- Pan the map (map server only) - click near the edge of the map when the pan arrows show.
- Centre the map (mapserver only) - double right click on the point you wish to be at the centre of the map.

Auto-Track List

This dialogue, which can be found on the Setup menu, allows you to input callsigns that will be automatically tracked whenever beacons from them are heard.

Add stations to the list by entering them into the text box and pressing <return>.

Delete them by highlighting them in the list and pressing the Delete key.

Double-clicking a callsign will remove it from the list and put it in the text box for editing.

'*' can be used at the end of a callsign as a wild card, so **G4IDE*** will match all callsigns starting with **G4IDE**.

Exit Host Mode

This section is really only relevant if you use a Kantronics or AEA/Timewave TNC.

The sensible default, for any packet program, is to leave the TNC in terminal mode

when the program closes. By doing that, it ensures that the TNC can be used with just about any other software.

Some programs, that use TNCs in a proprietary host mode, default to leaving the TNC in host mode when the program closes. Examples are the old AEA Pakratt program, and programs from Creative Services Software (CSS).

If a Kantronics or AEA/Timewave TNC is being left in host mode by another program, then the default UI-View32 initialisation routines will fail. However, it is a simple matter to modify the default routines to take the TNC out of host mode.

If you are using host mode NONE (terminal mode)

In 'Comms Setup', you should already have set 'TNC type' to KTRONICS if you are using a Kantronics TNC, or PK-232 if you are using an AEA/Timewave TNC.

Click the Edit button, and the command file will be opened in Notebook. Add the following line **at the beginning** of the [INIT_COMMANDS] section if you are using a Kantronics TNC:-

@KHOSTOFF

Or this line if you are using an AEA/Timewave TNC:-

@PHOSTOFF

Close Notebook, and click 'Yes' when prompted to save the file.

If you are using host mode KISS

In 'Comms Setup' click the 'KISS Setup' button. The first 'Into KISS' command should be '^M'. If you are using a Kantronics TNC, then replace it with **@KHOSTOFF**. If you are using an AEA/Timewave TNC, then replace it with **@PHOSTOFF**.

Auto Log

If this option is checked, then logging is automatically enabled when UI-View32 starts. The log file will be named according to the UTC date - YYYYMMDD.TXT - and a new log file will be started if the logging session goes past midnight UTC.

Edit Translations

Callsign translations allow you to put a label on the map for a station, that is different to the station callsign. Translations can also be used to change the map label of an object.

If a station's callsign is being translated, then the translation will be used as the tooltip, if you pause the mouse over the station in the Station List.

An example of the use of translations - The callsign of the mobile following the lead runner in a race could be translated to "Lead runner" on the map.

Using the editor

Input the callsign or object name in the Callsign text box, and input the text you wish to have on the map label in the Translation text box, then press Return to add the translation to the list.

To delete a translation, highlight it in the list, and press the Delete key.

If you double-click a translation, it will be removed from the list and put in the text boxes for editing.

If "Use translations" is not checked, then the translations are ignored.

Note - you can translate a callsign to itself, and so translations can be used, together with "Only label translations" in Miscellaneous Setup, to filter the labelling, even if you wish to see the real callsigns on the map.

Exclude By APRS Symbol Type

This dialogue allows you to select APRS symbol types that you want to exclude from your maps. Check any symbols you wish to exclude. 'All' checks all the check boxes, 'None' clears all the check boxes.

If the symbol description is "No Symbol", then the APRS table character and symbol letter are added to the description.

GPS Output Setup

This dialogue allows you to select a COM port, on which UI-View32 will output the data it receives from an attached GPS. This means you can share a GPS between UI-View32 and another application. TCP/IP output of the GPS data can also be enabled.

The default is that no COM port is selected, which means UI-View32 will not output GPS data, and TCP/IP output is disabled. To avoid wasting PC resources, do not enable either option unless you need to use it.

Although the COM port selected for output can be a physical COM port, this facility is intended to be used with a virtual COM port bridge. (A description of how a virtual COM port bridge works is beyond the scope of this help file!)

If UI-View32 is receiving GPS data from a GPS attached to a KPC-3+ TNC, or from a GPS attached to a Kenwood radio, which will be mixed in with packet data, the GPS data output from UI-View32 will be clean data. However, the frequency of the data may not be sufficient to keep some other programs happy. For example, MapPoint seems to need to see GPS input at least once every two seconds. If you check **Fill in gaps in GPS data**, then UI-View32 will output at least one GPS sentence every second. The "fill in" data is created by repeating the last \$GPRMC or \$GPGGA sentence that UI-View32 heard.

Note - If a COM port is currently selected in "Comms Setup", or in "GPS Setup", then it will not be selectable in this dialogue.

Enable TCP/IP server

If you check this option, then external programs can make a telnet connection on port 1449 and receive the GPS data from UI-View32. The setting of "Fill in gaps in data" is not applied to TCP/IP output. The port used can be changed by editing the "TCPIP_OUTPUT_PORT" key in the "[GPS]" section of UIVIEW32.INI.

IGATE Station Capabilities

IGATEs may transmit frames containing information about the status of the IGATE. These frames are described in the "Station Capabilities, Queries and Responses" section of the APRS spec.

The APRS spec describes two parameters that an IGATE can put in its capabilities frames -

- MSG_CNT - The number of messages, for stations heard on a radio port, that the IGATE has gated from the internet to RF.
- LOC_CNT - The number of stations that the IGATE regards as being local RF stations, and so the IGATE will gate messages to those stations.

IGATEs also include other information in their capabilities frames, depending on what software is used. The only other parameter that UI-View32 will include is LOCAL, which is explained in "UI-View32's Response To An IGATE Query" below.

IGATE capabilities frames can be viewed in the IGATE Stations window, which can be opened from the Lists menu. Note - capabilities frames are only processed when a posit has been heard from the station.

Stations recognised as being IGATEs have a blue square drawn round them on the maps, provided that "Highlight IGATEs" being checked on the Options menu.

Transmission of IGATE Capability Frames

A UI-View32 system, operating as an IGATE and logged on to an internet server, will transmit an IGATE capabilities frame in the following situations -

- When it first connects to the server.
- Each time it transmits its status text.
- In response to hearing an IGATE query on RF.

You can stop UI-View32 from transmitting any IGATE capabilities frames by unchecking "Transmit IGATE status" in "APRS Server Setup".

Querying IGATEs

The "Query IGATEs" option on the Action menu will transmit a general IGATEs query. All IGATEs that understand the query will respond by transmitting an IGATE

capabilities frame.

UI-View32's Response To An IGATE Query

A UI-View32 IGATE, logged on to an internet server, will respond to an IGATE query between five seconds and one minute and five seconds of hearing the query. The delay is random, and is designed to minimize collisions.

UI-View32 will first send a posit, and then send an IGATE capabilities frame 15 seconds after the posit. The capabilities frame always includes MSG_CNT and LOC_CNT. If the station sending the query is regarded by UI-View32 as a local station, then the frame will also include "LOCAL=" followed by the callsign of the station sending the query.

IGATE Stations

This window lists all the stations from which both a posit and an IGATE capabilities frame have been heard. It also includes stations that have been heard gating traffic from the internet to RF, even if they have not transmitted an IGATE capabilities frame.

If an IGATE is known to regard you as a local station, then it will be highlighted in red. (An IGATE is known to regard you as a local station if it is either seen to be gating messages to you, or it has sent your callsign in the LOCAL capability.)

MSG_CNT is the number of messages for local stations that the IGATE has gated from the internet to RF.

LOC_CNT is the number of stations that the IGATE regards as being local RF stations, and so the IGATE will gate messages to those stations.

The "Other" column contains any other information included in the capabilities frame. For UI-View32 IGATEs, it may include a "LOCAL=" parameter, if the frame was transmitted as a response to an IGATE query from a station that UI-View32 regards as being local.

You can sort the list on any column by clicking the title bar of the column. You can search for a callsign by clicking anywhere on the list, and then keying in the callsign.

If you right-click the window, there is a pop-up menu with one option - Default Size. This will restore the window to its default size.

See [IGATE Station Capabilities](#) for more information about IGATE capabilities frames.

Highlight IGATEs

If this option is selected, then any stations that UI-View32 regards as being IGATEs will have a blue square drawn round them. For more information about how UI-View32 recognises IGATEs, see [IGATE Station Capabilities](#).

GPS Cross-hairs Setup

This dialogue allows you to configure the GPS cross-hairs, which can be enabled with the "Show GPS cross-hairs" option in GPS Setup.

The cross-hairs show the position information from the GPS in real time, (the position of your station icon on the map only updates each time you send a posit beacon).

NOTE - UI-View32 does not track the cross-hairs position. The best way to keep it on the map is to track yourself.

Line thickness - The required thickness of the cross-hair line in pixels, the default is four.

Line length - The required length of the cross-hair line in pixels, the default is 10.
NOTE - if you put a value or zero, then the cross-hairs are drawn the full width and height of the map.

Line colour - Opens a colour selection dialogue, so you can change the colour of the lines. The default is red.

Track cross-hairs - If this option is checked, then the GPS cross-hairs are tracked as if they are a mobile station.

IGATE Traffic Limits

The [INET_TO_RF_LIMITS] section of IGATE.INI allows you to specify limits for the number of frames your system will gate from the internet to RF. Limits can be specified for the maximum number of frames that will ever be gated in one minute, two minute and three minute periods. There are two sets of limits, one for all frames except messages for local stations, and one for messages for local stations.

When you connect to an internet server, six green indicators will appear at the top of the map window. The top row is for frames other than local messages, the bottom row is for local messages. In each row one indicator is for each time period. They will turn red if the limit for a time period is exceeded. The Statistics window shows how many frames your system has gated, and how many have been dropped because the limits were exceeded.

Exclusions Enabled

This option enables/disables the exclusions set in Exclude/Include Lists.

Message Retries

This dialogue, accessed from the Message window Setup menu, allows you to

configure how messages will be retried if they are not ack'd on the first attempt.

Retry interval - This is the interval, in seconds, between attempts to send the message.

Try ? times - This is the number of attempts that will be made to send the message. If an ack is not received after this number of attempts, then the message is regarded as having failed. NOTE - To limit bandwidth usage, 'Retry interval' must be at least double 'Try ? times'.

Retry on heard - If this option is checked, then a failed message will be retried if traffic is heard from the station to which it was addressed, on the port on which it was sent. See below for some further comments about how this option affects APRS format messages.

Expire after ? mins - (This parameter is only relevant if 'Retry on heard' is checked.) If this number of minutes has elapsed since a message failed, then it will not be retried even if traffic is heard from the station to which it was addressed. A value of zero means 'never expire'.

'Retry on heard' and APRS format messages

If 'Retry on heard' is enabled, and an APRS format message fails, then any other messages addressed to the same station will be held. When the station is heard, the failed message is sent again, and, if it succeeds, then the next message queued for the station is released, etc. Held messages have a status of 'H' in the Message window.

If 'Retry on heard' is NOT enabled, and an APRS format message fails, then UI-View32 will immediately attempt to send the next message queued for the station.

NWS Active Area Information

This window shows information about an NWS active area that you have double-clicked on the map.

To close the window, either double-click it, or right-click it and select Close from the pop-up menu.

To get the full text of the NWS message relevant to this active area, right-click the window and select 'Finger WxSvr' from the pop-up menu. NOTE - this requires an internet connection.

Finger WxSvr

If you double-click an active NWS area on the map, a window will appear with some information about the NWS alert for the area. If you right-click this window, then a pop-up menu appears with an option of 'Finger WxSvr'. If you select this option, a request is sent to the finger server at wxsvr.net to retrieve the full text of the NWS message that generated the APRS message.

The **Print** menu option prints the message text, using the printer and font configured in UI-NWS Miscellaneous Setup. Note - printing is only possible when UI-NWS is running.

When the 'Finger WxSvr' window is open, you can send manual requests by entering suitable text in 'Finger command'. A good starting point is to send the command **fingerhelp**.

When you send a command to the server, it is displayed on the window title bar. If the command appears to be a request for the full message text, then it is decoded into county warning are (CWA), product id (PID), and issue time. The issue time is formatted **dd-hh:mm**, where **dd** is the day of the month, **hh** is the hour and **mm** is the minute.

A CWA list can be obtained by sending the finger command **nwshelp**, a PID list can be obtained by sending the finger command **typeshelp**.

Please note the following important points!

1. To be able to finger WxSvr, you need an internet connection.
2. Only APRS NWS messages automatically generated by WxSvr will produce a successful finger result. NWS messages from other sources will result in a "not found" message from WxSvr.
3. The finger function will not work properly with any NWS alerts in your lists that were received with a previous version of UI-NWS.

Show Area Objects

If this option is checked, then area objects - both APRS spec format and WxSvr format - are shown on the map.

Show Symbols On Map

(Shortcut Ctrl+F5)

This option can be used to hide/show the symbols on the map.

Multiple Configurations

It is possible to create multiple configurations for UI-View32 - perhaps one for home use and one for mobile use - using VBscripts. for more information, see the [Multiple Configurations help file](#).

Delete All Stations

This option allows you to completely clear the UI-View32 internal database. Both stations and objects will be deleted.

You can also delete all stations by holding down Ctrl and clicking the Delete button on the Station List.

Alert When Digi'd

If this options is checked, then UI-View32 plays DIGID.WAV when it sees its own frames digipeated.

Tooltip Text Setup

This dialogue allows you to configure the tooltips that appear when you hover the mouse pointer over a station symbol on the map.

Information to show in tooltip text - Check the items of information you wish to be displayed. Obviously the information displayed is also affected by the type of station - fixed, wx or mobile.

Style - The style of the tooltip.

Show for - How long you wish the tooltip to be displayed if you leave the mouse over the station.

Always tip - If this option is checked (the default), then the tooltips will always be shown when the mouse is over the map window, even if another window has the focus. If the option is not checked, then the map window must have the focus (be the active window) for the tooltips to show.

Enable tooltip - Check this box to enable the display of the tooltips.

Tooltip Limitations

1. If you use Win95 and the Windows Common Controls on your system have never been updated, then the balloon style will not work properly. Also tooltips for symbols near the bottom of the screen will appear at the top of the screen. This is a deficiency of Win95, not a UI-View32 problem.

2. If you use balloon style, and the UI-View32 message window is on top of the map window, but not covering all the map window, and you move the mouse over a symbol on the map window, then the message window will go behind the map window. If you find this annoying, then either use rectangle style, or uncheck 'Always tip'.

Metric/Imperial Measurements

The 'Km/Miles' button on the Station List acts as a switch between metric/imperial measurements, and affects other aspects of UI-View32 besides the Station List distances:-

- Distances in all the other lists.
- The distance displayed using the distance measuring tool.
- The distance units used in the Exclude/Include Lists dialogue.
- The distance units used in the 'best DX' status text.
- Wind speed, temperature and height values in the tooltip text.
- The height display in the mobile station details window.
- The range scale display.

A

AGWPE

APRS

AX25

B

BPQ

BPQ32

D

DDE

Digipeater

G

GPS

I

IARU locator

K

KISS

N

NMEA 183

W

WA8DED

AGWPE

A host most "packet engine" system written by SV2AGW. AGWPE controls the TNCs and other hardware devices, and implements the AX25 protocol. Application level programs communicate with AGWPE using DDE or TCP/IP and so do not have any direct communication with the packet hardware.

APRS

A program originally developed by Bob Bruninga, WB4APR, who describes it as "a multi-user packet network with a map display". Besides WB4APR's DOS version, there are also versions for other platforms - Windows, Mac. etc. In the USA, "APRS" is a registered

trademark of WB4APR.

AX25

The link-layer protocol used for packet communications. AX25 V2.0, which was originally specified in 1984, is still almost universally used.

BPQ

A software Netrom compatible node system written by G8BPQ, which includes host mode support for application level programs. Although originally written for use with DOS applications, BPQ will run underneath Windows, although some care is required when configuring it.

BPQ32

BPQ is a software Netrom compatible node system written by G8BPQ, which includes host mode support for application level programs. BPQ32 is a version of BPQ developed especially for use with 32 bit versions of Windows.

DDE

A method of transferring data between two Windows applications running on the same PC.

Digipeater

A repeater station used in AX25 communications. If digipeaters are specified in the address of an AX25 frame, then the frame is passed from the sender to the receiver by being received and retransmitted by each digipeater in the order that they are specified in the address.

GPS

GPS stands for Global Positioning System. It is a system, operated by the USA government, which uses reference signals from orbiting satellites to work out your exact location, anywhere in the world, to an accuracy of around 50 metres.

IARU locator

A system used in amateur radio for specifying the location of any point on the earth's surface, using a grid system based on fields, squares and sub-squares. The sub-squares in the grid are 5 minutes in longitude, and 2.5 minutes in latitude.

KISS

KISS stands for "Keep It Simple, Stupid". A KISS TNC is one which only handles the synchronous HDLC data on the radio channel and converts it to asynchronous data frames which are passed to the controlling PC. The software application running on the PC is responsible for implementing the AX25 protocol. A KISS TNC has a very simple command set, to allow the controlling software to specify tx delay, persist, etc.

NMEA 183

A standard of the National Marine Electronics Association which defines an electrical interface and data protocol for communications between marine instrumentation. The data is transmitted as sentences, the contents of a sentence being identified by its 5 character prefix.

WA8DED

WA8DED is a host mode AX25 firmware for use in TNC2 compatible TNCs. It is supported by several other firmware versions, including TF and the SCS PTC firmware.



UI-View32 IGATE.INI Editor

The UI-View32 IGATE options are configured by editing IGATE.INI.

Before UI-View32 V1.90, it was necessary to edit IGATE.INI with a text editor such as NotePad. This editor now provides an easier way to do it.

When you have edited IGATE.INI, UI-View32 will detect that the file has changed and reload it, you do not need to restart UI-View32.

PLEASE read the help before you make any changes!

Inet to RF

You use this section to specify callsigns/aliases that will have traffic, besides messages to your local stations, gated from the internet to RF. You can also use it to specify callsigns that will never have any traffic gated. **NOTE** - think at least twice about what traffic you gate to RF! If you misuse this feature, then you will make yourself very unpopular with the local APRS community!

You can use * (asterisk) as wildcard in the callsigns, so G4* means all callsigns starting with G4, MB7* means all callsigns starting with MB7, etc.

For each callsign you input, you must select an option from the drop-down list -

BEACONS - gate all APRS posit beacons heard from this callsign.

ALL - gate all frames heard from this callsign.

OBJECT - gate objects if their name matches this callsign.

DEST - gate all frames addressed to this destination address.

RECIP - gate all frames that are messages with this callsign as the recipient (addressee).

NONE - do not gate any traffic from this callsign, not even messages to local stations.

When you have input a callsign and selected the required option from the drop-down list, you can add it to the list by clicking the Add button, or pressing the return key when the cursor is in the Callsign text box.

To delete a callsign from the list, click on it in the list, and press the Delete key.

To edit a callsign, double-click it in the list.

NOTE - The order of callsigns in the list is significant. When checking a callsign against the list, UI-View32 starts at the top, and stops as soon as a match is found. **G4IDE** would match against both **G4IDE = ALL** and **G4* = NONE**, and which came first in the list would obviously make a difference whether traffic from G4IDE was gated. In general, entries for specific callsigns should be put before entries with wildcards. The order of the entries in the list can be changed by dragging them up and down with the mouse.

Setup

Port(s) and (Paths) - **NOTE** these settings are for traffic that is gated because of entries you put in the **Inet to RF** section. See below for the rules used for gating messages to local stations.

Port(s) - Specifies the port or ports on which to output the traffic. Separate multiple ports with commas. E.g. 1,2,3.

Path(s) - Specifies the unproto path(s) to use. If you specify more than one port in **Port(s)**, then you can specify a different path for each port. You separate multiple paths with '|' (pipe) characters. E.g. RELAY,WIDE|WIDE3-3|WIDE,WIDE. Please note - The path **does not** include the destination address, because the destination address for gated traffic is always the address configured in the UI-View32 'APRS Compatibility' dialogue.

Use default - If this option is checked, then the unproto paths configured in UI-View32 Station Setup are used, and **Path(s)** is ignored.

Rules for gating messages to local stations - The port used is the last port on which the station was heard. The path used is the path configured in UI-View32 Station Setup for that port.

Max digis for local - Specifies how many digis a frame can pass through and the sender still be regarded as a local station. The default of 0 means that only stations heard direct are regarded as local. You can effectively disable the checking by putting any number greater than eight, because no AX25 frame should ever pass through more than eight digis.

No-gate aliases - If a frame has any of these digi aliases in its unproto path, then a UI-View IGATE will not pass it to the internet servers. This provides a mechanism for APRS users to stop their frames being gated to the internet via your IGATE. Separate multiple aliases with commas.

Show Inet entry point callsign - If this option is checked, then the IGATE's callsign is inserted in all frames passed to the internet servers. It is inserted as an extra digi, and is suffixed with the text specified in **Inet entry point tag**. Note - this option can be set via 'Insert station callsign' in the 'APRS Server Setup' dialogue.

An example:-

G4IDE's IGATE hears this frame - G8MZ<APRS,RELAY,WIDE*:>Some text

If Show Inet entry point callsign is checked, the frame header is altered before the frame is passed to an internet server:-

G8MZ<APRS,RELAY,WIDE*,G4IDE,I:>Some text

Gate LAN to Inet - If UI-View32 is being used as a local server, and it is also connected to an internet server, then checking this option allows traffic heard on the

LAN to be gated to the internet. NOTE - unless you are sure you understand what this means, do not check this option.

Gate all RF to INET - By default UI-View32 only gates APRS packets from RF to the internet, and it does not gate digipeated copies of packets heard direct. If you check this option then -

- Non-APRS frames are gated.
- Digipeated copies of packets heard direct, including your own packets, are gated.

This option is designed to be used when an IGATE is on a satellite RF frequency. It is recommended that you do not select this option for a normal IGATE.

Inet to RF limits

This sections is used to specify limits on the number of frames your system will gate from the internet to RF. Limits are specified for the maximum number of frames that will ever be gated in one minute, two minute and three minute periods. There are two sets of limits, one for all frames except messages for local stations, and one for messages for local stations.

When you connect to an internet server, six green indicators will appear at the top of the map window. The top row is for frames other than local messages, the bottom row is for local messages. In each row one indicator is for each time period. They will turn red if the limit for a time period is exceeded. The Statistics window shows how many frames your system has gated, and how many have been dropped because the limits were exceeded.

Convert PNTS

There is a system used in Japan called NAVITRA that sends information in \$PNTS frames. UI-View32 understands the \$PNTS posit frames, and can optionally convert them to normal APRS format when they are gated. This section allows you to say whether you want to convert them.

Convert PNTS Inet to RF - If this option is checked, then \$PNTS posits will be converted to APRS format as they are gated from the internet to RF.

Convert PNTS RF to Inet - If this option is checked, then \$PNTS posits will be converted to APRS format as they are gated from RF to the internet.



UI-View32 Station Movement Alarm

This program is supplied mainly as an example of using the UI-View32 ActiveX interface. The idea being that add-on developers can use it to learn how the interface works. The VB5 source code for the application is in MoveAlarm.ZIP in the DEVELOP folder.

It allows you to create a list of stations and will alert you if any of them move. Also, a history list is available for the stations, so you may wish to add fixed stations to the list if you want to be able to review when you heard beacons from them.

To add a station to the list, enter its callsign into the text box and then press return or click the button.

To delete a station, highlight it in the list and press the Del key.

If you double-click a station in the list, a history window opens that shows the history for the selected station.

The status messages window records a list of movements and also shows when stations in the list have been deleted in UI-View32.

Every time a station moves, an alarm sounds. However, there is no alarm for movements less than the distance specified in the "Ignore movements less than" text box. This allows you to suppress alarms for "movement" resulting from GPS selective availability.

The Setup menu allows you to select either Imperial or metric units, and to disable the audible alarm.

The alarm sound is SIREN.WAV in the WAV folder, you can change the sound if you wish by simply replacing it with a different WAV file.



UI-View32 Multiple Configurations

If you wish to create different configurations for UI-View32 - perhaps one for home use and one for mobile use - then you can do it by using the config.vbs ('n' is a number) VBScript files, which you will find in the UI-View32 program folder.

Creating the first configuration

Close UI-View32 if it is running. Browse to the UI-View32 program folder in Windows Explorer, and double click config1.vbs.

You will be asked if you wish to create a shortcut for it on the desktop. You are advised to say 'Yes'. You can delete the shortcut or move it somewhere else once it has been created, and you are only asked the question the first time the script is run.

If you say you want to create a shortcut, then you will be prompted to input a name for it, so input an appropriate name, for example "UI-View32 Home".

The shortcut will be created on your desktop, and UI-View32 will start. Configure the program as you require for this particular use. In future, when you wish to use this UI-View32 configuration, all you need to do is double click the shortcut on the desktop.

Creating a second configuration

Close UI-View32 if it is running. Browse to the UI-View32 program folder in Windows Explorer, and double click config2.vbs.

You will be asked if you wish to create a shortcut for it on the desktop - see above. Give this shortcut an appropriate name for your second configuration, for example "UI-View32 Mobile".

The shortcut will be created on your desktop, and UI-View32 will start. Configure the program as you require for this particular use. In future, when you wish to use this UI-View32 configuration, all you need to do is double click the shortcut on the desktop.

Creating further configurations

Do exactly the same as for your second configuration, but use config3.vbs and config4.vbs. If you need more than four configurations, then make copies of config1.vbs and call them config5.vbs, config6.vbs, etc.

Updating a configuration

Any changes you make to the set-up of UI-View32, when you are running a particular configuration, will automatically be remembered for the next time you start that configuration.

If Windows does not know how to open the script files

If you find that, when you try and run the script files, Windows does not know how to open them, then you need to download and install Windows Script from [Microsoft Windows Script Downloads](#)

.

Error - The script must be run in the UI-View32 program folder

This script file must be run either from the UI-View32 program folder, or by using a shortcut that changes the working directory to the UI-View32 program folder. You appear to have started the script in a folder that does not contain uiview32.exe.

Make a shortcut on the desktop?

When you are prompted to make a shortcut the script file on the desktop, you are advised to say 'Yes'. You can delete the shortcut or move it somewhere else once it has been created, and you are only asked the question the first time the script is run.

Input a name for the shortcut

Input a name that is relevant to what this UI-View32 configuration will be used for. For example "UI-View32 Home" or "UI-View32 Mobile". Do not make the name too long, or Windows will not display it all on the desktop.

Only use valid file name characters, the following characters between the brackets are not valid in file names - (\ / : * ? " < > |) If your shortcut name includes invalid characters, you will receive an error message, and you will be prompted to input it again.

Not a valid file name character

You have used a character in your shortcut name that is not valid in a file name. The following characters between the brackets are not valid in file names - (\ / : * ? " < > |)

UI-View32 is already running

You are trying to use this script to start UI-View32, but the program is already running.



SA Map Grabber For UI-View32

SA Map Grabber allows you to easily create maps for UI-View32 from the DeLorme Street Atlas.

When you run SA Map Grabber, Street Atlas should automatically start and display the default view of the whole of the USA. You can then select the area for which you want to create a map in Street Atlas. SA Map Grabber will float on top of Street Atlas, but you can minimize it if it gets in the way.

When you have selected the required map in Street Atlas, input a description in SA Map Grabber. If you wish, you can input a more meaningful file name than the default MAP0001, MAP0002, etc, so you can easily identify your maps in Explorer.

Press the Grab button, the displayed map in Street Atlas will be automatically saved in your UI-View32 Maps folder, and a suitable INF file created.

If you are using UI-View32 V1.35 or earlier, then any maps you create won't be available in the "Load A Map" list until you restart UI-View32. Later versions of UI-View32 have a "Refresh Map List" option on the Map menu.

By default, SA Map Grabber saves the maps as Portable Network Graphics (PNG) files. This format produces much smaller files than BMP, but it can only be used by UI-View32 V1.68 or later and UI-View(16) V2.40 or later. For use with earlier versions of UI-View32 or UI-View(16), you should select BMP on the Format menu.

Hint

If you hide the tool bars and the status bar in Street Atlas, you will maximize the map area. You may also wish to create maps at a higher screen resolution than you normally use in order to make the maps as large as possible.

Street Atlas Versions

This version of SAGrab should work ok with Street Atlas V4, V5, V6, V7, V8 and V9. **It will not work with any of the new style versions of Street Atlas, e.g. Street Atlas Deluxe, Street Atlas 2002 and Street Atlas 2003.** These programs have a completely different structure to the old versions of Street Atlas. Even if it was possible to work out the format of the saved map files (Delorme do not publish it), it is impossible for an external program to feed in key strokes, which the Map Grabber needs to do.



UI-View32 Schedule Editor

Ui-View32 supports a simple form of scheduling.

Creating And Editing The Schedule

The default is that there is no schedule. To create the schedule, or edit the existing schedule, you use the "Schedule Editor" option on the File menu.

You create a new entry in the schedule by using the New button. To edit an existing entry you highlight it in the list and click the Edit button. To put an entry you are editing into the list you use the Yes button. To abandon editing an entry you use the No button. To delete an entry you highlight it in the list and press the Delete key.

When you exit, the schedule is saved as SCHEDULE.TXT. Cancel abandons any changes you have made.

THIS IS IMPORTANT! If a file name used with the CAPTURE_MAP, COPY or RUN commands contains spaces, then it **MUST** be surrounded with ". E.g. COPY "C:\A FOLDER\TESTA.JPG" "C:\ANOTHER FOLDER\TESTB.JPG". Note that each individual file name is surrounded with ". (This is standard Windows practice when using long file names that contain spaces.)

Each schedule entry consists of a time and a command that you want to execute at the specified time.

There are three different formats for the time -

- **hh:nn** - The command will be executed at this time. E.g. "15:30".
- **+nnn** - The command will be executed this number of minutes after UI-View32 is started. E.g. "+30" means 30 minutes after UI-View32 is started.
- **Ennn** - The command will be executed every "nnn" minutes. E.g. "E10" means the command will be executed every 10 minutes.

Valid Commands

Commands can be selected from the drop-down list. Some commands take arguments.

APRSERVE_CONNECT - connect to the APRS server that you have selected in "APRS Server Setup".

APRSERVE_DISCONNECT - disconnect from the APRS server.

BCN_INTERVAL <number> - set the beacon interval to this number of minutes. The setting is not saved, so UI-View32 will revert to the value set in Station Setup if you restart the program.

CAPTURE_MAP <file_name> - Capture the current map image in one of the supported graphics formats (BMP, JPG, or PNG). If <file_name> is omitted, then a default name of Capture.PNG will be used. If the file name has an extension, then it must be BMP, JPG, or PNG, if it doesn't have an extension, then PNG is used. If the file name doesn't have a path, then the Capture folder in the UI-View32 program

folder is used. The following date/time tokens are supported in the file name:-

- \$yyyy** - the year as four digits
- \$yy** - the year as two digits
- \$mmm** - the month name abbreviated - e.g. "Jan"
- \$mm** - the month as two digits
- \$dd** - the day of the month as two digits
- \$hh** - the hour as two digits
- \$nn** - the minute as two digits
- \$ss** - the second as two digits

An example of a file name with tokens - If you input a file name of "\$yyyy-\$mmm-\$dd \$hh-\$nn-\$ss.PNG", when the file was saved, the name would be (at the current time) "2002-Feb-03 23-08-15.PNG".

COPY <file_name> <file_name> - copy a file. If the file names don't include paths, then the files are assumed to be in the UI-View32 program folder.

EXIT - close UI-View32.

RESTART - restart UI-View32.

RUN <program name> - run a program. Example - "RUN C:\RIG\FREQ.EXE". You should give a full path for the program.

SNAPSHOT <number> - take a snapshot of the station list if there are at least <number> stations in the list. If <number> is omitted then a snapshot is always taken.

START_METEOR_MODE <number> - enable meteor mode for this number of minutes. <number> must be between one and 30. If you wish to enable meteor mode for more than 30 minutes, then you can use a series of "START_METEOR_MODE 30" commands, with times separated by 30 minutes.

WX_INTERVAL <number> - set the wx beacon interval to this number of minutes. The setting is not saved, so UI-View32 will revert to the value set in WX Station Setup if you restart the program.



Download APRS Server List

This utility allows you to download an updated list of APRS servers from an internet site. The list you download will automatically replace your current list in the UI-View32 'APRS Server Setup' dialogue.

URL of server list to download defaults to a file on SM5NRK's web page. The file is automatically created by software on his APRS server. Note - you do not need to input the "http://" part of the URL, it is displayed to the left of the text box, and it is automatically added to your input.

When you click the **Download** button, if the download is successfully, then the UI-View32 server list will be automatically updated. If any problems occur, then an error message will be displayed. If the downloaded list appears to contain comments, then it will be opened in NotePad so you can read the comments.

NOTE - Do not use this utility if you have the UI-View32 'APRS Server Setup' dialogue open, because, when you close the dialogue, the old list of servers will overwrite the new list.

Format Of The List

If anyone would like to make a server list available online, the required format is:-

Each server address in the list consists of a full qualified domain name followed by a colon and a port address. E.g. ahubeast.net:10152. Any addresses that do not comply with this format are ignored.

A semicolon denotes the start of a comment. Lines that consist only of a comment, and blank lines, are ignored. Any comment after a server address and port number will be used as the tooltip text when the server list is viewed in 'APRS Server Setup'.



UI-Captioner

What Is It For?

UI-Captioner is designed to write date/time stamps on UI-View32 images, which have been automatically captured using the CAPTURE_MAP command in the UI-View32 Schedule Editor. It was requested by users who wanted to capture images at regular intervals and export them to web sites.

It has two modes of operation -

1. Time Stamp Mode

If UI-Captioner is passed an image file name as a command line argument, then it will write a date/time stamp on the image and immediately exit. For example, if you put these two commands in the Schedule Editor -

```
E2 CAPTURE_MAP TEST.PNG  
E2 RUN UICAPTIONER.EXE TEST.PNG
```

The first command would save the current UI-View32 map image as TEST.PNG every two minutes, and the second command would write a date/time stamp on it.

In the above example the file name passed to UI-Captioner does not contain a path, so it will look for the file (a) in its program directory, and (b) in a sub-directory called Capture. This is designed to match the fact that CAPTURE_MAP will save the image in the Capture sub-directory if the name doesn't contain a path.

Here is an example of how to use the commands with a full path name -

```
E2 CAPTURE_MAP "C:\CAPTURE DIRECTORY\TEST.PNG"  
E2 RUN UICAPTIONER.EXE "C:\CAPTURE DIRECTORY\TEST.PNG"
```

Note that, because the path name contains spaces, it **must** be surrounded with "".

2. Setup Mode

If UI-Captioner is run without any command line argument, then a set-up dialogue will open. The dialogue window has a small map as the background, and it allows you to configure where the date/time stamp is placed on the image, what font is used, etc. Every time you make a change, the time stamp on the background map will be updated to show how the time stamp will appear when the program is used in time stamp mode.

Time

If you select 'Local Time', then the date/time stamp will use the PC clock local time. If you select 'System Time', then it will use Windows system time. If you have correctly configured your time zone on the PC, and the local time is correct, then System Time will be UTC.

Position

Where the date/time stamp will be put on the image.

Border

Whether the date/time stamp will be surrounded with a border one pixel wide.

Date/time format

This specifies how the date/time will be displayed. You can use a variety of date and time formatting tokens, the following are the most useful -

yyyy - the year as four digits.

yy - the year as two digits.

mmmm - the full month name, e.g. January.

mmm - the abbreviated month name, e.g. Jan.

mm - the month as two digits.

dd - the date as two digits.

hh - the hour as two digits.

nn - the minute as two digits.

ss - the second as two digits.

If you wish to include text in the format, you may find that some letters will be interpreted as tokens. To avoid that happening, you can precede letters with a "\". For example, to include the text "UTC" in the format, you could put "\U\T\C".

For a full list of all the possible date/time formatting tokens, see [this HTML document](#).

Opacity

Controls how much the background image shows through the date/time stamp.

Font

Opens a font selection dialogue.

Text colour

Opens a colour selection dialogue for the text colour.

Back colour

Opens a colour selection dialogue for the background colour.

Ok

Save any changes you have made.

Cancel

Abandon any changes you have made.



UI-History

The UI-History plug-in for UI-View32 allows you to -

- Keep a history list of frames received from selected callsigns.
- Save the history as a single callsign UI-View32 log file.
- Decode APRS telemetry from selected callsigns.

You can display history/telemetry lists for multiple callsigns, and each list is displayed in its own history window. Lists can be hidden, so the main window only displays the lists you currently want to see.

The plug-in has options to be minimized in the SysTray, and to start minimized, which means it will take up very little screen space. When it is minimized in the SysTray, left-click restores the program window, and right-click gives a pop-up menu.

Context-sensitive help is available at all times by pressing F1.

An important point - When you close a history/telemetry window, **it is only hidden**, and it will appear on the Unhide list. To remove a window, you must use the Remove menu option.

Another important point - If you save a history list as a log file, **do not** try to play the log from UI-View32 while you are still saving it! If you do, then you will find that the information in the file is duplicated.

Menu Options

New - See Add A Callsign.

Remove - Remove the currently highlighted history window. See Removing A Window.

Unhide - Lists any history windows that are currently hidden, so you can unhide them.

Params - This option is only available if the active window is a telemetry window. It allows you to edit the telemetry decoding parameters for the window. See Telemetry Parameters.

Setup - See UI-History Setup.

Windows - Lists all non-hidden history windows, and has options for cascading and tiling the windows.

Help - Displays this help file contents.

Exit - Close the program. The current lists are saved, and reloaded the next time you run UI-History.

History Window

The history windows display frames received from the selected callsigns.

For a history window, the frames are displayed as received, preceded with a stamp.

For a log window, the frames are displayed in UI-View32 log file format.

For a telemetry window, only telemetry frames are displayed, and they are decoded according to what you put in the Telemetry Parameters dialogue.

If you close a window, it is only hidden. To remove it, you must use the Remove menu option.

Add A Callsign

List Type allows you to select whether you want a simple history list, or to save the history as a log file, or to decode APRS telemetry received from the station.

Callsign - Please read this! You can either key in a callsign, or select one from the drop-down list. If "List Type" is "Telemetry list", then the drop-down list will contain all the callsigns of stations from which telemetry frames have been received. Otherwise, the drop-down list will contain the callsigns of all stations that have been heard by UI-View32, provided that the total number of stations heard is less than 200. If more than 200 stations have been heard, then there will be a "Refresh" button next to the list. This is because refreshing the list, when UI-View32 is connected to the internet, and several thousand stations have been heard, can be slow, so refreshing the list is made a manual option.

If you select **Log file**, then a text box will appear into which you can input a log file name. If you have selected a callsign, then the log file name will default to the callsign.

If you select **Telemetry list**, then a button will appear that allows you edit the telemetry decoding parameters for the selected station.

Tip - If you want to create a log file containing more than one callsign, then add each callsign separately, but put the same log file name for each callsign.

Note - history lists are saved in the History Lists folder, log files are saved in the Logs folder, and will be accessible from the UI-View32 "Play A Log" menu option.

See UI-History for more information on what the program does.

UI-History Setup

This dialogue allows you to configure the plug-in.

Dupe suppress minutes - This specifies the number of minutes for which duplicate frames are suppressed after receiving the first copy of the frame. It stops the list getting filled with dupes, when you hear the same frame via several digis.

Use UTC time - If you check this option, then the time stamps on the history lists are in UTC, otherwise they are in local time. This option is ignored if a history list is being saved as log file, when UTC is always used.

Auto-start - If you check this option, then the plug-in will start when UI-View32 starts.

Minimize in SysTray - If you check this option, then when you minimize the plug-in, it will appear as an icon in the SysTray, and so take up no space on the taskbar. When it is minimized in the SysTray, left-click restores the program window, and right-click gives a pop-up menu.

Start minimized - If you check this option, then the plug-in will start up minimized.

Telemetry Parameters

APRS telemetry frames are transmitted as a sequence number, five analogue values, and 8 binary bits. For example -
T#061,158,134,067,038,118,00010011

For telemetry frames to be of any value, you obviously need to know how to decode them. This dialogue allows you to specify how to decode the telemetry from a particular callsign. It is also possible for telemetry stations to transmit message frames containing the decoding information - see "Automatic Update" below.

The telemetry parameter files are saved as INI files in the "Telemetry Params" folder.

(Reading the telemetry section of the APRS spec might help to clarify some of the following!)

Window Title - The title given to the telemetry window for this callsign.

Name - Allows you to give each analogue value and data bit a name. Note - unnamed values are suppressed in the display.

Units - The units for each analogue value - e.g. V, A, deg.C.

Equation - According to the APRS spec, the decoded value for each analogue value can be obtained from a quadratic equation of the form $y = Ax^2 + Bx + C$. The 'A', 'B' and 'C' columns allow you to input the constants. In practice, 'A' will rarely be used, and 'C' will only occasionally be used, but 'B' will almost always be used and defaults to '1'.

Two simple examples -

If you leave 'A' and 'C' blank, and put 0.1 for 'B', then 123 will be decoded as 12.3.

If you leave 'A' blank, put 2 for 'B', and 50 for 'C', then 4 will be decoded as 58.

Label - The description given to each binary bit. The default is "On". The APRS spec does not allow for a description for the off state of bits, but the following rules are used -

- The off state of "On" is "Off".
- The off state of "True" is "False".
- The off state of "Open" is "Closed".
- The off state of any other bit description is the on state description preceded with "Not".

Invert - By default, the binary bits are displayed as "On" for a 1 bit and "Off" for a 0 bit. If you check "Invert" then the sense of that bit is inverted.

Automatic Update

The APRS spec allows for telemetry decoding information to be transmitted in special messages. All the time UI-History is running, it is looking for these messages, and any that are found are used to create and update telemetry parameter files. All decoding information that is received is stored, irrespective of whether you have a window open for the callsign. Unfortunately, in practice, only a very few stations ever transmit telemetry decoding information.

Allow automatic update - If you uncheck this box, then any telemetry decoding messages received for the callsign will be ignored. One reason you may wish to use this option is if you edit the received parameter names or labels for a callsign, and don't want your changes to be overridden.

Removing A Window

If you close the window for a callsign, then it is only hidden, and it will appear in the Unhide list. This allows you to only have visible the windows in which you are currently interested.

To remove a window, you must use the Remove menu option.

If the window is a history list or telemetry list, and some data has been received for the callsign, then there will also be a disk file containing the same information as the window. The disk files are used so the lists can be saved when the program is closed, and restored the next time it is run. When you remove a station, you will be asked if you want to keep the file. If you think you may want to view the information at some time in the future, then say "Yes", otherwise say "No".



UI-NWS

UI-NWS is a UI-View32 plug-in that processes the USA National Weather Service (NWS) APRS messages. It displays the messages, and draws shapes on the UI-View32 map corresponding to the areas in the messages.

There are three main types of NWS message - advisory, watch and warn. UI-NWS uses different colours for highlighting the different types of messages in the lists, and for colouring the areas on the map.

To use NWS **you must download the required shapefiles from the NWS web site**. See [Downloading The Shapefiles](#) for more information. **Until you have downloaded the shapefiles, UI-NWS is useless.**

As NWS messages are received, they are added to the 'Active messages list'. All the zones and counties contained in the messages are extracted, and individually added to the 'Active areas' list. The active areas are then drawn on the UI-View32 map. Areas can be counties, zones or marine zones.

Each message contains an expiry time. When the expiry time is reached, the message is removed from the list, and the active areas associated with the message are also removed from the list. NOTE - some areas may be included in more than one message, so it is possible that a message will be expired but some of the areas associated with it will not be, if they have also been included in other messages with later expiry times.

Some messages are cancel messages, and cause the areas listed in the message to be removed from the 'Active areas' list.

For UI-NWS to be really useful, you need to run it for an extended period. That will allow the list of active areas to build up properly. There is an option in [Miscellaneous Setup](#) to load UI-NWS when UI-View32 starts, and it is recommended that you select this option.

Active Areas List

This list shows all the areas for which NWS messages are currently active. You can sort the list by any column by single clicking the column header.

If you are using PmapServer, and you double click a line in the list, then the UI-View32 map will zoom to the selected area. See 'Zoom margin %' in [Shapes Setup](#) for information about how to adjust the zoom level.

If you right-click on a line, then a pop-up menu appears with two options - [Finger WxSvr](#), and 'Delete This Message'.

You can also delete an active area by highlighting it and pressing the Delete key. You can delete all the active areas with the Clear, Clear Areas menu option.

Active Messages List

This list shows the messages that are currently active.

If you right-click on a line, then a pop-up menu appears with two options - Finger WxSvr, and 'Delete This Area'.

You can also delete a message by highlighting it and pressing the Delete key. You can delete all the messages with the Clear, Clear Messages menu option.

Options

Show Active Areas List (shortcut F4) - Hide/show the active areas list.

Show Messages List (shortcut F5) - Hide/show the messages list.

When a list is hidden, the other list is expanded to fill the window.

Setup

Shapes Setup - See Shapes Setup

Miscellaneous Setup - See Miscellaneous Setup

Area Alarms - See Area Alarms

The UI-View32 Map

If you double click an NWS area displayed on the UI-View32 map, then a window will pop-up with information about that area. If you right click this window, then a pop-up menu appears with two options - Finger WxSvr and 'Close'.

Shapes Setup

Fill colour and Border colour - These are the colours used for drawing the NWS shapes on the UI-View32 map. The same colours are used for highlighting the messages in the lists. To change a colour, click the coloured area - it's a button.

Shape border width - the width of the outline border of the shapes.

Shape opacity - For normal bitmap maps, UI-NWS overlays the shapes on the map, with variable transparency. The opacity setting allows you to control how much the background map will show through the shapes. An opacity setting of zero means the shapes will be completely transparent. An opacity setting of 100 means the shapes will completely obscure the map behind them.

Zoom margin % - When you use UI-NWS with PmapServer, double clicking a line in the 'Active areas' list will cause the UI-View32 map to zoom to the selected county/zone. The zoom margin controls how much of the surrounding will be included. A bigger zoom margin means that more of the surrounding area will be shown.

Fill style - the style used to fill the shapes. This setting is ignored if PmapServer is being used, and the shapes are being underlaid.

Use map server special features - see PmapServer Special Support.

About UI-NWS

This is the UI-NWS About box, its use should be obvious!

Miscellaneous Setup

Start minimized - UI-NWS will minimize itself on start up.

Minimize in SysTray - When minimized, UI-NWS will appear as an icon in the SysTray. (The icon looks a bit like a snowflake.)

Load at UI-View32 startup - UI-NWS will automatically start when UI-View32 starts.

Stay on top - UI-NWS will always stay on top of other windows.

Times without 'z' are local - Some expiry times in NWS messages are not suffixed with 'z' (most are). If this option is checked, then the times without a 'z' will be assumed to be local time.

Audible Alarm - If an NWS message is received for an area with an alarm attached to it (see [Area Alarms](#)), then an audible alarm will sound if the checkbox for the appropriate message type is checked.

Alarm for my location - NWS message for areas that include your home location will generate an alarm.

Printing

None - No NWS messages will be printed.

Alarms - NWS messages for areas for which an alarm has been set will be printed.

All - All NWS messages will be printed.

Printer - Select the printer you wish to use.

Font - Select the printer font.

The following printing parameters can be changed by editing UINWS.INI, they can be found in the [PRINTER] section.

SIDE_MARGIN - The width in inches of the side margins on the printed page. If your printer does not print up to the edge of the paper, then you may wish to reduce this. Decimal values are accepted.

TOP_MARGIN - The height in inches of the top and bottom margins on the printed page. Same comment as for SIDE_MARGIN.

SEPARATOR_LINES - This is the number of blank lines printed at the end of the message report. If you use a printer with tear-off continuous paper, then you may wish to put a value in this parameter so the paper feeds past the tear-off edge.

Area Alarms

You can attach an alarm to any county, zone or marine zone area. If an NWS message is received for an area with an alarm attached to it, then the full line for the area in the 'Active areas' list will be coloured. Also, an audible alarm will optionally sound, depending on the 'Audible Alarm' settings in Miscellaneous Setup.

To set alarms, check the required areas. To search the list, enter the required text in the 'Enter text here to search the list' box.

The Sort button will sort the list, with checked areas at the top.

The Clear button will clear all the selected areas.

PmapServer Special Support

UI-NWS has some special support for PmapServer -

Underlay Shapes

If you check 'Use map server special features' in Shapes Setup, then UI-NWS will draw the shapes on the PmapServer maps in a way that makes them appear to be underneath the other map features, rather than on top of them. (Only shapes over the land areas can be underlaid, marine zone shapes are always overlaid.) You do not have to use this option, but it will usually produce a better effect than the default of overlaying all the shapes.

For underlying to work, you **MUST** make the following changes in the PmapServer Control Panel, Options menu. (the Control Panel is accessed from the UI-View32 map menu, when the 'Precision Mapping V5 or V6 Server' map is loaded.)

- Uncheck all the Shade options. If you do not do this then the shading will obscure the NWS shapes.
- Check 'White Background'. This is not essential, but if you do not check it, then the shapes may not appear on the map.

NOTE - If your PmapServer Control Panel does not have a 'White Background' option, then you have the wrong version of PmapServer! UI-NWS needs PmapServer V1.3 or later.

Zoom To Area

When using PmapServer, double clicking an area in the 'Active areas' list will cause the map to zoom to that area. 'Zoom margin %' in Shapes Setup allows you to control how far in you zoom.

Downloading The Shapefiles

To be able to use UI-NWS, you need the NWS shapefiles for counties, zones and

marine zones. **UI-NWS is useless without these files.** They are the shapefile sets prefixed "c_", "z_" and "mz". Each set contains three files - .DBF, .SHP and .SHX.

If you have already downloaded these shapefiles for use with other software, then you can use your existing files. Otherwise, you need to download them from the NWS site. The starting page is <http://www.nws.noaa.gov/geodata/>.

The files seem to be frequently updated, so the direct URLs for the latest versions change, but if you start at the above page, you can find the files by following these links. **NOTE - Read the following carefully! The wording of the link names is correct, but an awful lot of users seem to assume that I have made a mistake, and so download the wrong files.**

Zones

NWSI Libraries: Zone Forecast Areas, and then Public Forecast Zones (CONUS/OCONUS), Download Compressed shapefile.

Marine zones

NWSI Libraries: Coastal And Offshore Marine Zones, and then Coastal Marine Zones including the Great Lakes, Download Compressed shapefile.

Counties

County Libraries: AWIPS Counties, and then US Counties (CONUS/OCONUS), Download Compressed shapefile.

NOTE - To get to this link, you have to scroll down the page! It is NOT the 'County Warning Areas' link near the top of the page!

When you have got the files, they need to be unzipped into a folder that will be created the first time UI-View32 V1.5 or later is run. The folder is \NWS\Shapefiles in the UI-View32 program folder. Make sure you put them in the correct folder, or UI-View32 will not find them! You can tell if you are putting them in the correct folder, because it will contain a file called "Put the NWS shapefiles in here.TXT".

If you have already downloaded the NWS shapefiles for use with another program, then you can tell UI-NWS and UI-View32 to use the shapefiles in a different folder to the default folder, and so avoid having two copies of the files on your PC - see [Using Existing Shapefiles](#).

Preliminary Help

This help page is being displayed because it is the first time this installation of UI-NWS has been used. PLEASE READ IT. It's a lot easier than struggling, and then having to ask me for help!

- UI-NWS processes and displays weather warnings from the US National Weather Service. If you have no interest in these warnings, then stop reading now and close the program.
- To use UI-NWS you **MUST** download and install the NWS shapefiles - see

Downloading The Shapefiles.

- UI-NWS has special support for PmapServer - see PmapServer Special Support.
- UI-NWS has a number of configuration options - see Miscellaneous Setup, Shapes Setup and Area Alarms.

Using Existing Shapefiles

If you have already downloaded the NWS shapefiles for use with another program, then you can tell UI-NWS and UI-View32 to use the shapefiles in a different folder to the default folder, and so avoid having two copies of the files on your PC.

To alter the path for the shapefiles, edit UIVIEW32.INI with a plain text editor when UI-View32 and UI-NWS are not running, look for the user section, and change the NWS_SHAPE_FILES_PATH entry so it points to the folder where your shapefiles are.

Example - You have downloaded the shapefiles for use with WinAPRS, and they are in C:\WinAPRS\NWSshape. So you would put -
NWS_SHAPE_FILES_PATH=C:\WinAPRS\NWSshape

A possible problem!

Both UI-View32 and UI-NWS use the shapefiles. They open the files in shared, read-only mode, and they do not keep the files open - they are opened and closed each time they are accessed. If the files are shared with another program, that is running at the same time as UI-View32/UI-NWS, and the program does not open the files in shared mode, then UI-View32/UI-NWS will not be able to use the files.

Finger WxSvr

If you select this option, a request is sent to the finger server at wxsvr.net to retrieve the full text of the NWS message that generated the APRS message.

The **Print** menu option prints the message text, using the printer and font configured in Miscellaneous Setup.

You can also open the window from the Finger menu option.

When the 'Finger WxSvr' window is open, you can send manual requests by entering suitable text in 'Finger command'. A good starting point is to send the command **fingerhelp**.

When you send a command to the server, it is displayed on the window title bar. If the command appears to be a request for the full message text, then it is decoded into county warning are (CWA), product id (PID), and issue time. The issue time is formatted **dd-hh:mm**, where **dd** is the day of the month, **hh** is the hour and **mm** is the minute.

A CWA list can be obtained by sending the finger command **nwshelp**, a PID list can

be obtained by sending the finger command **typeshelp**.

Please note the following important points!

1. To be able to finger WxSvr, you need an internet connection.
2. Only APRS NWS messages automatically generated by WxSvr will produce a successful finger result. NWS messages from other sources will result in a "not found" message from WxSvr.
3. The finger function will not work properly with any NWS alerts in your lists that were received with a previous version of UI-NWS.



UI-Terra

UI-Terra allows you to easily use the map data available on Teraserver to make maps for UI-View32. You can make either aerial photograph maps (DOQ) or topographic maps (DRG).

Obviously, to use UI-Terra, you must have an internet connection!

Note - The first time you run UI-Terra, it will create an XTR file in your UI-View32 program folder, so that, once you have restarted UI-View32, you will have a 'UI-Terra' option on the UI-View32 file menu.

Making A Map

1. Input the reference point for the map. You have a choice as to whether the reference point is the centre or the bottom left corner of the map. The format for latitude and longitude is the same as in UI-View32 - degrees and decimal minutes. For example 40.23.95, 100.46.73. Because Teraserver only covers the USA, you do not need to input the 'N' for North or 'W' for West. For a first map, try inputting your own location and the centre of the map.
2. Select the required resolution - Maps are available on Teraserver in various resolutions. DOQ maps are available in resolutions of 1 to 64 meters/pixel. DRG maps are available in resolutions of 2 to 512 meters/pixel.
3. Select the image type.
4. Select the required width and height of the map - I make my UI-View32 maps so they are only slightly bigger than the available area when the UI-View32 window is maximized. Note that, as you do '2', '3', and '4', the caption above the window on the right-hand side will update to show the size of the area the map will cover.
5. Input a description - this is what will appear in the UI-View32 'Select A Map' list. If you leave it blank, then UI-Terra can provide a default description based on the reference point of the map.
6. Click Download, and UI-Terra will fetch the map from Teraserver as a series of tiles, which are 200 x 200 pixels in size. As the tiles are downloaded, a small version of your map will build up in the window. Note - This is not the size your map will be! It's purpose is so you can see what is happening, and preview the map before you save it. The UI-Terra window is sizeable, the bigger you make it, the bigger will be this small version of your map.
7. Once all the tiles are downloaded, you will be asked if you want to save the map. If you say 'Yes', then the map image and INF file will be saved in the UI-View32 Maps folder. Refresh the maps list in UI-View32, and it will be available for loading.

The Tile Library

Besides creating a UI-View32 map, UI-Terra also keeps all the downloaded tiles in its 'Tile Library' folder for possible use in other maps. When you make a map, UI-Terra checks the library to see if any of the required tiles have already been downloaded. If

you make a lot of maps, you will very quickly accumulate a lot of tiles! The 'Clear The Library' menu option can be used to delete the tiles if you do not wish to keep them.

File Names

UI-Terra can make the file names for the UI-View32 map files either from the date/time, or from the description. You can select which you want to use with the 'Make File Names...' menu options. This only affects how the files appear in Explorer, it does not affect how the map appears in the UI-View32 'Select A Map' list.

Acknowledgements

UI-Terra uses some code originally developed by Victor Fraenckel for converting between UTM and latitude/longitude.