Nav Operation and Configuration Guide

oMM

SIERRA WIRELESS®

4118617
Rev 2

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Revision History

Revision number	Release date	Changes
1	May 13, 2016	Updated to FM Template, minor layout updates.
2	May 18, 2017	Fixed chapter 4 title

Contents

1: Introduction

This document introduces the Nav Application (Nav).

Who Should Read This Document?

This guide should be used by anyone configuring and/or using the Nav Application on the PND (personal navigation device) / oMG and monitoring the location and communications in the oMM.

Table 1-1:

Title and Publication Number	Description
oMG-ED-121006 oMG Operation and Configuration Guide	Describes the configuration and usage of the oMG.
oMM-ED-110201- Operation and Configuration Guide for oMM	Describes the configuration and usage of the oMM including the user interface, reports and other related functionality.
Nav On-line Training Modules	A series of training modules to guide you through all phases of Nav setup, installation, and operation; available on the knowledgebase.

2: What is the Nav Application?

The Nav application is an optional application installed on the oMG. It works in conjunction with a Garmin PND and an oMM to provide vehicle routing functionality and two-way messaging capabilities between a fleet of vehicles and a control center.

The Garmin PND and the oMG are physically connected via a serial cable and are installed in a vehicle. The PND reports its location automatically via the oMG to the oMM using the oMG's application and WAN connection.

Operations personnel at the control center can view real time vehicle locations on a map displayed on the oMM and can send routing instructions to vehicles for their next and future destinations using a simple user interface. Operations personnel can send and receive messages to and from one or more vehicles in the fleet at any time, and drivers can respond to incoming messages as well as send messages to operations personnel.

3: Requirements

The major components of the Nav application are:

- Personal Navigation Device (PND); currently Sierra Wireless supports the Garmin nüvi® 265WT.
- Four Port oMG running software version 3.5 with option package 1.512.compat-20100608.2 or later.
- oMM running Software Version 2.8.1 or later.

Garmin

The Nav application is designed to work with the Garmin nüvi® 265WT. This device has a color touch screen and provides voice-prompted, turn-by-turn directions that speak street names to help users get to their destination. Maps that show the vehicle's position are automatically smoothed and redrawn as the journey is navigated. The 265WT includes many tools, including a JPEG picture viewer, world travel clock, currency converter, calculator, and more.

The Garmin PND comes with an FMI cable in order for it to connect to 12 VDC vehicle power and to an oMG at the oMG's serial connector

Figure 3-1: Garmin nüvi® 265WT

oMG

Vehicle operators use the Garmin PND to navigate to their stops, and operations personnel use the oMM to assign vehicles to stops and to send messages. The oMG is the interface between the PND and the oMM. The oMG receives Next Stop and messaging information from the oMM via the oMG's cellular WAN connection. The oMG parses the data, puts it in a format the Garmin PND understands, and sends the data over the serial connection to the PND. A vehicle operator confirms the Next Stop or reads (and perhaps replies to) a message and that information is sent to the oMG over the serial connection. At the oMG the data is parsed, translated into a format the oMM understands, and sent to the oMM over the wireless WAN connection.

The oMG is connected to 12 VDC vehicle power and is connected to a Garmin PND via the serial connector.

Figure 3-2: Sierra Wireless Four Port oMG

oMM

The oMM is a browser-based software application that enables users to configure, monitor, and analyze oMGs and associated applications/accessories such as the Nav application.

For fleets with the Nav application, the oMM gives operations personnel the ability to send routing instructions to vehicles in the fleet as well as send and receive messages to/from vehicle operators in the fleet. Vehicles locations are shown on a map, and operations personnel simply click on a new destination or type in an address to assign it to a vehicle.

4: Installation and Preparation

Installation

The oMG and the PND both run on a vehicle's 12 VDC source, and the PND connects to the oMG via a serial connection on the FMI cable.

Note: the DB9 connector that connects the FMI cable to the serial port of the oMG is not included with purchase. This must be supplied by the customer.

Below is a cabling diagram for the PND and the oMG.

Sierra Wireless recommends that a professional vehicle electronics installer perform the installation. Professional installers are able to tailor the procedure to meet the specific requirements of each vehicle.

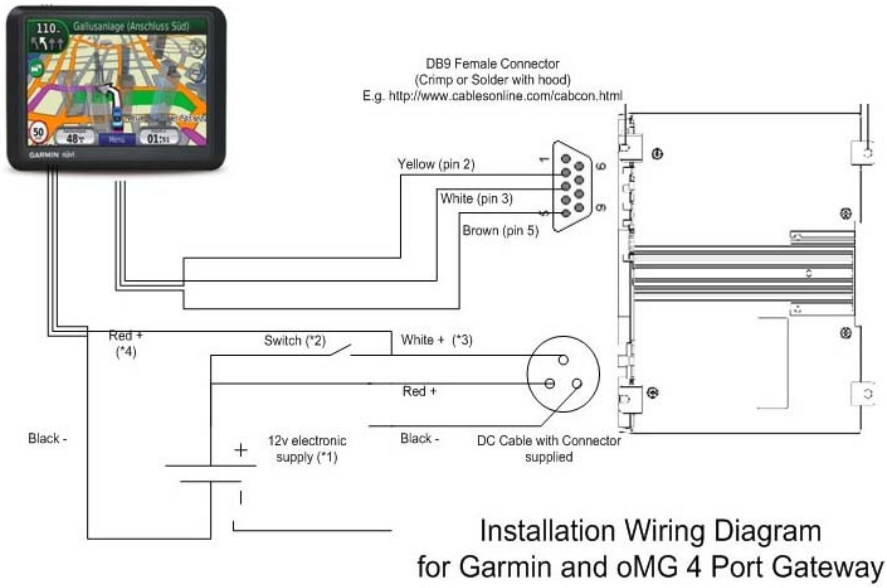

Figure 4-1: oMG and PND Wiring Diagram

oMG Configuration

If the Nav application has been purchased, the oMG software will automatically include the Nav application software. The only change that must be made to the oMG is that the serial port must be assigned as *Application* rather than the default Serial Console. In the LCI, click on **Devices -> Serial** and use the drop down menu to select *Application* as shown here:

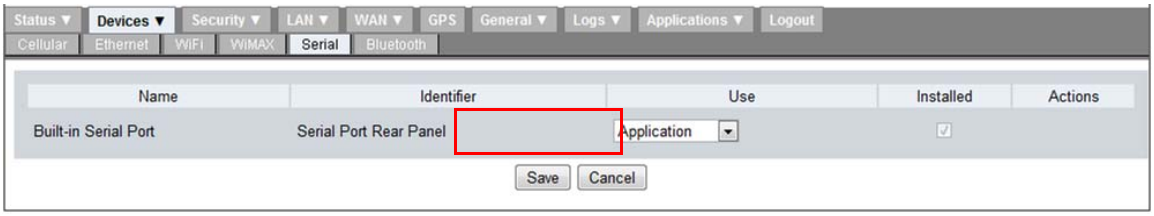

Figure 4-2: Assigning the oMG Serial Port to Application

The Nav application is enabled by default. Be sure to leave the Enable check box enabled in the LCI on the *Applications -> Nav* screen, and keep the default *Cable Attachment as Use default rule, matches: built-in Serial Port, Rear Panel*.

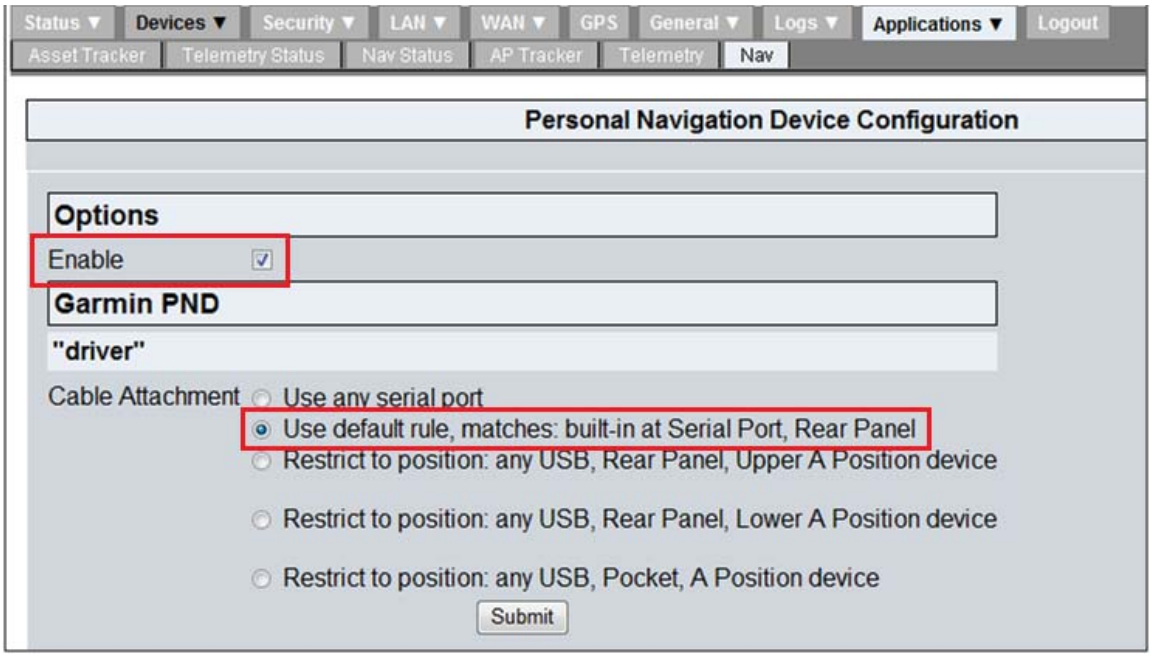

Figure 4-3: Enabling the Nav Application in the LCI

You can verify the oMG is powered on and successfully communicating with the PND and the oMM in the LCI in the *Applications -> Nav Status* screen.

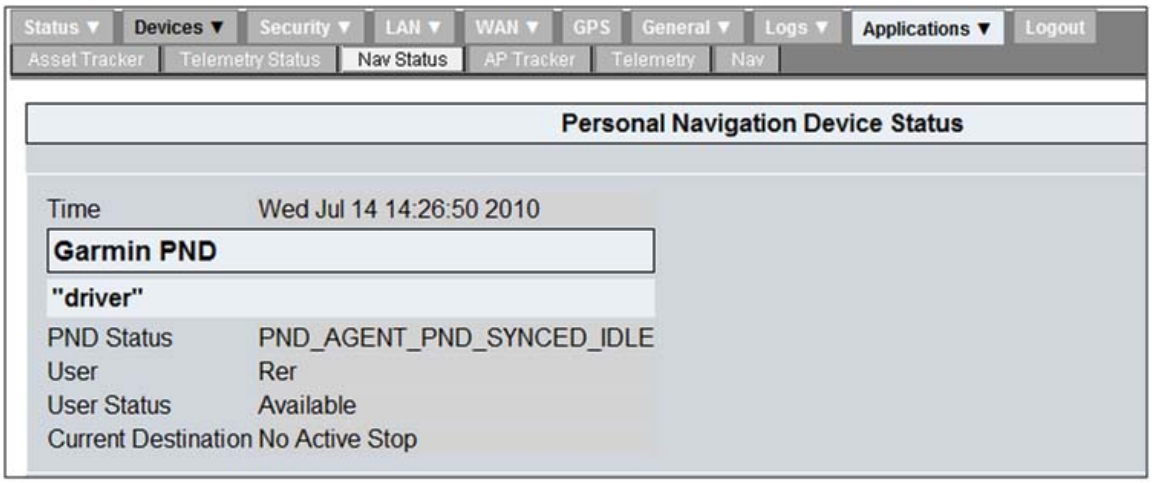

Figure 4-4: Nav Status in the LCI

These instructions are only for setup of the Nav application. Other setup is required to use the oMG in your fleet.

5: Garmin PND Startup and Initialization

PND Startup

When power comes on in the vehicle, the oMG and the Garmin PND will automatically power on.

Figure 5-1: Garmin PND Power on Screen

The PND may display a warning about using the PND while driving. The PND will automatically advance to the next screen, but pressing **Agree** will move it along faster. If prompted to enter simulation mode, select **NO**.

Figure 5-2: Garmin PND Warning

The PND will display the truck and map screen when the device is ready.

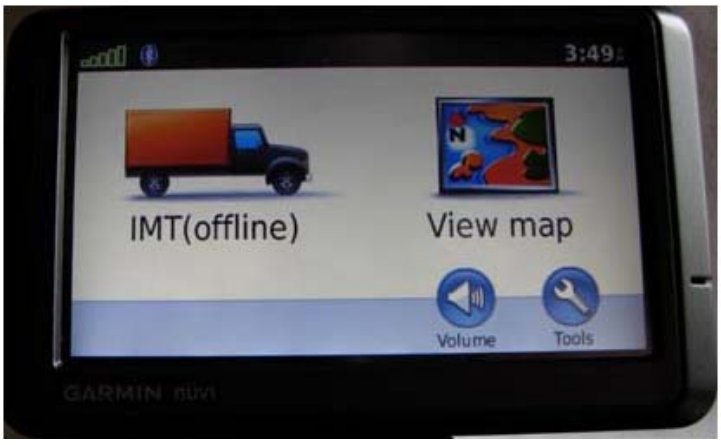

Figure 5-3: Garmin PND Offline

If the oMG cannot connect to the WAN, the PND will show offline. This status will change to online once the oMG is connected to the WAN.

Garmin PND Driver Information

After power up there may be no driver information, or information from the previous shift. The PND can be configured so that messages sent and received from the PND are identified. Once the PND is reporting online, select the truck icon, and then select Driver Info.

Figure 5-4: Garmin PND Main View

The Driver Information screen lets you identify the driver and specify the driver status.

Figure 5-5: Driver Information

Selecting Driver ID will show an on screen keyboard. Use this keyboard to type in an ID and then select **Done**. Use the eraser or cursor keys at the top right of the screen if needed while editing the value.

Figure 5-6: Keyboard entry for Driver ID

Select an appropriate driver status and select **Back**. Select **Back** again to exit the *Driver Information* screens.

Figure 5-7: Driver Status

Garmin PND Volume and Map Scale

Audio volume for the turn by turn spoken directions as well as the audible alerts for incoming routes and messages can be adjusted by tapping on the Volume icon in the *Truck and Map View*.

Figure 5-8: Volume Icon

The volume screen allows the audio to be adjusted or muted. When a new message arrives it will be indicated by an on screen icon and a bell tone. It's easy to miss the on screen icon so using the audio feature is recommended. Once the volume is set select **OK**.

Figure 5-9: Mute or Adjust Volume

The map showing the vehicle location is shown when selecting *View Map* on the *Truck and Map* view. The first view that is presented will be zoomed-out.

Figure 5-10: Initial Map View

Tap the + or – keys to zoom to the preferred level. The zoom level can be adjusted at any time.

Figure 5-11: Zoomed-in Map

Garmin PND Device Registration

As part of the Garmin PND setup you will be prompted to register. Registration involves going to the Garmin website (https://my.garmin.com) and entering the serial number to qualify for free map updates, free software updates, and to start the warranty. This step should be done when the unit is being prepared for installation.

Garmin Factory Reset Procedure

A factory reset should not be necessary, but the Garmin PND is a complex device with many options that could be set incorrectly and cause the unit to operate with non-standard behavior. Therefore if a problem is reported with the Garmin PND, one of the first steps is to perform a factory reset.

Use the following steps to perform a factory reset of a Garmin PND:

1. Unplug the FMI cable from the back of the unit.
2. Remove the unit from the mount.
   a. a.Take note of the serial number from the bar code label. This information is necessary if you contact Sierra Wireless Technical Support for InMotion Solutions (IMS).
3. Turn the unit off by moving the slide switch to the left; wait until the screen goes blank before proceeding.
4. With the unit turned off and the FMI cable unplugged, press down on the bottom right of the Garmin PND screen. Move the power slide switch to the left to turn on the unit while continuing to hold the screen.
5. When the unit comes on you will be prompted to select a country, language, registration, and a safety warning. Select **OK** (or **Agree**) for these prompts.
6. If the unit recognizes the reset, it will prompt you to erase all user data. Select **Yes**.

If you don't see this screen then the screen wasn't held quite right. Retry again if this is the case. After the reset is accepted you will see a progress bar and several messages at the bottom of the screen.

7. When the factory reset completes you will see the Magnifier and Map screen (not the truck). This indicates that the Garmin PND is in consumer mode and does not have two-way communication capabilities.
8. To put the unit back into normal operation, reinstall it in the mount and plug in the FMI cable. Usually the unit will power on automatically but you may need to slide the switch to the left. You will again see the initialization screens; agree or ignore these screens until the initialization completes.
9. When the power up completes, the unit will display the truck (not the magnifier) and the map. If you don't see the truck then repeat the procedure, starting with the removal and reconnection of the FMI cable. When the truck is displayed the Garmin PND is in fleet management mode and you can select and configure the map view.

Garmin PND Support

In the event of a problem associated with a Garmin PND, IMS Support will require that the unit be factory reset and therefore any unusual setup on the unit will be lost. In the event that the Garmin PND unit is determined to be defective, the RMA process described in the Garmin warranty will apply (http://www8.garmin.com/support/warranty.html).

Garmin capabilities that are not supported:

1. Map update through one-time fee or subscription is not supported. Agencies may upgrade any Garmin at their own discretion and expense but if the upgrade process renders the Garmin inoperable the repair of the Garmin will not be covered under support. If a Garmin is successfully upgraded with maps and operates normally thereafter, the current support terms will continue to apply.
2. FM radio traffic reception is not supported. Although this may be operational under certain conditions and in some locations, use of this capability is at the discretion of the agency and if it interferes with normal operation of the Garmin it must be deactivated.
3. Bluetooth hands free phone operation is not supported. Although this may be operational under certain conditions and in some locations, use of this capability is at the discretion of the agency and if it interferes with normal operation of the Garmin it must be deactivated.
4. Personalization of the Garmin is not supported. Although this may be operational under certain conditions and in some locations, use of this capability is at the discretion of the agency and if it interferes with normal operation of the Garmin it must be deactivated.

6: Garmin PND Operation

When the oMG is connected to a WAN, the truck icon will indicate online. This means you can send and receive messages with the Garmin PND. To begin normal operation, select the **View Map** icon.

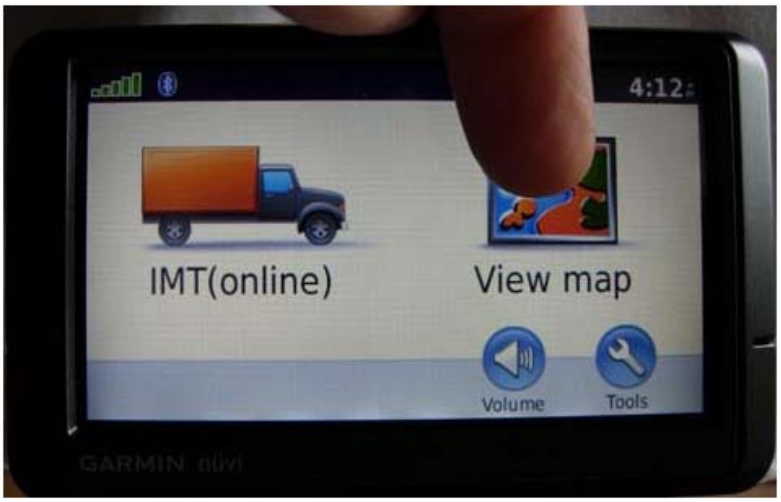

Figure 6-1: Tap View Map for Normal Operation

Receiving a New Stop

When in map mode, the Garmin PND will track the location of your vehicle, assuming it can see satellites. Use the + or – keys to zoom in to the preferred level. You can also pan the map by touching and dragging it.

Figure 6-2: Garmin Navigation Mode

A user with access to the oMM can send a destination address also known as a stop, to the Garmin PND. This message is delivered instantaneously. When a new stop message arrives the Garmin PND will notify you with a bell tone and display a flag on the map screen.

Tap the flag to accept the stop.

Note: the Garmin PND will not provide instructions until this is done.

Figure 6-3: New Stop Alert

After tapping the flag, the Garmin PND shows the stop address. Tap the address to acknowledge it, and then tap **Go!** if accepted. Selecting *Delete* will send a message to the oMM and the message state will be changed to *Driver Deleted*.

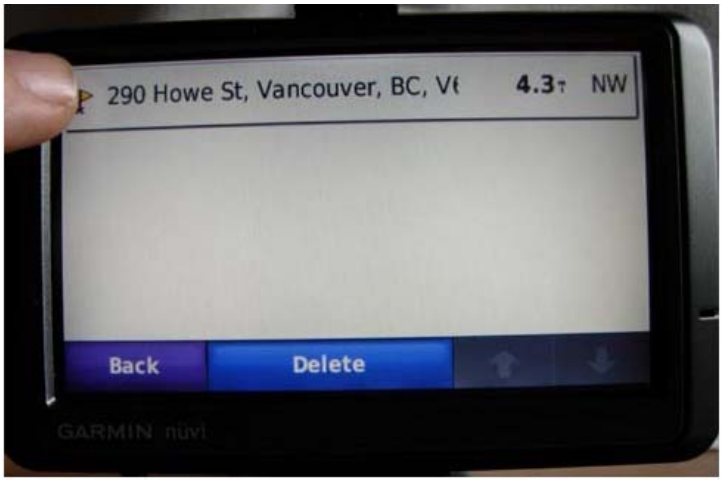

Figure 6-4: New Stop Address

Figure 6-5: Select Go! to Accept the stop

Once the stop is accepted, the PND displays your location on the map and begins audible turn by turn driving instructions. While driving the route the PND will highlight the next turn and give periodic updates until reaching the destination.

Figure 6-6: Navigate to Your Stop

Receiving a Text Message on the PND

The Garmin PND will issue an alert when it receives a message. To read and respond to a message select the exclamation icon.

Figure 6-7: Receiving a Text Message

The operations personnel can send two types of messages:

- The first type takes the form of a question with several reply choices. The Garmin PND lets you view and choose one of the options in your reply.
- The second type is a free form message that does not have predetermined reply choices. To respond, select the message and when it appears full screen, select **Reply**:

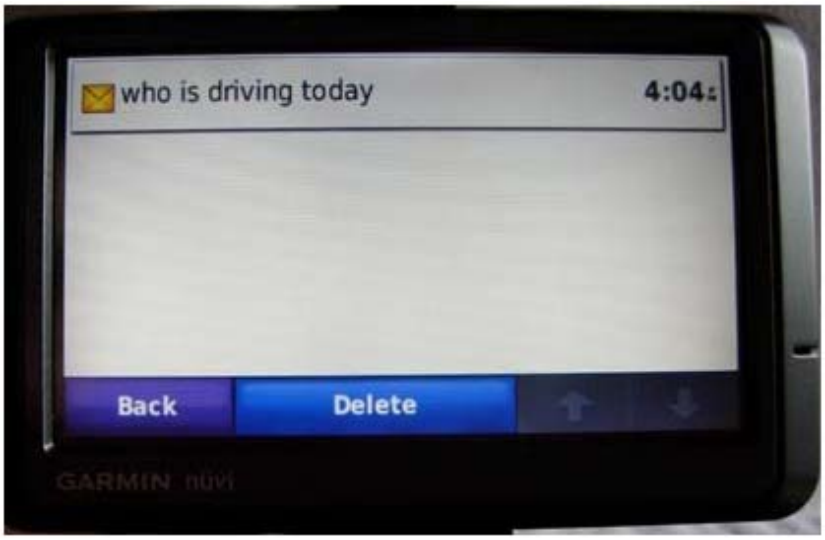

Figure 6-8: Message Reception at the Garmin PND

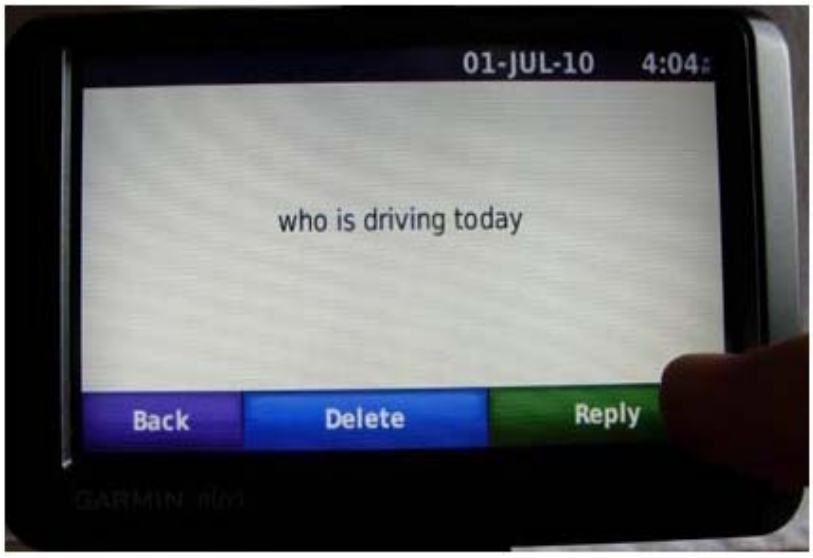

Figure 6-9: Tap Reply to Respond to a Message

- Two choices will be presented: *Use Keyboard* and *Use Quick Message*. Currently *Use Quick Message* is not populated, so use the keyboard to respond.

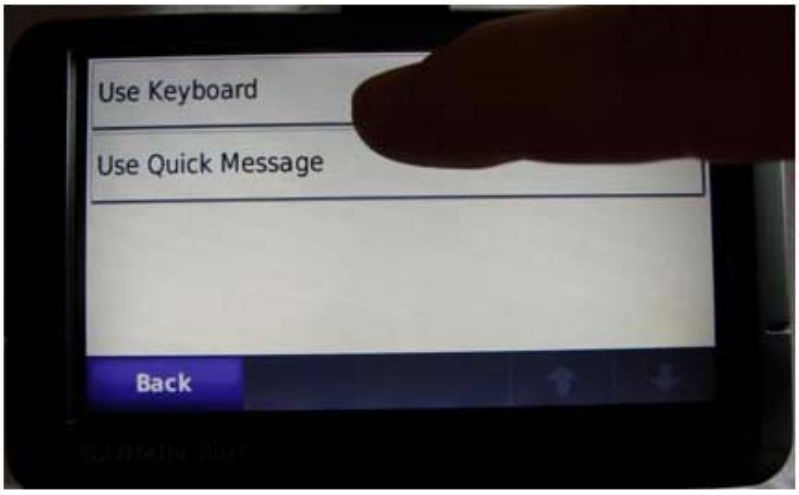

Figure 6-10: Use Keyboard to Reply

- Type your response to the message and select **Done**.

Figure 6-11: Keyboard Response

- Select **Yes** when the *Send Message* prompt is displayed.

Figure 6-12: Confirm Message to Send

- Once the message is sent, select the **Back** button to return to the top menu.

Figure 6-13: Tap "Back" to Get to the Top Menu

- From this menu select the map icon to resume normal operation.

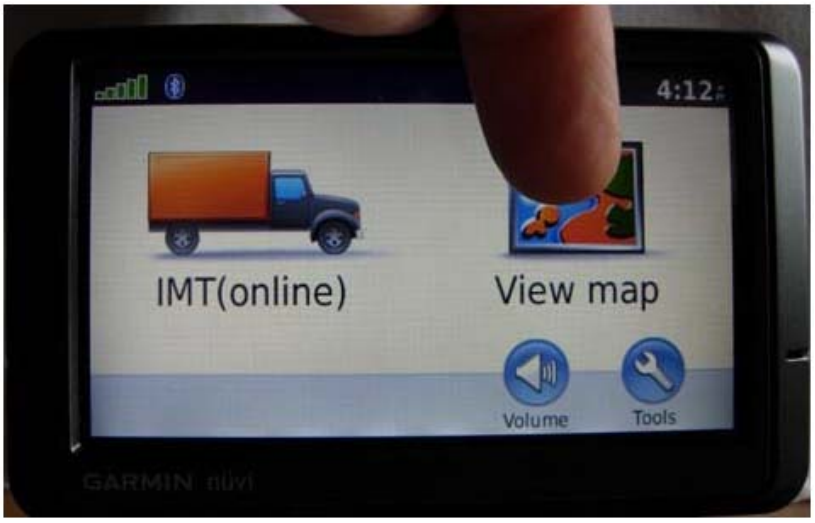

Figure 6-14: Tap View Map to Resume

Sending a Text Message from the Garmin PND

The Garmin PND lets you send text messages to operations personnel via the oMM. To access this feature tap the truck icon. The second level menu contains the messages icon. Select **Messages** and then select **Create Message** to display the keyboard to compose your message.

Figure 6-15: Tap Messages to Access the Message Tools

Figure 6-16: Tap Create Message to Send a Text

Once you have composed your message select **Done** and send it by selecting **Yes**. Then select **Back** to get to the top menu. Select the map icon to resume normal operation.

Figure 6-17: Use the Garmin Keyboard to Compose Your Message

Figure 6-18: Tap Yes to Send the Message

7: Nav Operations on the oMM

The enterprise side of the Nav system is provided by the oMM. Nav is an optional module installed on the oMM that provides routing instruction and two-way messaging services. All communications to the Garmin PND in the vehicle must go through the oMM's gateway.

To access the Nav options, select the Nav tab on the oMM. This brings up the Nav route and status summary, including the vehicle ID, its Garmin PND status, driver information, and the most recent stop.

The route and status information also includes a Last Update timestamp. This will be refreshed every few minutes if the oMG is reporting to the oMM and indicates that you can send and receive messages to it. If the oMG is not online, you can still send to it but the message will be queued until it can be sent.

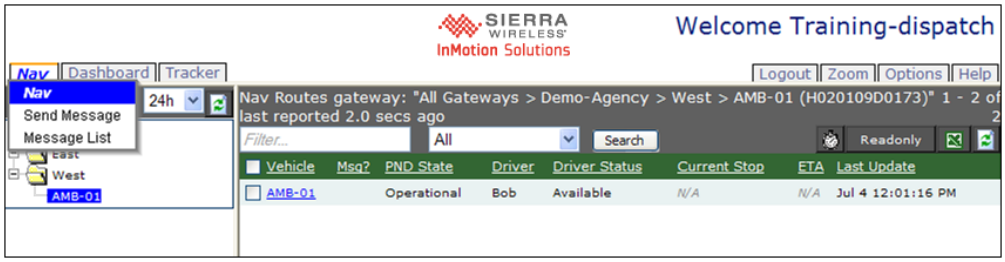

Figure 7-1: oMM Nav Pane

Nav – PND States

The following table outlines the PND work states

Table 7-1: PND Work States

PND State	Description
Presence Detected	The oMG has detected the PND through the reception of a packet from the PND
Operational (default)	This state is set immediately after Presence Detected is set
Not Operational	Occurs when the oMG does not receive keep alive packets from the PND
Absence Detected	After a PND deactivation event is sent, the oMG's Nav application will enter sleep mode for 10 seconds. It will then try to re-establish communication with the PND. If the PND does not respond, the Absence Detected state will be set

Nav – Adding a Stop

To add a new stop for a vehicle, click on the URL formed by the vehicle name on the main screen of Nav.

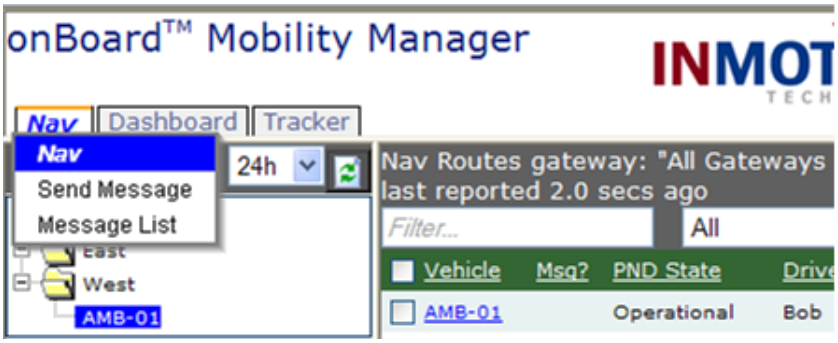

Figure 7-2: Click on the Vehicle Name to Add a Stop

Clicking the vehicle URL displays the *Add Stop* detail page with a map centered on the current location of the oMG.

Use the + key in the magnifying glass or double-click in the map area to zoom in. Note that at the top are details about the Garmin PND, including its electronic serial number and the information entered by the driver. A list of previous stops is also shown with the option to delete them from display.

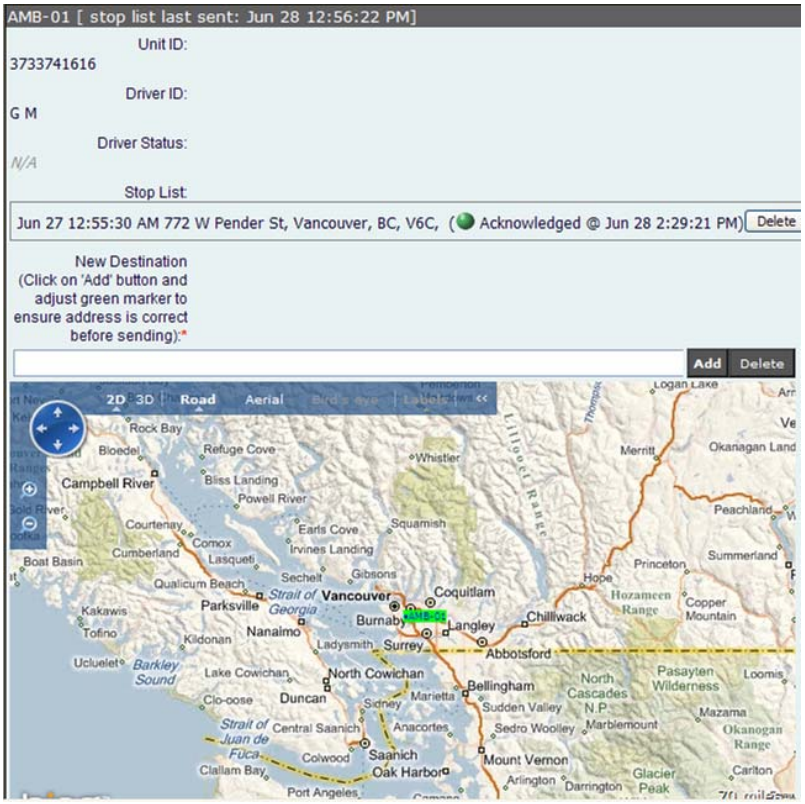

Figure 7-3: Add Stop Pane

To send a Stop to a vehicle, enter a destination in the text box and click **Add**. This will display a green icon at the location. Click on the green icon to show the pop-up and confirm the address. Note that the icon will be positioned at the closest address found by the mapping tool.

If the address does not match the desired address or location closely, drag the icon to a more preferable location. When done, click on the new location of the icon to confirm the address in the text field. Click **Add** to confirm that the new address is entered in the text field, or the stop will not be sent.

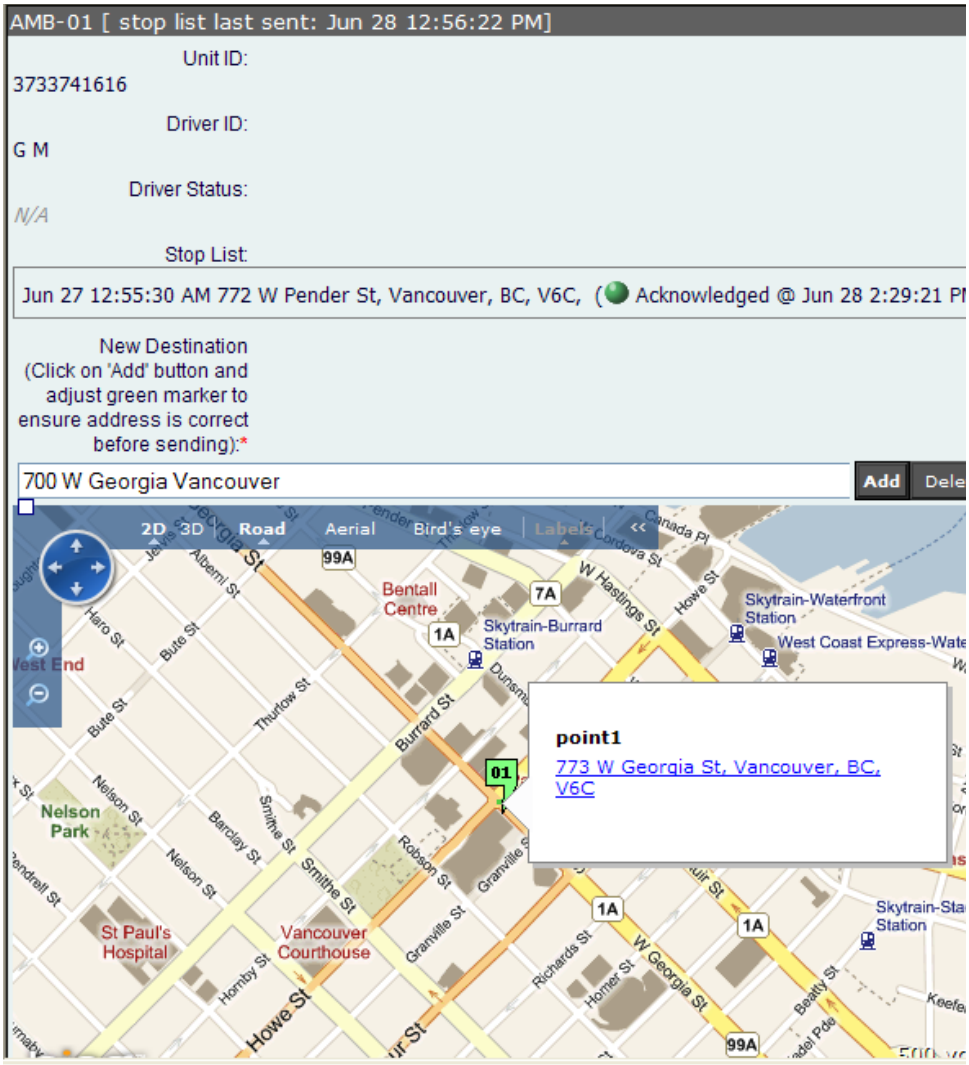

Figure 7-4: Address Information

To send the destination, click **Send** on the bottom of the *Add Stop* pane. The driver will be alerted, and once the driver acknowledges the stop it will be shown as the Current Stop along with an ETA.

Figure 7-5: Send a New Stop

Figure 7-6: Current Stop and ETA

Deleting a Stop

To delete a new stop for a vehicle, click on the URL formed by the vehicle name in Nav's main screen. The URL of the vehicle displays the *Add Stop* detail page with a map centered on the current location of the oMG. On this page, select the stop you wish to delete and click on **Delete**. The PND will display a message that the stop has been deleted.

The stop list will contain all stops sent to a PND until they are deleted.

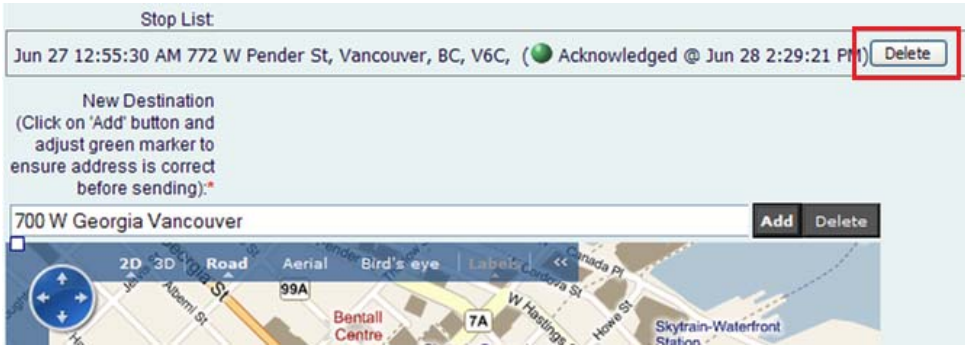

Figure 7-7: Delete Stop in the oMM

Sending Messages from the oMM

To send a message to one or more units in the field, select *Nav -> Send Text Message*. Select one or more vehicles by highlighting them in the Available Items list on the screen, and click the right arrow to move them to the Selected Items list on the screen.

Type the message you want to have displayed on the Garmin PND screen for each message recipient. The Garmin PND can receive a maximum of 199 characters per message; however it is best to keep messages short so that they are readable. You can send the message or supply optional response choices, one per line.

Messages sent from the oMM to a Garmin PND are nearly instantaneous. Messages received at the oMM from Garmin PNDs may be delayed by up to a minute due to the refresh rate of the oMM.

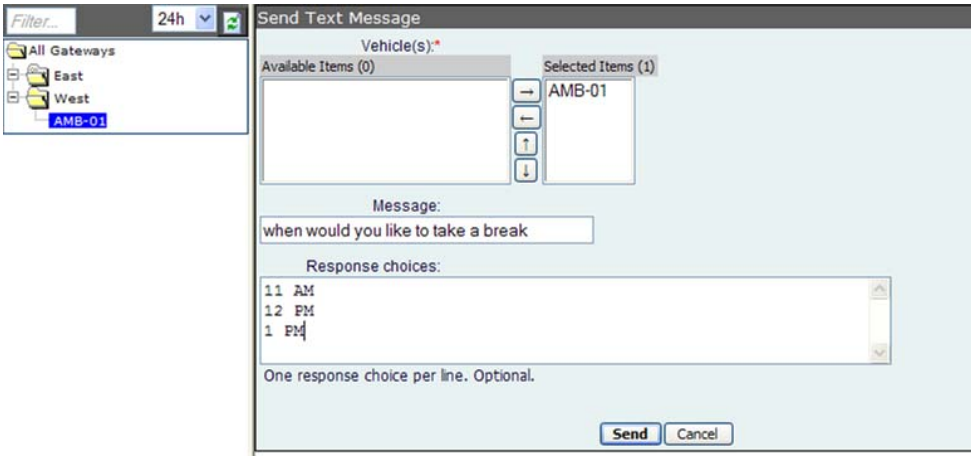

Figure 7-8: Sending a Message on the oMM

Receiving Messages on the oMM

Messages received on the oMM can be reviewed by clicking on Nav -> Message List. There are two types of messages:

1. Responses to optional choices in a message sent to the Garmin PND from the oMM
2. A spontaneous message sent from the Garmin PND. This type also includes responses to questions from the oMM that did not have optional choices provided, necessitating the driver to use the keyboard to compose a free-form response.

Message Responses on the oMM

View responses by clicking on the link in the Message column. This will display the Text Message pane with details about what response option was selected and when the response was sent. If the message was sent to multiple recipients, each response will be shown along with the time it was sent.

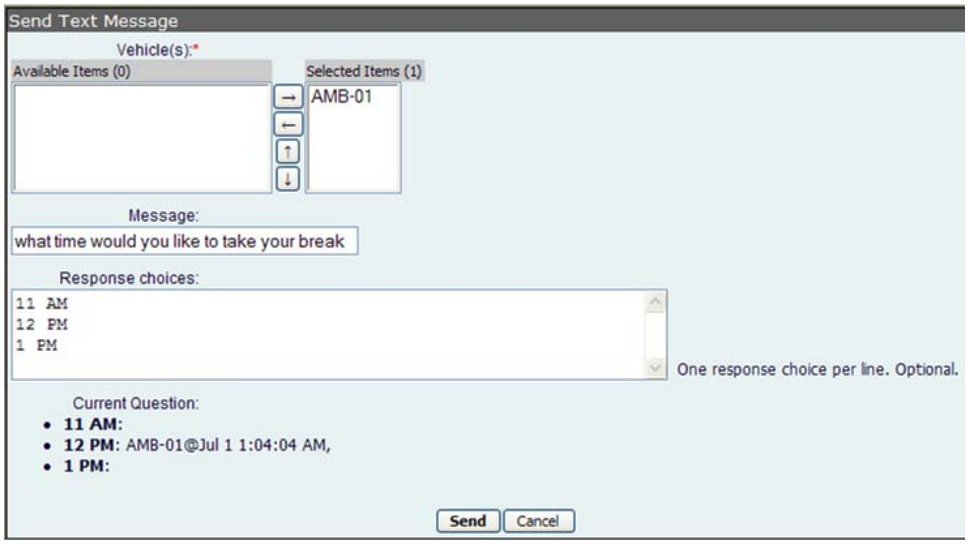

Figure 7-9: Message Response Details

Receiving Spontaneous Messages on the oMM

Drivers may send in text messages from their Garmin PND at any time, not just as a response to receiving a message. Messages from the Garmin PND can only be answered at the oMM by a text message – no optional response choices can be defined.

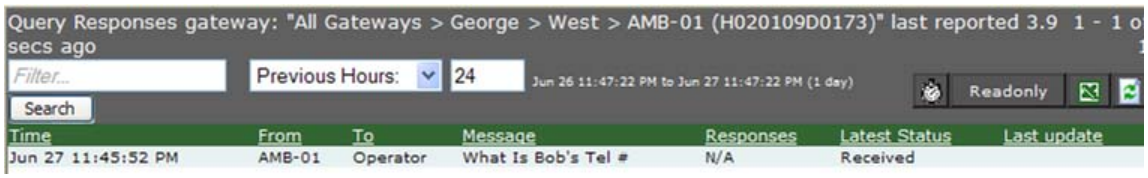

Figure 7-10: Spontaneous Text Message from the Garmin PND

Notification of Incoming Message

A threshold can be set to alert staff when a message has been received from the PND. The alert can be in one or both of the following two forms:

- An email is sent to predefined recipient(s)
- A color coded icon will be displayed on in the oMM Dashboard

To add the threshold, access the oMM and select *Admin -> Thresholds*. Click **Add**, and fill in parameters as in the example below:

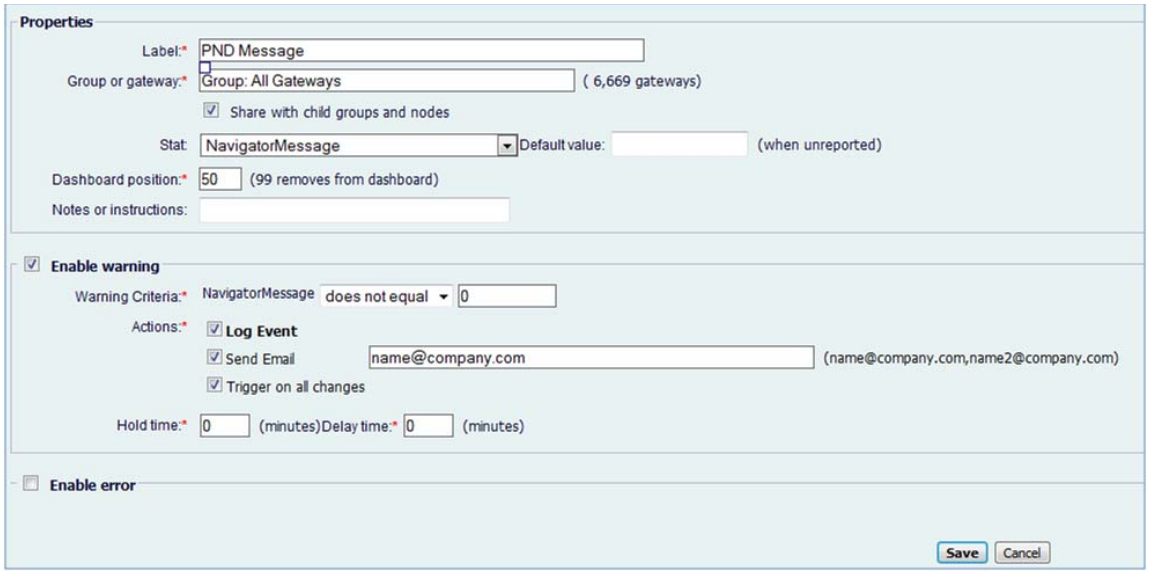

Figure 7-11: Setting a Threshold for Incoming Message Notification

Label: The name that will appear on the Dashboard

Group or gateway: The group of gateways that will use this threshold

Share with child groups and nodes: This option should remain enabled.

Stat: The statistic name is *NavigatorMessage*. Leave the default value blank.

Dashboard Position: The placement on the dashboard for this threshold.

Warning Criteria: To get a color coded icon and/or email for this threshold, set **NavigatorMessage** to *does not equal 0*. Set *Log Even*t and *Trigger on all Changes* to enabled. To receive email notifications of an incoming PND message, enable *Send Mail*, and enter in one or more email addresses.

Message History

Responses to optional choices in a message sent to the Garmin PND from the oMM are tied to the oMM's outgoing message. The status of these messages will show *Pending* until the driver responds, after which the status will change to *User Responded*. If the message was sent to more than one recipient the oMM will track how many recipients have responded in the Responses column.

Messages are stored indefinitely on the oMM.

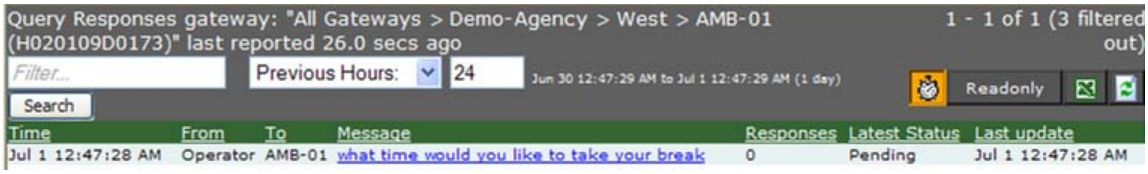

Figure 7-12: Message Awaiting Response

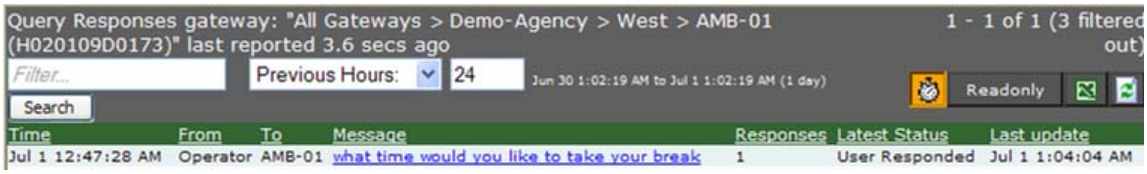

Figure 7-13: Message with Response

If the message from the Garmin PND is a keyboard response to an oMM message, the status will be shown as Received once it reaches the oMM. These messages may take up to a minute to be displayed on the oMM due to the refresh rate of the oMM. Click the refresh icon for an immediate update.

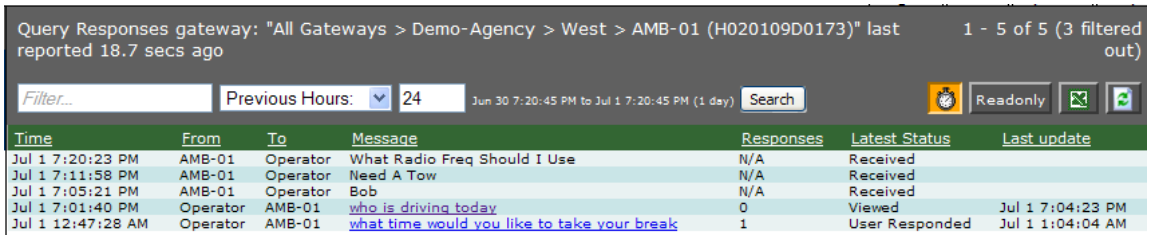

Figure 7-14: Message History with Spontaneous Incoming Messages

Nav Reports in the oMM

The oMM provides two reports associated with the Nav application, found in the main tab under *Reports > Nav*.

Nav Events Report

The *Nav Event* report provides the raw events that were uploaded by the gateways for Nav activities. Events are generally complex in nature and are used by Sierra Wireless staff for troubleshooting activities.

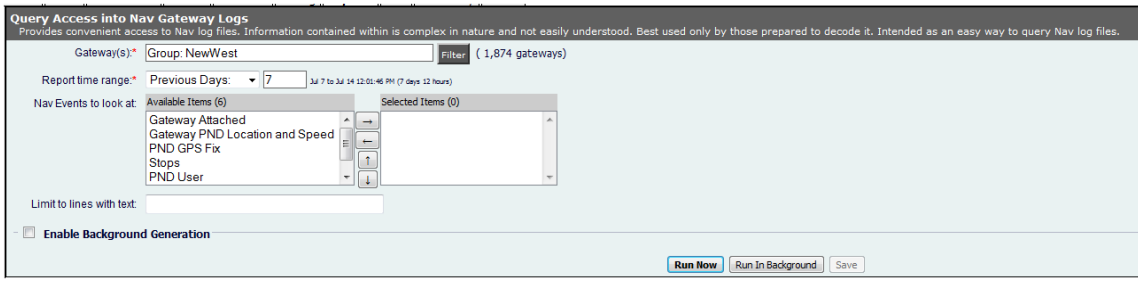

Figure 7-15: Nav Events Report

Nav Events for Group: 1PeterTest (10 Gateways) from Jul 8 to Jul 15 3:44:51 PM (7 days 15 hours)

Save Results | Change | Edit | Merge Results

Merged events from 10 vehicles

	Timestamp	Gateway	Text
1	Jul 13 10:42:57 AM	H020109D0142	Stop Accepted by Gateway DPI=reserved0 stopid 1711276091
2	Jul 13 10:42:57 AM	H020109D0142	Stop Accepted by PND DPI=USB1 stopid 1711276091
3	Jul 13 3:26:31 PM	H020109D0142	Stop Acknowleded by PND DPI=USB1 stopid 1711276091
4	Jul 13 3:26:46 PM	H020109D0142	Stop Current by PND DPI=USB1 stopid 1711276091
5	Jul 13 3:27:01 PM	H020109D0142	PND Current Destination Metrics DPI=USB1 Stop ID 1711276091 dist=19120,eta=1330
6	Jul 13 3:27:11 PM	H020109D0142	PND Current Destination Metrics DPI=USB1 Stop ID 1711276091 dist=18950,eta=1324
7	Jul 13 3:27:30 PM	H020109D0142	PND Current Destination Metrics DPI=USB1 Stop ID 1711276091 dist=18880,eta=1314
8	Jul 13 3:27:41 PM	H020109D0142	PND Current Destination Metrics DPI=USB1 Stop ID 1711276091 dist=18790,eta=1306
9	Jul 13 3:28:00 PM	H020109D0142	PND Current Destination Metrics DPI=USB1 Stop ID 1711276091 dist=18640,eta=1285
10	Jul 13 3:28:10 PM	H020109D0142	PND Current Destination Metrics DPI=USB1 Stop ID 1711276091 dist=18540,eta=1277
11	Jul 13 3:28:31 PM	H020109D0142	PND Current Destination Metrics DPI=USB1 Stop ID 1711276091 dist=18420,eta=1256
12	Jul 13 3:28:34 PM	H020109D0142	PND Current Destination Metrics DPI=USB1 Stop ID 1711276091 dist=18420,eta=1253
13	Jul 13 3:28:41 PM	H020109D0142	PND Current Destination Metrics DPI=USB1 Stop ID 1711276091 dist=18220,eta=1234
14	Jul 13 3:29:01 PM	H020109D0142	PND Current Destination Metrics DPI=USB1 Stop ID 1711276091 dist=18030,eta=1208
15	Jul 13 3:29:11 PM	H020109D0142	PND Current Destination Metrics DPI=USB1 Stop ID 1711276091 dist=17830,eta=1198
16	Jul 13 3:29:31 PM	H020109D0142	PND Current Destination Metrics DPI=USB1 Stop ID 1711276091 dist=17630,eta=1179
17	Jul 13 3:29:41 PM	H020109D0142	PND Current Destination Metrics DPI=USB1 Stop ID 1711276091 dist=17430,eta=1169
18	Jul 13 3:30:01 PM	H020109D0142	PND Current Destination Metrics DPI=USB1 Stop ID 1711276091 dist=17230,eta=1149
19	Jul 13 3:30:10 PM	H020109D0142	PND Current Destination Metrics DPI=USB1 Stop ID 1711276091 dist=17030,eta=1139
20	Jul 13 3:30:30 PM	H020109D0142	PND Current Destination Metrics DPI=USB1 Stop ID 1711276091 dist=16830,eta=1121
21	Jul 13 3:30:33 PM	H020109D0142	PND Current Destination Metrics DPI=USB1 Stop ID 1711276091 dist=16830,eta=1118
22	Jul 13 3:30:40 PM	H020109D0142	PND Current Destination Metrics DPI=USB1 Stop ID 1711276091 dist=16640,eta=1110
23	Jul 13 3:31:01 PM	H020109D0142	PND Current Destination Metrics DPI=USB1 Stop ID 1711276091 dist=16440,eta=1090
24	Jul 13 3:31:11 PM	H020109D0142	PND Current Destination Metrics DPI=USB1 Stop ID 1711276091 dist=16240,eta=1080
25	Jul 13 3:31:31 PM	H020109D0142	PND Current Destination Metrics DPI=USB1 Stop ID 1711276091 dist=16110,eta=1065
26	Jul 13 3:31:41 PM	H020109D0142	PND Current Destination Metrics DPI=USB1 Stop ID 1711276091 dist=16000,eta=1062
27	Jul 13 3:32:01 PM	H020109D0142	PND Current Destination Metrics DPI=USB1 Stop ID 1711276091 dist=15800,eta=1041
28	Jul 13 3:32:11 PM	H020109D0142	PND Current Destination Metrics DPI=USB1 Stop ID 1711276091 dist=15600,eta=1030
29	Jul 13 3:32:31 PM	H020109D0142	PND Current Destination Metrics DPI=USB1 Stop ID 1711276091 dist=15390,eta=1009
30	Jul 13 3:32:34 PM	H020109D0142	PND Current Destination Metrics DPI=USB1 Stop ID 1711276091 dist=15390,eta=1006
31	Jul 13 3:32:40 PM	H020109D0142	PND Current Destination Metrics DPI=USB1 Stop ID 1711276091 dist=15190,eta=999
32	Jul 13 3:32:42 PM	H020109D0142	Future Stop by PND DPI=USB1 stopid 1711276091
33	Jul 13 3:40:56 PM	H020109D0142	Stop Deleted by PND DPI=USB1 stopid 1711276091
34	Jul 13 3:40:56 PM	H020109D0142	Stop Deleted by PND DPI=USB1 stopid 1711276089

Figure 7-16: Nav Events Sample for Stops

Nav Stops Report

The *Nav Stops* report lists all of the stops (addresses) that have been sent to the Garmin PND in the time range specified. Included in the report is the time that the stop was sent to the PND and the time the stop information was last updated. The response of the driver changes the state; once read by the driver the state changes to *Received*. If a driver rejects the site the state changes to Rejected. The following is a list of all possible states for a Stop:

- **No Route** – this is the initial state for the PND
- **Timed Out** – the oMM did not receive the acknowledgement from the oMG (not the driver) within the timeout interval (30 sec)
- **Deleted** – the stop was deleted on the oMM
- **Pending** – the oMM is waiting for the oMG to acknowledge receiving the stop
- **Rejected by Gateway** – the oMG has rejected the stop; this could be due to ID collisions, a malformed stop, or invalid data
- **Received by Gateway** – the stop has been received at the oMG (and it has sent an acknowledgement of the reception to the oMM)
- **Acknowledged** – the driver has read the stop but has not yet responded
- **Completed** – the driver arrived at the stop
- **Driver Deleted** – the driver deleted the stop
- **En Route** – the driver is en route to the stop

Nav Stops for Group: 1PeterTest (10 Gateways) from Jul 7 to Jul 14 2:58:51 PM (7 days 14 hours)

Save Results | Change | Edit

Merged events from 10 vehicles

	Last Update Time	Gateway	State	Address	Dispatch Time
1	Jul 13 3:40:56 PM	H020109D0142	Deleted	5691 Elizabeth Street, Vancouver, BC	Jul 6 3:33:18 PM
2	Jul 14 9:10:57 AM	H020109D0142	Rejected by Gateway	625 Agnes Street, New Westminster, BC	Jul 13 10:43:45 AM
3	Jul 13 4:13:26 PM	H020109D0142	Deleted	325 School Ave, Vancouver, BC	Jul 13 3:44:11 PM
4	Jul 13 4:05:48 PM	H020109D0142	Deleted	325 School Ave, Vancouver, BC	Jul 13 4:04:25 PM
5	Jul 13 4:14:19 PM	H020109D0142	Received by PND	625 Agnes Street, New Westminster, BC	Jul 13 4:14:19 PM

Figure 7-17: Nav Stops Report

8: Troubleshooting

The following lists some of the common issues and solutions when using the Nav application:

Nav tabs not seen on the oMG LCI: if you do not see the Nav application as one of the applications on the oMG's LCI, verify that the application was purchased. Nav is not available with the basic oMG package. Verify that the option pack version is 1.512.compat-20100608.2 in the Status -> General tab in the LCI.

The Garmin PND is not showing the Truck picture: this indicates the Garmin PND is in consumer mode and does not have two-way communication capabilities. To put the unit back into normal operation, reinstall it in the mount and plug in the FMI cable. The unit should power on automatically but you may need to slide the switch to the left.

Delay in receiving messages at the oMM from the PND: messages sent from the PND, especially text messages (rather than stop acknowledgements and quick replies), can take up to a minute to be received at the oMM. This is due to the refresh rate on the oMM. Clicking on the refresh icon on the oMM screen will refresh the oMM immediately.

The oMG is not connected to the WAN (green light is blinking) and I want to send a text message from the PND: the oMG will store any unsuccessfully delivered messages until the oMG recovers WAN service.

The oMG is not connected to the WAN (status is offline) and I want to send a stop and/or a message from the oMM: the oMM will NOT send a stop to a PND that is not online.

9: Additional Information and Training

For additional information and training, Sierra Wireless has a series of training modules for installation, setup, and operation of Nav fleets. Search the Knowledge Base for the following training modules:

1. Preparation for Installation
2. Installing the oMG with the Nav Option
3. Basic Configuration of the oMG
4. Power up, Setup, Factory Reset for Garmin PND
5. Nav Mobile Operations