ScanNav Companion Version 3.0 Getting Started Guide

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Introduction

The Android version of ScanNav, called "ScanNav Companion" is a simplified version of ScanNav with the basic functions useful in the cockpit, and dedicated to Raster SnMap charts. Only the maps are chargeable, which makes it completely free for ScanNav users already equipped with SnMap cartography. The application is not yet available on the Google PlayStore, it can be downloaded from the ScanNav website (see "Installation" chapter).

Supported Devices and Android Versions

ScanNav Compagnon is compatible with all Android tablets and phones from version 4.0 (Ice Cream Sandwich), all processors (arm/intel/mips).

The storage space required depends mainly on the cartography (Count for example about 500MB for one of the complete SnMap packs)

Choice of interface language

The user interface is displayed in the language configured on your Android device. For languages not listed below, the interface will be displayed in French. To change the language, you must change the configuration of your device.

Some languages come from an **automatic translation via Google Translate** to test their relevance, and the mistakes (see misinterpretations) are certainly numerous. Any feedback on their comprehensibility is welcome.

The following languages are currently available:

- **French:** Native version
- **English:** Native manual translation
- **German:** Manual translation (Contribution Odile Pelletier-Lombard)
- **Spanish / Portuguese / Italian** : **automatic translation via Google Translate**

Features

The main features are:

- **Cartographic support** : Cartography management is Seamless (loading and connection between maps automatic). This version works exclusively with raster maps in the latest generation SnMap format. These must be in Mercator projection, perfectly straightened and without deformations. It is strongly recommended to use only snmap maps from the ScanNav offer, with which the cartographic engine is well developed (see http://www.scannav.com/FR/PackRaster.php)
- **GPS positioning** with tracking
- **Configurable tracking** repeaters (COG/SOG/BTW/DTW/XTE/ETE/ETA/VMG), and Sounder (DPT) since version 3.0
- **Creation of Waypoints, and Routes**
- Interactive management of Routes/Waypoints/Traces in a list with **search function** and **synchronized with cartography**
- **layer** management to quickly show/hide feature classes.
- **Import/Export** in GPX format
- Use of the **Internal GPS** , or an **NMEA Wifi source**
- Possibility of transmitting NMEA frames from the internal GPS via Wifi.

Important Notes on Android Permissions

As the versions of Android progressed, restrictions appeared on the possibilities of access to the various directories. Thus the following restrictions apply (some variations may exist depending on the manufacturer):

- To access outside of its private space, Compagnon must obtain the user's authorization, which you are strongly advised to accept (see "application authorizations" in the following chapter).

- Without permissions, ScanNav Compagnon will only be able to access its space specific to the application, located in directories, some of which are invisible to other applications. In addition, all maps and personal data in these directories will be erased if Compagnon is uninstalled.

- Also, even if permissions are granted, an additional restriction applies for write access to external SD cards. Thus, even if Compagnon can have access to all the directories of the SD card in read mode, it will only be able to write in its dedicated directory "android/data/com.mlombard.scannav", this directory being moreover erased on uninstallation of the 'application.

In the file selectors or directories used in various functions (import/export GPX, choice of base directory for maps, etc.), a list of shortcuts is presented at the top of the window, they are as follows:

- "Shared" "ScanNav" directory at the root of the internal disk. Access will only be possible if the rights are granted. Apart from the permissions restrictions, no other restrictions apply, the data will not be erased on uninstallation, and other applications have access to it (if they have obtained the permissions)

- "Private" Only Compagnon has access to this directory, it is not visible to other applications, and will be deleted on uninstallation

- "SD0" This is the directory located on the internal card, and specific to the application (android/data/com.mlombard.scannav). Its use is identical to "Shared", except that it will be removed when Compagnon is uninstalled .

- "SD1" (and following, depending on whether or not there is one (or more) external SD cards): This is the directory located on the external SD card and specific to the application. This is the only directory Compagnon can write to on the card, and it will be deleted when Compagnon is uninstalled.

- "Downloads": This is the standard Android download directory, normally "Download", at the root of the internal card (apart from exceptions depending on the manufacturers). Access will be denied if you have not accepted the permissions. This shortcut is not presented if it does not make sense.

By default, Companion stores its information, in "Shared" if rights are granted. Otherwise he tries in "SD0", and as a last resort "Private"

Facility

Installing the app

As the application is not yet referenced on the Google PlayStore, you must authorize the installation of "Unknown Sources" on your tablet or telephone. To do this, go to Android's security settings and check the box "Unknown sources (Allow installation of non-Market applications)". On recent versions of Android, a window opens to invite you to go to the settings. Then just follow the instructions to accept the exception.

Download the latest version of the installation package from the following link:
http://www.scannav.com/Compagnon/SNCompagnon.apk
and launch it on your device to install it.

The download and installation are very fast, because no map is installed. The authorizations and the download of the maps will be offered to you when you first launch the application.

APPLICATION PERMISSIONS

Once requested during installation, permissions are granted only when explicitly requested by the application. When Compagnon is launched for the first time, a window will therefore ask you to accept the following authorizations, which will be unchecked by default. Although it may run in degraded mode if you do not allow them, **it is strongly recommended that you accept them** .

- **Storage** : If this permission is not granted, your data will be stored in the directory dedicated to the application, and cannot be exported. They will also be erased when the application is uninstalled (see "Important notes on Android access rights" in the introduction).
- **Location** : This permission is required to use the internal GPS. You can do without it if you only use an external Nmea source
- **Telephone** : If this permission is not granted, you may have problems recognizing your license if you reinstall your system.

MAP DOWNLOAD REQUEST

On first launch, or if it does not detect any installed maps, ScanNav Compagnon will offer to install some. If you don't install any maps, you will get a blank screen. Three packs that do not require a license are offered by default:

- BASECHARTS: It is strongly recommended to install at least this pack which consists of a world basic odds outline. It is very light and will install very quickly.
- MARINE AREAS: This is a basic cartography of the Marine Protected Areas of the French coasts. In addition to consulting the protected areas, this pack allows you to have a little more detail than the world contour on the French coasts to test the software. It is also very light to install.
- DEMONY: This is a demo pack of royalty free maps covering the New York area. It will allow you to test the software a little more with detail maps. Please note that these maps are not up to date and should not be used for navigation.

See chapter "3 Installing the cards" below for the operating mode.

Map license activation

Installing other maps requires activating your license first. You must be connected to the Internet at this time.

- Launch the "ScanNav Compagnon" application by clicking on the icon .
- Click on the extension menu, and choose the " **License Activation " entry** . The extension menu is displayed by clicking on the **button** at the bottom right .
- In the form, indicate your Surname/First name/Mail, and possibly address, as well as the product code which was provided to you during your order.
- Then click on the "Submit" button, and wait a few moments until the result is indicated.

Installing maps

We advise you before installing the cards to check the " **Base directory** " parameter in your system configuration, described at the beginning of the " **CONFIGURATION** " chapter below. The maps will indeed be installed under this directory, and its location should be defined before installing the maps if the default parameters are not suitable.

By default, the directory chosen will be the shared directory (which will be persistent between several installations), or, if you have not given authorization (see above), the private directory to Compagnon (which will be deleted on uninstallation of the software)

The first maps to be installed are the contour maps of the world coasts (BASECHARTS, see above)

If you have maps from SnMap packs, be **sure to activate the license (see previous chapter) before installing them** . The procedure is identical for the demo cards and the packs that you have acquired. We advise you to use the standard procedure which downloads and installs the maps immediately.

NOTES ON LIBRARY STRUCTURE

Each library corresponds to a sub-directory of the base directory, named according to the identifier of the corresponding pack.

In versions 2.9 and earlier, maps could be installed directly at the root of the maps directory if the user had not taken care to create a dedicated directory. This is no longer possible in order to clarify the management of the libraries. If Compagnon detects cards at the root, it will therefore automatically migrate them into a library, named "Migrated", which can be activated/deactivated like the other libraries. In order to avoid duplicates in different directories, we advise you to reinstall the packs in the standard way, and once the checks have been carried out, to uninstall the "Migrated" pack

STANDARD PROCEDURE

This method is the simplest. The maps are downloaded one by one, and installed in stride, as and when the end of their download.

1 – Installation : In ScanNav Compagnon, choose the " **Maps** " entry then " **Download and Install...** " from the extension menu (bottom right button) to open the map installation management window. Note: this window is automatically displayed when the application is started if no card is present in the library (see "1-Installation of the application" above)

When this window is opened for the first time, a message indicating that it is downloading the list of cards for your subscription is displayed. This message should disappear on its own after a few seconds.

The list of available packs is then displayed, with for each entry, the identifier of the pack and its title. Click on an entry, it then displays the details of the pack, including legal information, the number of cards in the pack, and its size, as well as an " **Install** " button

⇒ Click this button to start the download/installation.

A progress bar is then displayed to indicate the progress, with in particular the number of cards in the queue, the number of cards whose installation is complete, and possibly the number of cards in error, then disappears when the installation is complete.

The duration of the installation will vary depending on the number of cards in the pack, and the speed of your Internet connection. During the installation, you can return to the main Companion screen, the maps will then be displayed as they are installed. You can return to the installation screen at any time to check how the installation is progressing.

If for any reason the installation stops (for example application shutdown, tablet or phone shutdown, Internet cut, etc.), simply click on the "Install" button again. The download/installation will resume where it was, without re-downloading the maps already installed. Similarly, you can later relaunch the installation to check if an update is available. No maps will be downloaded if they are already up to date with your license.

If installation errors are reported, check that you still have space available on your device, that your connection is active, and that your license has been updated (see chapter 2 "Activating the map license" above), then try again.

2 – Uninstallation : To uninstall a pack, simply click on the "Uninstall" button of the corresponding pack. This button is absent if no card is installed for this pack.

Please note: older versions of the packs are no longer available for download after one year. To reinstall them after this time, you will need to subscribe to an update, or install it from a personal backup.

PROCEDURE WITH PRE-DOWNLOADED PACK

With this method, you must download (or copy from your pc) the pack(s) concerned. Although both formats are accepted, prefer the Zip format to the Exe format. The space needed is therefore twice the size of the pack (once for the installation pack, and once for the installed cards)

Caution : The installation source must be a pack of maps (extension .zip or .exe), and not individual maps (extension .snmap). To install individual maps (.snmap), follow the manual procedure described below.

Open the map installation window (see "standard procedure" above), then click on the menu button **at the top right** , and choose the entry " **Install a package already downloaded** "

- A file selector opens to choose the pack (zip file) to install. Go to the location where you downloaded the pack, then select the file corresponding to this pack, and confirm by pressing the "Select" button
- A new window opens to confirm the name of the destination library. We advise you to keep the proposed name which, by default, is the name of the selected setup file. However, you can choose another destination with the drop-down list of existing entries, and also create new entries using the " **New** " button.

Once you have made your choice, click on " **Install** ", the procedure will begin, and a progress bar will appear at the bottom of the screen until the end. Once the installation is complete, a window displays the results of the installation, and the maps are loaded on the screen (*). The installation is not blocking, you can continue to work during it.

The entry will then appear in the list of installed packs under the chosen name, and with the label "Custom Pack". To **uninstall** it, follow the same procedure as for the standard procedure.

MANUAL PROCEDURE

Warning : This manual procedure used in earlier versions is obsolete since the Beta 2.5 version, and is therefore indicated in gray. It can still be used in troubleshooting **only by technicians knowledgeable** in understanding the directory structure. Certain restrictions related to the evolution of the Android permissions system must also be taken into account.

You must copy the maps from your PC version of ScanNav, to the sdcard (physical or virtual) of your Android device. This can be done either from your pc by inserting the

physical sdcard on a reader on your pc, or by USB connection; or Wifi from your Android device, having previously shared the directory(s) on your pc (in the latter case, we recommend using EsExplorer, available for free on the PlayStore, see here: https: //play.google.com/store/apps/details?id=com.estrongs.android.pop). The map base directory can be installed wherever you want, but it is strongly recommended to use the default location as described below. The subdirectories of the base directory were imposed until version Beta 2.4. From the Beta 2.5 version, they are no longer imposed, but it is advisable to keep the naming recommendations.

- At the root of the SD card (path /sdcard or /mnt/sdcard or other depending on the case), create a "ScanNav" directory.
- In this ScanNav directory, create a "Charts" subdirectory
- In this "ScanNav/Charts" directory:
  - Copy the "Europe.snmap" map found on your pc in the ScanNav installation directory (by default "C:\Program Files (x86)\Marc Lombard\ScanNav\DemoCharts\Europe.snmap" to the "/sdcard" directory /ScanNav/Charts" of Android, in order to have the general map.
  - Create sub-directories corresponding to the packs of SHOM maps that you own. Until Beta 2.4, the directories had to have one of the following names, depending on the card(s) you have. They have been free since Beta 2.5, so the following naming is just a recommendation (you can now create as many subdirectories as you want):
    - "Sleeve": SHOM Sleeve pack
    - "Atlantic": SHOM Atlantic pack
    - "Mediterranean": SHOM Mediterranean pack
    - "UKHO-GB": UKHO UK + Ireland pack
    - "UKHO-ESPT": UKHO Spain + Portugal pack
  - Copy the SnMap maps of the packs from your pc to these directories depending on the pack.
  - You can copy the charts in the base directory "Charts", but in this case they will always be taken into account, whatever the library selected in the preferences (see below)

Other menus related to maps

The "Maps" menu entry also includes other possibilities:

- " **Active Maps Library** " allows you to enable/disable packs without uninstalling them. Only packs installed in the base directory are offered.
- " **Frames** " displays a red frame around each available map, using the same principle as in ScanNav, in order to graphically check the list of maps present.
- " **Map Rotation** " allows the user to rotate the map with 2 fingers, in conjunction with zooming. Uncheck this box to return to a "North Up" view (default)

Configuration

Click on the extension menu, and choose the "Preferences" entry.

Under the chapter " MAP LIBRARY ":

- The " **Base** directory" entry corresponds to the base directory in which the maps will be installed. To change it, click on the entry, and change the directory using the directory selector that appears.

- The " **Map Library " entry** has the same function as the "Map" menu ⇒ "Map Libraries".

- If you had installed the maps manually before activating the license, the pack(s) you configured above will have been scanned, with a null result because no active map will have been detected. Companion should then be told to re-scan the map directory(s) to detect them. To do this, click on " **reload cards** ". This operation is necessary as soon as you change the contents of the map directories manually (adding or deleting maps), but is not normally useful on standard installations, unless indicated by the support.

- " **Priority of scales** " allows you to adjust the choice of maps to display according to the zoom level, in order to adjust the display according to the resolution of the screen and the view of the user. When the cursor is in the center, the software will choose the maps whose scale corresponds to the zoom level. By moving the cursor to the left, it will choose smaller scales (with less detail) which will be magnified on the screen (therefore with larger characters), and by pushing it to the right, larger scales (with more details, but smaller characters therefore less readable).

Under the chapter " LOCALIZATION ":

You can be located with

- the internal GPS.
- by an external NMEA source via Wifi
- or by triangulation of the GSM and Wifi network (approximate positioning)

Once the first tests have been carried out, **it is recommended to uncheck "localization by wifi network",** and to **keep only one source of positioning: either** the internal GPS, **or** the NMEA Wifi source.

Configuring the NMEA Wifi interface: In addition to checking the option "Location by external NMEA source", you must configure the Wifi communication port on which the information will arrive. You must first consult the documentation of the sending device to know the protocol parameters, port number, and IP address. To connect to ScanNav on PC (from version 14.1), refer to the documentation in the ScanNav update notes.

In this version, the configuration is simplistic and consists of a string to be entered, which must be entered scrupulously, according to the following syntax: " **XXX** " " **numport** "{" **:addressIP** "}, or:

- "XXX": Protocol used: must be **UDP** or **TCP**
- "portnum": Port number (for example 5000)
- ":addressIP": remote IP address: Mandatory in TCP, Optional in UDP. In UDP, if the address is not specified, Compagnon listens to all the devices sending on the port number specified in numport, and whatever their IP. Otherwise, only frames from the specified IP address are accepted.

Examples (to be completed without quotes):

- "UDP3555": accepts sentences from all network senders that send on port 3555 in UDP mode, regardless of their IPs.
- "UDP3555:192.168.1.4": Same, except that only frames from the IP address 192.168.1.4 are accepted.
- "TCP5000:192.168.1.4": connects in point-to-point TCP mode to the IP address 192.168.1.4 on port 5000
- "TCP5000:monordi": connects in point-to-point TCP mode to the IP address of

the "monordi" computer on port 5000 (from version 2.9 Build 35)

To connect to the PC version of ScanNav, use the UDP protocol (with or without IP).

"Boat centering" When this box is checked, the boat remains centered on the chart. This entry is also available directly in the expansion menu.

"Interpolation distance" This parameter indicates the minimum displacement below which no point will be stored.

Under the chapter " NMEA WIFI OUTPUT ":

From version 2.9, you can transmit the position given by the internal GPS on the Wifi network, and thus transform a telephone or a tablet into an external GPS, which can be used by ScanNav on pc (from version 14.1) or Companion on another Android device without internal GPS.

The setting consists only of defining the UDP or TCP communication port, according to the same principle as described in the previous chapter (see **Setting the NMEA Wifi interface** above). For use with ScanNav pc or Compagnon, use the UDP protocol.

Activation/Deactivation of the NMEA output is done via the **"NMEA Wifi output" entry of the general extension menu** .

Important note : If Companion is put in the background, the transmission of NMEA frames is not interrupted, unless Android decides to stop the background task. It is therefore important to deactivate the NMEA output if you no longer need it, before switching to another application, in order to save battery (use of Wifi and GPS)

Under the " VISUALIZATION " chapter:

" **Interactive Rotation** " allows the user to rotate the map with 2 fingers, in conjunction with zooming. This entry is also available directly in the "Maps" expansion submenu. Uncheck this box to return to a "North Up" view (default)

" **Display of map frames** " displays a red frame around each available map, according to the same principle as in ScanNav. This entry is also available directly in the expansion "Maps" submenu.

" **Display of map edges** " allows you not to hide the edges of the maps where the cartridges/general information of the map appear, following the same principle as "navigable area" in ScanNav.

" **Size of waypoint symbols** " Allows you to enlarge or reduce the size of the symbols in order to better adapt their visibility to the resolution of your device and your preferences. Note: The waypoint size is adapted to the screen resolution since version 3.0. Users of previous versions who increased this value may need to reset it to 100%.

Under the chapter " REPEATER ":

Each repeater can be enabled/disabled individually. These will only appear on the screen if they are checked, and that:

- For COG and SOG, and DPT: GPS be enabled
- For all others (BTW/DTW/XTE/ETE/ETA/VMG) : GPS is enabled and a destination waypoint is set
- That the entry "Active repeaters" is checked in the extension menu.
- The DPT (sounder) repeater requires connecting an external Nmea source.

The size of the repeaters can be set as a percentage of the base size, in order to make them more or less visible and to fit them all on the screen depending on your device and

its orientation. From version Beta 2.5, if according to their size and number, all the repeaters do not fit in the width of the screen, just scroll them with your finger to the left or to the right.

List of repeaters:

- COG (Course Over Ground): Course (course) instant background
- SOG (Speed Over Ground): Instant bottom speed (expressed in Knots)
- VMG (Velocity Made Good): Effective approach speed to the waypoint
- BTW (Bearing To Waypoint): Bottom heading to follow to reach the destination waypoint
- DTW (Distance To Waypoint): Distance to the destination waypoint (expressed in Nautical Miles)
- XTE (Cross Track Error): Heading correction to reach destination waypoint:
    - If preceded by "L" (Left): correction to Port
    - If preceded by "R" (Right): correction to Starboard
- ETE (Estimated Time Enroute): Estimated time to reach the destination waypoint, (depending on the current conditions)
- ETA (Estimated Time of Arrival): Estimated time of arrival at the destination waypoint, (based on instant conditions)
- DPT (Depth): Displays the probe (new in 3.0)
- Other instruments will be available in later versions.

Other preference entries :

Under the "Advanced" chapter, you can set the periodicity of the automatic backup. Put a value of 0 to disable it.

Notes:

- The automatic backup is done in the background, and should not normally impact performance.
- If you disable automatic backup, it will still be performed when putting the application to sleep (passing to the background, etc.)

It is recommended not to touch the other inputs and leave them at their default values. Further information will be given in subsequent versions.

Use

Once the map library is configured, use should be very intuitive.

Toolbar:

The toolbar shown above appears at the bottom of the screen (see later in this document for the use of each button). On low resolution phones in portrait mode, all of the buttons may not appear. In this case, just press the center of the bar and drag it to the left or right without lifting your finger, to reveal the missing buttons.

Visualization of maps:

To scroll the map on the screen, just slide your finger on the map, and to zoom, use 2 fingers, spreading them apart to zoom in, and tightening them to zoom out. The maps will be loaded automatically as you move and zoom.

It is also possible to zoom in/out using the   and buttons   on the toolbar, which can be easier when operating with one hand on a phone, and allows it to work on devices that do not have the multi-touch.

Screen Rotation : On most tablets/phones, you can flip the screen to display in portrait or landscape.

It is also possible to control the rotation more finely manually, by checking the "Map rotation" entry in the "Map" expansion submenu, or in the preferences. The rotation is then done interactively with 2 fingers. To return to a "North up" angle, uncheck the "Map rotation" box

Activating GPS:

If you are using internal GPS, first ensure that GPS is enabled in your Android system settings (location settings), and that you have accepted location permissions.

If you are using an external WiFi source, make sure that the WiFi connection is active and properly configured.

Then click on the button   , a window asks you if you want to activate the trace (see below). After validation, the boat will appear at your location, and the center of the

button will be replaced by a filled circle   . If you are moving, the track (if active) will be displayed. Active repeaters are displayed.

Re-click on the same button to stop gps listening: The gps button returns to its initial state, and the repeaters disappear if they were active.

GPS listening is interrupted each time the application is put to sleep.

The GPS may take some time to receive valid information. At first, the map is positioned at the last known position of the gps (which can be dated a long time ago).

The boat symbol on the screen will be displayed in different colors, depending on the GPS reception status:

- In Green: GPS reception active.
- In Grey: Remanent position not updated (listening disabled, or no GPS reception yet)
- In Red: GPS not picking up, or disabled.
- In Yellow: Position received by GSM/Wifi triangulation.

If in doubt about reception, tick the box "Display positions received" in the "DEBUG" chapter of the preferences. Text notifications will then appear at each gps or wifi point received. You can also view GPS status changes, or information about the satellites taken into account in the location (still in the form of text notifications).

Important: it is recommended to deactivate the localization by GSM/wifi triangulation and to keep only the internal or external gps (see above in the preferences).

The gps activation window asks you the question "Do you want to continue the old track" and offers you 3 choices:

- "No track": no track will be stored or displayed, only the boat will be positioned on

the map

- "New Track": A new track will be created
- "Yes": The previous track will be resumed. However, this choice is not valid on the first launch of ScanNav Compagnon.
- If you do not validate one of these 3 choices (click outside the window, or press the Android back button), the activation of the gps is cancelled.

All intermediate points are kept in the track. Its display (visibility, line color and thickness, class) can be controlled in the trace properties. See later the chapter "Routes Properties" for the description of these attributes. The list of points displayed is however different from the routes: For the tracks, the points display the date, position, route and bottom speed.

If Companion is put in the background, GPS tracking is not interrupted, **unless Android decides to stop the background task** . This keeps track even when Companion is not in the foreground. It is therefore important to deactivate the GPS if you no longer need it, before switching to another application, in order to save battery.

Query:

Click the button ↗ to select the "Query" tool

This tool is the default tool. It is recommended to return to this tool outside of the route and waypoint creation phases so as not to create a waypoint or route inadvertently. With this tool, when pressing briefly on an object (same behavior for waypoints, routes and tracks)

- If the object list is opened with the object type included, it displays the object details (see below)
- Otherwise a waypoint properties dialog is displayed without a confirmation button. This allows you to consult the waypoint without modifying it (click outside the dialog to make it disappear)

If you short-tap the map outside of any object, the underlying map properties dialog is displayed, allowing you to view its analytical details.

GOTO function:

The destination waypoint is shown on the map by a translucent red circle superimposed on the waypoint. The current tool must be **the "Query" tool** in order to define the destination waypoint. (This ergonomics will undoubtedly be reviewed in a future version)

- To set the destination waypoint, do a long press on an existing waypoint.
- To cancel the destination waypoint, do a long press on the map outside of any waypoint.
- You can move the destination waypoint (see "creating waypoints"), to define a new destination.

Creation of Waypoints:

Click the button 🪧 to select the "Waypoints" tool

A waypoint will be created with each confirmed press on the map (touch the map, leave the finger for about ½ second, and lift it without moving it), a window then allows you to modify the properties of the waypoint before validating. If you click on "Cancel", the waypoint will disappear.

To move an existing waypoint, make a confirmed press on it, and move your finger

without lifting it. You can also modify the parameters, before validating. If you click on "Cancel", the waypoint will return to its initial state (position and attributes).

To delete a waypoint on the screen: make a confirmed press on it, and quickly move your finger by raising it at the end in stride ("fling" action)

Pressing faster (simple "tap" on the screen by raising the finger immediately) on an existing waypoint, the behavior is identical to the selection tool.

WAYPOINT PROPERTIES:

The waypoint properties window displays the following fields:

- name: must fit on one line
- Comment: free field that can fit on several lines. The area expands as you enter rows.
- Symbol: allows you to choose the symbol to display.
- Class: allows you to group several objects (waypoints/routes/tracks) within the same class. These classes are then manageable by the layers window to be activated or deactivated at the same time.
- Scale mini: Definition of a minimum scale below which the size of the waypoint will decrease until it is no longer displayed in order to lighten the display. Check the box, and specify a scale to enable this feature. Note: the scale is approximate and may vary depending on the screens.
- Visible: If this box is unchecked, the waypoint will never be visible (used in conjunction with layers)
- Latitude/Longitude: it is not yet possible to modify these values, to move a waypoint, move it graphically on the screen.

The Symbol/Visible/Mini scale parameters are memorized between the creation or modification of each waypoint within the same session (the default parameters when creating a new waypoint are those assigned during the previous validation). The default value of the "Class" parameter is defined in the "Layers" window (see below).

Creation of Routes:

Click the button to select the "Add Routes" tool

Click (confirmed press) on successive places on the map to create a route. To end the route, double-click on the map, or press and hold. The properties window will appear and allow you to modify the graphic attributes of the road. A new route will be created at the next click on the map.

You can also:

- Move a point of an existing route: Click on it and move it while keeping your finger pressed (if you click on a waypoint belonging to another route, this becomes the currently edited route.
- Create intermediate points: Click on the middle of a road segment to create the intermediate point
- Delete an existing waypoint: Click on the point, and quickly move your finger, raising it at the end ("fling" action) (same function as for individual waypoints)
- To edit the general properties of a route (name, color, line, class), or view the list of points with their headings and distances: perform a long press on the entry corresponding to the route in the list of objects, or a long press on one of the waypoints of the route in the map.

ROUTE PROPERTIES:

The route properties window displays the following fields:
- Name/Class/Comments/Visible: See description in Waypoint properties above.
- Color / Thickness: allow you to change the color and thickness of the road line
- List of points: the number of points and the total distance is indicated at the top, and is followed by the list of all the points, with for each one its position, and the distance and course to follow to reach it from the previous point.
- By making a long press on one of the points, you can edit its properties (see chapter above)
- You can scroll the list of points up or down if they are not all displayed on the screen.
- Comments: you can hide or show this field, by clicking on the small button to its left, which allows you to have more space to view the list of points, very useful especially in cases where the comment has several lines.

Layer management:

To open the layer management window, use the "Layers.." entry from the main extension menu or from the object list. For connoisseurs, this concept is very close to that used in ScanNav.

This window is used to quickly display or hide several objects belonging to the same class. Just check or uncheck the box of the line corresponding to the layer.

The checkbox can take 3 states:
- Green tick: all objects of this class are visible.
- Gray square: Part of the objects of this class are visible, and some are hidden.
- Empty box: all objects in this box are hidden.

The definition of the layers is done automatically, according to the "Class" field filled in the properties of the objects. The " **Default** layer" field allows you to define a layer where all new objects created will be classified by default. Simply enter a name in the input field. This can be the name of an existing layer or a new name. To assign it to an existing name, make a long press on the line corresponding to the layer.

For example, you can enter "Summer 2013", all new tracks, waypoints, and routes will be classified there by default. You can thus easily display or hide all the data corresponding to your "Summer 2013" navigation, without having to delete them and then re-import them.

The list contains as many entries as there are different classes defined in the objects. The first line "Unnamed" corresponds to objects for which no class has been defined. You can scroll the list up or down if not all of the entries fit on the screen.

To validate your modifications, click on the "OK" button. If you click on "Cancel", no modification will be taken into account.

Import GPX:

Accessible via the extension menu ==> "Import GPX", this allows you to import waypoints, tracks or routes, to view them on your Android device. For example, you can export a waypoint database from ScanNav to query them in Android.

The import takes place in the background, so if you use a very large gpx file, the waypoints will not appear immediately. You can continue to move around the map, or other operations during this time. Imported waypoints or other types of objects will appear when the total import is complete.

Note: certain notions such as classes, minimum display scales, thickness of road lines,

etc... are specific to ScanNav (and ScanNav Companion), and are therefore implemented as extensions, because they do not appear in the GPX-based format. Some are only implemented in the latest versions of ScanNav (13.3 minimum).

GPX export:

Allows you to export all objects in GPX format for archive or use in ScanNav. Note: To do a selective export, use the export function available in the object list menu.

Display of the list of Waypoints/routes/tracks:

You can display the list of objects, via the "List Objects" entry of the extension menu. The list is displayed to the left of the map in landscape mode, or at the top of the map in portrait mode. To enlarge the area devoted to the list, touch the edge separating the list from the map, and move your finger. This list contains its own toolbar:

Extension menu, allowing to:

- define the type of objects to display (Waypoints, Routes, Tracks, or all types)
- Open the "Layers..." management window
- List all objects, or only those in the visible map area ("Visible only")
- Set the action when the user selects an entry in the list
  - "Auto zoom": the map zooms on the selected elements to contain them all in the map (new in Beta 2.2 version)
  - "Auto centering": the map recenters on the selected elements, without changing scale (behavior of versions prior to version 2.2)
  - none of the 2 entries checked: no action (new in Beta 2.2)
- Switch from "Multiple selection" or "Single selection" mode (see below)
- "Select all": Switches to "Multiple selection" mode, and selects all the entries in the list
- "Deselect all": Deselects all entries
- "Export selection": allows you to export the items selected in the list in GPX format
- "Properties": Opens a window allowing you to edit the properties of the selected object. Note: you can also make a long press on an element of the list when you are in "Single selection" mode
- close list

This button allows you to quickly switch from "Single Selection" to "Multiple Selection" mode . It changes icon depending on the selection mode.

Deletes the item(s) selected in the list

Research tool. Fill in the text field immediately to the left of this button, and click on the button. The list will then display only the objects whose name contains the specified string. To return to the total list, empty the text field and press the button again.

In Single Select mode:

- Only one item is selected at a time, and the details (comments) of the selected object are displayed under its name.
- You can edit item properties by long-pressing the item, which opens the item

properties window.

In Multiple Selection mode:

- Several elements can be selected, which allows for example to delete several elements at once.
  - Click on an element to select it, or deselect it
  - To select or deselect an entire range of items, long press one item, then click another item in the list. ==> All inputs between these 2 inputs (inclusive) will be selected or deselected depending on the selection status of the first input.

The list and the map are synchronized in the 2 modes (only synchronized in "single selection" mode in versions prior to Beta 2.2): Depending on the "Auto zoom" and "Auto centering" mode, the selection of an item in the list centers/zooms the map on the corresponding object, and a click on an object in the map selects the object in the list.

Other functions of the general extension menu:

- "Active repeaters": allows you to hide all repeaters (by unchecking the box), without touching their individual settings in the preferences. Note: the repeaters will in any case only be present when the gps is active (see above "configuration → repeaters", "gps activation" and "goto function")
- "About ScanNav": Displays a window with ScanNav Companion version information. You can check if a more recent version of ScanNav Compagnon is available by clicking on the "Check for updates" button in this window.
- "Documentation": Opens this document. Note: you must have a pdf reader on your device.
- "Clock": displays a clock superimposed on the map: Simple test as a prelude to the display of repeaters. As Gérard thought she was pretty, I left her :-)
- "Maps" / "License activation" / "Preferences": see above.

Crash reports:

A mechanism allows to send a crash report by E-mail (after validation by the user)

In the event of a crash, a dialog box opens the next time the application is started, asking you to send the crash report.

- If you click on " **OK** ", an email window opens. You can view the technical information sent, and possibly complete it with other information that would allow you to reproduce or situate the context. The report is then deleted from your device. Note: on the latest versions of Android, you also have the choice of using other sharing methods than email, depending on the applications installed on your tablet/phone.
- If you click " **Cancel** ", nothing is sent, and the report is deleted from your device.
- If you click on " **Later** ", the report is "parked" in a separate directory, and can be sent later (for example when you have an Internet connection at no additional cost)

When crash report(s) are "parked", a new " **Send Crash Reports** " entry appears at the end of the expansion menu. Click on this entry to send pending reports (same confirmation box as above), these will then be deleted, and the menu entry will disappear.