SmartPTT Plus

Dispatcher User Guide

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elcomplus

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1 Introduction

SmartPTT is a software package designed to manage dispatch communication between linear-extended and geographically-distributed objects where it is necessary to facilitate voice and data transmission between remote control stations of the radio network.

SmartPTT implements all benefits of the MOTOTRBO digital platform.

SmartPTT architecture manages subscriber networks of any size and topology, using both digital functions of MOTOTRBO radio stations and analog mode to facilitate a gradual upgrade to the new radio communication standard. It is also possible to use a "mixed" mode when some sites operate in the analog mode and others in the digital mode.

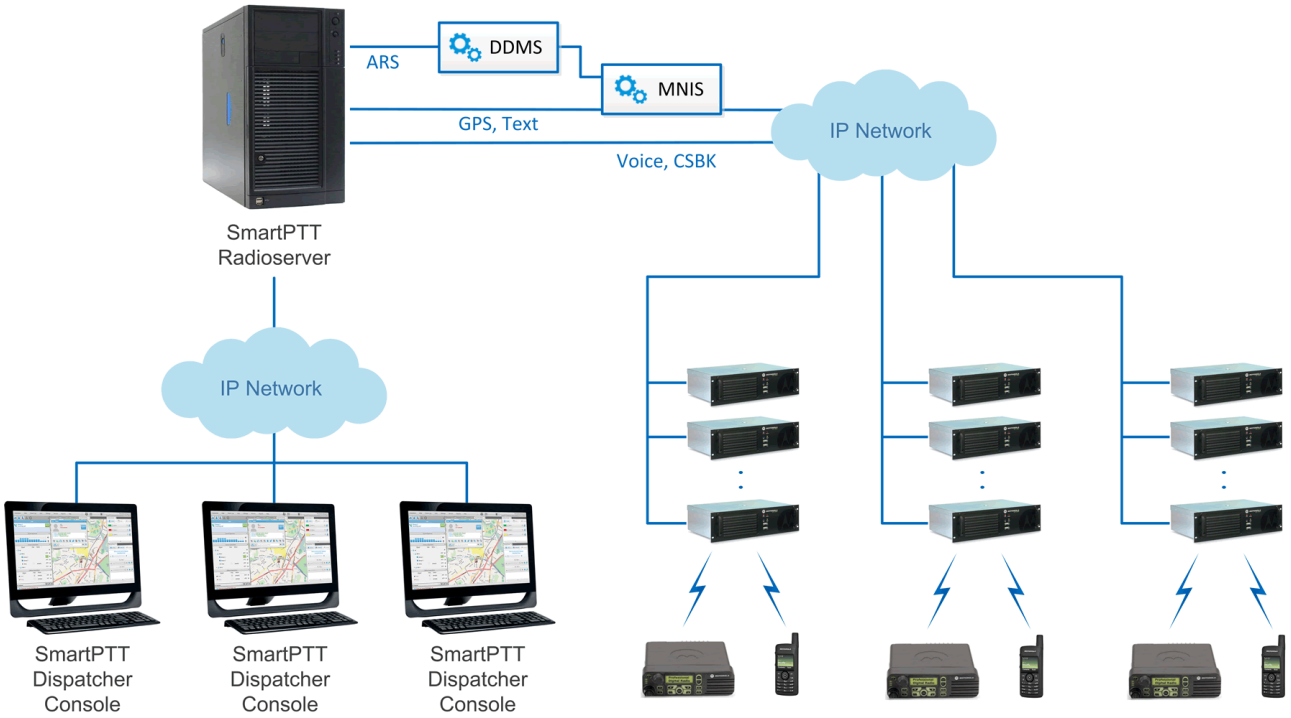
SmartPTT architecture consists of three segments:

- Management segment (dispatcher network administrators)
- Base segment, including radioservers connected to stationary radios (mobile MOTOTRBO stations as control stations) and repeaters.
- User segment or subscribers (mobile and portable radios)

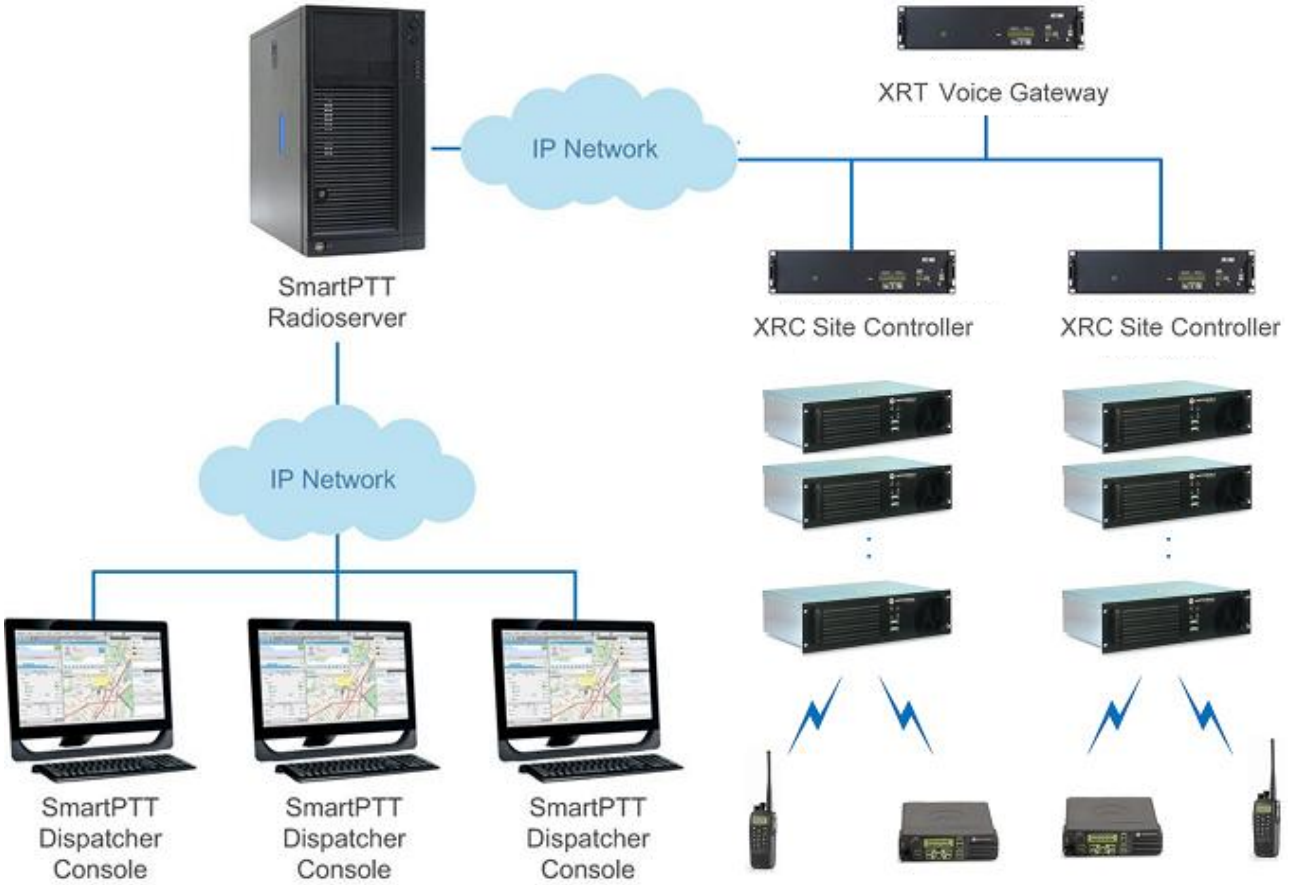
The management segment implements control and monitoring functions – data management (telemetry, telemechanics), human resources management and industrial process control – via access to the base segment. The dispatcher has either full or partial access to the system radioserver, that is software installed on PCs. SmartPTT software enables various MOTOTRBO platform functions, which form the basis of the system.

Radioservers are linked to fixed stations, which are control stations for the system , and repeaters. All repeaters are interconnected via IP network and enable subscriber roaming and formation of a common, geographically distributed communication network. Communication zones can be both adjacent and separated. The number of radioserver and dispatcher seats is unlimited.

The radioserver database stores radio station pool data. When the MOTOTRBO subscriber digital radio station enters the SmartPTT network coverage zone, it sends a request to the radioserver and, in the event of successful authentication, it is registered automatically.



Dispatch control over NAI Voice network



Dispatch control over Connect Plus network

Using SmartPTT dispatchers can easily perform their daily functions, i.e., organize radio communication, monitor subscribers and communicate data to subscribers. As for radio subscribers, they can take advantage of all the features of MOTOTRBO radios. The number of subscribers per radioserver is unlimited.

2 SmartPTT Dispatcher

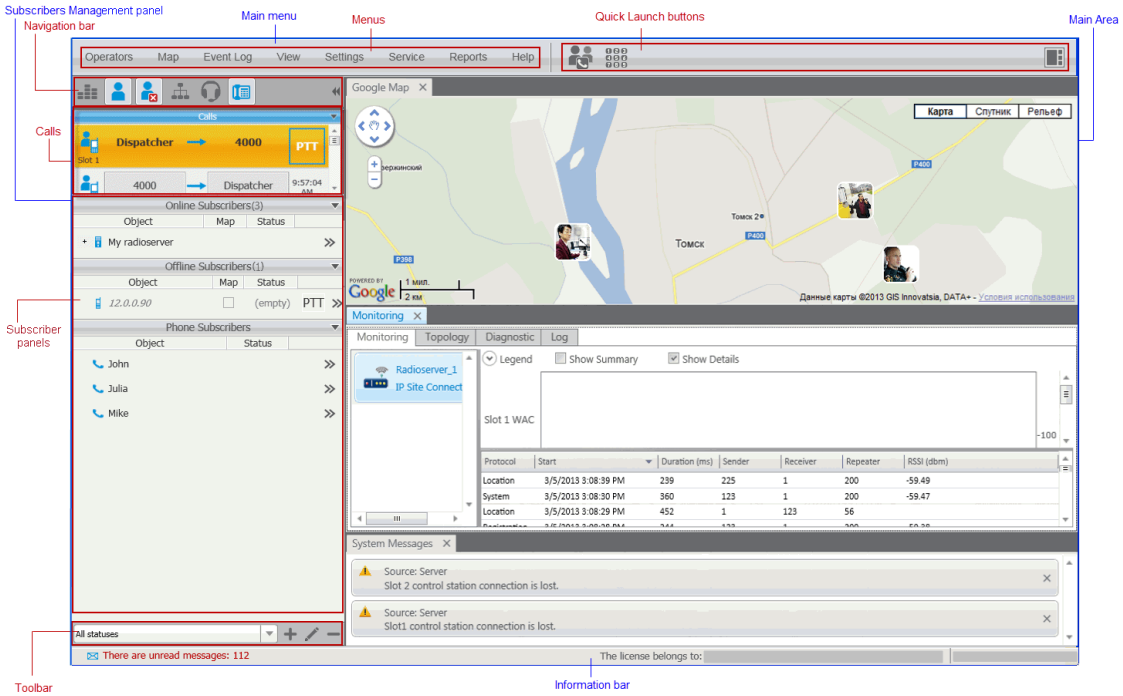
2.1 Main Features

SmartPTT includes a number of functions, each designed for a specific task.

Here is a brief list of the main functions SmartPTT software has to offer:

1. Dispatcher voice communication. SmartPTT Dispatcher supports 4 subscriber types for dispatcher communication:
    - MOTOTRBO radios
    - Analog radios
    - Telephone subscribers, including iPhone subscribers
    - Other SmartPTT Dispatcher consoles
2. Voice call recording. All voice calls, even private calls between subscribers, can be recorded in MP3 files and stored both on the radioserver and in the dispatcher console.
3. Subscriber location tracking (AVL). Real-time GPS-based fleet management system provides constant tracking of subscriber location, keeps the track log, controls subscriber movement via pre-set rules on several types of maps.
4. Integration with telephone networks via VoIP. SmartPTT Dispatcher implements Telephone Interconnect Gateway to make calls between MOTOTRBO or analog radios and telephone subscribers. A phone call can be initiated by a radio subscriber, a dispatcher or a telephone subscriber.
5. Radio network bridging. SmartPTT Routing Service allows call patching between multiple radio networks of the same or different types type (IP Site Connect, Capacity Plus, digital conventional, and analog conventional networks), as well as between multiple SmartPTT Radioservers. Unique dynamic intelligent routing of private and group calls is based on the information about the subscriber registration in the network.
6. Text message and data transfer. SmartPTT Dispatcher allows exchanging text messages between radio subscribers, supports subscriber statuses, native MOTOTRBO telemetry features. Gateways to E-mail and GSM provide opportunity for MOTOTRBO subscribers to exchange text messages with e-mail boxes and mobile phones correspondingly.

2.2 SmartPTT Dispatcher Interface



SmartPTT Dispatcher interface can be divided into the following sections:

1. **Main Menu** bar which can be further divided into:
    - Menu section
    - Quick Launch button section
2. **Subscribers Management** panel which contains:
    - Navigation bar
    - Calls section
    - Subscriber panels
    - Toolbar

3. **Main area**
4. **Information bar**

Main Menu Bar

The **Main Menu** bar is full of options and commands which allows you to carry out the majority of the functions available in the application. It also gives you the ability to adjust the application settings to your liking.

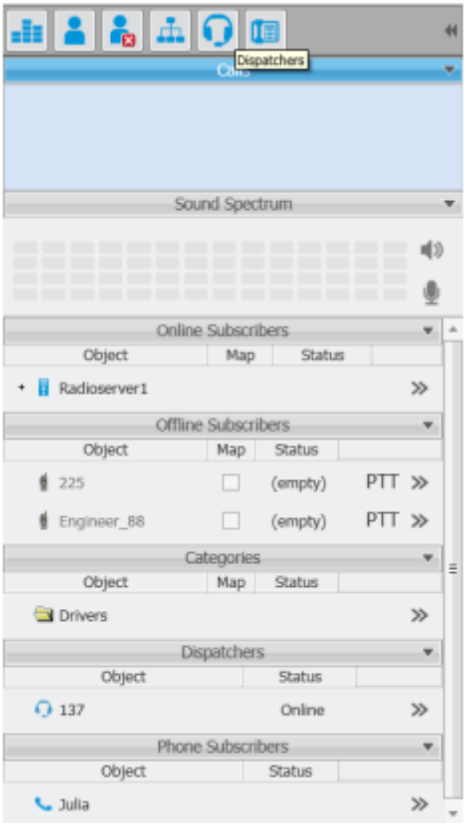
The **Quick Launch** buttons are used to allow you to get access to some functionality of the application in no time. Currently, there are three **Quick Launch** buttons.

The **Conference Call** button opens the special window where you can hold conference calls. For more information about this function see Conference Calls.

The **Dial Pad** button opens a telephone keypad which allows you to make calls to telephone subscribers from SmartPTT Dispatcher.

The **Window Configurations** button is very useful as it allows the dispatcher to keep configuration of the opened windows. Thus, next time the dispatcher opens the application, he or she won't need to open the windows all over again. The dispatcher can simply click the **Window Configurations** button and select the one he or she used earlier. For more information see Window Configurations.

Subscriber Management panel

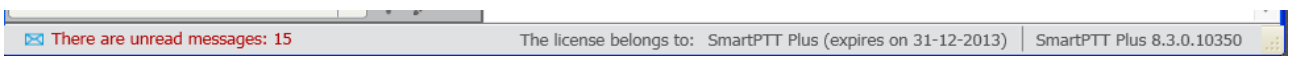


The **Subscriber Management panel** is one of the most important sections of the application. You can see all the subscribers and their status, make private and group calls, carry out the majority of actions addressed to subscribers and many other things. For more information about the section see Subscriber Management Panel.

Main Area

The **Main area** is a central area of the application window and is used for opening functional windows and panels when operating in the application.

Information bar



The **Information bar** was designed to give the user information about the number of unread messages, the owner

of the license and the application version.

2.3 Subscriber Management Panel

The **Subscriber Management** panel in the left-hand area of the application window is one of the most important parts of the application. It is the navigation tool of the application and it allows reaching subscribers and dispatchers easily and in no time. The **Subscriber Management** panel includes the four sections.

Navigation Bar

The navigation bar is situated at the top of the **Subscriber Management** panel. The main function of the navigation bar is to allow dispatchers to move between the lists of different subscriber types and to organize the main area to the liking of the dispatcher.

The navigation bar includes the following items:

Equalizer opens a window with an equalizer.

Online Subscribers opens the list of radio subscribers who are currently online.

Offline Subscribers opens the list of radio subscribers who are currently not available, that is offline.

Categories opens the list of subscribers divided into categories.

Dispatchers opens the list of added online and offline dispatchers.

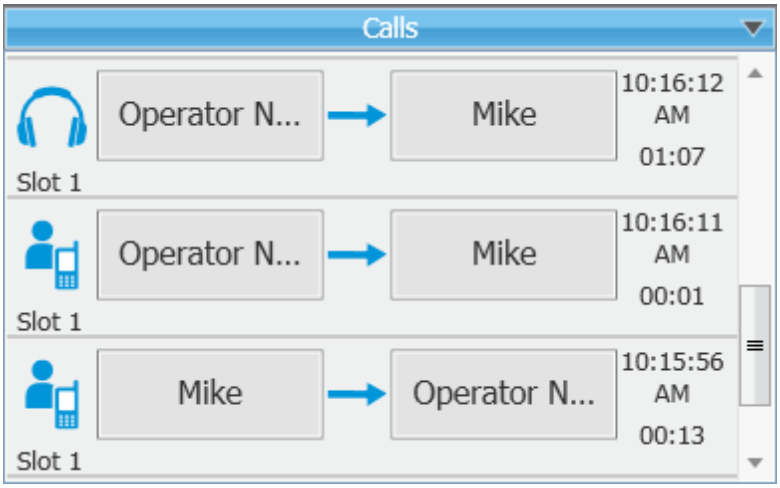
Telephone Subscribers opens the list of added telephone subscribers.

Collapses or expands the **Subscriber Management** panel.

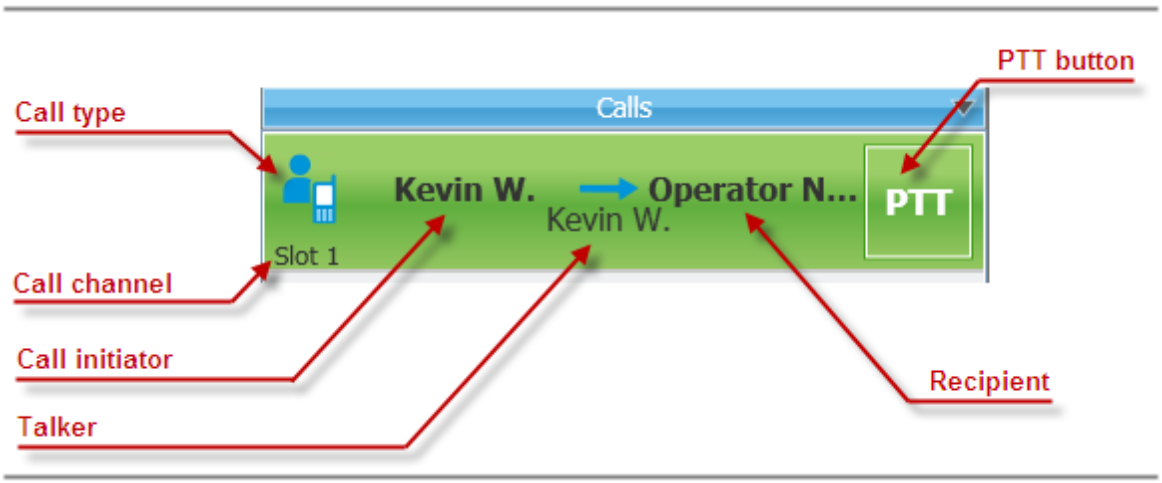
When the buttons are dark gray, it means that the corresponding windows are closed.

Calls Section

The **Calls** section displays the ongoing call activity and call history in the radio network.



A call record in the **Calls** section contains several elements.



From this section the dispatcher can do the following:

- answer the ongoing call by clicking anywhere on the call record;
- see the ongoing call activity. The call activity can be determined by the color of the call record. There are 4 possible colors:
    1. Light yellow – outgoing call attempt;
    2. Yellow – outgoing call from SmartPTT Dispatcher to the to radio subscriber;
    3. Green – incoming call to SmartPTT Dispatcher or radio monitoring;
    4. Blue – none of the parties transmit or receive voice (hang time). The subscriber or the dispatcher can continue the call by pressing the PTT button within hang time. After the hang time expires, pressing the PTT button will initiate a new call.
- see history of all registered calls, time of call and its duration;
- make all types of call by clicking on the button with the subscriber name.

If the **Calls** section is empty, to make a call to a radio subscriber, select it from **Online Subscribers** and click the **PTT** button. The correspondent call record will appear in the **Calls** section and the call will be initiated.

Subscriber Panels

The **Subscriber panels** display panels represented in the navigation bar. It also allows making calls to subscribers.

The **Online/Offline subscribers** and **Categories** panels display available radioservers with control stations, talkgroups and radio subscribers. The sections include the following columns:

1. Object
2. Map
3. Status
4. PTT
5. Action List

The **Object** field shows the subscriber or radioserver name. For easier search of the subscribers in the list, use searching by name. To do it, place the mouse cursor in any of the subscriber panels on the left and type his or her name used in the system. At that, if any match of letters occurs, the system focuses on the subscriber.

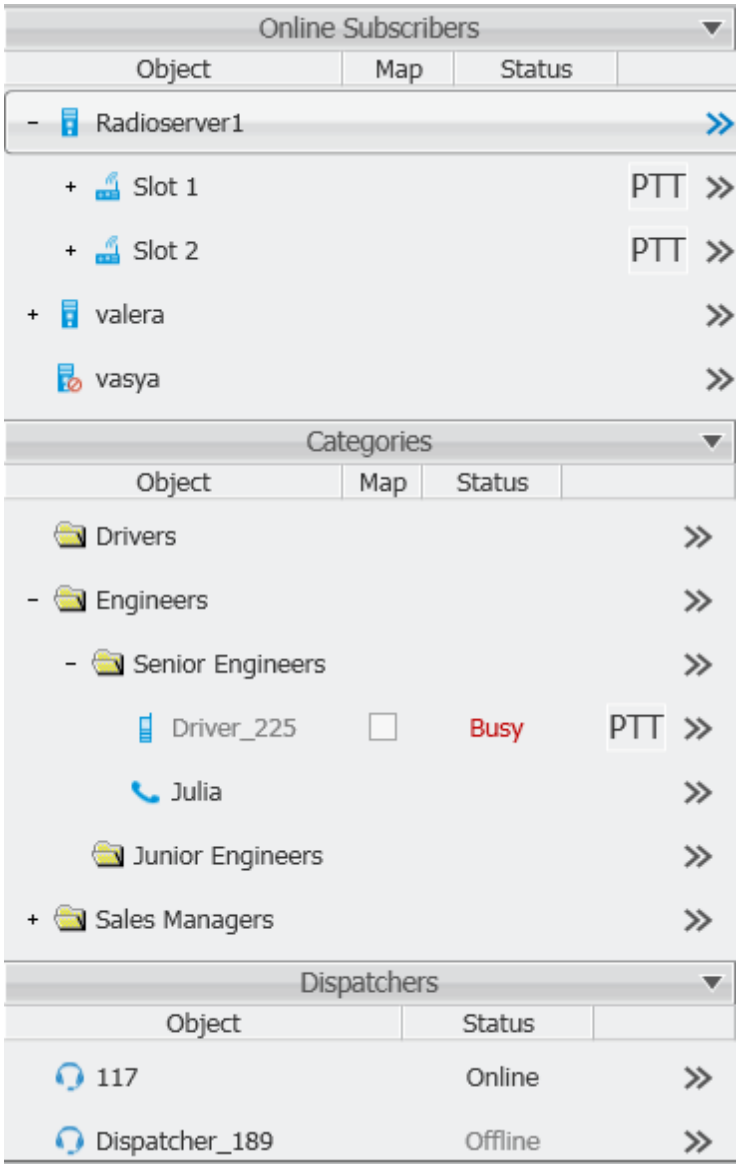
The **Map** checkbox turns on/off the display of the subscriber location on the map (applicable to radio subscribers

only). The **Status** field displays the status of the subscribers or dispatchers. **PTT** initiates a call.

The **Dispatchers** and **Telephone Subscribers** windows include the following columns:

1. Object
2. Status
3. Action List

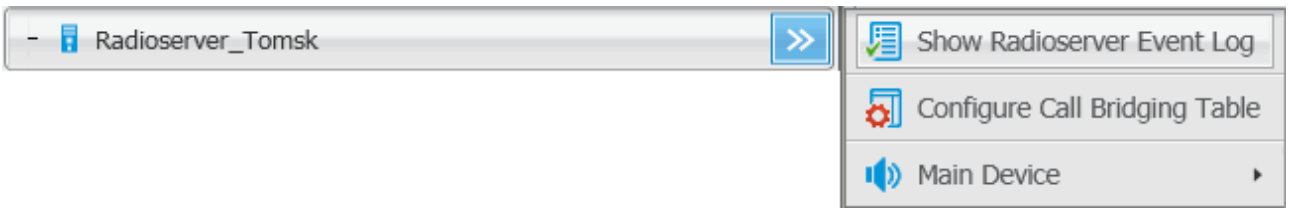
The **Object** field shows the name of the dispatcher or the telephone subscriber. The **Status** field displays the system status – online or offline.



Action List

The **Action List** » includes a list of actions which can be applied to a radio subscriber, the radioserver, a control station, a talkgroup, a telephone subscriber or a dispatcher.

The Action List for the radioserver



Show Radioserver Event Log – displays the radioserver event log for the specified period of time. For more information on the event log see Radioserver Event Log.

Configure Call Bridging Table – redirects to the routing configuration window.

Main Device – shows what audio output device is currently used for the radioserver. You can also change to another device.

The Action List for a hardware control station

Exit Emergency Mode – disables emergency mode.

Note: The **Exit Emergency Mode** action becomes available after a radio subscriber sends the emergency signal.

Radio Dekey – forced interruption of calls on the channel. This option is available only for hardware control stations and in IP Site Connect network.

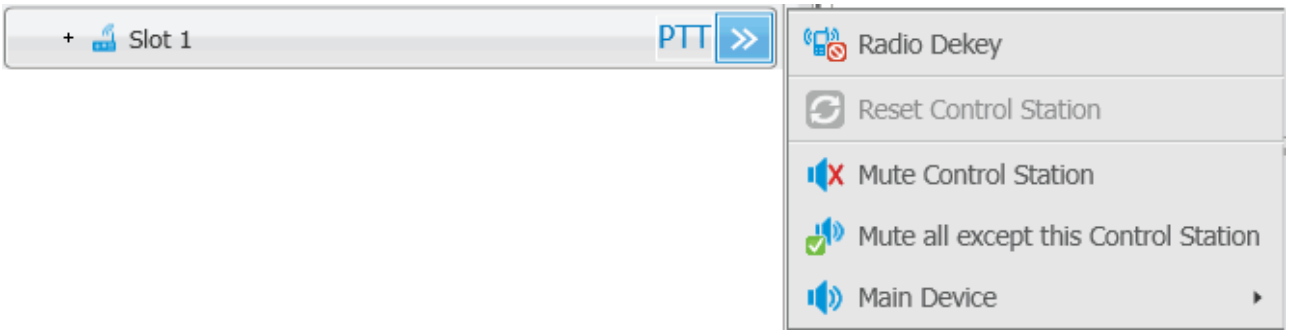
Reset Control Station – resets the control station. Only hardware control stations can be reset.

Mute Control Station/Control Station Sound On – turns off/on the control station mute mode.

Mute All Except This Control Station – leaves sound on only for this control station; other control stations are muted.

Main Device – shows what audio output device is currently used for the control station.To change to another device, select a specific output device or **Inherited device**, i.e., the device selected for the higher level, in this case, for the radioserver.

The Action List for a virtual control station



Radio Dekey – forced interruption of calls on the channel. This option is available only for hardware control stations and in IP Site Connect network.

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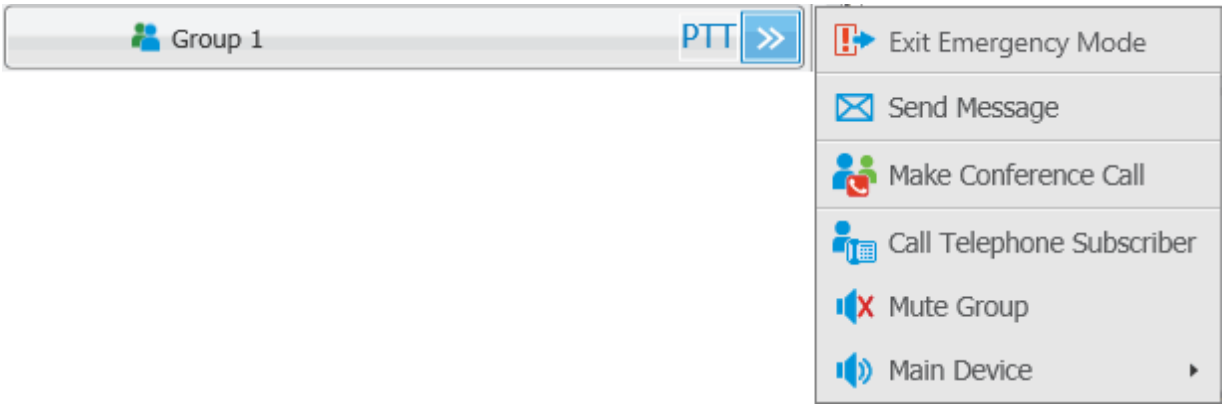
Mute Control Station/Control Station Sound On – turns off/on the control station mute mode.

Mute All Except This Control Station – leaves sound on only for this control station; other control stations are muted.

Main Device – shows what audio output device is currently used for the control station.To change to another, select a specific output device or **Inherited device**, i.e. the device selected for the higher level, in this case, for the radioserver.

The Action List for a talkgroup



Exit Emergency Mode – disables emergency mode.

Note: The **Exit Emergency Mode** action becomes available after a radio subscriber sends the emergency signal.

Send Message – opens a window for creating and sending messages.

Make Conference Call – opens the **Conference Call** window and starts the conference call.

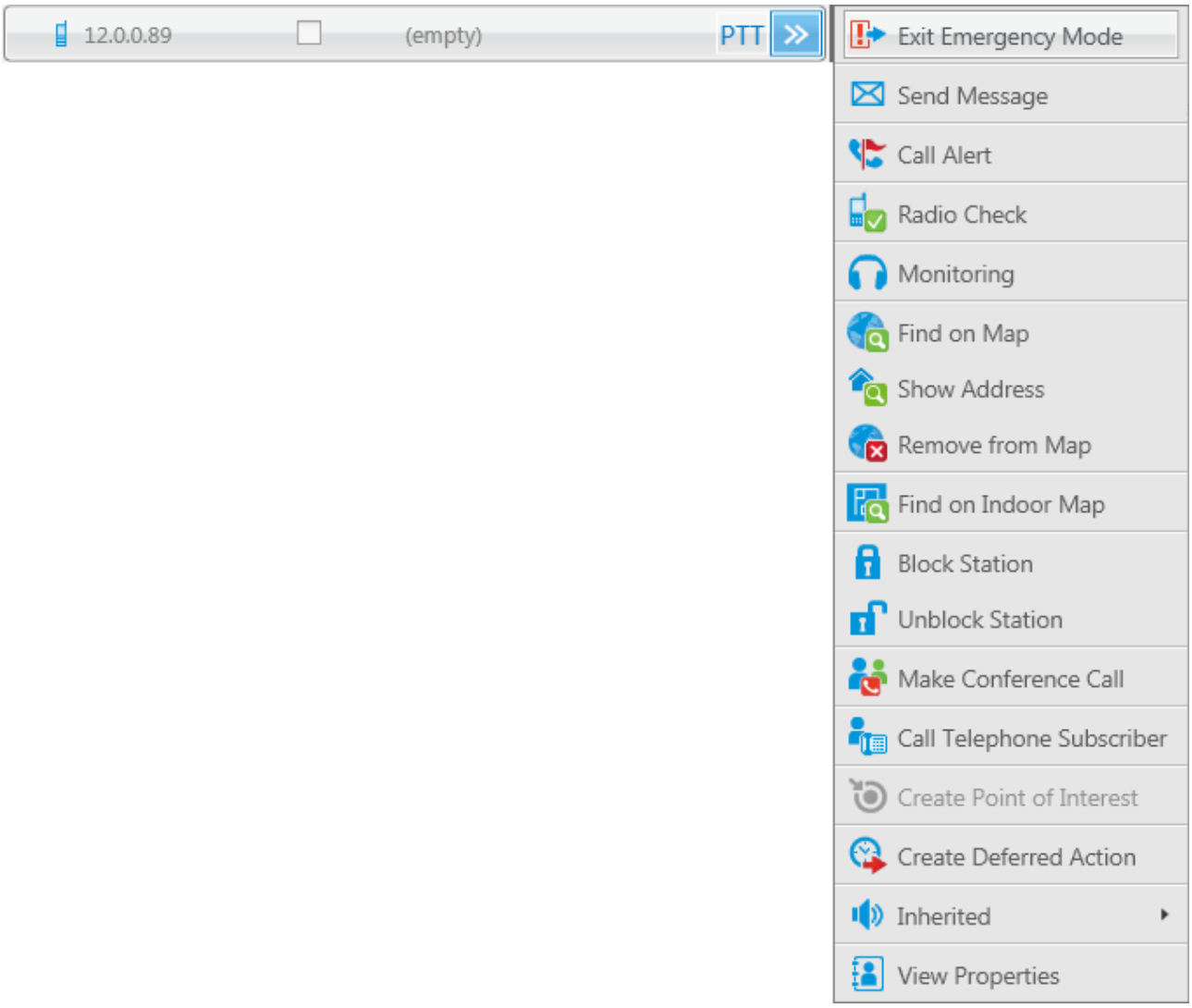
Call Telephone Subscriber – opens the window with the list of registered telephone subscribers.

Mute Group/Group Sound On – turns on/off mute mode for this group.

Main Device – shows what audio output device is currently used for the talkgroup. To change to another device, select a specific output device or **Inherited device**, i.e., the device selected for the higher level, in this case, for the slot.

The **Call Window** of a talkgroup contains the same list of actions. The main function of the **Call Window** is to give the ability to apply actions to the talkgroup and to view the action log. To open the window, double-click on the talkgroup.

The Action List for a radio subscriber



Exit Emergency Mode – disables emergency mode.

Note: The **Exit Emergency Mode** action becomes available after a radio subscriber sends the emergency signal.

Send Message – opens a window for creating and sending messages.

Send Call Alert – sends a call alert to the subscriber.

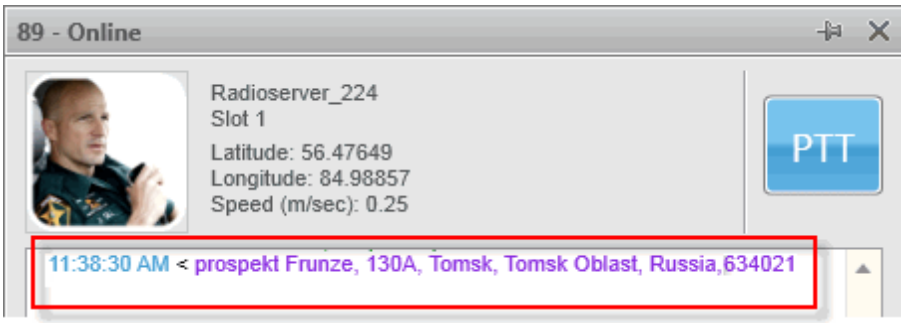
Radio Check – sends the radio check command to the subscriber radio.

Monitoring – allows you to listen to the radio subscribers without their awareness.

Find on Map – shows the subscriber on the map.

Show Address – displays the subscriber address based on the current GPS coordinates. When you reopen **Call**

Window (after it was closed), previously received information on the address is not displayed.



Remove from Map – removes the subscriber from the map.

Find on Indoor Plan – shows the subscriber on the building map.

Note: The **Find on Indoor Plan** action is available for a radio subscriber if all necessary settings for SmartPTT Radioserver and SmartPTT Dispatcher are specified. The required settings for SmartPTT Radioserver are described in the **Indoor Tracking** section of the SmartPTT Radioserver Configurator help file. To set up SmartPTT Dispatcher, go to the **Location** tab of the radio subscriber Properties window.

Block Radio – sends the Block Radio command to the subscriber radio.

Unblock Radio – send s the Unlock Radio command to the subscriber radio.

Make Conference Call – opens the **Conference Call** window and starts the conference call.

Call Telephone Subscriber – opens the window with the list of registered telephone subscribers.

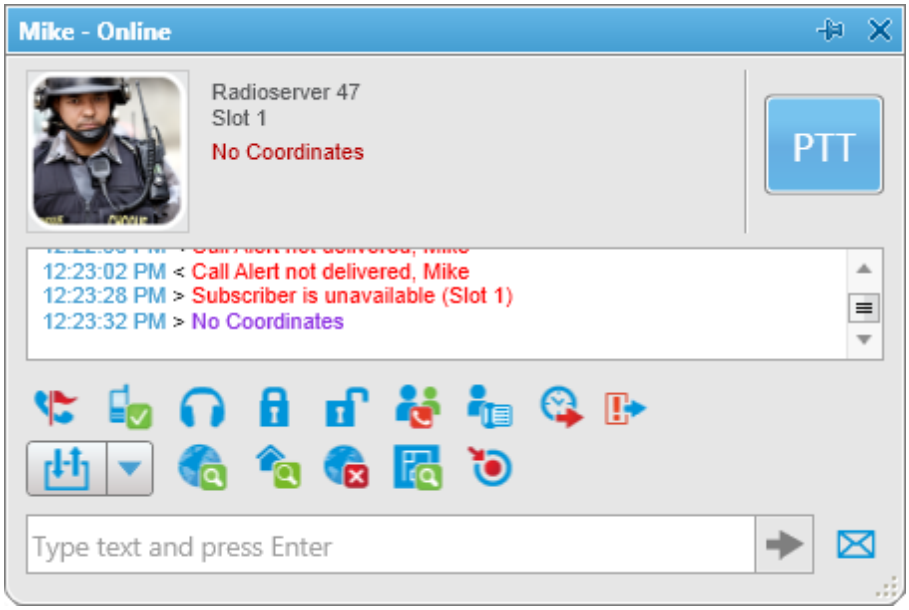
Create Point of Interest – creates POI at the current place of the subscriber. If there are no coordinates, the system uses the latest coordinates received from the radio. If coordinates are absent altogether, nothing happens.

Create Deferred Action – opens a window for creation of the deferred action.

Main Device – shows what audio output device is currently used for this radio subscriber. To change to another device, select a specific output device or **Inherited device**, i.e., the device selected for the higher level, in this case, for the talkgroup.

View Properties – opens the subscriber's **Properties** window.

The **Call Window** of a radio subscriber contains the same list of actions. The main function of the **Call Window** is to give the ability to apply actions to the subscriber and to view the action log. To open the window, double-click on the radio subscriber.

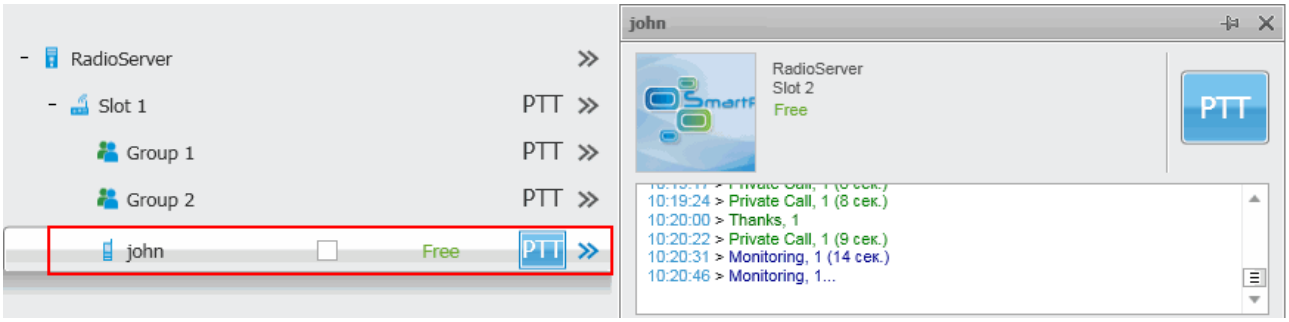


How to change subscriber name using radio

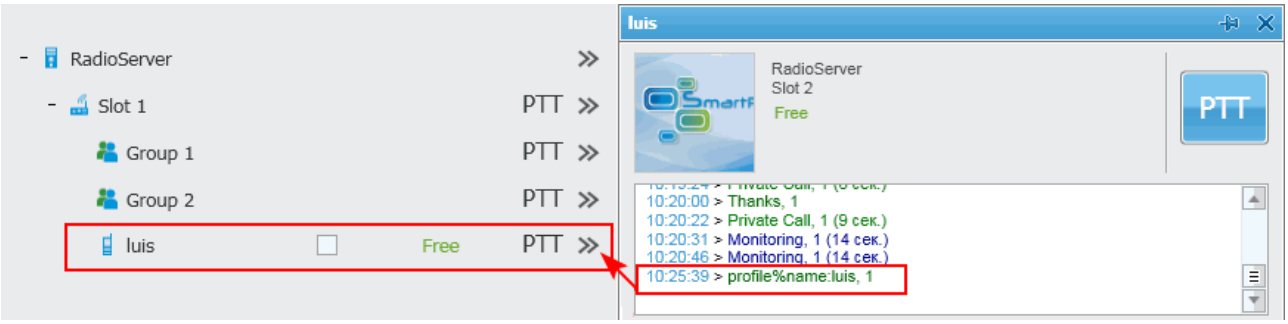
A subscriber can easily change his or her name by using the radio. At that, the new name will appear in the **Subscriber panel**.

To do it, you need to send the text message ***profile%name:<new name>*** to the Slot ID set in your system.

Before sending:

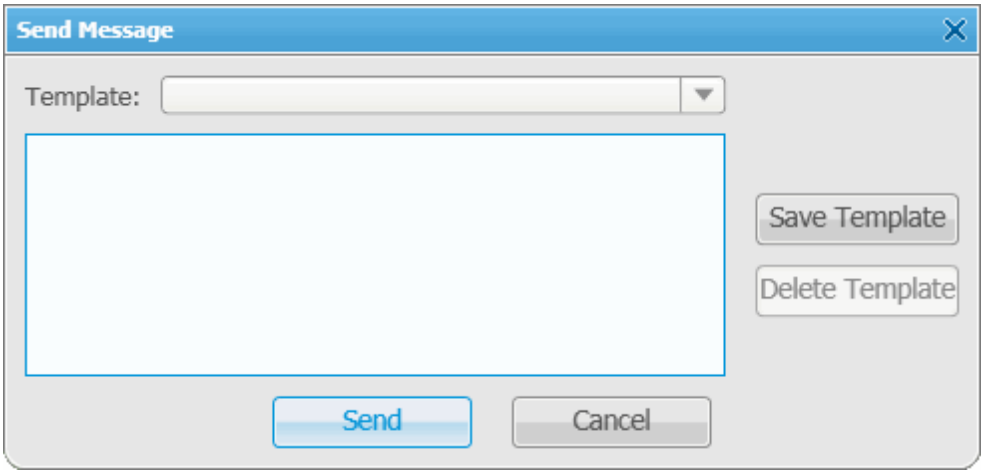


After sending the message:



How to send messages

To send a message to a subscriber, click **Send Message**.



Save Template – saves the typed message as a template.

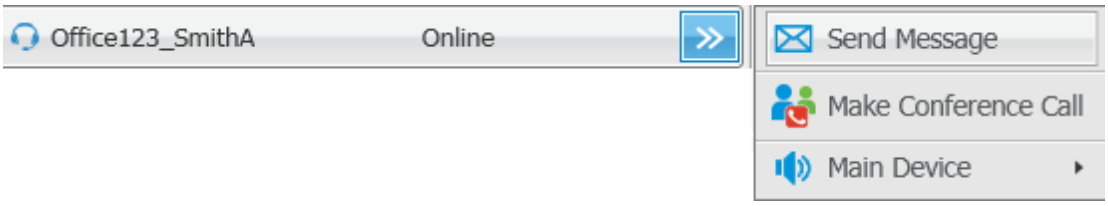
Delete Template – deletes a template selected in the list of templates.

Send – sends the typed message to the subscriber

Cancel – the **Text Message** window closes and the message is not sent.

You can also send a message using the **Type text and press Enter** field.

The Action List for the dispatcher



The **Call Window** of a dispatcher contains the same list of actions. The main function of the **Call Window** is to give the ability to apply actions to the dispatcher and to view the action log. To open the window, double-click on the dispatcher.

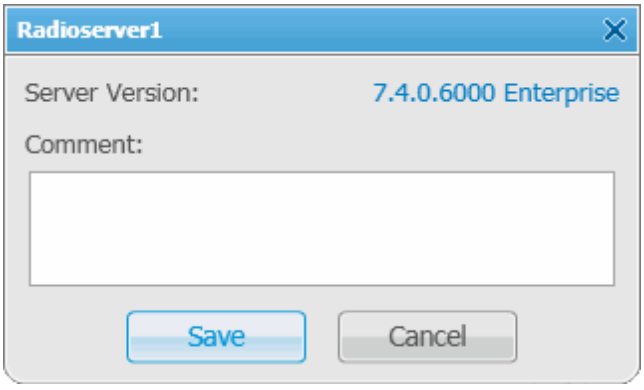
The Action List for the telephone subscriber

The **Call Window** of a telephone subscriber contains the same list of actions. The main function of the **Call Window** is to give the ability to apply actions to the subscriber and to view the action log. To open the window, double-click on the telephone subscriber.

The Properties Window

To open the **Properties** window of the radioserver, control station, talkgroup, radio subscriber, dispatcher or telephone subscriber, right-click on the corresponding item.

The Properties window of the radioserver

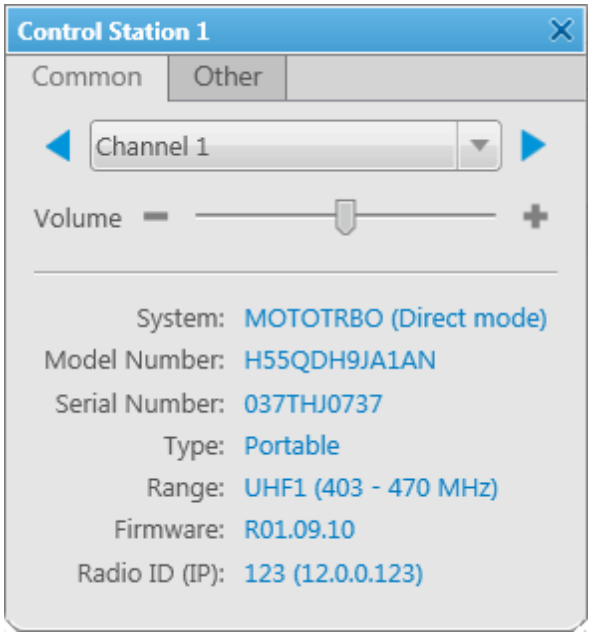


Server Version – the version of the radioserver. If the version of SmartPTT Radioserver does not match the

version of SmartPTT Dispatcher, the version number is displayed in red.

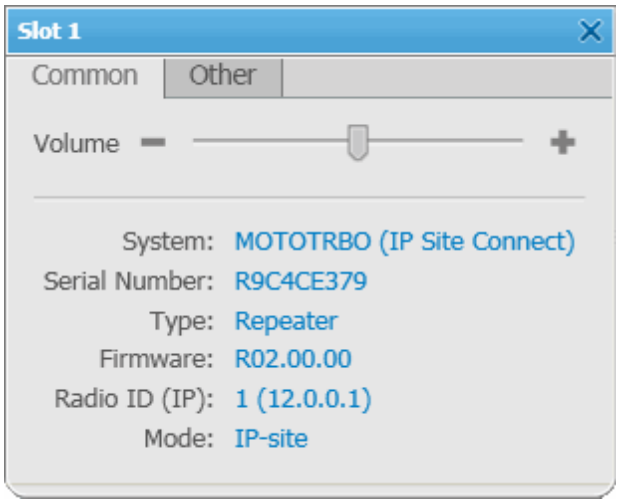
Comments – text field for additional information.

The Properties window of the hardware control station



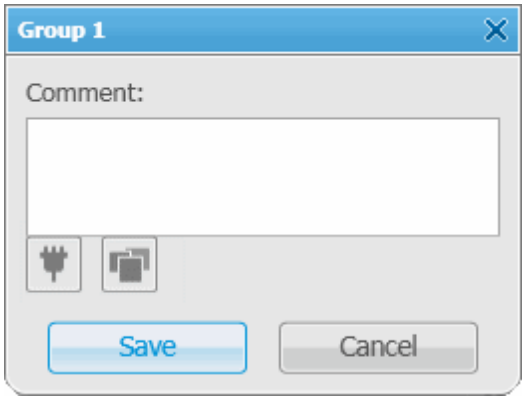
The window displays information on the control station, for example, model number, serial number, control station type, frequency range, firmware version, control station identifier. Also, it allows you to switch the control station channels (select from the list or using the arrow keys) and to adjust volume level of the selected channel.

The Properties window of the virtual control station



The window displays information on the virtual control station, for example, serial number, firmware version, control station identifier, type of network configuration. Also, it allows you to adjust volume level of the selected channel.

The Properties window of the talkgroup

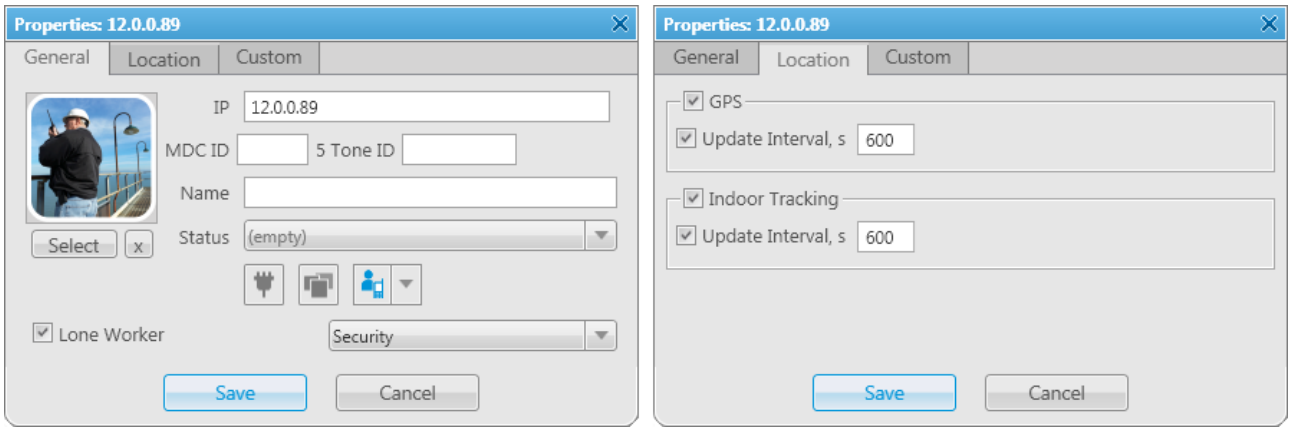


Comments – text field for additional information.

Click the **Telemetry** button to select telemetry command for the talkgroup.

Click the **Categories** button to assign category to the talkgroup.

The Properties window of the subscriber



The **General** tab:

IP – IP address of the radio subscriber to identify the subscriber radio. If the **IP** field is absent, specify **CAI** and **Radio ID**.

MDC ID – the identifier used to identify Motorola Data Communication (MDC) messages. You cannot type more than 4 hexadecimal numbers into this field. It is used only in the analog mode.

5 Tone ID – the radio subscriber identifier, If the radio works on the analog channel and supports the 5 Tone signaling (SelectV). It must match the **5 Tone Radio ID** in the **General Settings** tab of the radio MOTOTRBO CPS settings. To be set in the range from 0 to 9 or from A to G or R.

Note: Several IDs can be used as the radio identifier. If the radio is used on the analog channel only, just **5 Tone ID** (and **MDC ID** if necessary) must be filled, and the **CAI** and **Radio ID** or **IP** fields must be empty.

Name – the subscriber's name.

Status – the subscriber's status.

Select – click to upload the radio subscriber's image if there is any. To delete the selected image of the user, click the cross symbol on the left to **Select**.

– click the **Telemetry** button to specify telemetry actions to the radio subscriber.

– click the **Categories** button to specify a category to the radio subscriber.

– click the button to select the icon of the subscriber.

Lone Worker – select the checkbox to assign the **Lone Worker Profile** to a radio subscriber. Select from the list the profile of the lone worker.

Note: You can add lone worker profiles in SmartPTT Dispatcher in the **Settings** menu under Lone Worker Rules.

The **Location** tab:

GPS – select the checkbox to see the subscriber on the map. The subscriber radio must support **GPS**.

Note: To set up GPS for SmartPTT Radioserver, specify the required settings described in the **GPS** section of the SmartPTT Radioserver Configurator help file.

Update Interval, s – the time interval for location update.

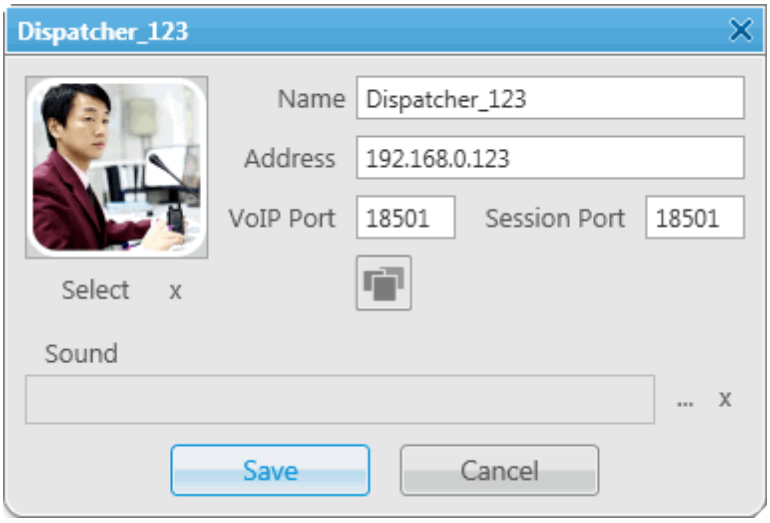
Note: You can set the main time interval for receiving GPS coordinates in the subscriber **Properties** window. The minimum interval for receiving GPS coordinates is set on the radioserver. Therefore, if the interval from the **Properties** window is less than that set on the radioserver, GPS coordinates will be received at an interval set on the radioserver.

Indoor Tracking – select the checkbox to see the subscriber on the building plan by the dispatcher request (the **Find on Indoor Plan** action) or after the predefined time period (the **Update Interval, s** field in the **Location** tab of the radio subscriber **Call Window**). The subscriber radio must support Indoor Tracking.

Note: To set up Indoor Tracking for SmartPTT Radioserver, specify the required settings described in the **Indoor Tracking** section of the SmartPTT Radioserver Configurator help file.

Update Interval, s – the time interval for location data update from special beacons (K-TERM 70IC Beacon Transmitter), which are installed in buildings.

The Properties window of the dispatcher



Name – the dispatcher's name.

Address – the dispatcher's workstation IP address (DNS name can be used).

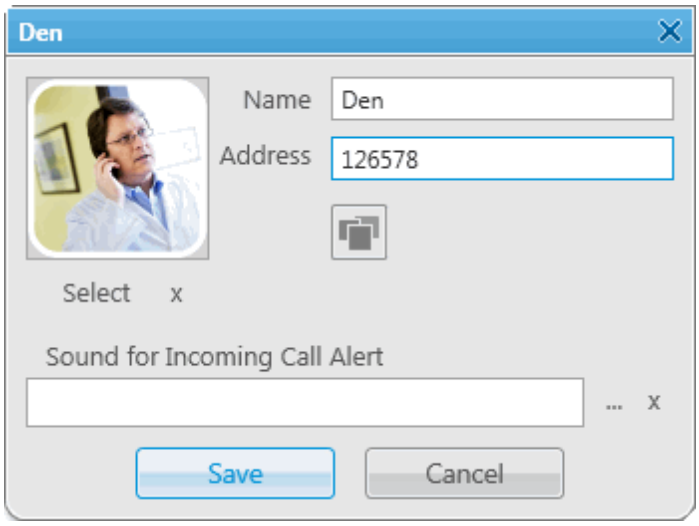
VoIP Port – UDP port for sound transmission. звука.

Click **Select** to upload an image.

Click the **Categories** button to assign category to the dispatcher.

Upload the sound for incoming call alert by clicking the browse button (the **Sound for Incoming Call Alert** field). To remove the sound, click the button.

The Properties window of the telephone subscriber



Name – the telephone subscriber's name.

Address – the telephone subscriber's.

Click **Select** to upload an image.

Click the **Categories** button to assign category to the subscriber.

Upload the sound for incoming call alert by clicking the browse button (the **Sound for Incoming Call Alert** field). To remove the sound, click the button.

Toolbar

The **Toolbar** is situated at the bottom of the **Subscriber Management** panel. The main function of the toolbar is to add, edit or delete radio subscribers. It also allows dispatchers to filter subscribers by their status.

The **Toolbar** contains the following items:

Allows filtering radio subscribers by their status.

Allows the dispatcher to add a new radio subscriber, edit and delete the existing subscriber.

To add a new radio subscriber, click the **Add Subscriber** button . completed. To edit the radio subscriber,

select the radio subscriber to edit and click . At that, the subscriber **Properties** window opens. Make the necessary changes and click **Save**.

Note: Subscribers not included in the list are automatically displayed in the list of subscribers after a radio station is turned on and registration on the radioserver is successfully completed.

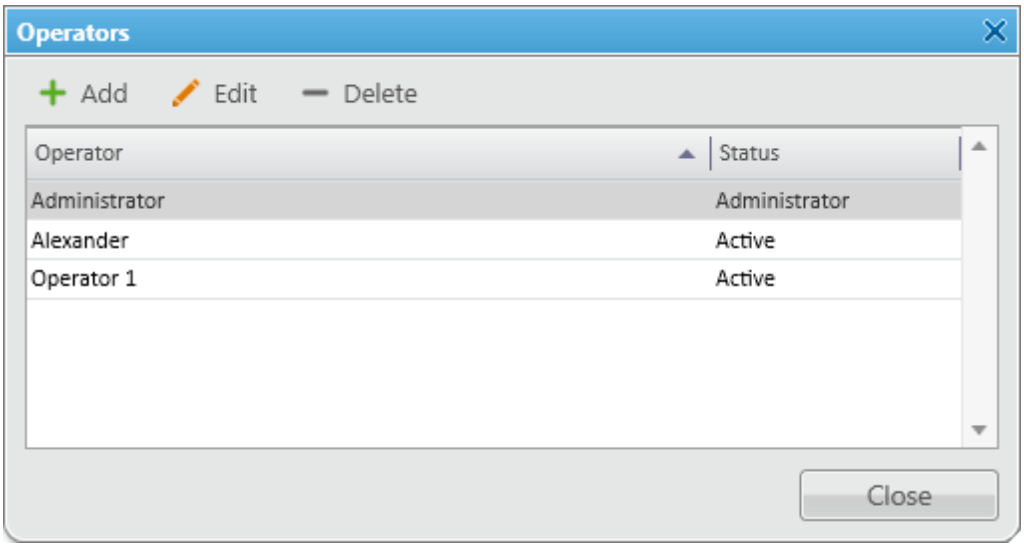
To delete the radio subscriber from the list, select the radio subscriber and click .

2.4 Operators

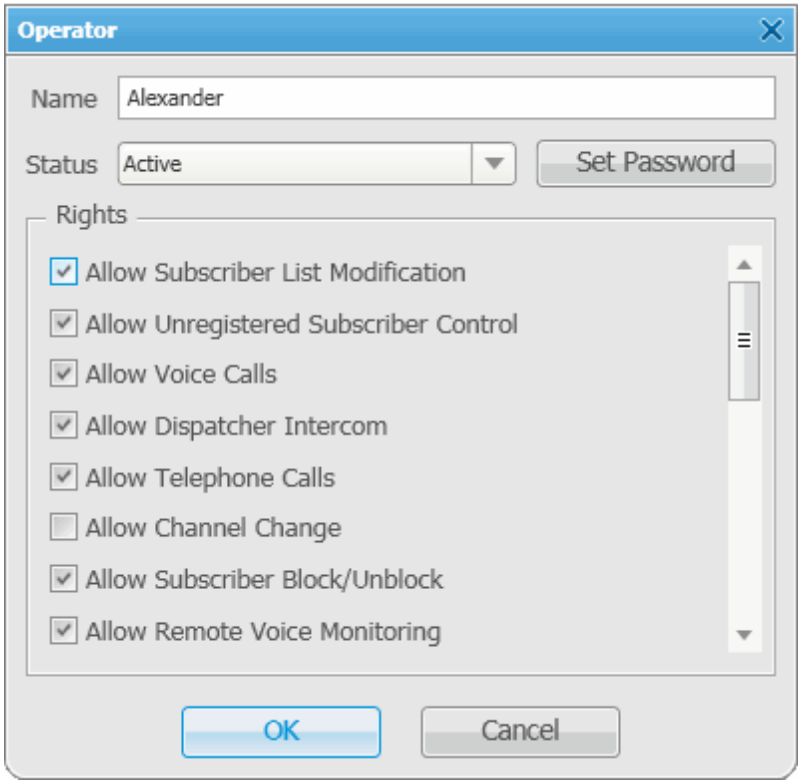
By default an operator with the name **Administrator** and a blank password is created in the SmartPTT Dispatcher application. The Administrator has full access to SmartPTT management functions.

SmartPTT Dispatcher **Administrator** can add new system operators and customize their access to specific functionality. To add a new operator, expand the **Operators** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and select **Operator Settings**.

At that, the **Operators** window is displayed.



To add a new operator, click **Add**. A new window for adding operators opens up.



Name – operator's name.

Status – operator's status ("Active" or "Archive"). Status *in the archive* is used for registered operators which are not used any longer, but cannot be removed from the system as the event log contains entries referring to them.

Rights – a list of permissions which can be selected or cleared for each operator individually.

Here are some of them:

Allow Subscriber List Modification – the permission allows the operator to add, delete subscribers and modify their properties.

Allow Unregistered Subscriber Control – select this property to allow operator to modify unregistered subscribers in the subscriber tree.

Register Subscribers on Selected Control Station – select control stations which will be used to display all registered subscribers. This option is recommended to be set for Capacity Plus systems.

Set/Change Password – set new operator's password or change the old one.

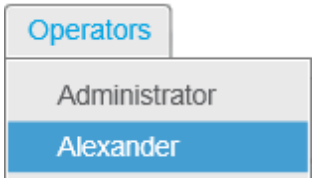
To edit an operator, select it in the list of operators and click **Edit**. The edit window is displayed where you can

change **Name**, **Status** and **Password** parameters.

To delete an operator from the operators list, select it and click **Delete**.

Note: You cannot delete the Administrator from the system.

To switch operators, expand the **Operators** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and select the desired operator in the opened list.



At that, the **Log In** window opens. Type the password if applicable and click **OK**.

2.5 Map

SmartPTT supports different maps, like Google Map, Open Street Map, vector maps of various formats, raster maps, polish format maps. Together with many useful tools like showing and animating a track, defining points of interest, maps provide the dispatcher with a better control over radio subscribers.

Polish Format Maps

To open a polish format map, expand the **Map** menu in the **Main Menu** bar of SmartPTT Dispatcher and click **Map (Polish format)**. In the opened window select the map file in a MP format.

Google Map

To open the Google Map, expand the **Map** menu in the **Main Menu** bar of SmartPTT Dispatcher and click **Google Map**.

Raster Map

To open a raster map, expand the **Map** menu in the **Main Menu** bar of SmartPTT Dispatcher and click **Raster map > Open map**. In the opened window select the file in a MAP format.

To create a map based on a map image, see the Raster Map section.

INGIT Map

To work with INGIT vector maps in SmartPTT Dispatcher, the GWX ActiveX Control application (version 6.1), the registration key (HASP) and INGIT vector maps are required.

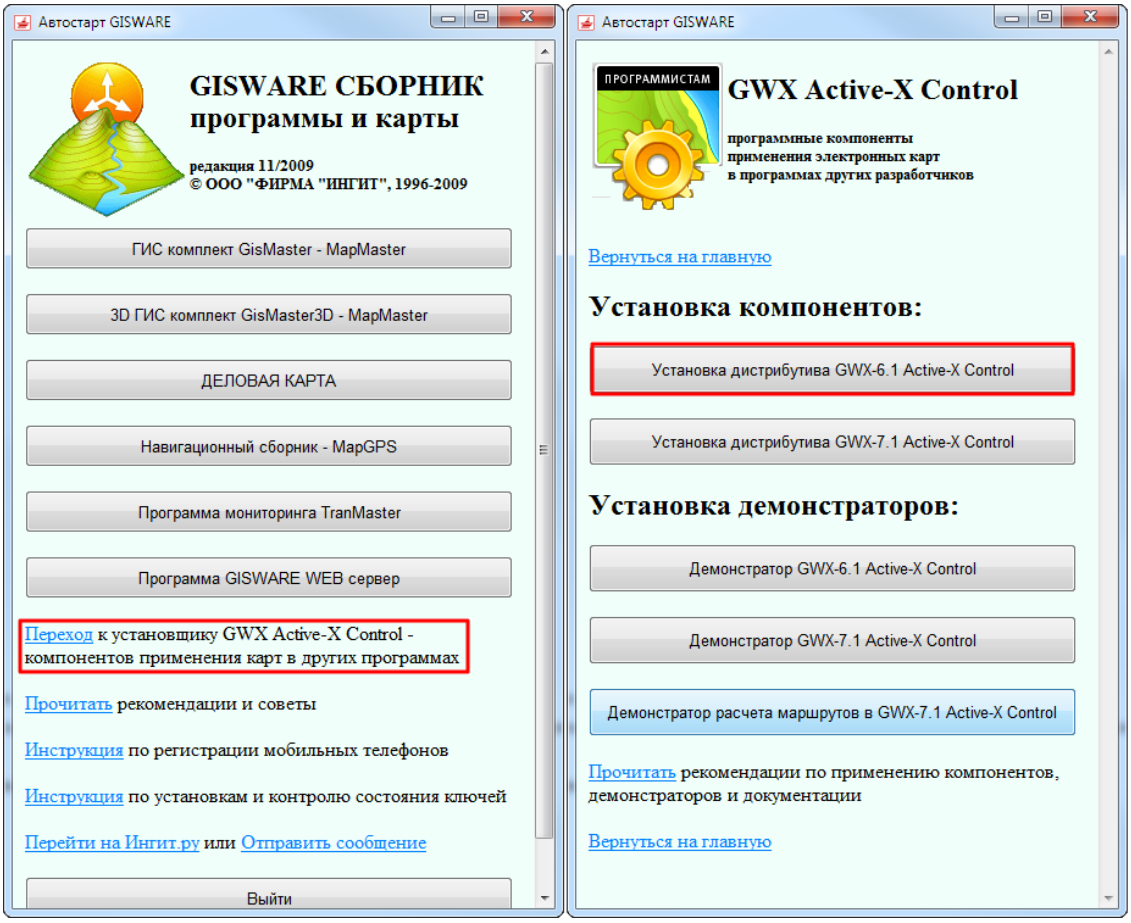
Note: The GWX ActiveX Control software is designed to build INGIT vector maps into independent applications as a unit, which provides mapping service as a part of these applications. GWX ActiveX Control is purchased once and then allows you to use various INGIT vector maps. Each map must be purchased separately. See the purchase conditions on the INGIT company website (http://www.ingit.ru).

GWX ActiveX Control Installation

Follow these steps to install GWX ActiveX Control:

1. Run purchased disk with maps. Insert your HASP into the USB of PC.
2. Click **Proceed with the installation of GWX Active-X Control**.

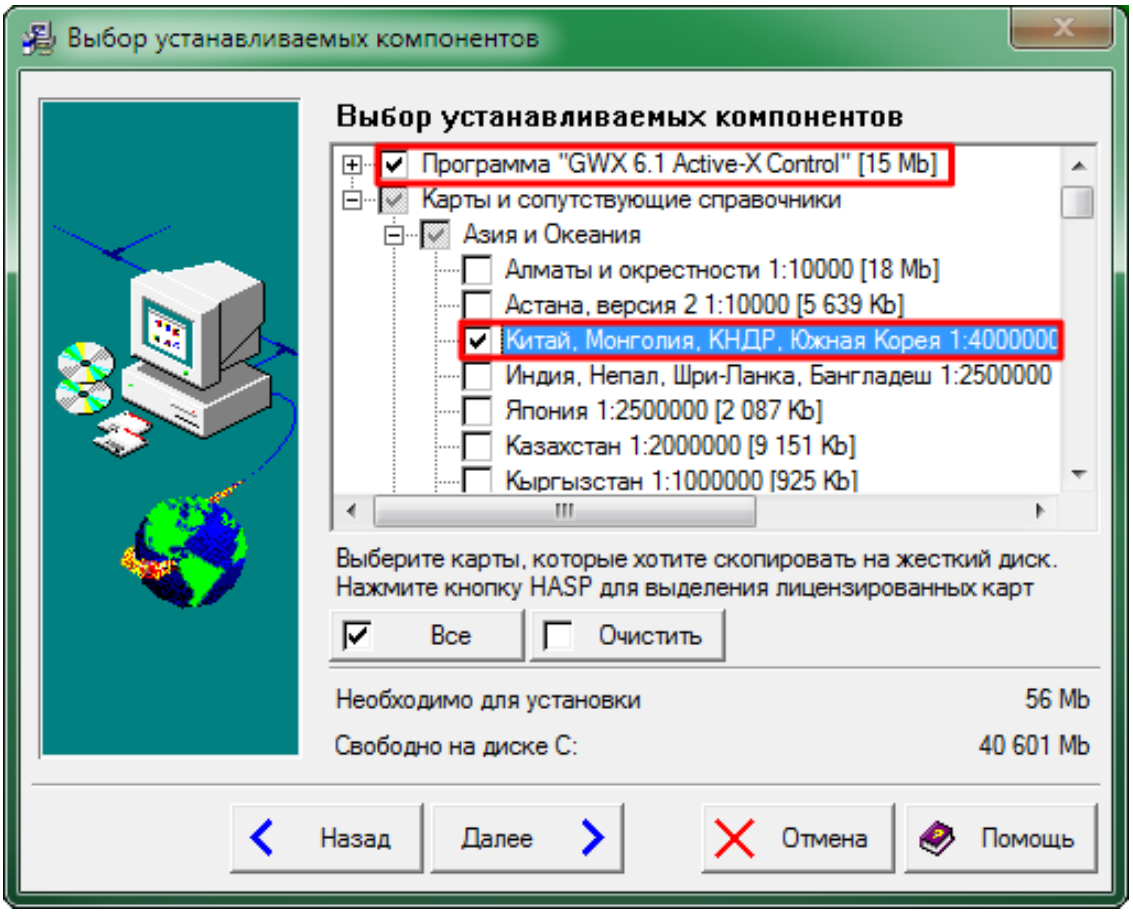
3. Select **GWX-6.1 ActiveX Control Installation**.



4. In the license agreement window, click **I Agree**.
5. GWX ActiveX Control offers a wizard that will perform the HASP driver upgrade if necessary.

Note: To upgrade the HASP driver manually, download the latest HASP driver installer from the supplier site and follow the instructions provided.

6. Continue to follow any remaining on-screen instructions to install the software. Select the installation folder. It is recommended to use the default installation directory, or create a folder at the root of the other local drive and name it *GWX61*.
7. Select the checkbox that is next to the component that you want to add. Make sure the **GWX-6.1 ActiveX Control** checkbox is selected.



8. Once the installation is over, run **Register GWX ActiveX Control**.

When GWX ActiveX Control is installed and the software components are registered, it is possible to work with the maps, allowed by licenses embedded in HASP. HASP must be plugged into the USB of your PC.

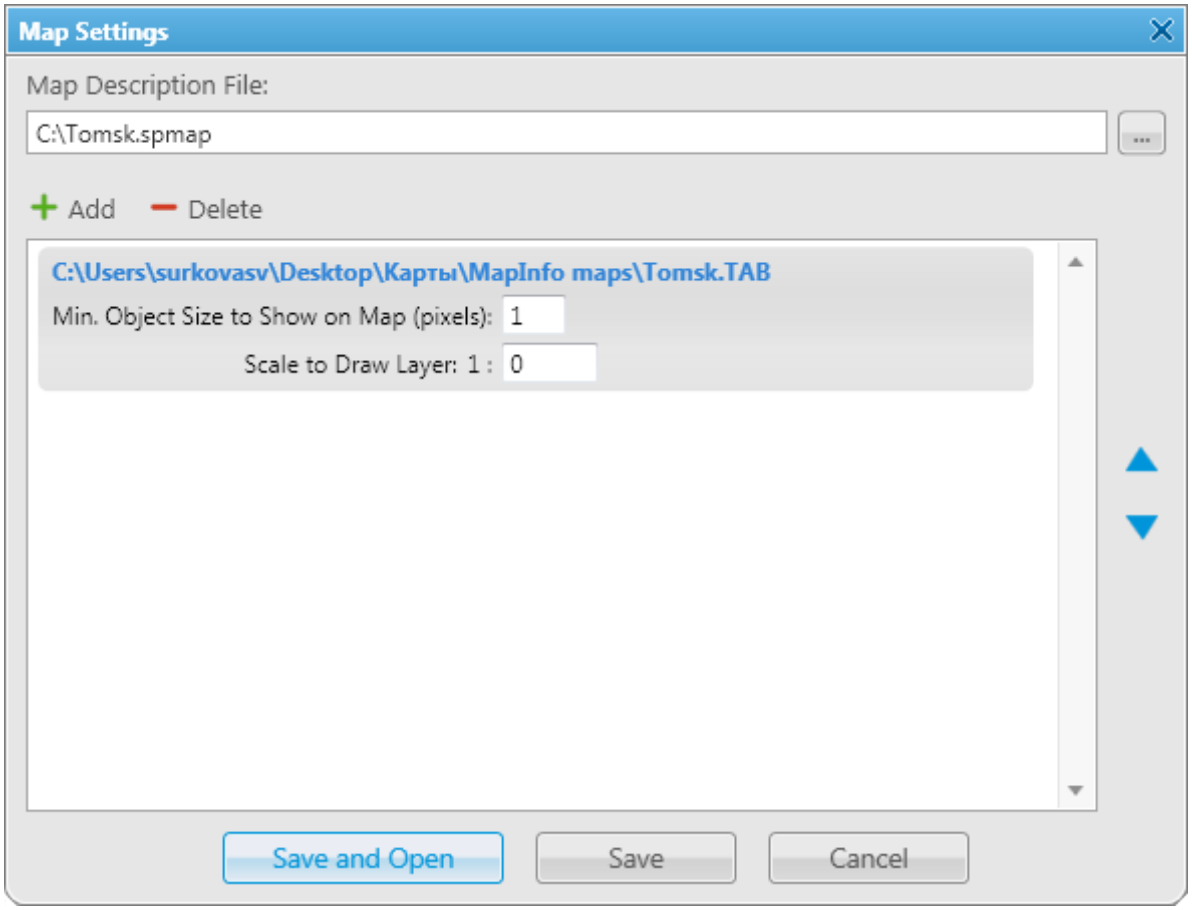
To open an INGIT map, expand the **Map** menu in the **Main Menu** bar of SmartPTT Dispatcher and click **INGIT Map**. In the opened window select the map file in a CHART format.

Note: If the map failed to load, restart **Register GWX ActiveX Control**.

MapInfo Map

To set a MapInfo map for SmartPTT Dispatcher, expand the **Map** menu in the **Main Menu** bar and click **MapInfo Map > Map Settings**. In the **Map Settings** window click **Add** and in the opened window select a map layer – a file in a TAB format. You can add multiple TAB-files and determine the drawing order of the layers using the

arrows on the right. To delete a layer, select the TAB-file and click **Delete**.



Min. Object Size to Show on Map (pixels) – minimum size of the object displayed on the map in pixels. Affects the detail level of the displayed map.

Scale to Draw Layer : 1 : – scale factor for a layer. The layer objects will not appear on the map when you are zoomed in or out beyond the specified scale.

In the **Map Description File** field specify the path to the map file. Click **Save** when you are finished. The file will be saved in a SPMAP format. To open the map right after you saved it, click **Save and Open**.

To open a MapInfo map, expand the **Map** menu in the **Main Menu** bar and click **MapInfo Map > Open Map**. In the opened window select the file in a SPMAP format.

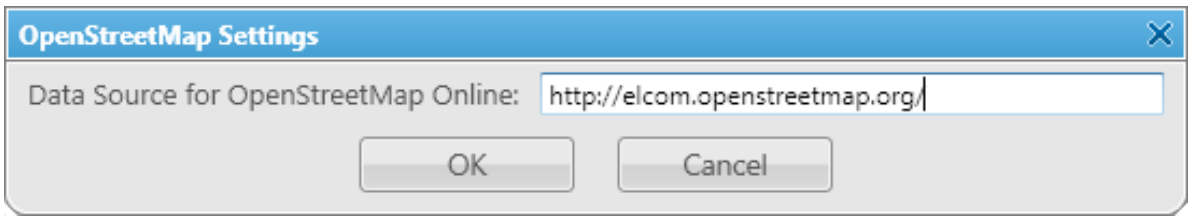
Open Street Map

To open the online Open Street Map, expand the **Map** menu in the **Main Menu** bar and click **Open Street map**

> Open Online Map.

To open the offline Open Street Map, expand the **Map** menu in the **Main Menu** bar and click **Open Street Map > Open Map from File**. In the opened window select a map file in an OSM format.

To open the Open Street Map from local server, expand the **Map** menu in the **Main Menu** bar and click **Open Street Map > Settings**. In the **Data Source for OpenStreetMap Online** field of the **OpenStreetMap Settings** window specify the path to the local server.



MapPoint Map

To work with MapPoint maps in SmartPTT Dispatcher, you must first install Microsoft MapPoint on this PC. Europe or North America version depends on required target coverage area.

Note: All versions of Microsoft MapPoint show a simple outline map of the world when zoomed and scrolled outside of their target coverage area. National borders and a large number of cities are shown outside the target coverage area. For the target coverage area, road detail and internal subdivisions such as provinces, parishes, counties, states are shown.

To open a MapPoint map of Europe or North America, expand the **Map** menu in the **Main Menu** bar of SmartPTT Dispatcher and click **MapPoint Maps > MapPoint "Europe"** or **MapPoint "North America"**.

To open a MapPoint map file created in Microsoft MapPoint earlier, expand the **Map** menu in the **Main Menu** bar of SmartPTT Dispatcher and click **MapPoint Maps > Open MapPoint Map File**. In the opened window select the map file in a PTM or PTT format.

How to Use Maps

To move the map press and hold the left mouse button, and move where necessary. Or use arrow keys to move, this is applicable to the offline map.

To zoom in scroll the mouse wheel forward. To zoom out scroll the mouse wheel back. You can also use the keys

"+" and "-" to zoom in and zoom out.

Online maps allow you to display the object address. To do this, right-click at any place on the map – the object address will be shown. This feature is supported by online maps only (Google Map and Open Street Map).

Offline maps provide more opportunities for improvement. Right-click on the offline map. At that, a context menu appears.

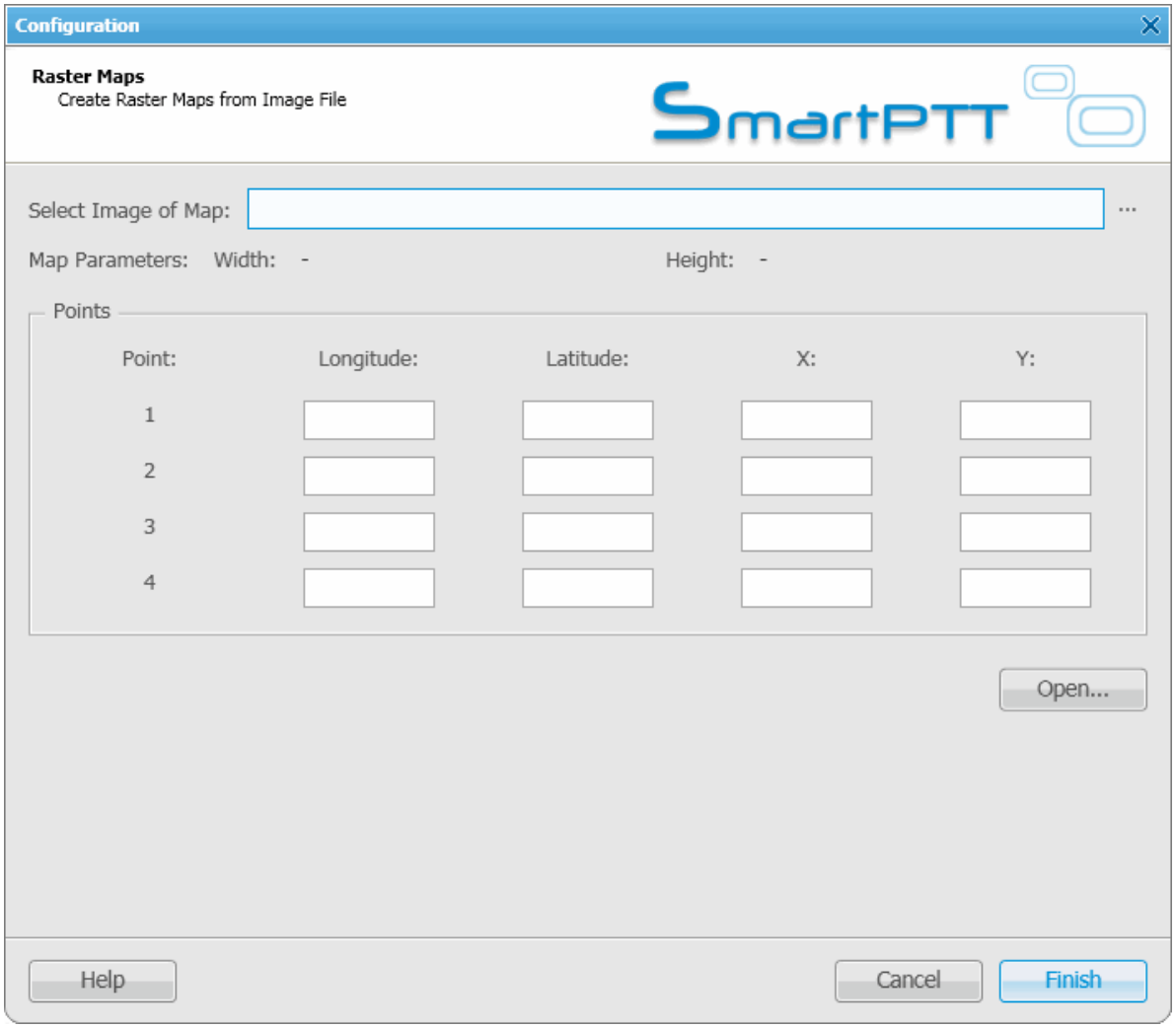
Using this menu you can:

1. Search on the map
2. Select elements to be labeled on the map:
    - Roads
    - Buildings
    - Labels
3. Change the map’s appearance:
    - Add or remove grid
    - Add or remove scale
    - Add or remove coordinates
    - Add or remove detail level
4. Select the map's rendering type:
    - Anti-aliasing
    - Default
    - High quality

- High speed
- None

2.5.1 Raster Map

To set raster map settings, expand the **Map** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Raster Map**. At that, the configuration window is displayed for creating geographic raster maps based on an image.



To create a map, select the map image using the browse button .

On the selected map image mark reference points (crossroads, places of interest, etc.) with the help of Google Earth and calculate their coordinates. Coordinates are calculated in the following way:

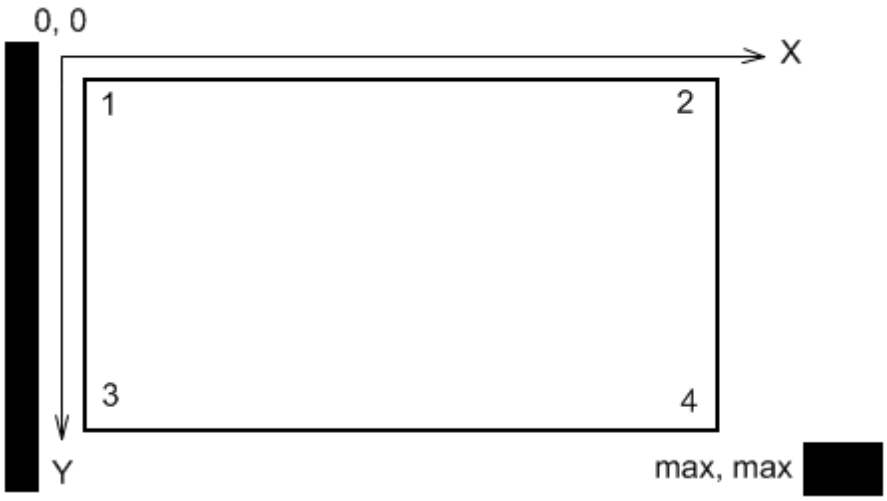
Longitude and Latitude = Degree + ((Minute * 60) + Second) / 3600 (this s a conversion from degrees, minutes and seconds into normal values), where X and Y are corresponding coordinates (in pixels) on the image.

The longitude corresponds to the horizontal coordinate (X) and the latitude corresponds to the vertical coordinate (Y). The longitude value can range from -180 degrees (the most distant longitude to the west from the Greenwich Meridian set to 0) to +180 degrees (the most distant longitude to the east from the Greenwich Meridian). In fact -180 degrees and +180 degrees are the same longitude. The latitude value can range from -90 degrees (the South Pole) to +90 degrees (the North Pole).

Longitude and Latitude coordinates, already converted into normal values and corresponding to the subscriber's current locations, are also shown in the subscriber's **Call Window**.

You need four points. Point selection criteria are:

- Point 1 is located as close as possible to the top left image corner.
- Point 2 is located as close as possible to the top right image corner.
- Point 3 is located as close as possible to the bottom left image corner.
- Point 4 is located as close as possible to the bottom right image corner.



After all coordinates are entered, click **Finish**. In the opened window set the raster map name and click **Save**.

To edit or check object locations in the created raster map, click **Open**. Locate the raster map in the window which is displayed.

Note: The created raster map files and the image map file must be in the same folder.

2.5.2 Raster Maps From Database

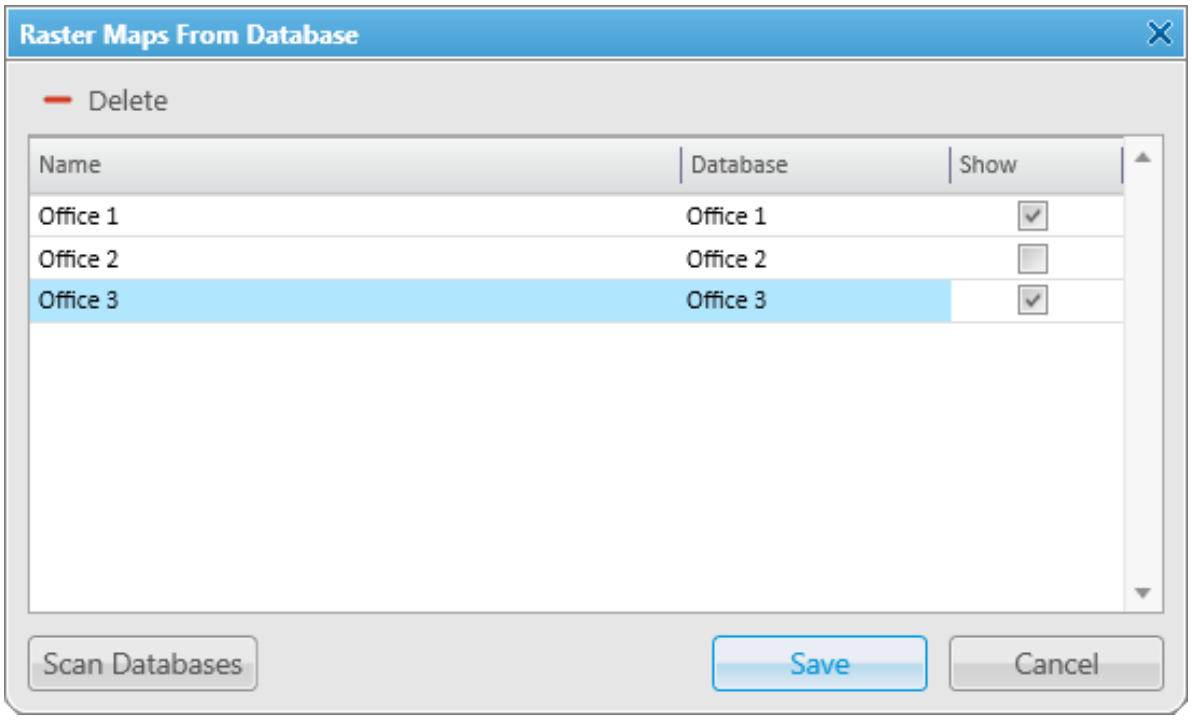
SmartPTT Dispatcher allows you to work with large raster offline maps with a size of more than 5000x5000 pixels. The functionality is used for displaying SmartPTT system objects located at a long distance from each other. This is achieved by dividing the original raster image into pieces and storing them in the database.

To create the database for the raster map, send your query to our technical support service and attach the raster map image in a JPEG format with the list of geographical positions on the map (e.g., in a TXT or MAP format). Geographical positions are necessary to anchor image points to the geographical coordinates. The list of geographical positions must contain four points at the corners of the map. In response to your request our technical support specialist will provide you the database backup of the map in a BAK format.

Note: If the attachment(s) size exceeds the limit of 50 MB, split the file to several small files using the archiver or file manager, or upload it to the file hosting service. In the latter case include a link to the file in your query message.

Then restore the database from the received backup. For more information see How to restore from SmartPTT Dispatcher database backup.

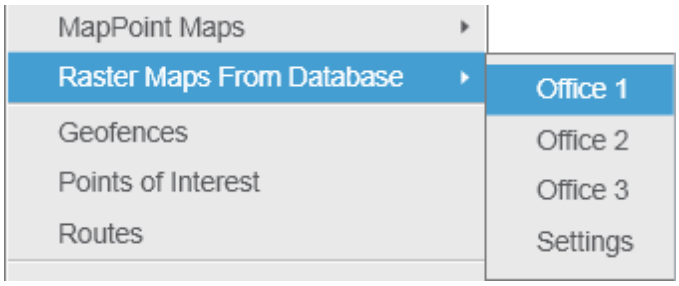
After the database is restored, expand the **Map** menu in the **Main Menu** bar and click **Raster Map From Database**. Click **Scan Database** in the opened window, and you will see a list of all available maps stored in the databases of the selected server (see Database Settings, the **Database Server Name** field).



Name – name of the map stored in the database. To change the name of the map, double-click on the name in the **Name** field and enter a new name.

Database – name of the database.

Show – if the checkbox is selected, the map is available in the **Map** menu. To open the map, expand the **Map** menu and select the required map under **Raster Maps From Database**.

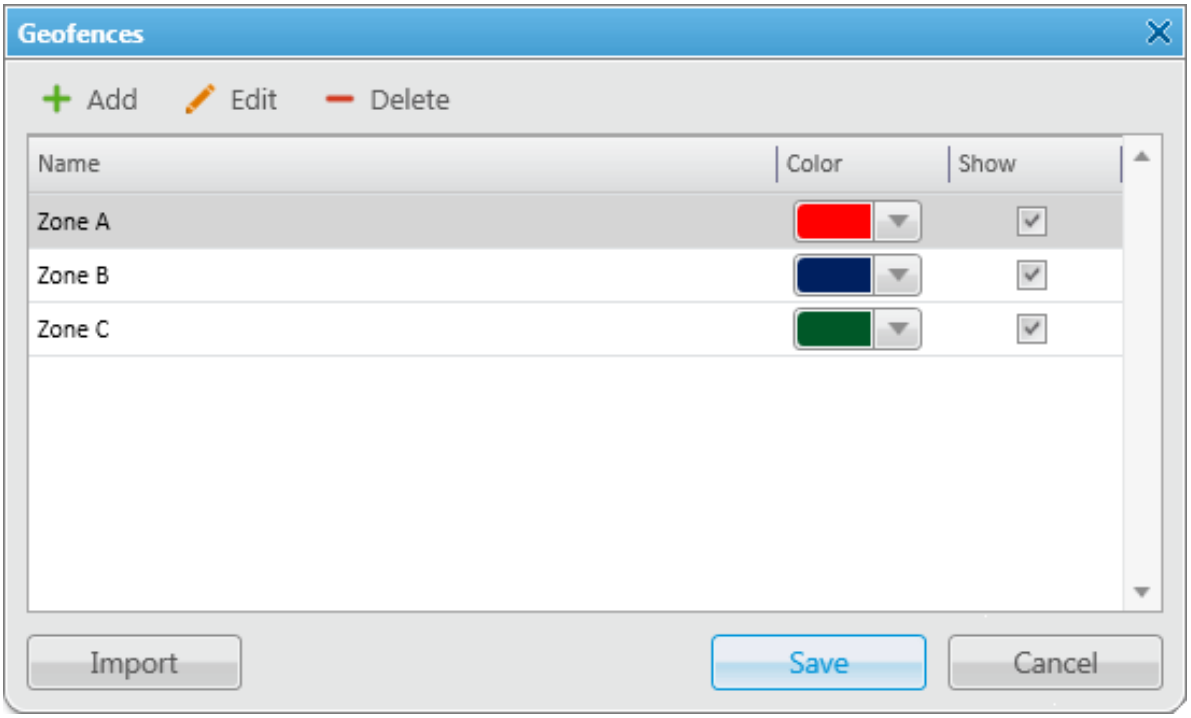


To remove the map from the list, select the map and click **Delete**. To save your changes, click **Save**. If you want to undo the last changes, click **Cancel**.

2.5.3 Geofences

Geofences help dispatchers to keep an eye on the radio subscribers. A dispatcher can define the area of the geofence on his or her own and attach GPS rules to it.

To add the geofence, expand the **Map** menu in the **Main Menu** bar of SmartPTT Dispatcher and click **Geofences**. In the opened window you can add a new geofence or modify settings of the existing one – name, color, and whether it should be displayed on the map:



Name – the geofence name.

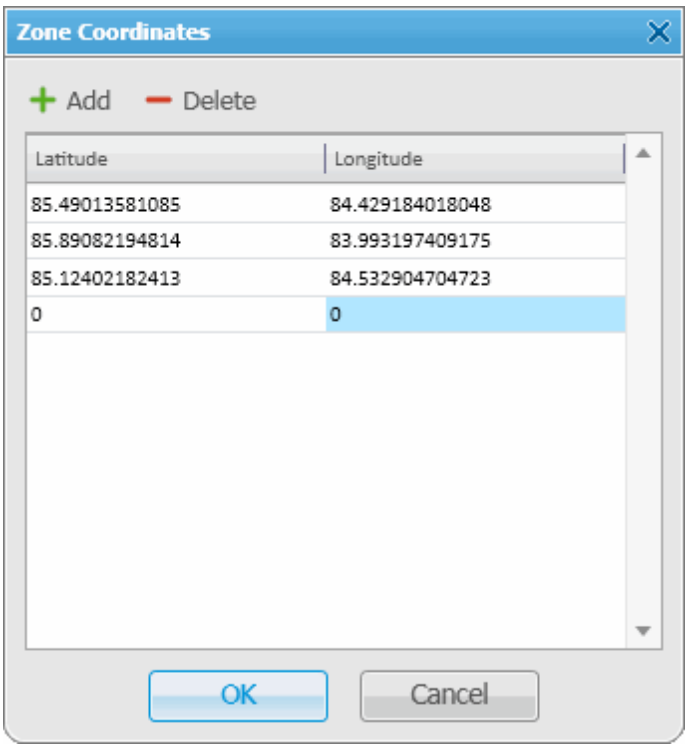
Color – the geofence color on the map.

Show – enables the option to display the geofence on the map.

Note: Whether the geofence is displayed on the map or not, GPS rules set for the geofence are enabled. To assign a rule to the geofence, go to GPS Rules.

Add the zone-forming points of the new zone. To do that, click **Add** in the **Geofences** window. To edit the zone-forming points, select the zone and click **Edit**.

Specify a pair of longitude and latitude values for a zone-forming point. To edit point coordinates, place the cursor into the required field and type new value. You can't create a zone with less than 3 longitude and latitude pairs. To delete the points, click **Delete**.



To delete a geofence from the list, select the geofence and click **Delete**.

You can also create a geofence from the **View** menu. For more information see Geofences panel.

Geofence Import

SmartPTT Dispatcher allows you to import geofences created on a maps in Polish format with the help of the GPSMapEdit software.

To create a geofence in GPSMapEdit:

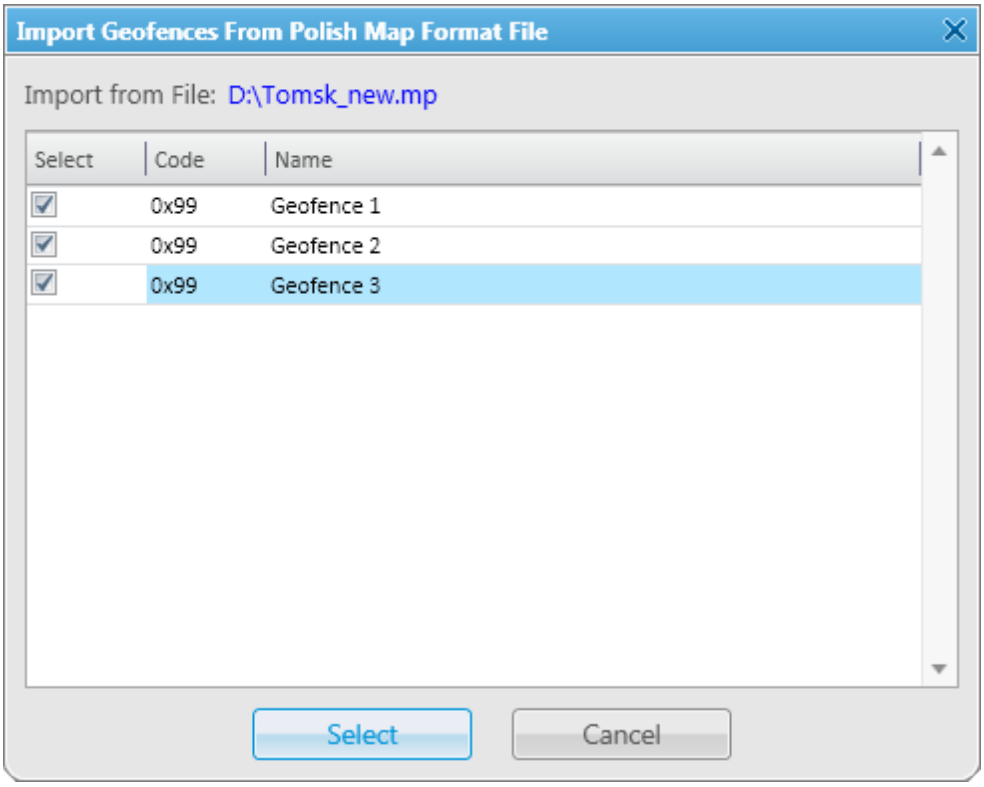
1. Run the GPSMapEdit application.
2. Open a map in Polish format (**File > Open**).
3. Create a polygon object on the map. To do that, click **Tools > Create Object > Polygon: Rectangle**.
4. Left-click on the map at the start point of the new zone. Then, clicking the left mouse add all the required

points. Once you have a zone set up, the **Select Type** window opens.

5. In the **Select Type** window type the *0x99* value in the **Code** field and click **OK**.
6. Type the zone name in the field on the map and press **Enter**.
7. Save your changes (**File > Save**).

To import geofences created on a maps in Polish format with the help of GPSMapEdit to SmartPTT Dispatcher:

1. Open the **Geofences** window (**Map > Geofences**).
2. Click **Import**.
3. Select the map in Polish format, which geofences will be imported.
4. Select geofences you want to import in the **Import Geofences From Polish Map Format File** window.



5. To see the imported geofence, make it active in the **Geofences** window.

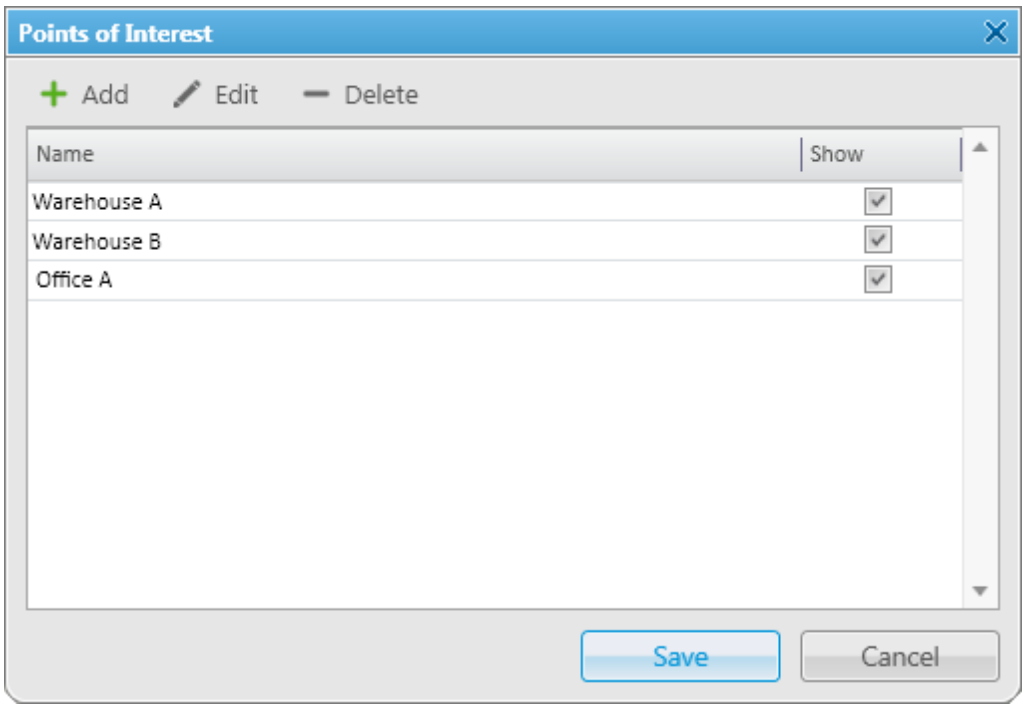
2.5.4 Points of Interest

Points of interest (POI) identify location of special interest which are shown on the map and can be quickly found

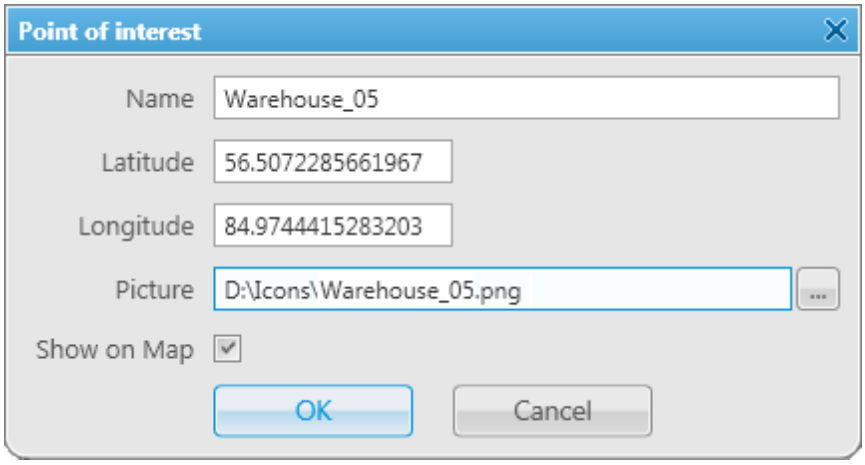
in SmartPTT Dispatcher. A point of interest consists of the point name, location coordinates and the picture.

To add a point of interest, expand the **Map** menu in the **Main Menu** bar of SmartPTT Dispatcher and click **Points of Interest**.

The **Points of Interest** window allows you to change the name of the existing point of interest and whether it should be displayed on the map. To modify the existing point of interest, select it and click **Edit**. To delete the point of interest, select it and click **Delete**.



To add a new point of interest, click **Add**.



Name – name of the point of interest.

Latitude – latitude coordinate of the point of interest.

Longitude – longitude coordinate of the point of interest.

Picture – the image which represents the point of interest on the map. Maximum image size of the point of interest is 64×64 pixels. Images of the bigger size are be automatically cropped to 64×64.

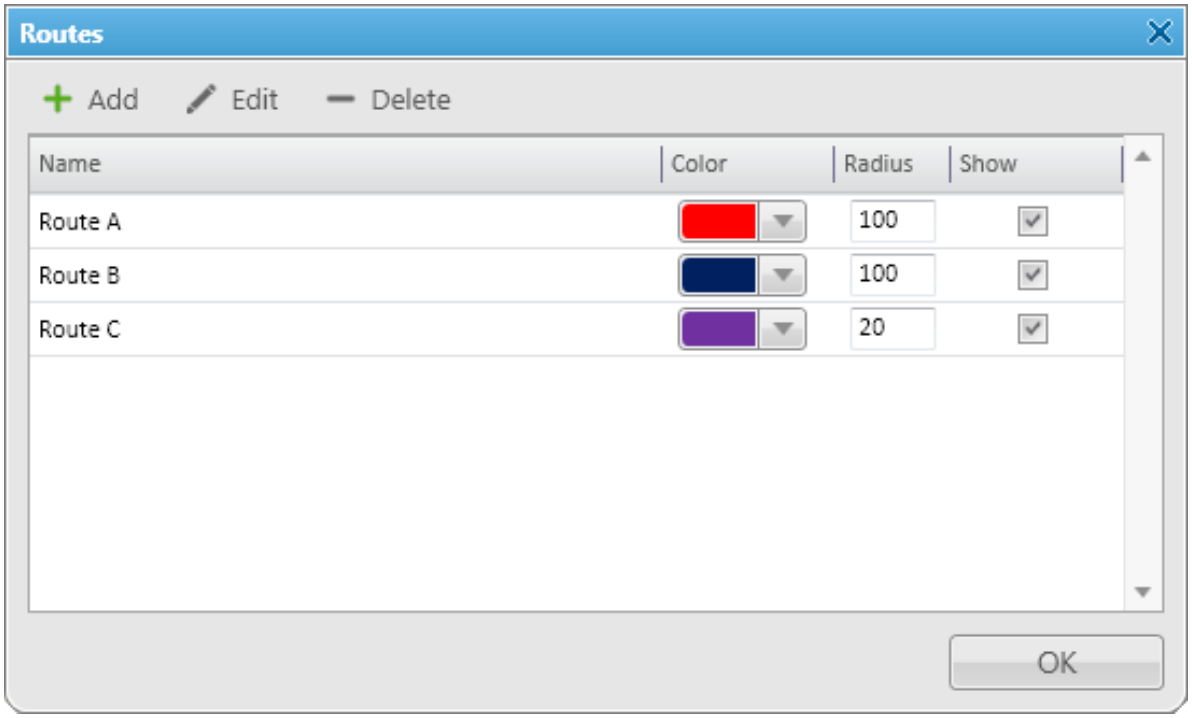
Show on Map – enables the option to display the point of interest on the map.

You can also create a point of interest from the **View** menu. For more information see Points of Interest panel.

2.5.5 Routes

The route is a polyline connecting key points of the network coverage area. Subscriber location near the key points is identified by the specified radius of the route and can be summarized in the Subscriber Location Report.

To specify the route parameters (Color, Radius, Coordinates), expand the **Map** menu in the **Main Menu** of SmartPTT Dispatcher and click **Routes**. In the opened window you can add a new route or modify settings of the existing one.



Name – the route name.

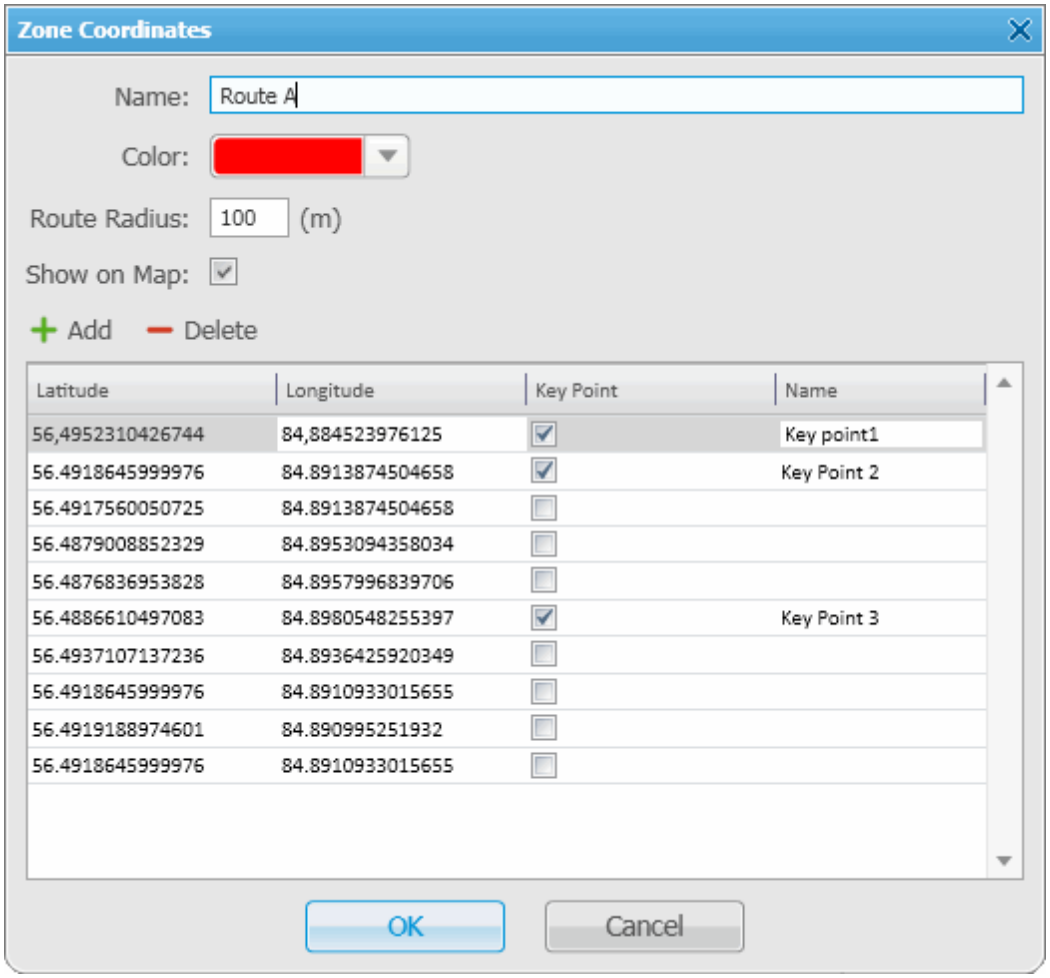
Color – the route color on the map.

Radius – the allowed deviation from the route.

Show – enables the option to display the route on the map.

To add a new route, click **Add**. To modify route settings, select a route from the list and click **Edit**.

In the **Route Coordinates** window specify the route name, the route line color, the acceptable deviation from the route for the radio subscriber, coordinates of the route points and its properties. **Key Point** is used for singling out particular places of the track on the map. You can give a name to each key point to be displayed on the map. The key points are represented by small white squares on the map. Select **Show on Map** to display the route on the map.



To delete the route, select it from the list and click **Delete**.

The route example:

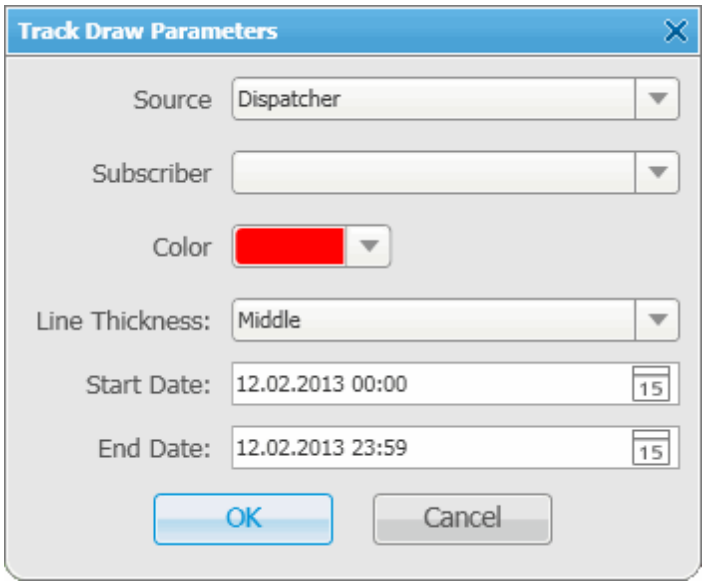
You can also create a route from the **View** menu. For more information see Routes panel.

2.5.6 Show Track

GPS tracking is very helpful for seeing the real-time position of the radio subscribers you are tracking. In addition, the **Show Track** feature allows dispatcher quickly see where a radio subscriber was over a particular time frame.

Note: By default, GPS coordinates are not saved in the database. If you want to save GPS coordinates, open the **GPS Settings** window in the **Settings** menu and select **Save GPS Locations in Database**.

To specify draw parameters of the track, expand the **Map** menu in the **Main Menu** of SmartPTT Dispatcher and click **Show track**. The **Track Draw Parameters** window opens.



Source – defines the source, which database will be used for drawing the track. If *Dispatcher* is selected, the data is taken from the local database. Apart from *Dispatcher*, any available radioserver can be chosen as a data source. In that case all data is taken from the database of the chosen radioserver.

Subscriber – defines subscriber whose track is to be displayed.

Color – the track color on the map.

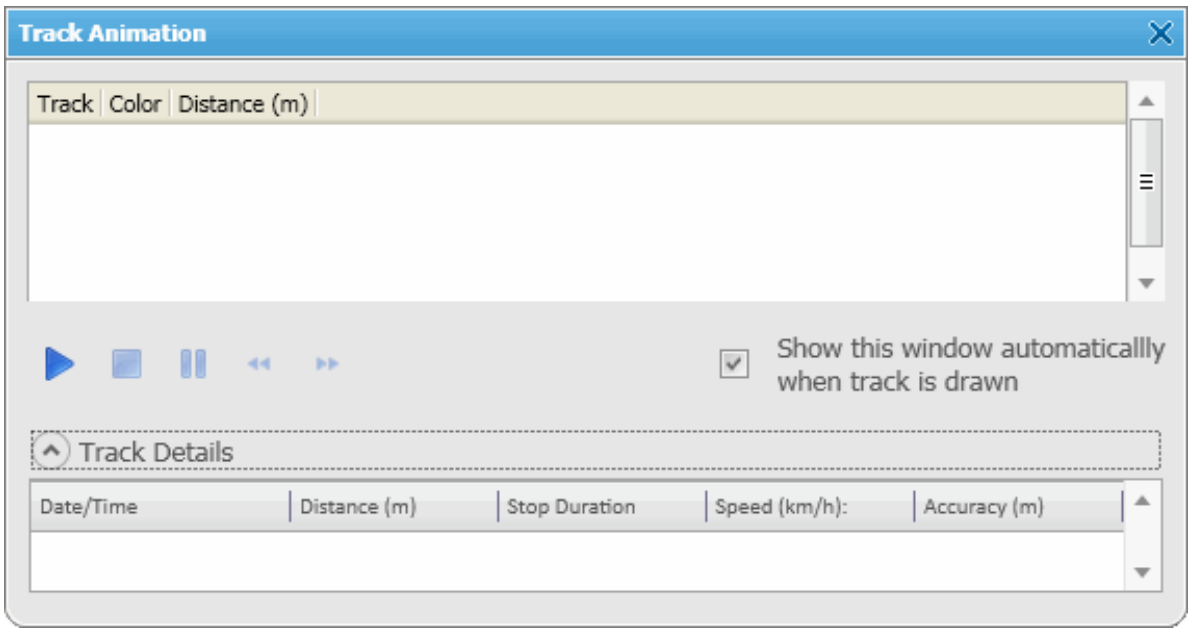
Line Thickness – thickness of the track line on the map.

Start Date, **End Date** – the time frame of the track.

2.5.7 Animate Track

To animate displayed tracks, expand the **Map** menu in the **Main Menu** bar of SmartPTT Dispatcher and click **Animate Track**.

The **Track Animation** window opens.



Run track animation

Stop track animation

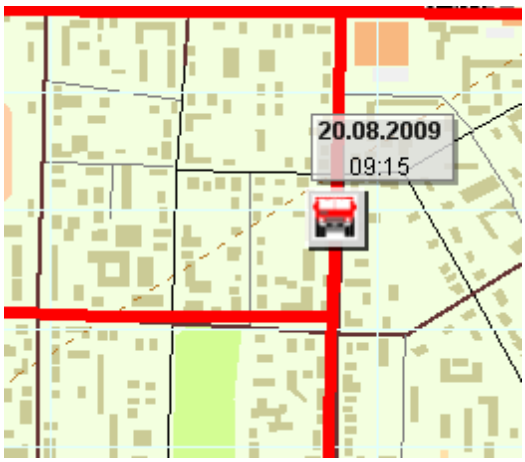
Pause

Run track animation slower

Run track animation faster

During track animation you can slow it down or make it faster. The system remembers the last track animation speed and uses it during next track animation.

Here is an image of a sample track on the map.



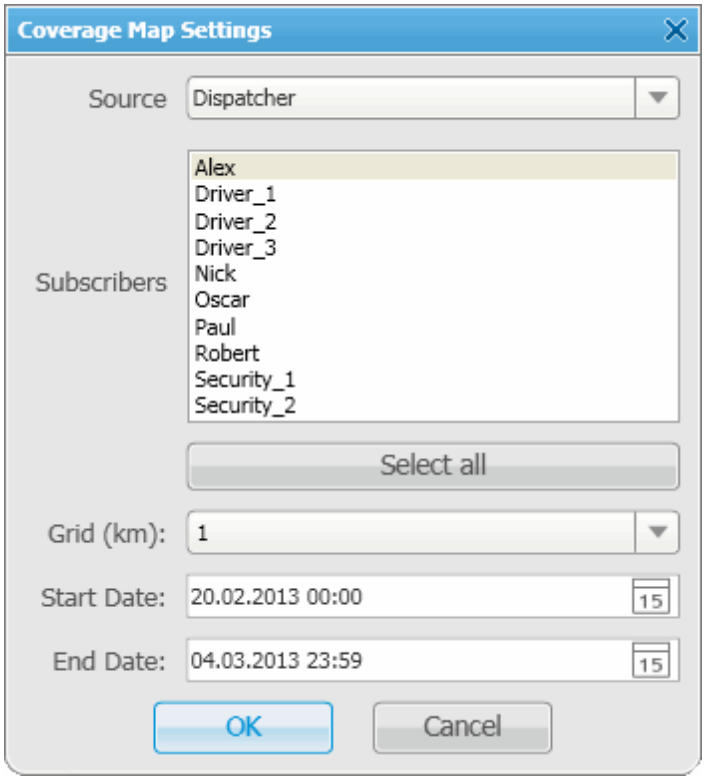
To clear the tracks shown on the current map, expand the **Map** menu in the **Main Menu** of SmartPTT Dispatcher and click **Clear Shown Tracks**.

To clear the shown tracks on all maps, expand the **Map** menu in the **Main Menu** of SmartPTT Dispatcher and click **Clear Shown Tracks on All Maps**.

2.5.8 Coverage Map

Coverage maps gives you information about RSSI of a particular radio in a particular place.

To compose a coverage map, expand the **Map** menu in the **Main Menu** bar of SmartPTT Dispatcher and click **Show Coverage Map**.



Source – defines the source, which database will be used for drawing the track. If *Dispatcher* is selected, the data is taken from the local database. Apart from *Dispatcher*, any available radioserver can be chosen as a data source. In that case all data is taken from the database of the chosen radioserver.

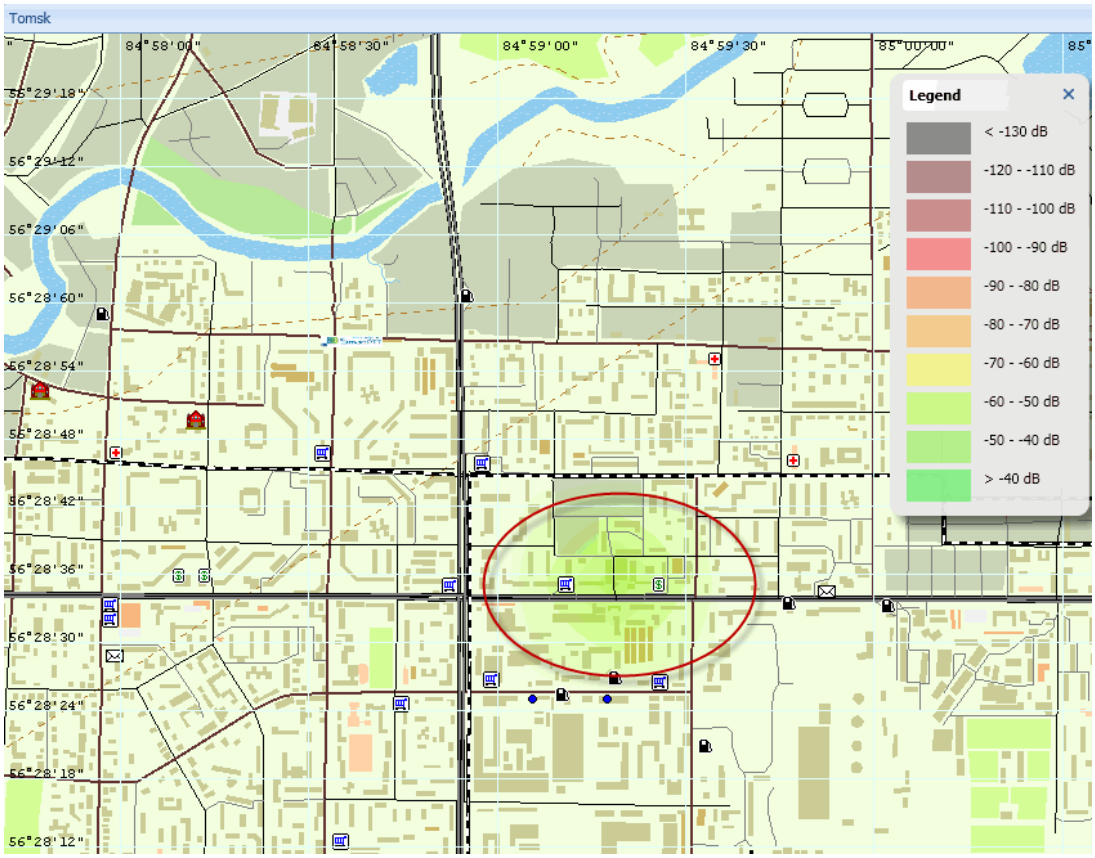
Subscriber – defines radio subscriber for whom the coverage map is to be generated. The list of subscribers is taken from the connected database.

Note: Click **Select All** to generate a coverage map for all subscribers which have GPS coordinates in the database.

Grid – the radius value for checking RSSI.

Start Date, **End Date** – the time frame of the events.

The coverage map example



The **Legend** box identifies the colors used in the coverage map.

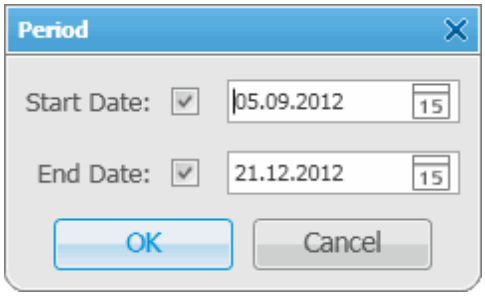
To clean the map, select **Hide Coverage Map** in the **Map** menu.

2.6 Event Log

The **Events** window allows you to see what is going on in the system. The event log displays status and event messages from the SmartPTT system, and other useful information.

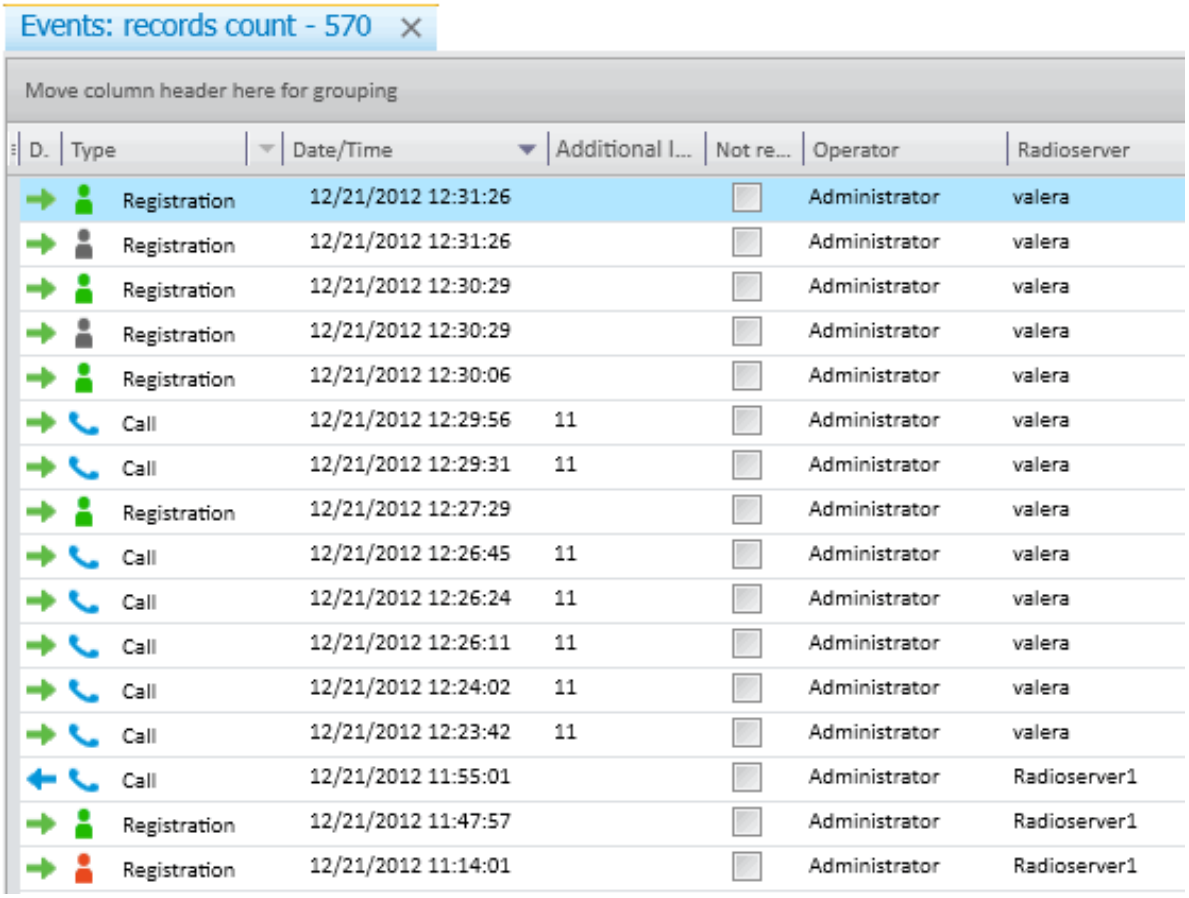
To open the event log, click **Event Log** in the **Main Menu** bar and then **All Events**. To tune **Event Log** settings, see Event Log.

You can limit the number of displayed data by setting a period of time. To do this, click **Events for Period** in the **Events** menu. The **Date/Time Period** dialog is displayed. Specify start and end date for entries displayed in the log.

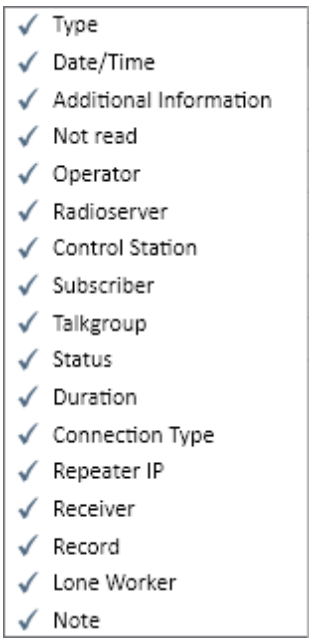


To display only not read messages in the log, select **Unread Messages**.

The system event log appears as follows.



The log consists of the following columns: Direction, Event Type, Date/Time, Radioserver, Description, Not Read, Operator, Control Station, Subscriber, Talkgroup, Status, Duration, Record, Connection Type, Repeater IP and Receiver, Lone Worker. By default, all the columns are displayed in the log. To select columns displayed in the event log, right-click on the menu with column names and select the requisite columns in the list.



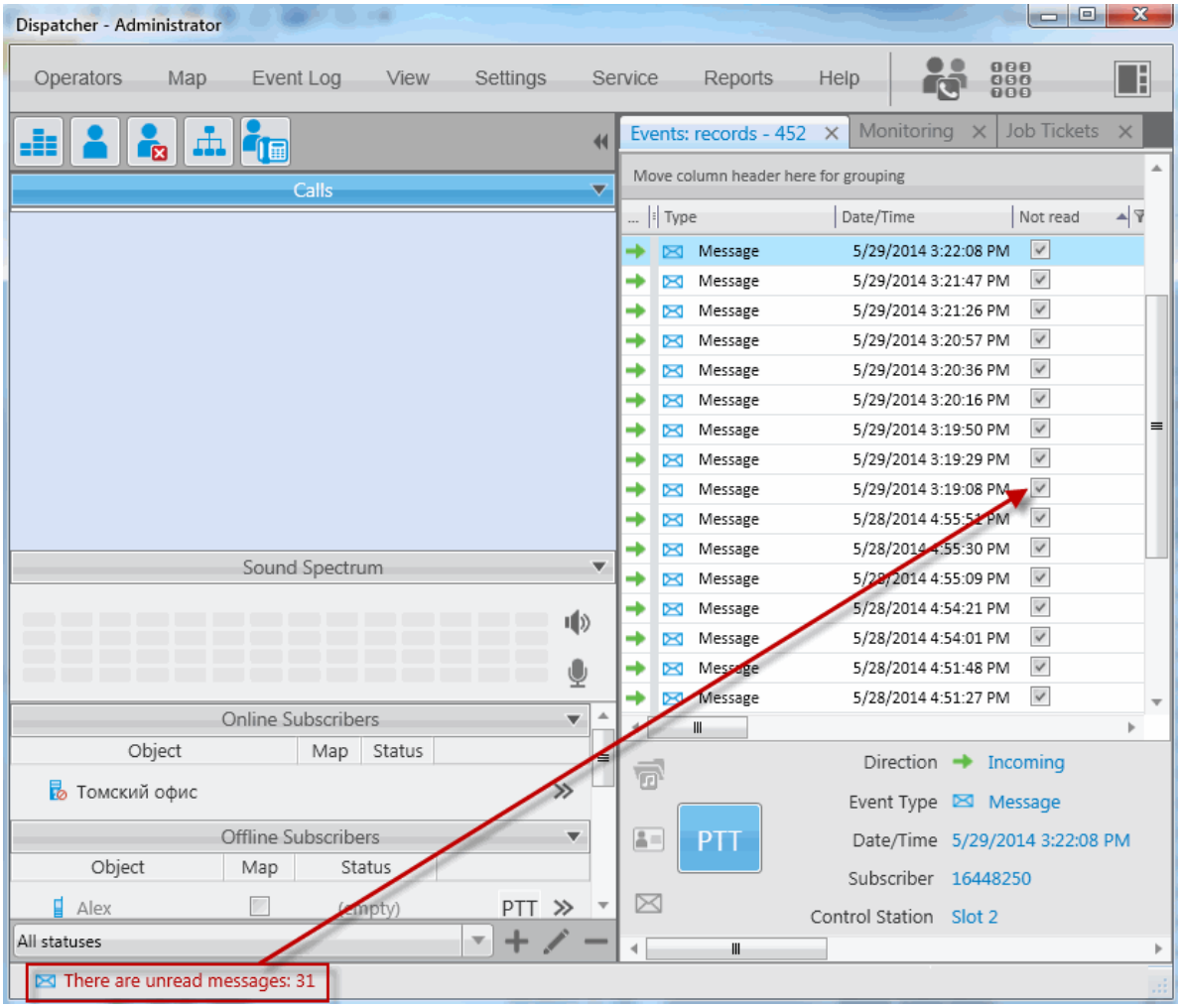
Place the cursor on the column name and click the arrow button that appears to open a list of filters related to the selected column. The following table contains a list of filters for the log columns and their description.

Column Name	Filters	Description
Direction	Left arrow Right arrow	Direction of calls, incoming and outgoing
Type	Block radio Call Registration Message Status Telemetry	Select available events in SmartPTT

Column Name	Filters	Description
	Alarm Job Ticket Lone Worker	
Date/Time	Date/Time	A list of filters by date/time when an event took place
Additional Information	Text from the **Additional Information** or **Message** fields	Additional information includes: text messages, titles and description of tasks, talkers from a group call and some other.
Not Read	Read	Select read and not read messages
Operator	Operators list	List of SmartPTT operators
Radioserver	List of radioservers	List of available SmartPTT radioservers
Control Station	List of control stations	List of available SmartPTT control stations
Subscriber	Subscribers list	List of SmartPTT subscribers
Talkgroup	List of talkgroups	List of SmartPTT talkgroups
Status	List of statuses	List of SmartPTT statuses
Duration	Timing list	Displays for how long events last
Record	Not recorded Recorded	Select messages with and without recorded audio files
Connection Type	IP PBX DMR Connect+	Connection types in SmartPTT
Repeater IP	Address list of repeaters	IP-address and port of repeater in IP Site Connect network

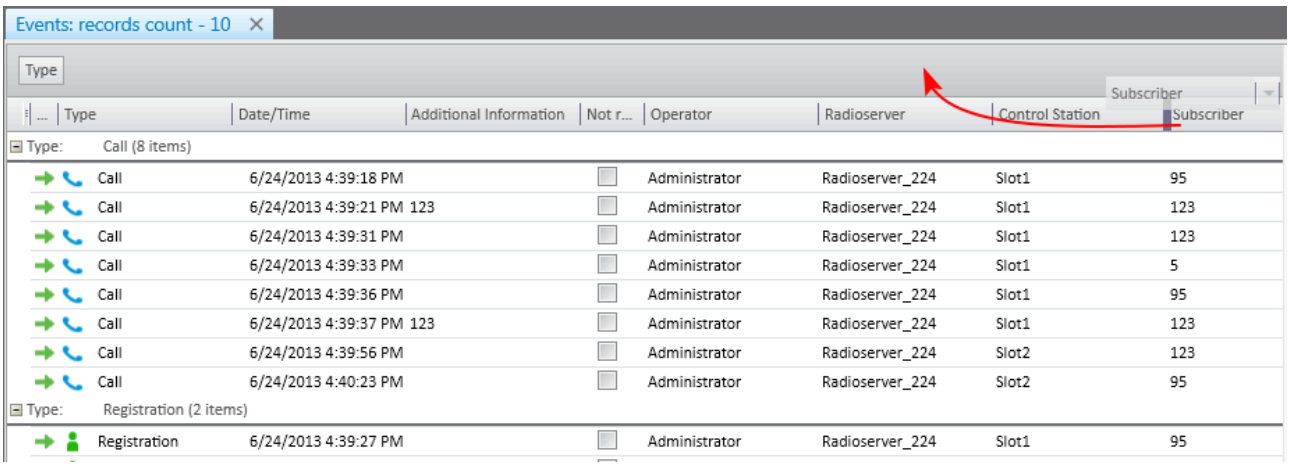
Column Name	Filters	Description
Receiver	List of radios or talkgroups	ID of receiving radio or talkgroup
Lone Worker	Yes/No	Lone worker profile is assigned to the radio subscriber or not.
Note	Text from the **Note** field	Any text information added by the dispatcher

Note: You can filter the event log by the column **Not Read** not only from the event log, but also by clicking on "There are unread messages: n" in the **Information bar**.

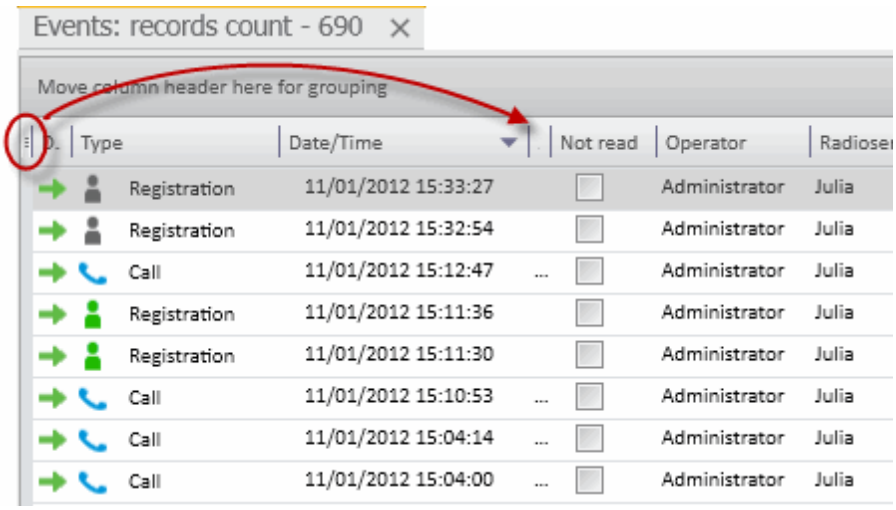


Click on any column name so the log sorts its contents according to this column content. You can filter the content displayed in the log using filters.

To group the log entries, click on the column title and drag it to the area labeled as "*Move column header here for grouping*".



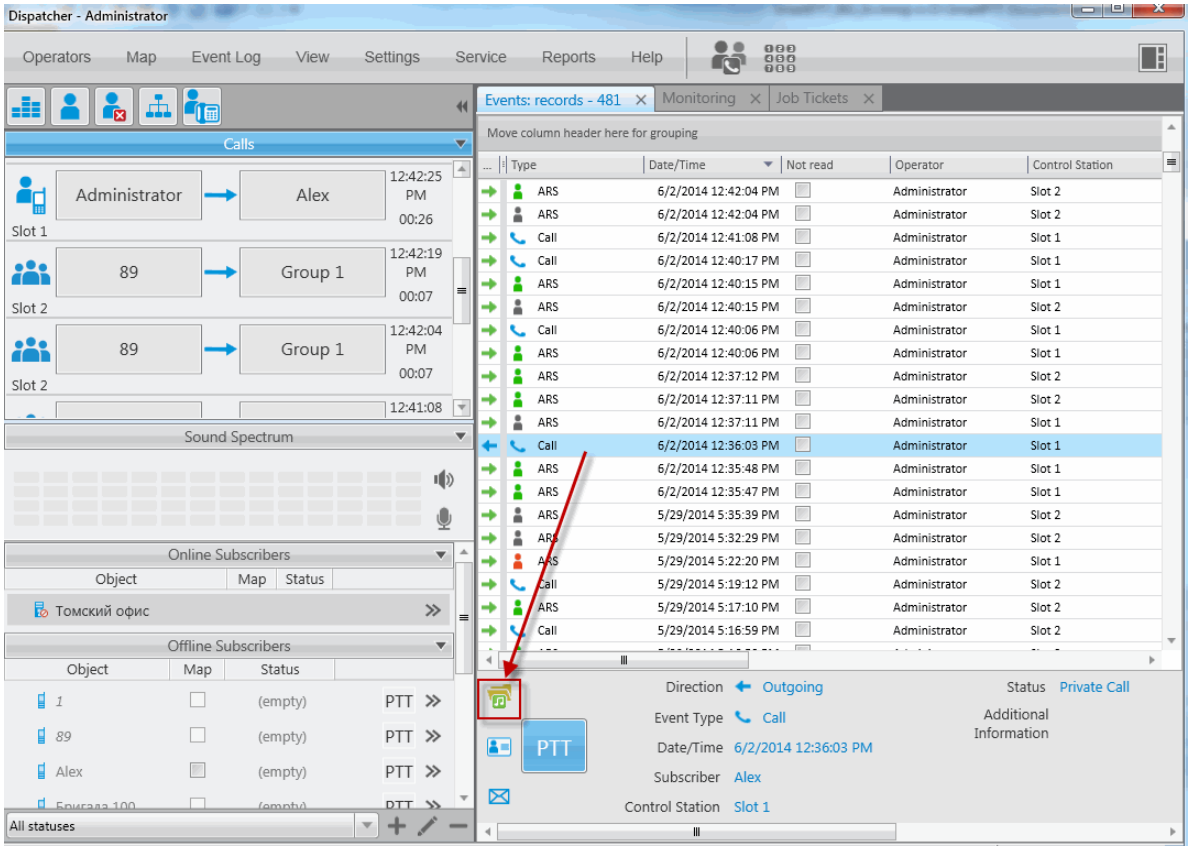
If you want to have particular columns to be always seen in the log regardless of the scroll position, use the special element in the column titles. Just drag it after the column you want to be always there.



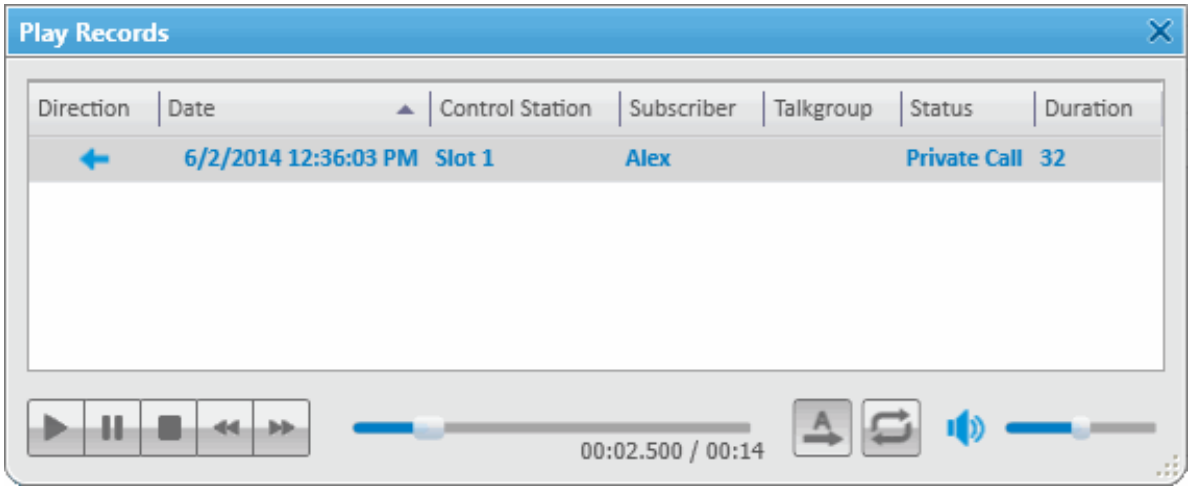
To listen to audio records of the calls, select the call in the event log and click the **Play Selected Records** button

.

Note: To enable recording of calls, go to **Settings** and select **Records**. There select **Record Calls**.



The **Play Records** window for selected records opens.



Note: After the record playback window opens, selected records are reproduced automatically, starting from the earliest date.

Player buttons:

Start Playback plays the selected record and all the records of the list without stopping.

Pause Playback pauses playback of the current record. Clicking the **Start Playback** button resumes playback of the record from the place of suspension.

Stop Playback stops playback of the current record. Clicking the **Start Playback** button enables playback of the record from the beginning.

Return to Previous Record plays the previous record after the current one.

Go to Next Record plays the following record after the current one.

Settings:

Play All Records enables the mode of all records reproduction in turn. Playback is controlled by the previously described buttons.

Replay enables the mode of replaying the current record or all the records in turn if the **Play All Records**

mode is activated.

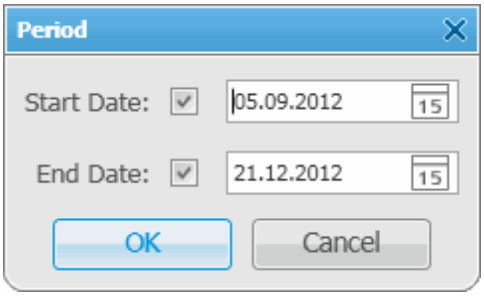
Button opens a subscriber call window. Button opens a window for message sending.

Opening Radioserver Event Log

Depending on the SmartPTT system configuration the event log can be saved either on the dispatcher side or the server side, or both.

To open the event log saved at the radioserver:

1. Open the radioserver **Action List** and select **Show Radioserver Event Log**.



2. Select the **Start** and **End Dates** to show events of the period. The **Radioserver Event Log** is displayed in the same way as the **Dispatcher Event Log** in a separate tab.

To make subscriber radio activity report based on the radioserver data, select **Create Radio Activity Report**. In the opened window specify the period of time, grouping, file to save the report and click **OK**.

2.7 View

From the **View** menu you can open all the panels used in SmartPTT Dispatcher.

These are the following panels:

- Lock UI Layout, allows blocking any changes in SmartPTT Dispatcher layout for operators. Available for Administrator only.
- Sound Panel from where you can manage the sound volume of the selected subscribers and slots.
- Call History panel, which gives you information of the recent voice calls made.
- Subscribers panel for quick access to the subscribers.
- Points of Interest which opens the panel with created points of interest (POIs). You cab also manage the POI list from this panel.

- Subscriber Locations panel to display subscriber on the map.
- Control Zones panel to manage control zones.
- Routes panel to create new routes on maps.
- Lone Workers panel to show lone workers' status, for example, that a lone worker did not call for a longer period than expected, etc.
- Server Tasks panel to display server tasks in the background.
- System Messages panel, which displays errors, disconnection of the radioserver, etc.
- Notifications panel to get information about the alarms configured by the dispatcher.
- Job Tickets panel from where you can create and supervise job tickets.

2.7.1 Lock UI Layout

Lock interface layout function is available only for Administrator account and allows blocking any dispatch console layout changes for operators. It allows administrator to do specific console customization and prevent ordinary dispatchers from opening and closing windows and panels.

In order to fix panel positioning, expand the **View** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Lock UI Layout**.

When this mode is enabled, the dispatcher can't do the following actions:

- Opening and closing panels. Automatic pop-up panels, such as **Notifications** and **System messages**, do not open either.
- Changing panel location (see Panel Positioning).
- Switching window configurations by clicking the **Show List of Window Configurations** button .
- Changing the size of the opened panels.
- Changing the content of the **Subscriber Management Panel** using the **Navigation Bar** buttons (see Subscriber Management Panel > Navigation bar).

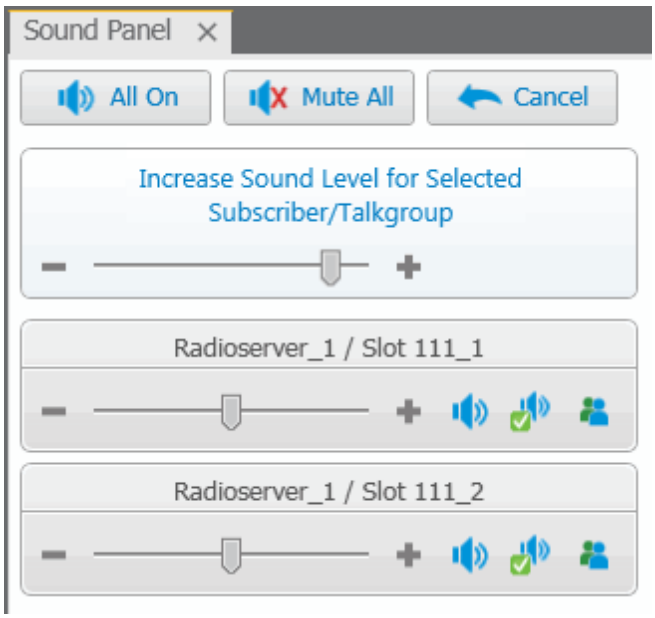
Note: If the **Event Log** is opened when the user interface layout is locked, all the features designed for the **Event Log** management are available to the dispatcher.

2.7.2 Sound Panel

The **Sound Panel** allows setting individual sound level for each control station, turn on/off sound for the subscriber or talkgroup, select only one control station with the sound turned on.

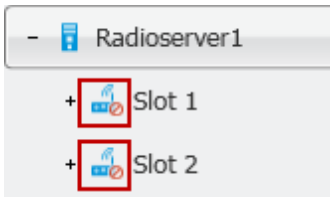
To open the **Sound Panel**, expand the **View** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Sound Panel**.

The **Sound Panel** window.



All On – turns on the sound for all the connected control stations.

Mute All – turns off the sound for all connected control stations. Mute control stations are marked with a special symbol.



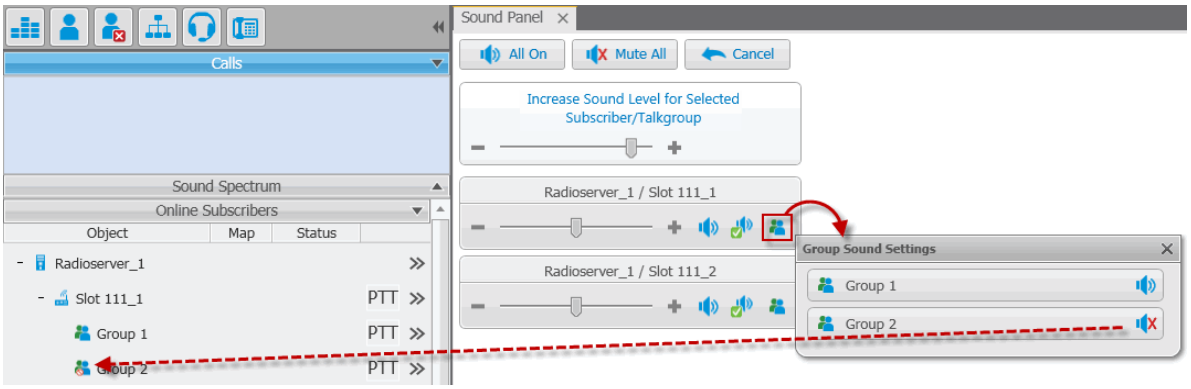
Cancel – calls off the last action.

To manipulate the sound level, click the **–** / **+** buttons or move the thumb.

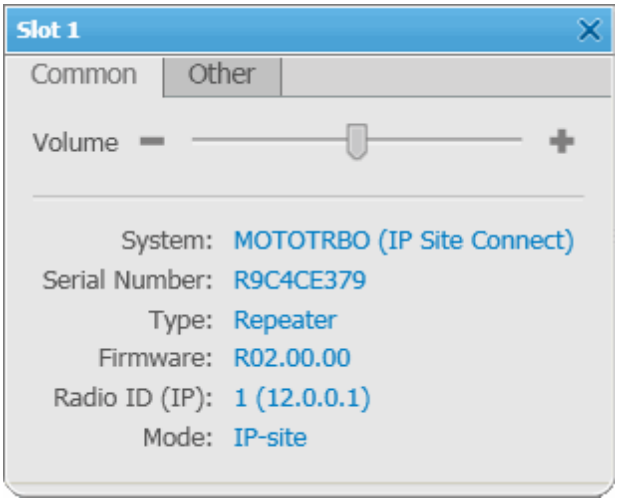
To turn on/off the sound on a particular control station, click .

To turn on the sound for one control station and at the same time to turn off the sound for other control stations, click .

To turn on/off the sound for talkgroups, click . At that, a window will open with the list of available talkgroups on the slot. Mute talkgroups are marked with the special symbol.



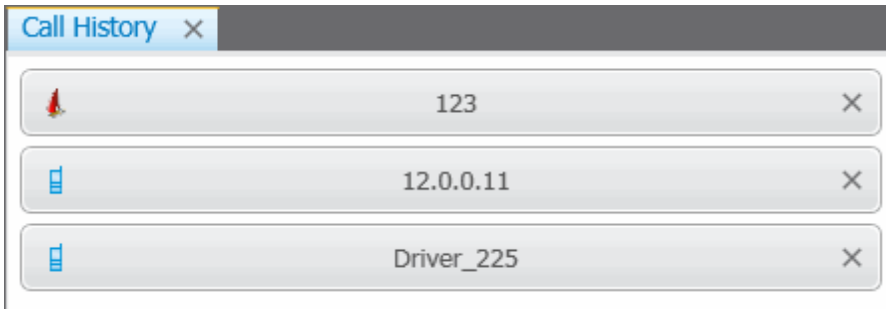
Sound settings for a control station can also be done in the control station **Properties** window.



2.7.3 Call History

The **Call History** panel displays the list of subscribers who initiated calls. The panel is used for quick access to the call windows of the subscribers.

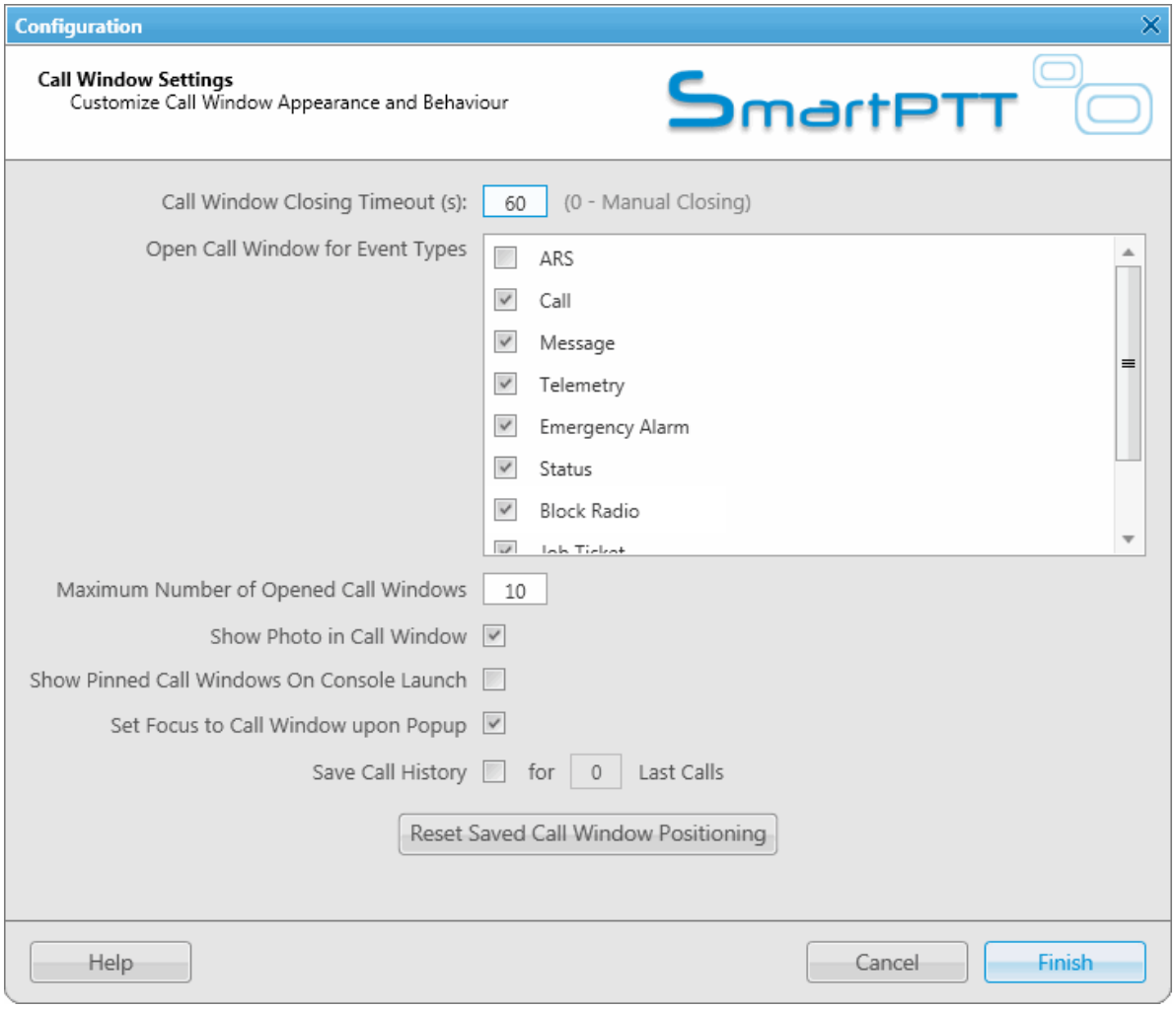
To open **Call History** panel, expand the **View** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Call History**. At that, the **Call History** window opens.



Click on the subscriber record to open the **Call Window**.

To configure the **Call History** panel settings, expand the **Settings** menu in the **Main Menu** of the SmartPTT Dispatcher window and click **Call Windows**.

At that, the following window opens.



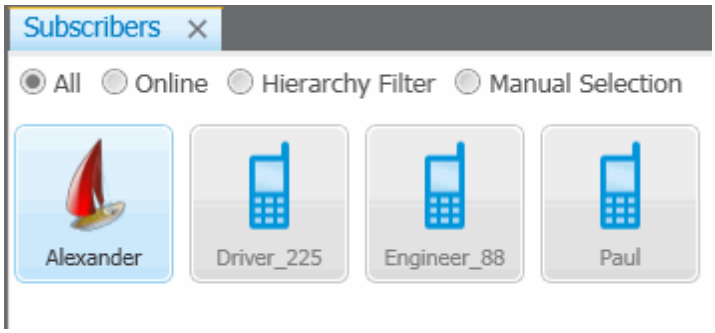
Save Call History – keeps history of calls in the **Call History** panel. The limit is set in the **Last Calls** field.

To apply the changes, click **Finish**.

2.7.4 Subscribers

Subscribers panel provides convenient interface to perform voice calls and subscriber property modification by generating the list of large control buttons for radio subscribers.

To open the **Subscribers** panel, expand the **View** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Subscribers**. At that, the **Subscribers** panel opens.



All – all registered radio subscribers (online and offline) are displayed on the panel.

Online – only online radio subscribers are displayed.

Hierarchy Filter – only radio subscribers from selected category, radioserver or control station are displayed.

Manual Selection – radio subscribers selected manually by the dispatcher are displayed. To do it, drag the radio subscriber into the panel window.

To select a subscriber on the panel, click on the corresponding button. Functions applicable for a selected subscriber:

- Right-click to view the subscriber **Property** window.
- Double-click to view the **Call** window.

On the **Subscriber** panel window it is possible to distinguish between radio subscribers' states. Different states differ by color of the control button, the icon and the frame around it. The colors are the same as in Custom Consoles.

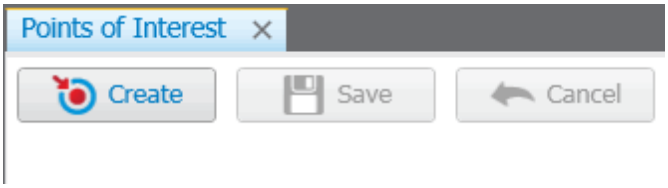
– the icon on the subscriber element shows that the dispatcher did not answer to the subscriber call. The figure next to it shows the number of missed calls.

2.7.5 Points of Interest

The **Points of Interest** panel displays all the exiting points of interest. You can also create, modify or delete a point of interest from the panel.

To view points of interest (POI) to be displayed on the map, expand the **View** menu in the **Main Menu bar** of the SmartPTT Dispatcher window and click **Points of Interest**.

At that, the **Points of Interest** panel opens.



In the panel window you can do the following:

- Create a new POI
- View the list of created POIs
- Hide or show POIs on the map

To create a new POI:

1. Open a map.
2. Click **Create**.
3. In the opened window type the name of the POI and upload its picture. Click **OK**.
4. Place the new POI on the map by clicking the left mouse button.
5. To save the position of the POI click **Save** in the panel window. To call off the changes, click **Cancel**.

You can also create the POI from the **Map** menu. For more information see Maps.

To hide or show the POI on the map, select the checkbox next to the POI title.

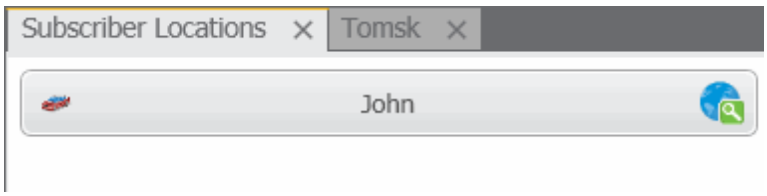
2.7.6 Subscriber Location Panel

Subscriber Location panel shows the subscribers inside the selected area on the map.

To select area on the map, press **CTRL** and click with the left mouse button and draw the area covering subscribers.

Note: The **Subscriber Location** panel will be opened automatically if it is hidden at the moment of subscriber selection.

Opened **Subscriber Locations** panel.



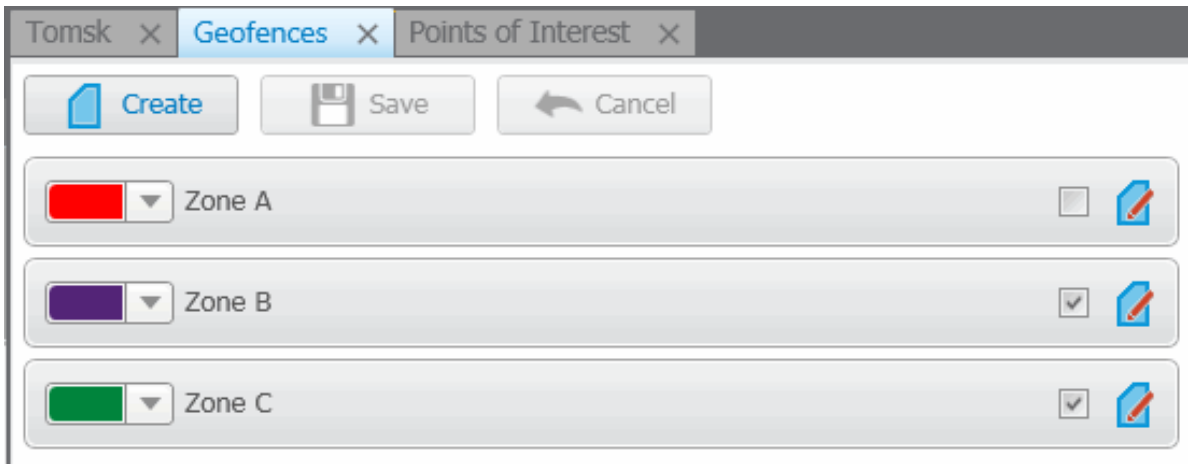
Click to find the subscriber on the map.

To manually open the **Subscriber Location** panel use the **View** menu in the **Main Menu** bar.

2.7.7 Geofences

The **Geofences** panel is used to create, modify and display geofence on the map. Geofences help dispatchers to keep an eye on subscribers. A dispatcher can define the area of the geofence on his or her own and attach special rules to it.

To open the **Geofences** panel, expand the **View** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Geofences**. At that, the following window opens up.

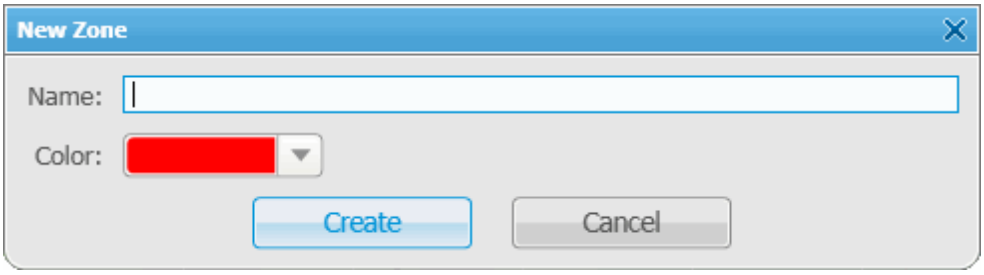


To create a new geofence:

1. Open a map.

Note: Geofence creation with Map Point is not supported.

2. Click **Create** in the **Geofences** panel window.
3. In the opened dialog box type the name of the geofence and select the color. Click **Create**.



4. Draw the geofence on the map with the help of mouse and the keyboard. For example, to undo the last added point press the **ESC** key.
5. Click **Save** in the **Geofences** panel window.
6. The record about the new geofence will appear in the **Geofences** panel.
7. You can activate the geofence in this panel by selecting the checkbox next to the name of the geofence and edit it by clicking **Edit**. You can also change the color of the geofence.

Note: You can also stop drawing the geofence by double-clicking on the last point of the zone.

Note: Geofence must have at least 3 points.

To call off creation of the new geofence, click **Cancel**. To modify the existing geofence, click **Edit**.

You can also create geofences from the **Map** menu. For more information see Maps.

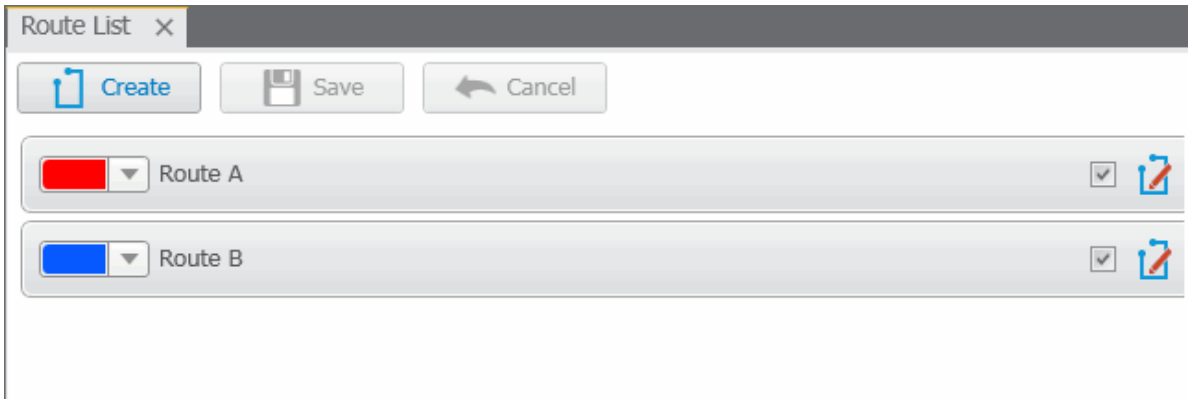
To assign a rule to the geofence, go to GPS Rules.

2.7.8 Routes

Route is a tool of SmartPTT that significantly extends functionality of the dispatch system, especially for monitoring and controlling networks of highly mobile subscribers moving along the predefined route (for example, employees of transportation companies). Its meaning radically differs from the pre-existing concept of a "Route" as the trajectory of subscriber's movement that, from now on, is called "Track".

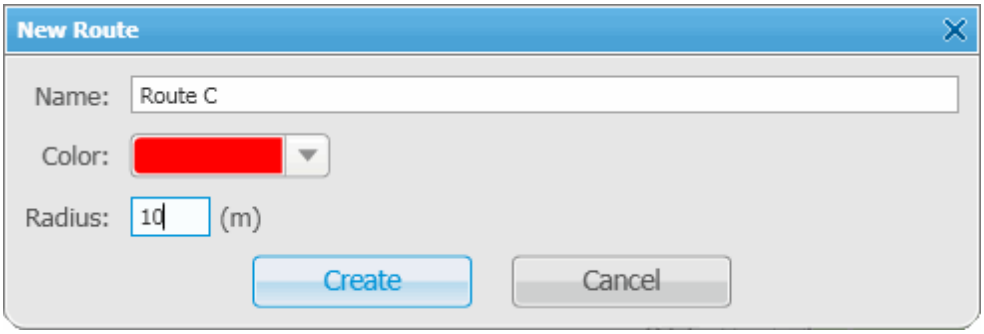
The route, starting with version 7.1.0 is a polyline connecting key points of the network coverage area. Subscriber location near the key points is identified by the specified radius of the route and can be summarized in the **Subscriber Locations** report.

To open the **Routes** panel, expand the **View** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Routes**. At that, the **Routes** panel opens.



To create a new route:

1. Open the map window and click **Create**. At that, the **New Route** window opens.



2. In the field **Name** type the name of the new route.
3. Set the color of the new route.
4. In the **Radius** field enter allowed deviation from the route.
5. Click **Create**.
6. Go to the map window and draw the route.

   Route points are created by clicking with the left mouse button on the map area. To create the first route point, point to the place where the route starts and left-click on it. To create next route points, point to the appropriate place on the map and left-click on it. Route points connect sequentially drawing a new route on the map. To undo the last added point, press Esc.

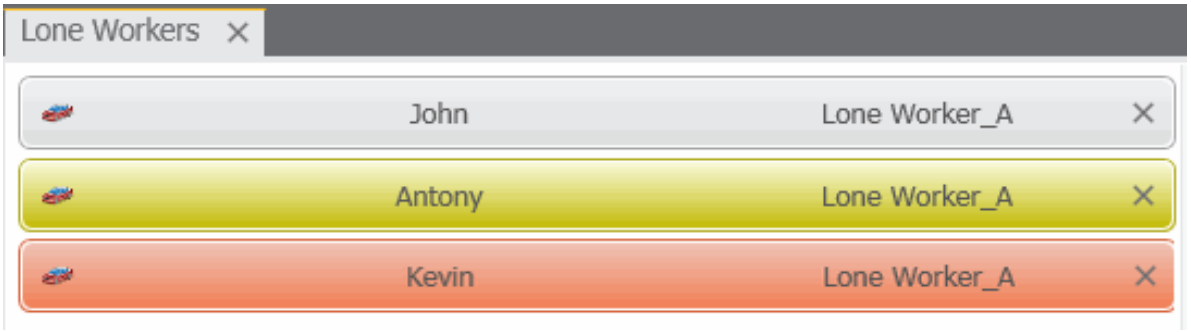
You can stop drawing the route by double-clicking the last point of the route.

7. To save the route, click **Save** in the **Routes** panel window. To call off the route, click **Cancel**. To modify the existing route, click the **Edit** button .

2.7.9 Lone Workers

The **Lone Workers** panel displays the list of subscribers who are in the **Lone Worker** mode and their current status. This was designed for a better supervision over lone workers.

To open the **Lone Workers** panel, expand the **View** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Lone Workers**. At that, the following window opens.



The **Lone Workers** panel shows radio subscribers working in the **Lone Worker** mode marked with specific color. The color shows if the subscriber meets the requirements set for the lone worker profile the subscriber belongs to:

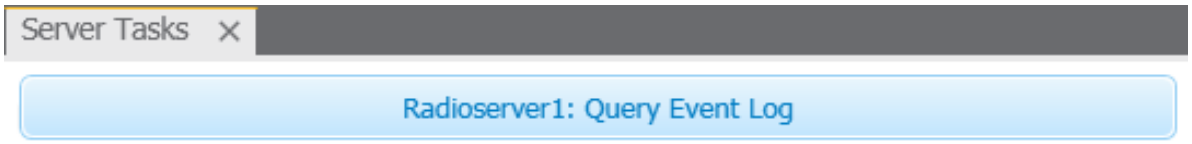
- Light gray – the lone worker did not violate the rule.
- Yellow – rule violation: the event, described by the rule, has occurred. **Alert Timer** starts.
- Red – the lone worker did not react in a specified way after **Alert Timer** expired.

Note: For more information how to set rules for lone workers, please see Lone Worker Rules.

2.7.10 Server Tasks

The **Server Tasks** window shows the list of commands from the dispatch application the radioserver is processing at a given moment of time.

For now, only a few commands are displayed in the **Server Tasks** window, for example, the command to create the radioserver event log.



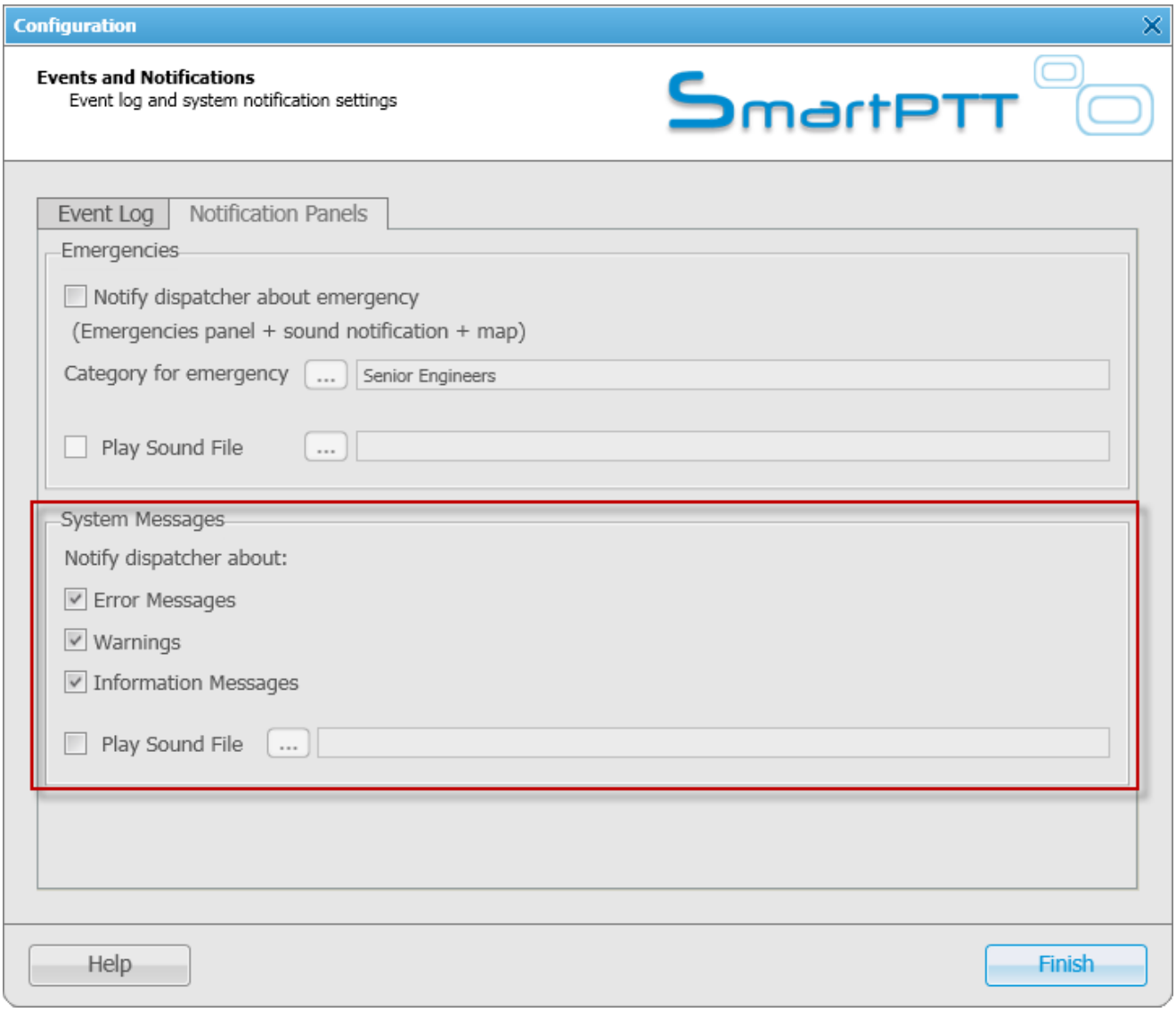
2.7.11 System Messages

The **System Messages** window displays notifications which inform about interaction between SmartPTT Dispatcher and SmartPTT Radioserver.

There are three notification types shown in the **System Messages** window:

- Error messages
- Warnings
- Information messages

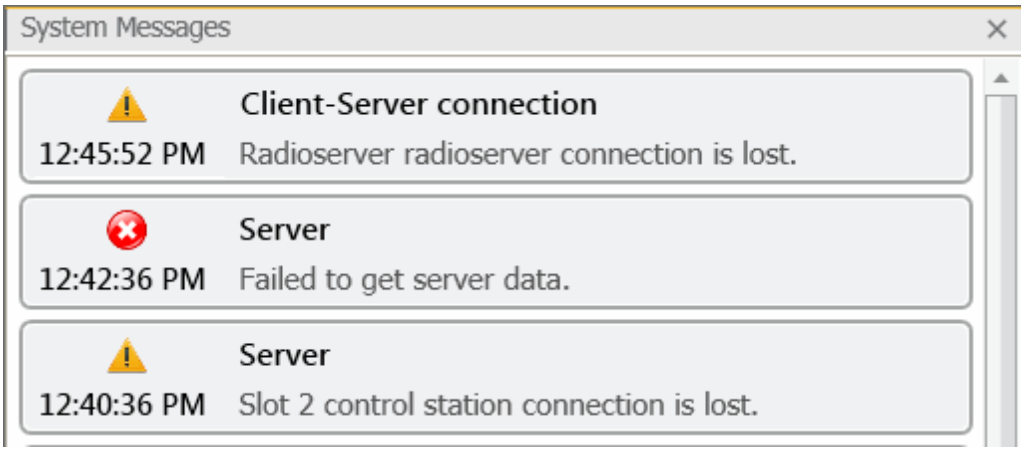
To set up **System Messages**, expand the **Settings** menu in the **Main Menu** bar and click **Events and Notifications**. In the opened window select the **Notification Panels tab**.



In the **System Messages** section select the checkboxes next to the notification types of which the operator is to be informed.

Note: If none of the checkboxes is selected, notifications will be registered in the background, i.e., the **System Messages** window won't open automatically. In this case, if an error is registered, an error message will appear.

To open the **System Messages** panel manually, expand the **View** menu in the **Main Menu** bar and click **System Messages**.



All the three message types (**Error Messages**, **Warnings**, **Information Messages**) have the following format:

1. Source of the problem:

   a) "Client" (SmartPTT Dispatcher)

   b) "Server" (SmartPTT Radioserver)

   c) "Client-Server Connection" (connection between SmartPTT Dispatcher and SmartPTT Radioserver)

   d) "Database"

2. Problem description.

Each message can be differentiated by the following characteristic traits:

- Icons:

  : used for error messages;

  : used for warnings;

  : used for information messages.

- Colors of the messages:

  Red is used for error messages.

  Gray is used for warnings and information messages.

2.7.12 Notifications

The **Notification** window informs the dispatcher that the set of rules were not fulfilled and the alarms were activated.

The following rules are displayed in the **Notifications** window:

- Rules and Alerts
- GPS Rules
- Lone Worker Rules

When the specified event happens and one of the rules triggers, the notification window opens up automatically to display the alarm notification.

The usual notification is composed of the following parts:

- Caption
- Subscriber name and time
- Text of the alarm

2.7.13 Job Tickets

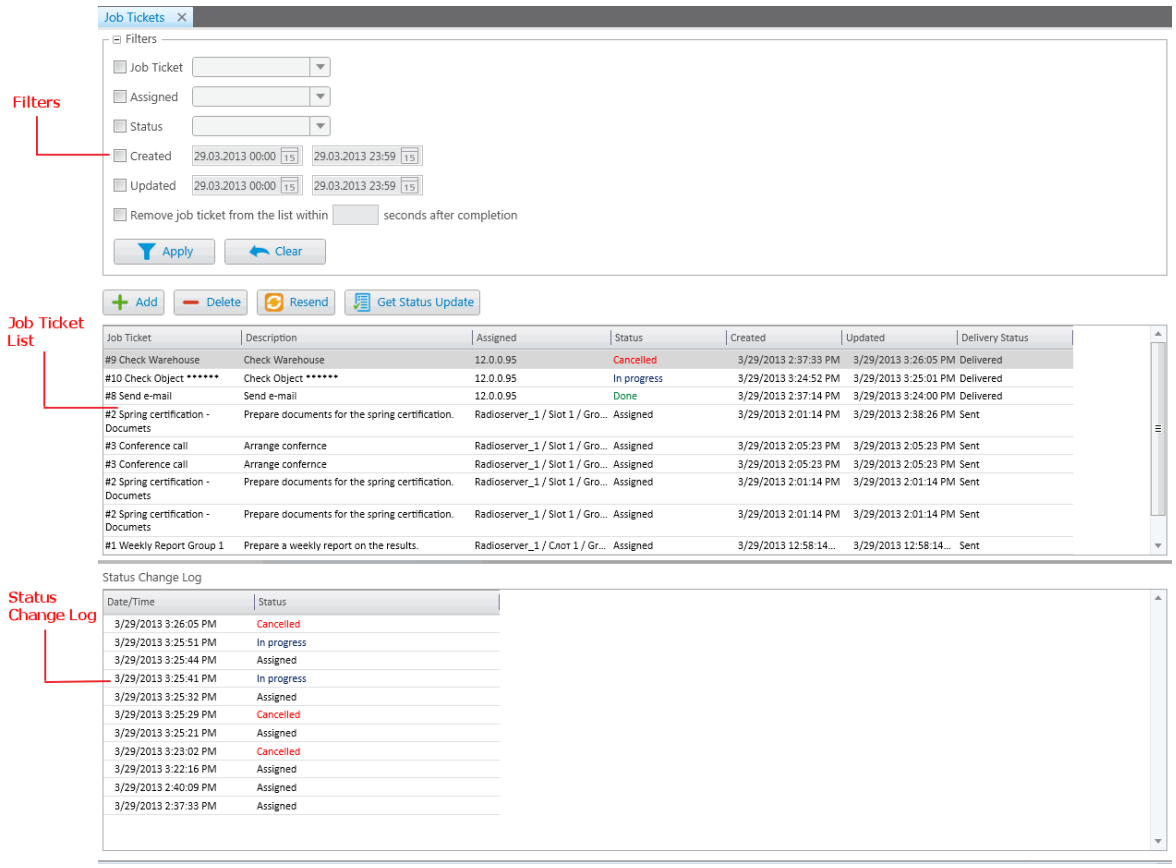
The **Job Tickets** panel allows creating special assignments for individual radio subscribers or talkgroups and tracking their performance.

Note: This functionality is only supported by MOTOTRBO SL Series portable radios. When a job ticket is sent to the radio, which does not support this functionality, it comes as a message, for example, ***<JTS> Job Ticket ? 1 Create weekly report***.

To create a job ticket, expand the **View** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Job Tickets**.

The **Job Tickets** panel can be divided into three parts:

- Filters
- Job Ticket List
- Status Change Log

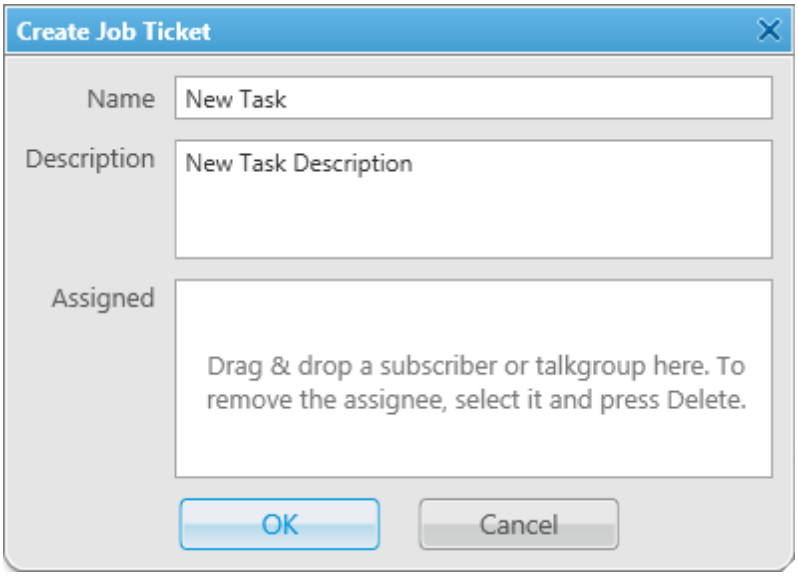


The filters arrange the list of job tickets to the user's taste.

You can hide job tickets from the job list after the particular status is achieved. To do that, select the **Remove job ticket from the list within** checkbox and specify time period in the **seconds after completion** field. The status is set in the job ticket status settings. This setting is disabled if filters are used.

The job list is a section to create, display and delete (or cancel) job tickets.

To create a job ticket, click **Add**.



Name – job ticket name. It is a required field.

Description – description of the job ticket. Also required field.

Assigned – job tickets can be assigned to an individual radio subscriber or to a talkgroup. To do this, simply drag a subscriber or a talkgroup in this field. To remove the assigned subscribers, select the subscribers from the list and press the DELETE key.

After creation, the job ticket will be displayed in the job list with the default status value. When the radio subscriber changes the job ticket status, the status in the job list will be changed accordingly. If the job ticket is assigned to a talkgroup, then the job ticket table will contain the name of the radio subscriber, who changed the job ticket status.

Note: You can also assign job tickets to offline subscribers. As soon as the subscribers become online, they will get the job tickets.

To see the history of changes for job ticket statuses, click on the job ticket status. At that, the **Status Change Log** table will display the information about status updates.

To cancel the job ticket and delete it from the job list, click **Delete**. At that, the radio subscriber, to whom the job ticket was assigned, will receive a text message that the job ticket was canceled (only if **Send Message When Not Completed Job Ticket Was Deleted** is checked in **Job Ticket Statuses**).

If the job ticket has not been delivered (see **Status Delivery**) for some reason or if you want to resend an existing job ticket to the radio subscriber or a talkgroup, click **Resend**. In this case, the job ticket will change its status to the default value.

Information about job ticket statuses can be obtained even for the period, when the dispatcher console was turned off. To do this, click **Get Update Status** to load data from the radioserver database.

2.8 Settings

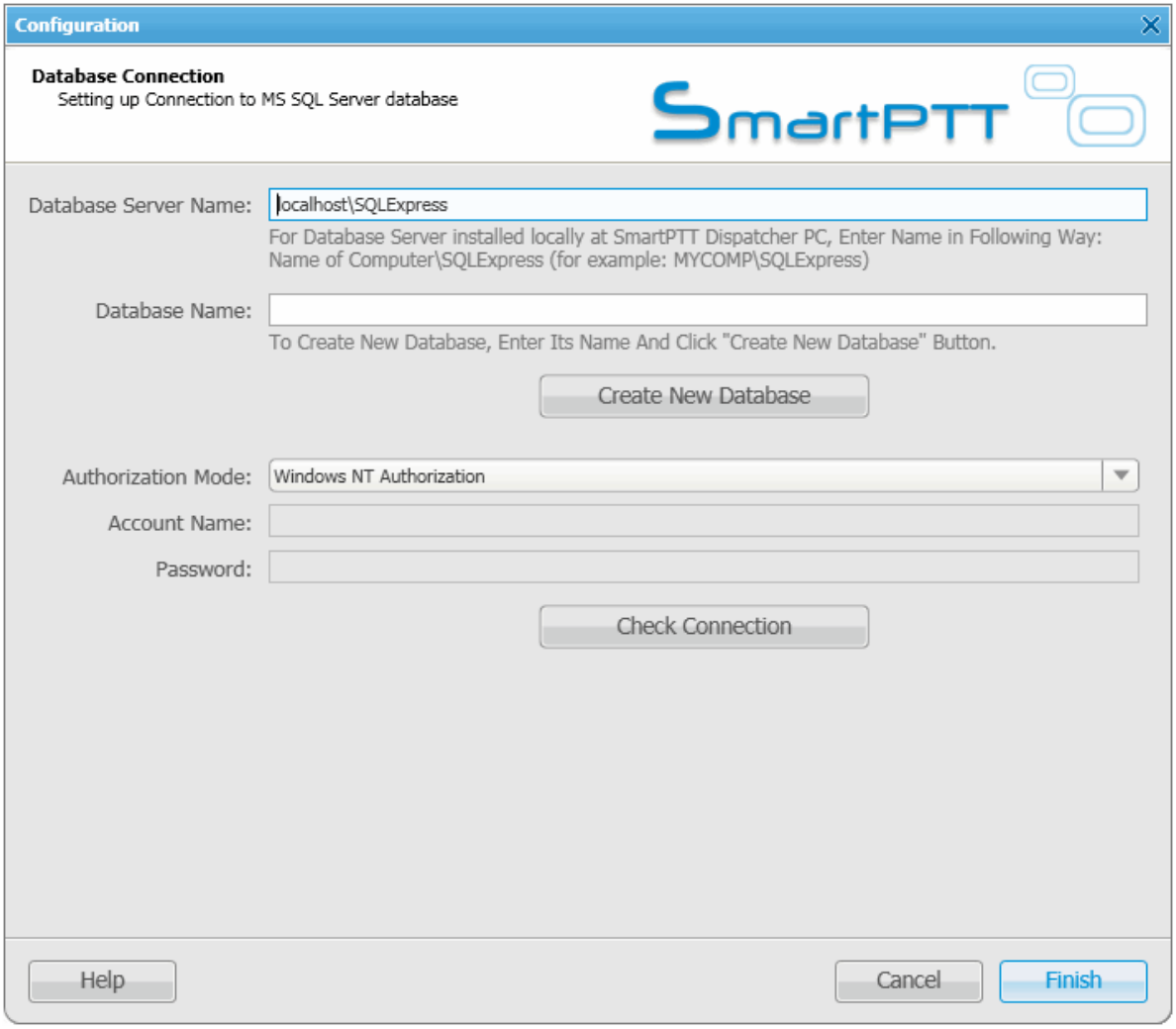
The **Settings** menu allows you to configure system parameters, create special rules, which will help you manage workers, connect external third-party devices and so on:

- Database Settings allows you to manage the system database, i.e., create new database or connect to the existing database.
- Licenses allows you to install licenses.
- General Settings allows you to tune the dispatcher console, e.g., define the PTT button behavior, enable automatic system updates, select language, etc.
- Radioservers allows you to manage available radioservers, e.g., add new radioservers to be seen in the dispatcher console, assign profiles to the available radioservers.
- Statuses allows you to add statuses for radio subscribers displayed in the **Subscribers Management** panel.
- Event Log allows you to manage the event log and the system messages.
- Call Windows allows you to configure **Call Window** parameters, e.g., specify the type of event that triggers the window opening.
- Sound Settings allows you to configure sound settings and set up multichannel sound.
- Records allows you to enable call recording and set up recording parameters.
- GPS allows you to configure GPS settings, e.g., set up GPS request interval, accuracy radius, etc.
- Raster Maps allows you to create raster maps.
- Telemetry allows you to configure telemetry commands to be available.
- Categories allows you to create categories.
- Dispatchers allows you to add other dispatchers and configure parameters of your own dispatcher console.
- Telephone Settings allows you to configure telephone settings and add telephone subscribers.
- Job Ticket Statuses allows you to add statuses for job tickets.

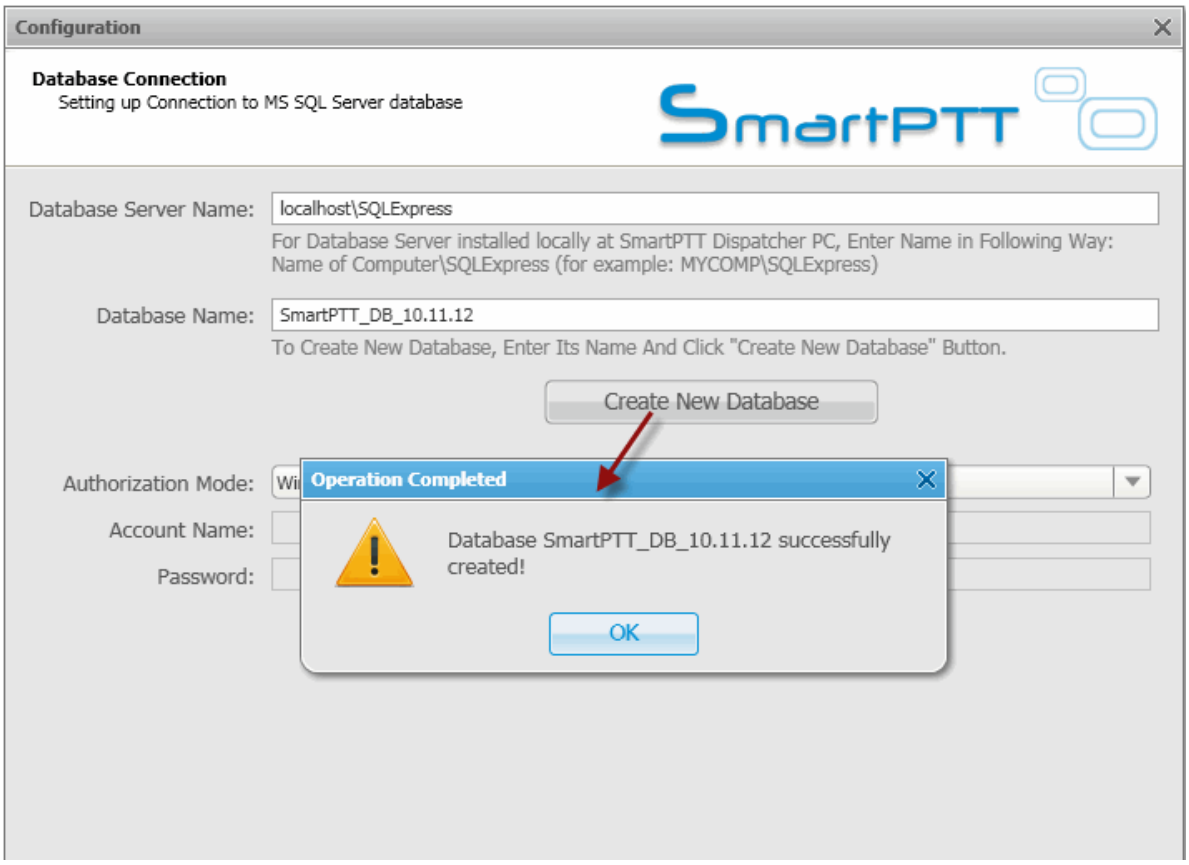
- Tipro allows you to configure Tipro settings.
- Hot Keys allows you to customize keyboard shortcuts for making calls to subscribers.
- Database Auto Backup allows you to set the SmartPTT Dispatcher database auto backup.
- Rules&Alerts allows you to set up rule conditions.
- GPS Rules allows you to set up GPS rules.
- Lone Worker Rules allows you to create and set up **Lone Worker** rules.
- Subscriber Custom Properties allows you to add additional properties to be displayed in subscriber **Properties** window.
- Custom Consoles allows you to cteate custom consoles with necessary elements.

2.8.1 Database Settings

To connect to the database, expand the **Settings** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Database Settings**. At that, a configuration window for database creation opens.



To create a new database, fill in the **Database Server Name** and **Database Name** fields, and click **Create New Database**. If creation was successful, a message about successful database creation is displayed. If the database is not created, the reason will be displayed at the bottom of the window.



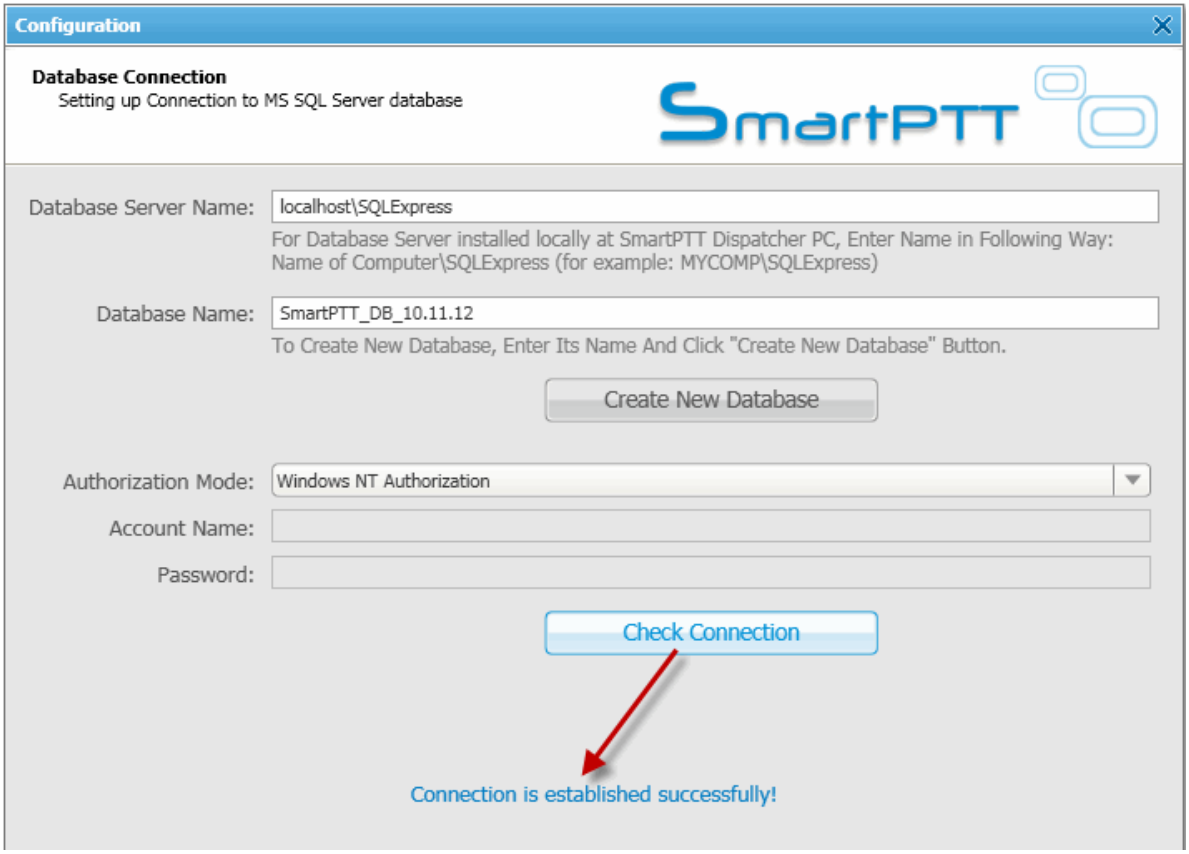
Note: For the database server installed together with the SmartPTT dispatcher application enter the name using the format: Name of PC\SQLExpress (for example, MYCOMP\SQLExpress).

To test connection with the database, choose **Authorization Mode**.

SQL Server Authorization – you must have the login and password of the account which has access to the SQL server.

Windows NT Authorization – the user who has logged into the Windows system, must be listed in the SQL server's list of users to make connection.

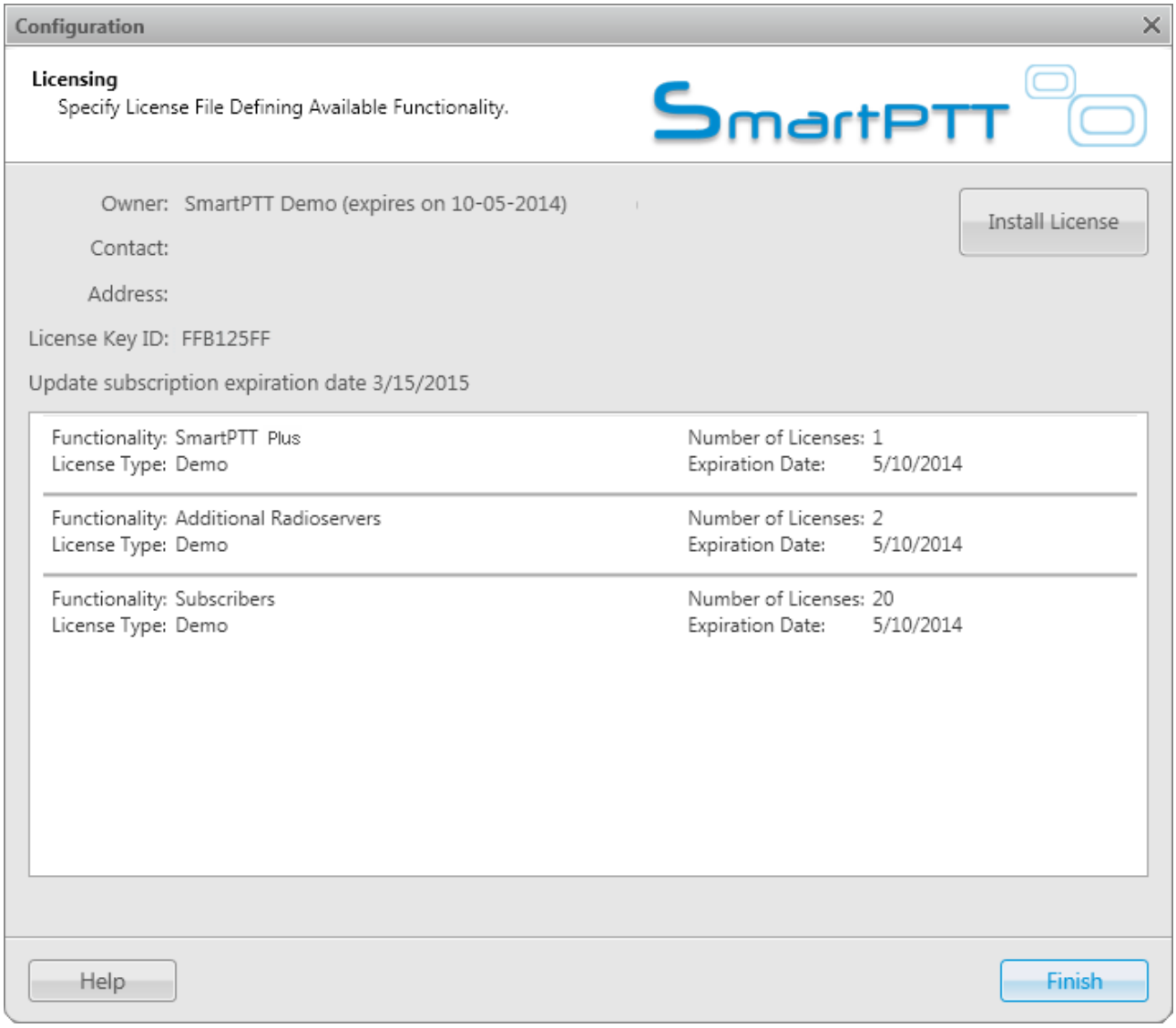
Click **Check Connection**. In case of successful authorization the message "Connection is established successfully!" is displayed. If authorization fails, the reason will appear at the bottom of the window.



2.8.2 Licenses

To use the SmartPTT application you need to install licenses. There are licenses for basic features which allow you to run the application and licenses for additional features, like telephone connection support, bridging, SNMP service, etc.

To install licenses, expand the **Settings** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Licenses**. The configuration window opens from where you can load license files which define functions available in the system.



Click **Install License** – the browse window will open. Specify the license file's location and click **Open**.

The license is installed, and the system licensing window displays information on the license type and scope of functions.

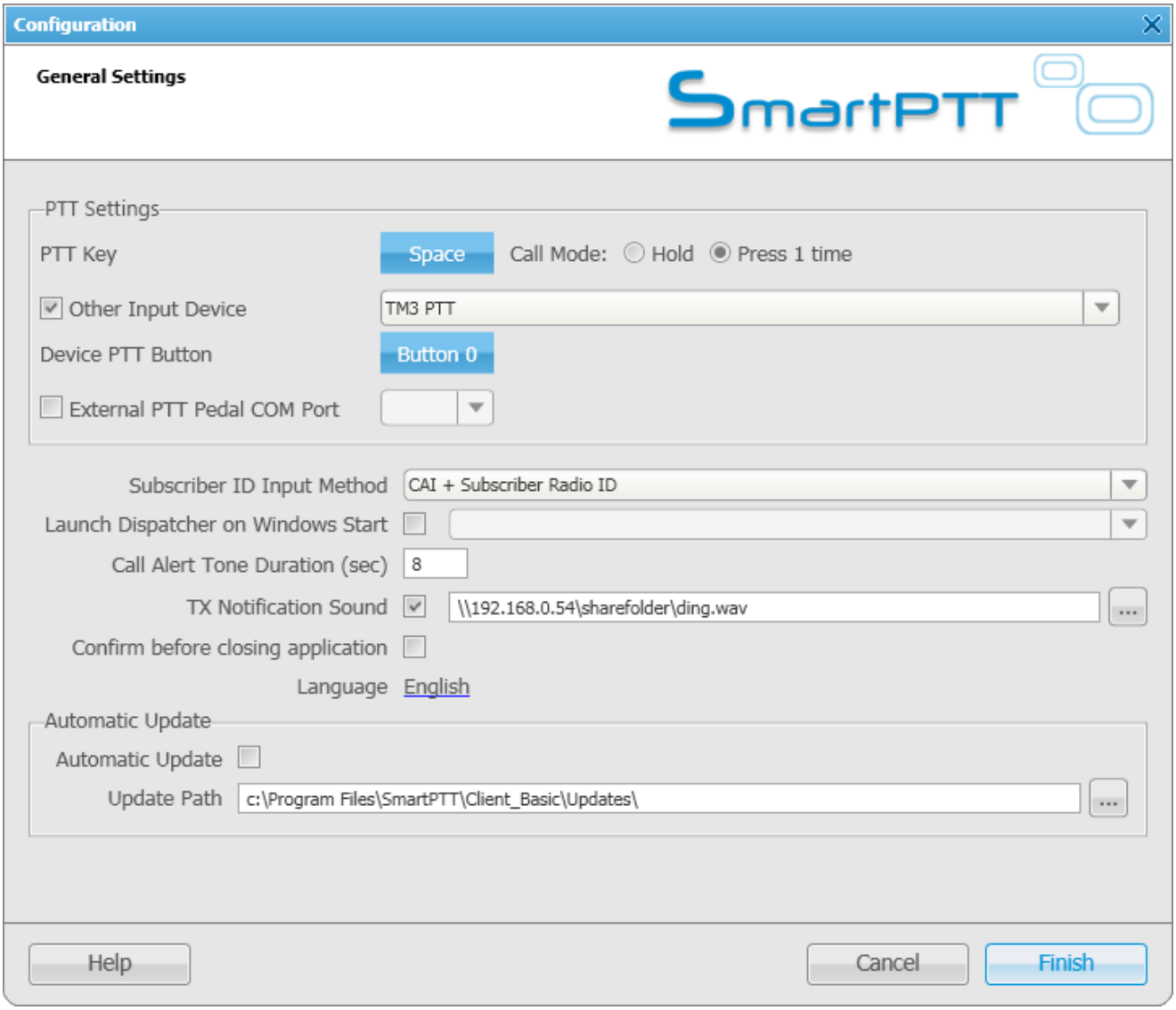
Note: If the radioserver and the dispatcher console are installed on one and the same machine, you can install the

licenses either in SmartPTT Radioserver Configurator or in SmartPTT Dispatcher. If the radioserver and the dispatcher console are installed on different PCs, you need to install the licenses in both applications.

2.8.3 General Settings

In the **General Settings** window you can configure the global settings of the SmartPTT Dispatcher application, for example, specify PTT behavior, select interface language, enable automatic update, etc.

To set the general settings, expand the **Settings** menu in the **Main Menu** bar and select **General Settings**. At that, the following window appears.



The **General Settings** window can be divided into 3 sections:

1. PTT settings
2. Miscellaneous
3. Update settings

PTT Settings

In this section you can set up the PTT button on:

1. the keyboard;

2. the external input device connected via USB;

3. the external input device connected via COM port (currently, it is a foot pedal).

To set up the PTT button on the keyboard, click on the blue button next to **PTT Key** and then press any key on the keyboard. To define the working mode of the PTT key, select either **Hold** or **Press 1 time**.

To set up the PTT button on any external input device connected via USB, select **Other Input Device** and choose the required device from the list. Then click on the blue button next to **Device PTT Button** and press any button on the device.

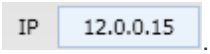
External PTT Pedal COM Port – COM port used to connect to the external PTT pedal.

Note: There is only one mode available for the PTT button on external devices – hold to enable.

To save changes, click **Finish**.

Miscellaneous

Subscriber ID Input Method sets the input and display method used for showing network ID in the radio subscriber **Properties** window: IP address or CAI + subscriber ID.

IP Address – IP address is entered and displayed in the subscriber **Properties** window, for example, 

.

CAI + Subscriber ID (CAI network ID and a unique radio station ID) are entered and displayed in the subscriber's **Properties** window, for example,

.

Launch Dispatcher on Windows Start – launches SmartPTT Dispatcher automatically on Windows start under specified dispatcher account.

Call Alert Tone Duration (sec.) – configures the call alert tone sound duration for the Dispatcher application.

Talk Permit Tone – sets alert tone which sounds after the PTT button is pressed and the dispatcher is able to transmit on the channel.

Confirm Before Closing – if selected, the application will ask for a confirmation before closing.

Language – selects interface language.

Note: After selecting a new language, restart SmartPTT Dispatcher to apply the change.

Automatic Update

To enable automatic update, select the **Automatic Update** checkbox. If the checkbox is selected, the system will be checking for updates on a regular basis.

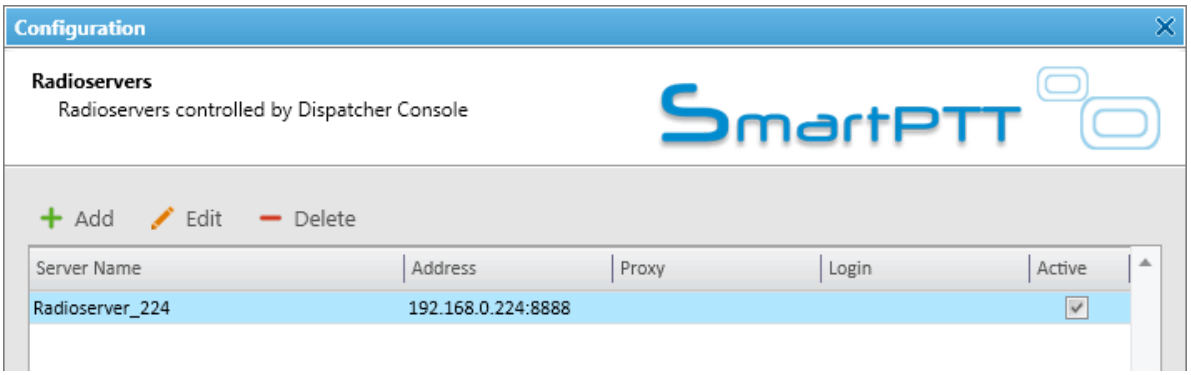
In the **Update Path** specify the path to the **ClientSetup.exe** file which you download together with SmartPTT Software Installation Package.

If the new SmartPTT version is available, when you launch SmartPTT Dispatcher (or when you choose **Check for Updates** from the **Service** menu), the notification window will appear.

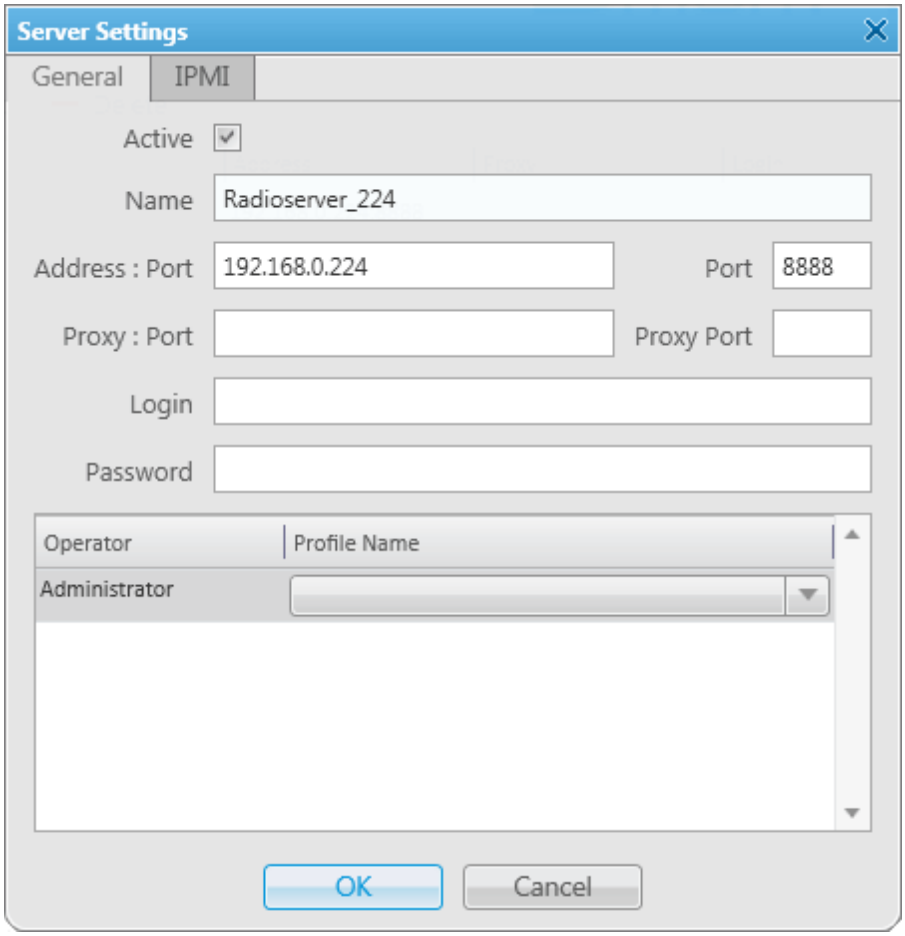
Note: After downloading the new system version, it is not necessary to uninstall the previous version.

2.8.4 Radioservers

To connect the existing radioserver to the dispatcher console, expand the **Settings** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Radioservers**. The configuration window for setting up and configuring the list of radioservers opens up.



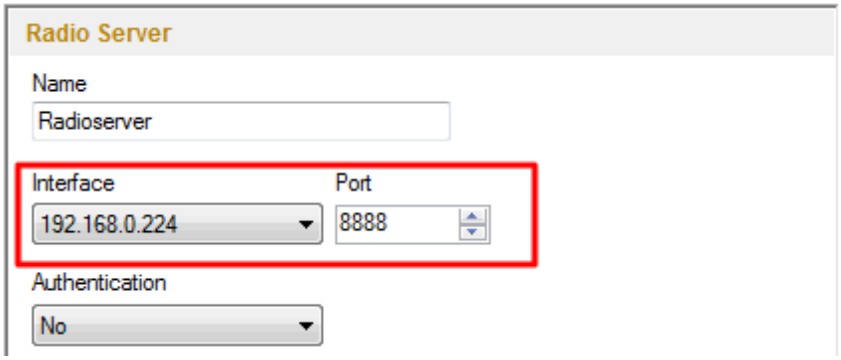
By default, the list of radioservers is empty. Click **Add** to open the window for adding radioservers.



Name – radioserver name displayed in the list of radioservers.

Address, Port – radioserver IP address and port number to connect with the dispatcher (the default radioserver port number is 8888). Make sure that the **Address** and **Port** you enter match the **Address** and **Port** specified in SmartPTT Radioserver Configurator.

In this example we use port *8888*.



Proxy:port – is a proxy server IP address and port number of the connection.

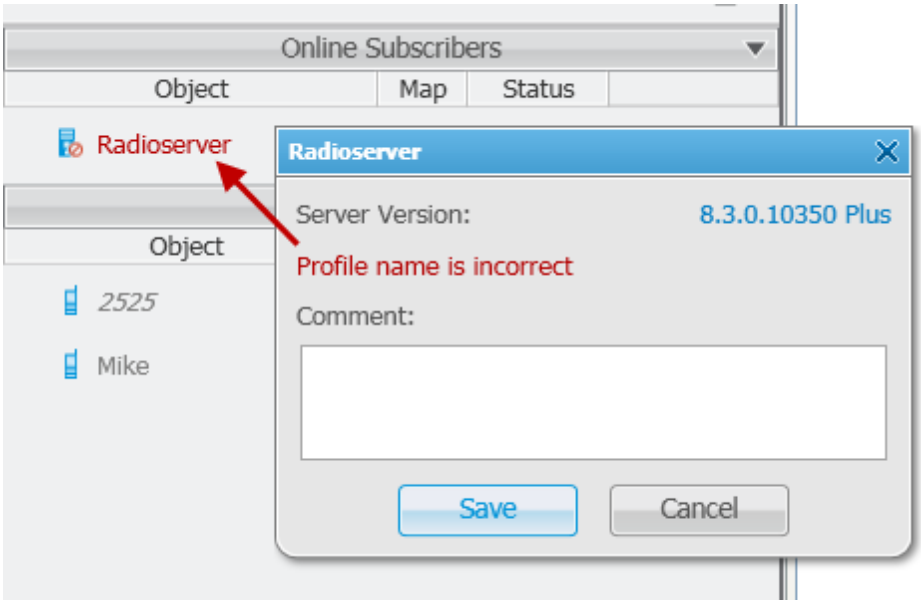
Fields **Login** and **Password** must be filled if authentication is enabled on the radioserver side. To enable authentication on the radioserver side, run SmartPTT Radioserver Configurator, click **Radioserver**, select *Windows* in the **Authentication** field. Currently, you can select only Windows authentication. If Windows authentication is selected, you can't connect the dispatcher console and the radioserver without indicating valid credentials in the **Login** and **Password** fields. If the radioserver computer makes part of a domain, indicate the domain login and password, if not – indicate local login and password.

Note: If *No* is selected in the **Authentication** field, make sure that the fields **Login** and **Password** in the dispatcher console are empty. Otherwise, the dispatcher console and the radioserver can't connect.

Active – if selected, the radioserver is available for connections. You should also remember that you do not have to remove the radioserver from the list to disable it. It is enough to clear the checkbox.

Operator – list of all active operators created in SmartPTT Dispatcher.

Profile Name – enter profile name defined for the dispatcher in SmartPTT Radioserver Configurator. If **Profile Name** is not specified, the dispatcher has access to all radios, talkgroups and services provided by the radioserver. If the profile name is incorrect, the radioserver will be marked red.



Note: Profile management is described in the SmartPTT Radioserver Configurator help file.

After all the fields are completed, click **OK**. At that, the new radioserver appears in the list of radioservers.

To edit the radioserver settings, select it in the list of radioservers and click **Edit**.

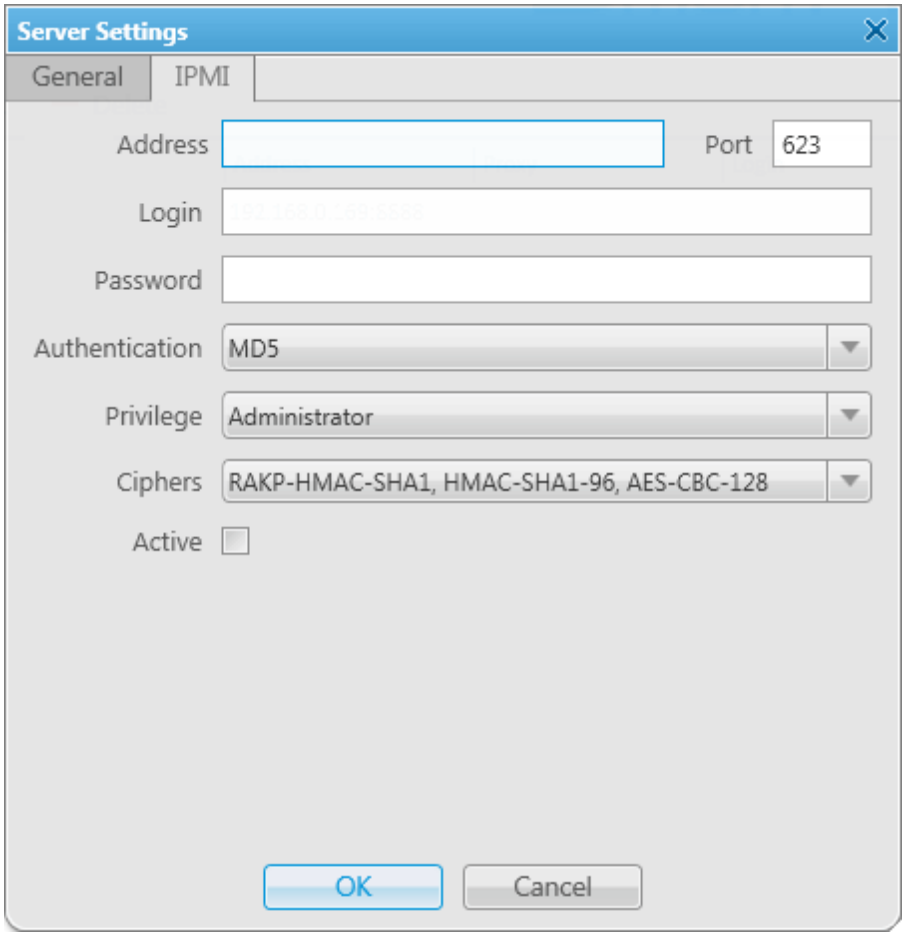
To delete the radioserver, select it in the list of radioservers and click **Delete**.

IPMI Settings

Intelligent Platform Management Interface (IPMI) is a standardized computer system interface used for out-of-band management of computer systems and monitoring of their operation.

SmartPTT system uses IPMI for managing and monitoring remote radioservers. With the help of IMPI you can not only learn about the hardware characteristics of the radioserver machine, but also turn it on/off remotely.

To set up IPMI open the **Server Settings** window of the selected radioserver and then open the **IPMI** tab.



Address, Port – IPMI interface address.

Login and **Password** are obligatory fields. they must match the login and password set at the radioserver.

Authentication – authentication types. Use **MD5** as default authentication type.

Privilege – depending on the privilege used, the user has different permissions. Use Administrative as default. For more information about the privileges, check the official IPMI documentation.

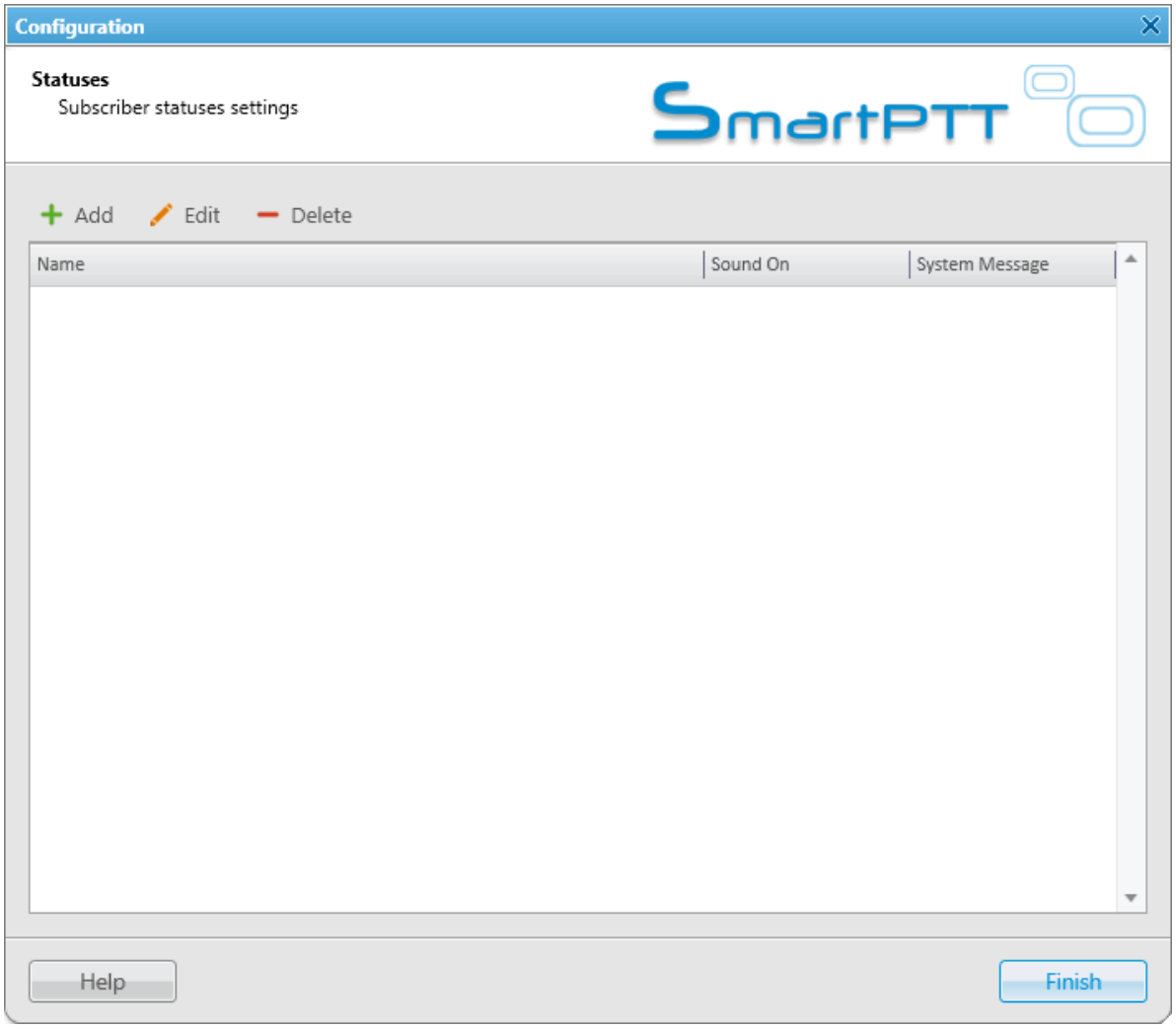
Ciphers – the list of ciphers to be used. Select the default cipher, that is ***RAKP-HMAC-SHA1, HMAC-SHA1-96, AES-CBC-128.***

Active – select the checkbox to activate IPMI functionality for the radioserver.

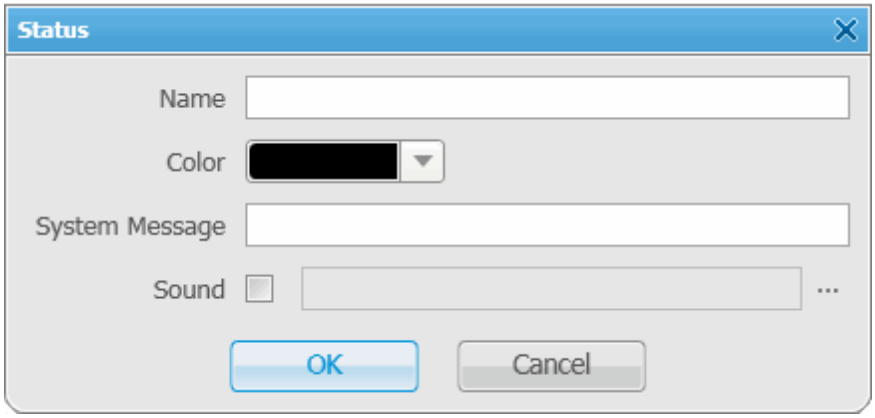
2.8.5 Statuses

You can create statuses to assign to radio subscribers (for example, Available, On Call, In Place or Busy). Each radio subscriber can have a status showing their current state. The status is set either by the dispatcher or by the radio subscribers themselves.

To set up statuses, expand the **Settings** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Statuses**. At that, the configuration window opens.



To add a new status, click **Add** in the **Active** tab. A window for adding a new status opens.



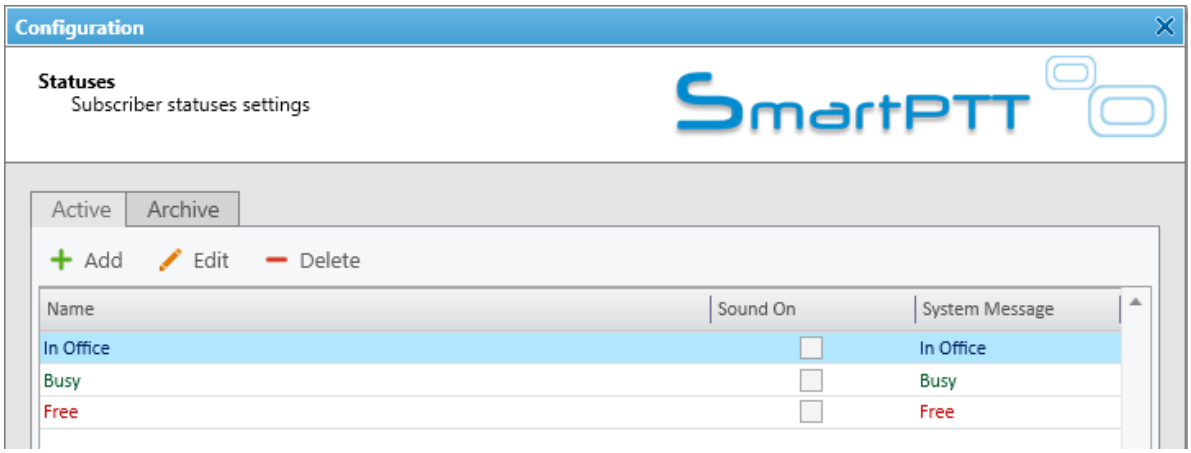
Name – status name to be displayed in SmartPTT Dispatcher.

Color – status color to be displayed in SmartPTT Dispatcher.

System Message – message which triggers status change, that is if a radio subscriber sends this message to the dispatcher, the subscriber receives the status.

Sound – audio file played back if the status is activated.

Click **OK**, and the new status is added to the list of statuses.

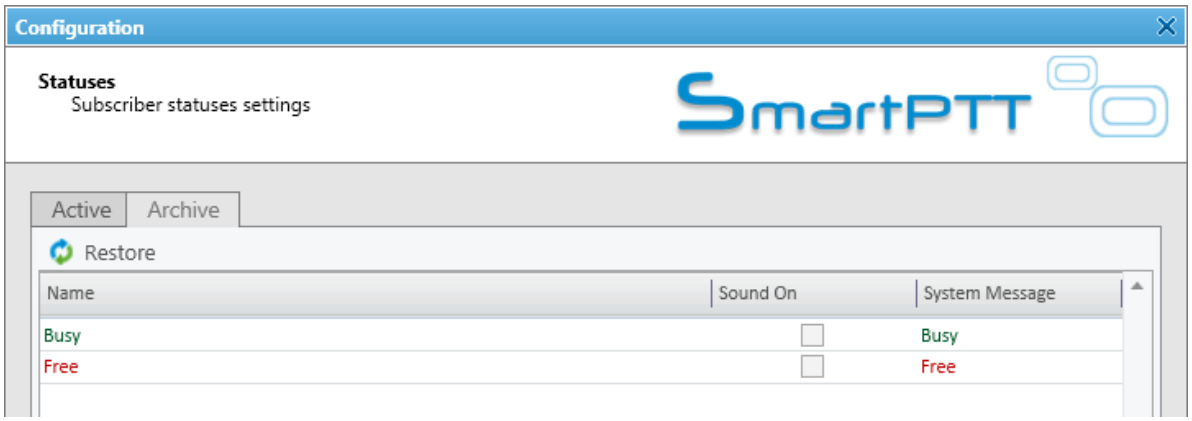


To edit the existing status, select it in the list of active (the **Active** tab) statuses and click **Edit**.

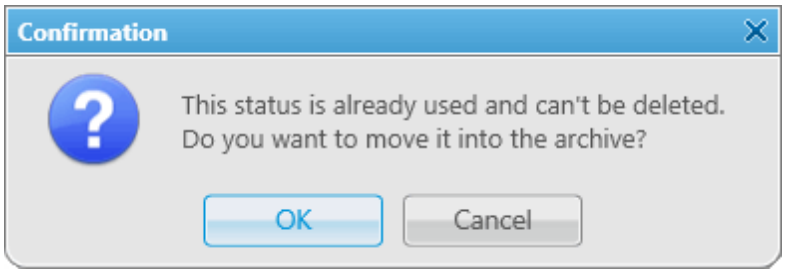
To delete a status, select it in the list of active statuses and click **Delete**. You can delete a status only if it was never assigned to a subscriber. If the status is currently assigned to a subscriber or used to be assigned, it can't be deleted. But, it can be moved to an archive. Characteristics of the archive statuses are:

- They can't be assigned to radio subscribers.
- They can't be used in the alert rule definitions. However, the archive status remains valid as an alert rule criteria for a particular rule, if it was selected as such before being moved to the archive.
- They are displayed in the event log entries.
- They can be restored from the archive.

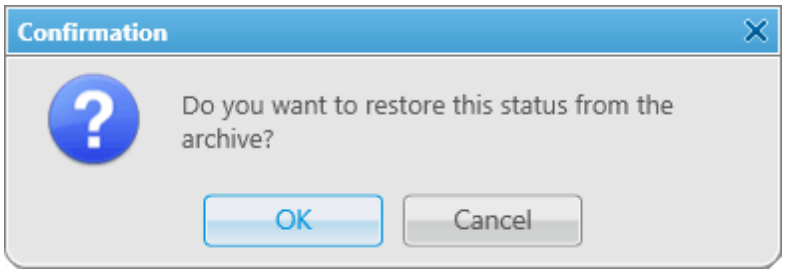
To see the list of archive statuses, open the **Archive** tab of the **Statuses** window.



To move the status to the archive, select the status from the active status list, click **Delete** and click **OK** in the opened dialog box to confirm the action.



In order to restore the status from the archive, select the status from the archive list, click **Restore** and then click **OK** in the opened dialog box to confirm the action.

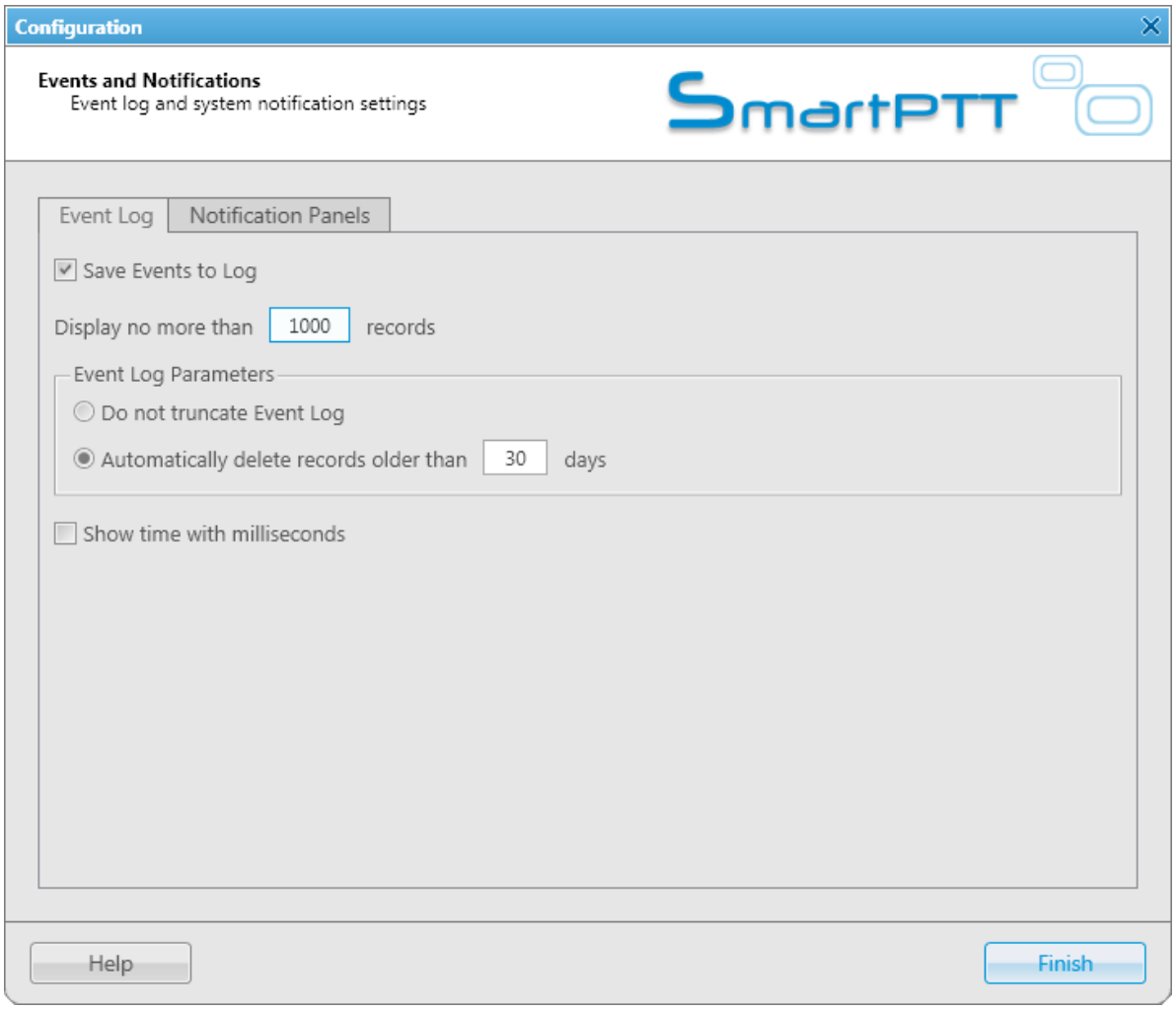


2.8.6 Events and Notifications

The **Events and Notifications** window provides the following settings:

- Event log settings
- Settings for the **Emergencies** panel
- System message settings

To manage the event log, expand the **Settings** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Events and Notifications**:



Save Events to Log – when the checkbox is selected, events data is saved in the SmartPTT Dispatcher database.

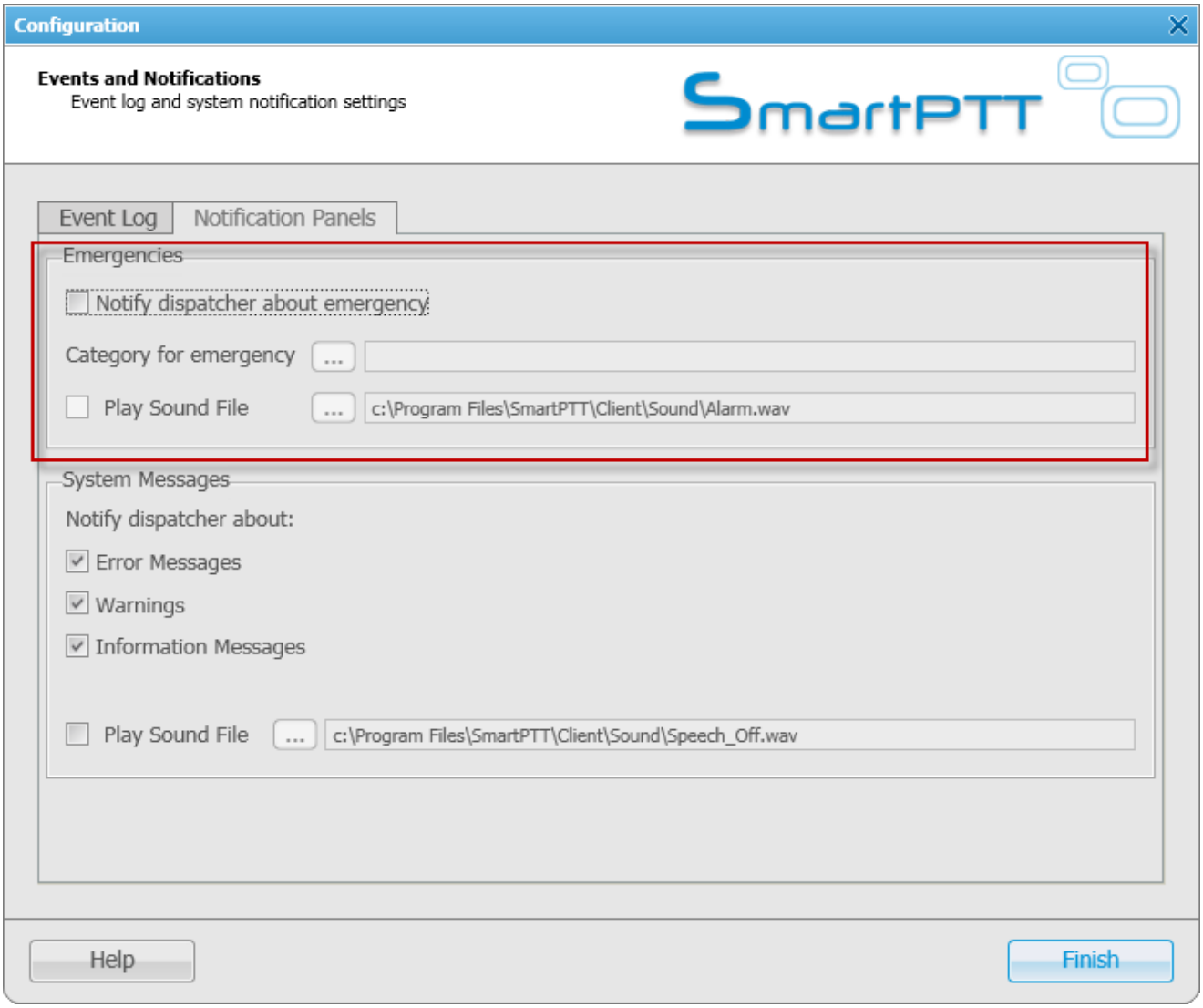
Display no more than – sets the number of records to be displayed in the log.

Event Log Parameters – an area to configure cleaning settings for the event log.

Show time with milliseconds – sets time format to display milliseconds.

To save changes, click on **Finish**.

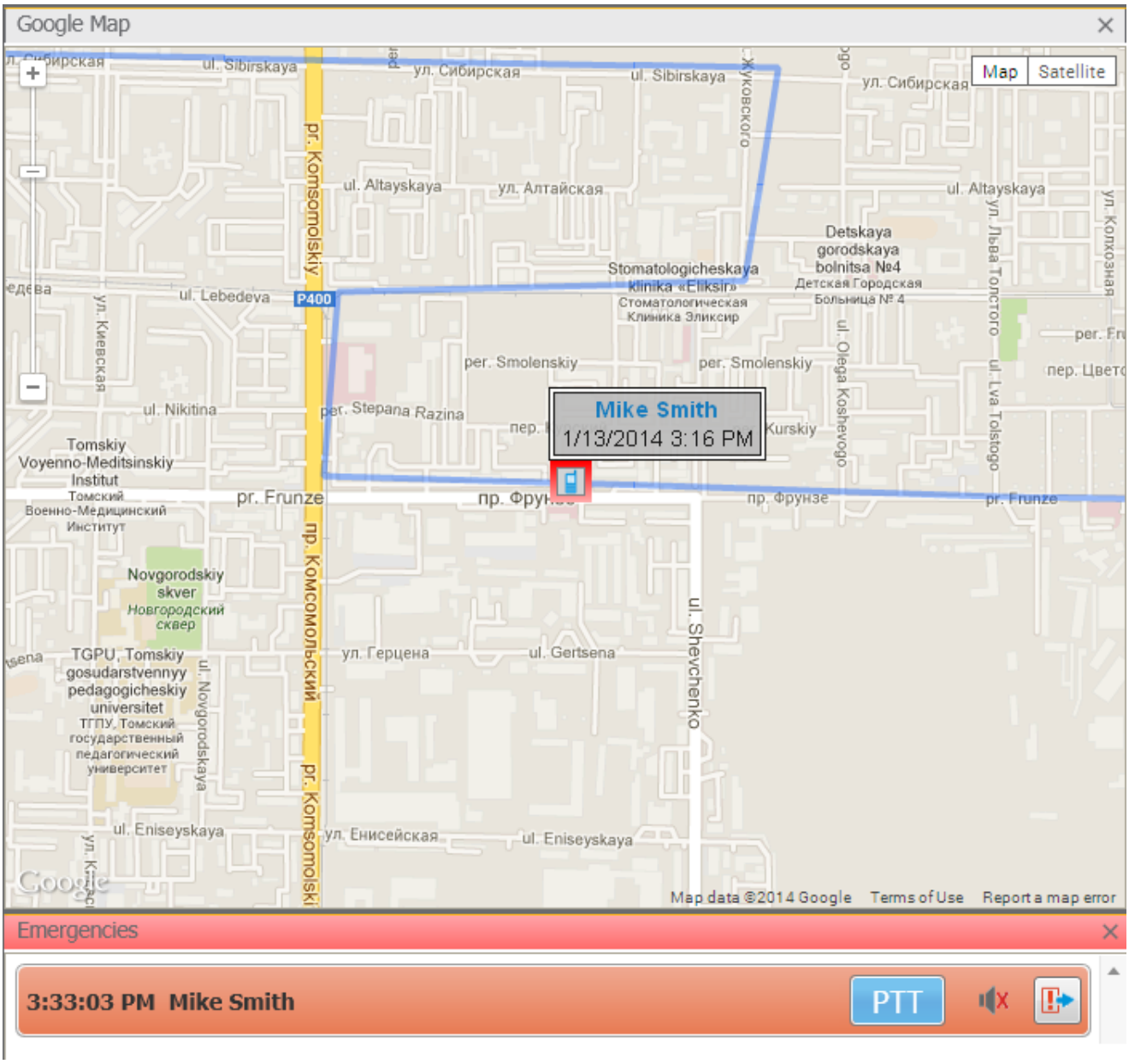
To set parameters for the **Emergencies** panel, click on the **Notification Panels** tab.



Notify dispatcher about emergency – if enabled, when receiving an emergency signal from a radio subscriber, the system will open the **Emergencies** panel, play the sound file, if specified, and will open the map to display the radio sending the emergency signal. The radio location on the map is based on the latest GPS data.

Category for emergency – select a category, which will be responsible for resolving the emergency issue. If the category is selected, it will also appear on the map.

If enabled, the **Emergencies** panel opens automatically, when the system receives the emergency signal:



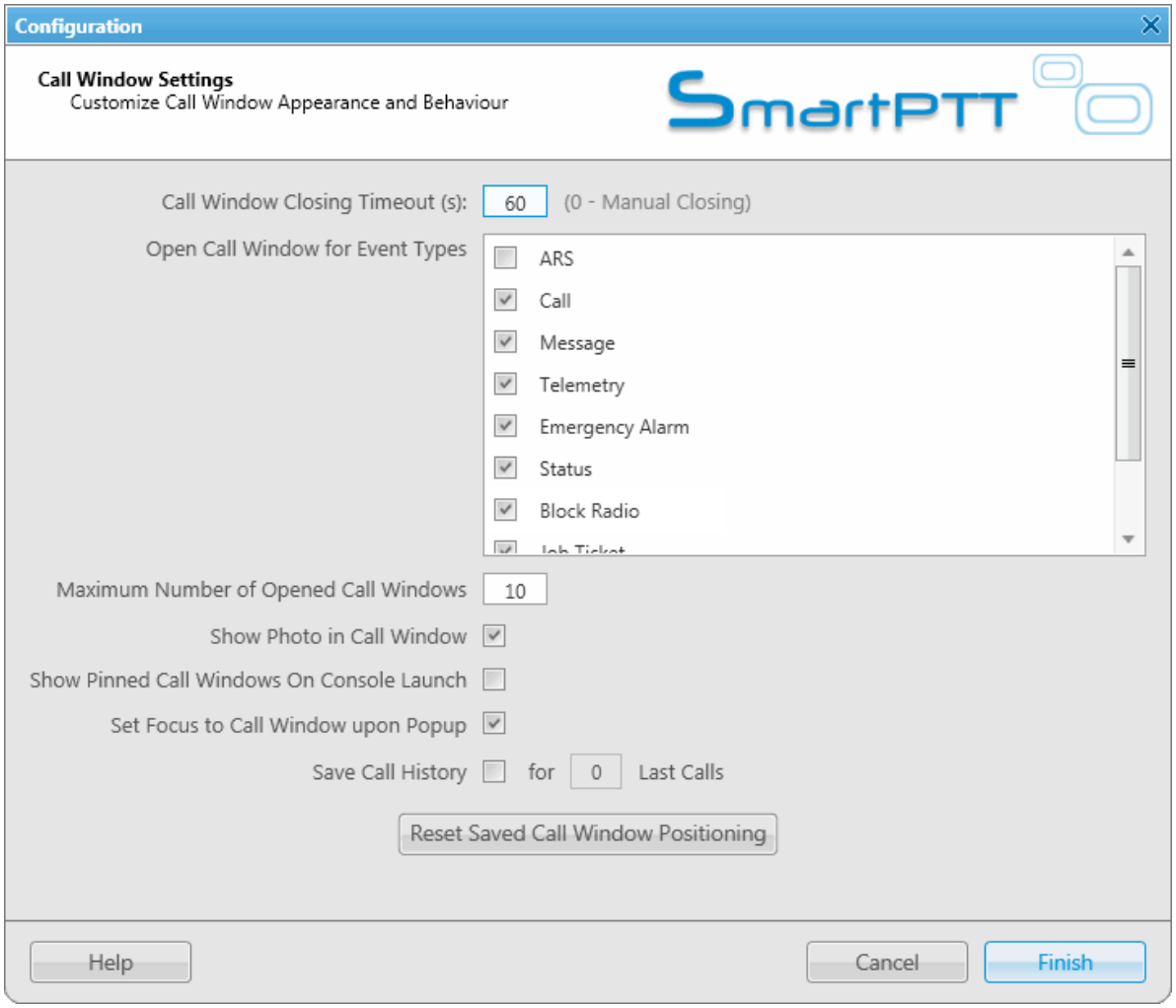
From the **Emergencies** panel the dispatcher can do the following:

- Make a group call. The talkgroup is set in the radio parameters in MOTOTRBO CPS.
- Turn off the sound alert by clicking .
- Mark the issue as resolved by clicking . At that, the **Emergencies** panel gets closed.

To set parameters for the system messages, see System Messages.

2.8.7 Call Windows

To configure the parameters of the **Call Window**, expand the **Settings** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Call Window Settings**. At that, the configuration window opens where you can configure the appearance and functions of the **Call Window**.



Call Window Closing Timeout (sec) – sets the time period in seconds at the end of which the **Call Window** closes automatically.

Note: If you enter 0 in the field, the **Call Window** won't close automatically.

Open Call Window for Event Types – specifies types of events triggering the **Call Window** opening (**Registration**, **Call**, **Message**, **Telemetry**, **Alarm**, **Status**, **Block Radio**, **Job ticket**, **Lone Worker**, **Radio**

Check).

Maximum Number of Opened Call Windows – allows you to set up the maximum number of call windows opened automatically.

Show Photo in Call Window – select to display the subscriber's photo in the **Call Window**.

Show Pinned Call Windows on Console Launch – if selected, the position of the **Call Windows,** pinned before the SmartPTT Dispatcher application closing, will be restored during next launch.

Make Call Window Active upon Opening – select the checkbox to focus on the **Call Window** when it is opened or have a new activity.

Save Call History – allows you to keep call history when SmartPTT Dispatcher is closed.

Reset Saved Call Window Positioning – click the button to reset the current position of the call windows.

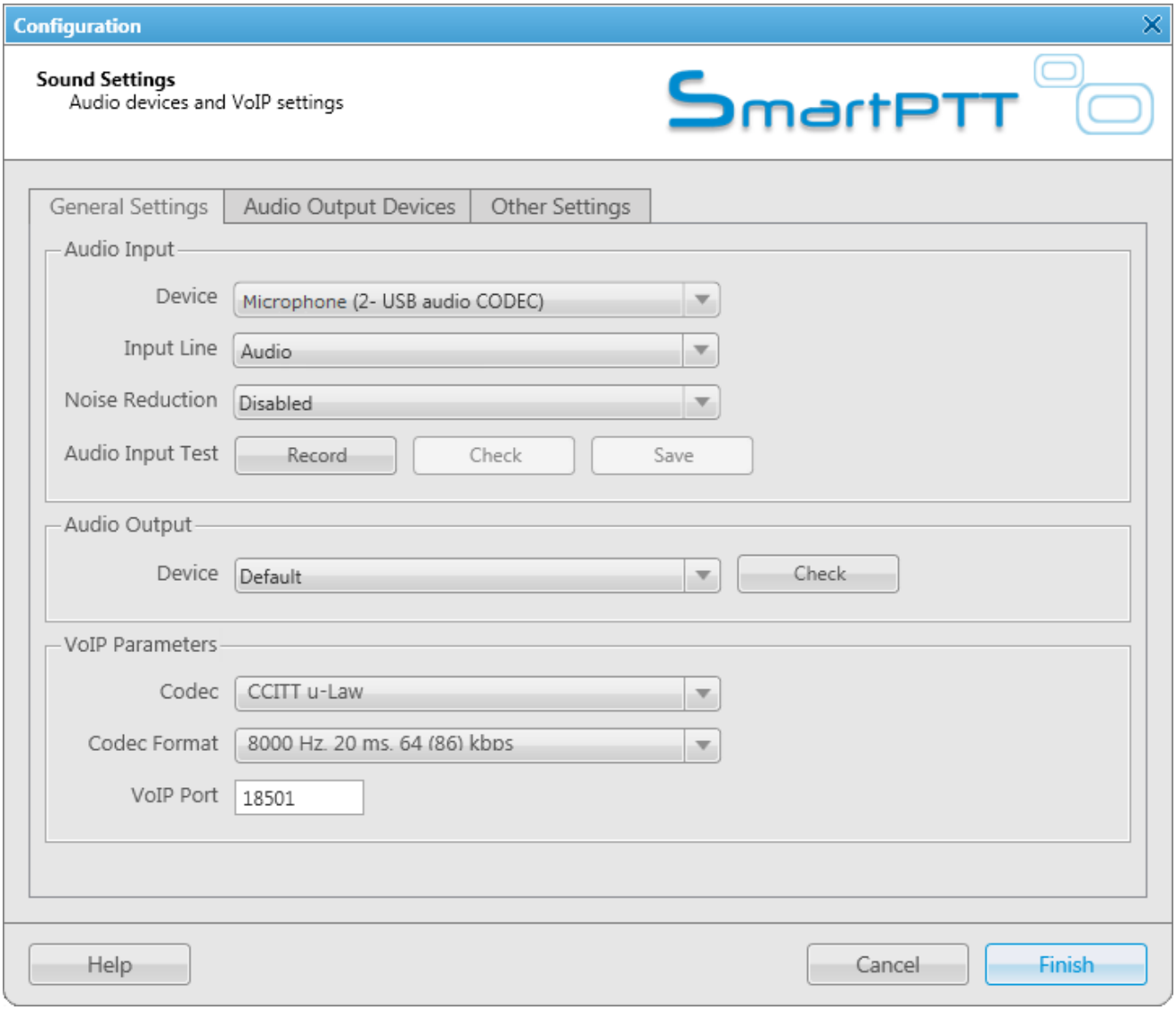
2.8.8 Sound

To set audio device settings and VoIP parameters, expand the **Settings** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Sound Settings**. At that, the configuration window opens up.

The **Sound Settings** window includes:

1. **General Settings** tab
2. **Audio Output Devices** tab
3. **Other Settings** tab

The **General Settings** tab:



Audio Input – audio device to which the microphone is connected.

Input Line – audio mixer line used to connect a microphone.

Noise Reduction – allows making dispatcher sound clearer by reducing noises. You can choose several levels starting from 6 to 18 dB. If voice and noise levels are the same or close, do not enable noise reduction.

Audio Input Test – allows checking quality of microphone performance. To test your microphone performance, click **Record** and then talk into the microphone. Stop recording by clicking **Stop**, which appears instead of **Record**. To listen to what you have just recorded, click **Check**. You can also save the recording in MP3 format by

clicking **Save**.

Audio Output – audio device to which headsets or speakers are connected. To check quality of the audio output device performance, click **Check**. At that, you will hear a sound. To stop the sound, click **Stop**.

Codec – audio stream compression method.

Bitrate – audio stream sampling frequency.

VoIP Port – audio stream receive port.

Specifications of the codec format **8000 Hz, 20 ms, 64 (89) kbps**:

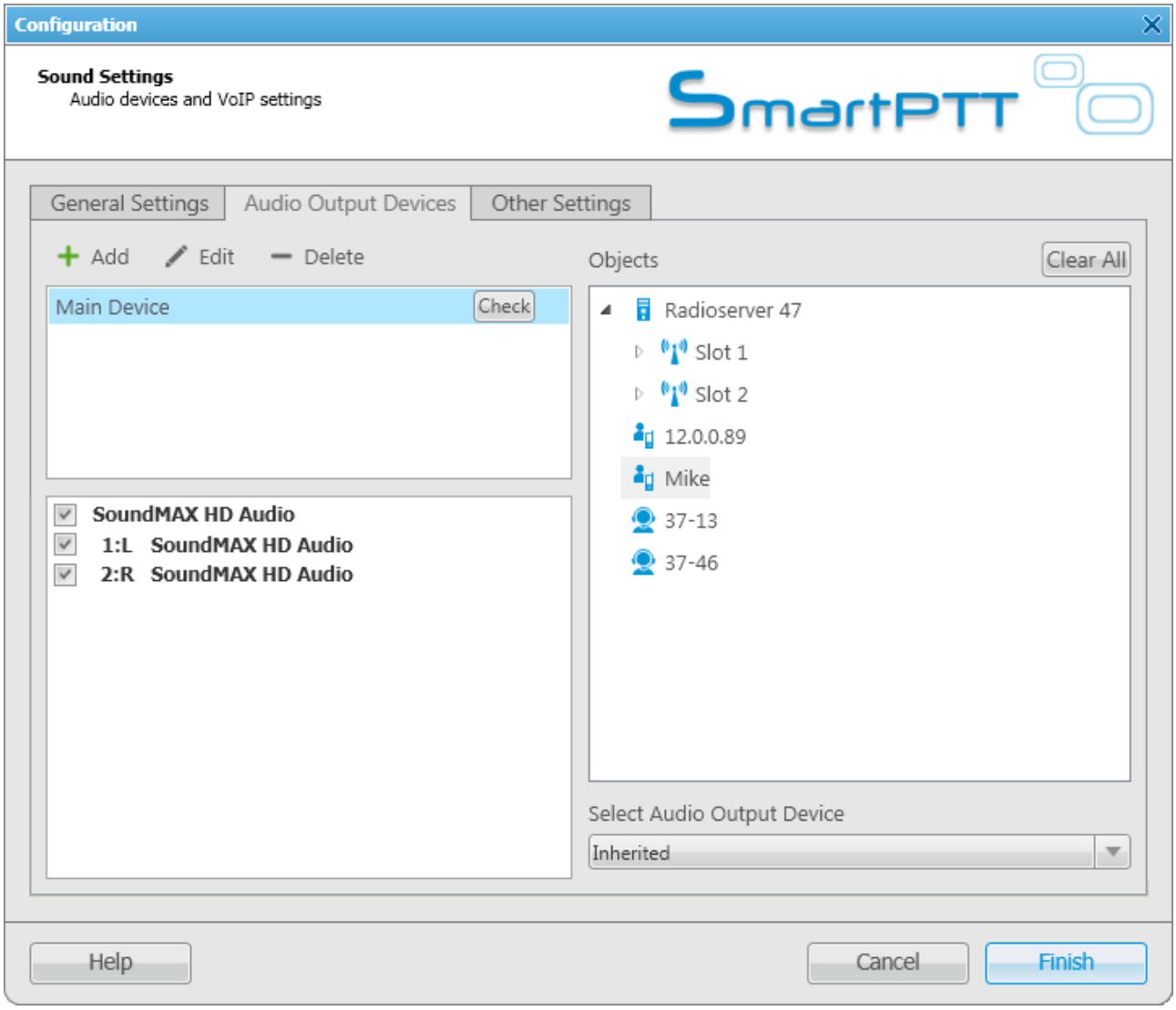
8000 Hz – the sampling rate

20 ms – the frame size

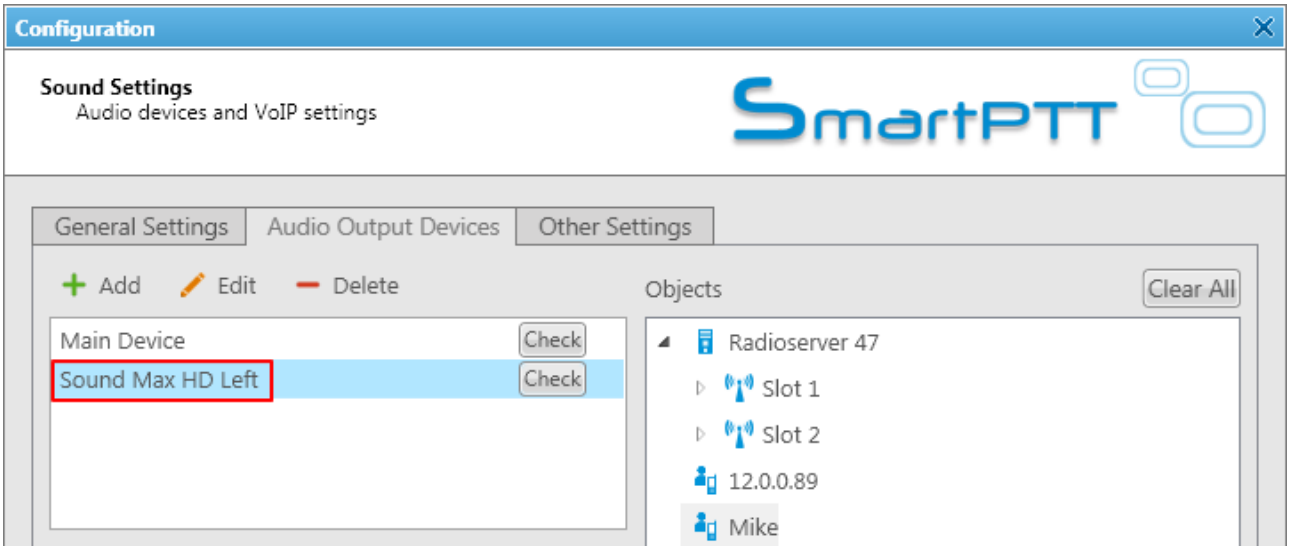
64 kbps – the voice data bit rate

89 kbps – a full bit rate (required network bandwidth)

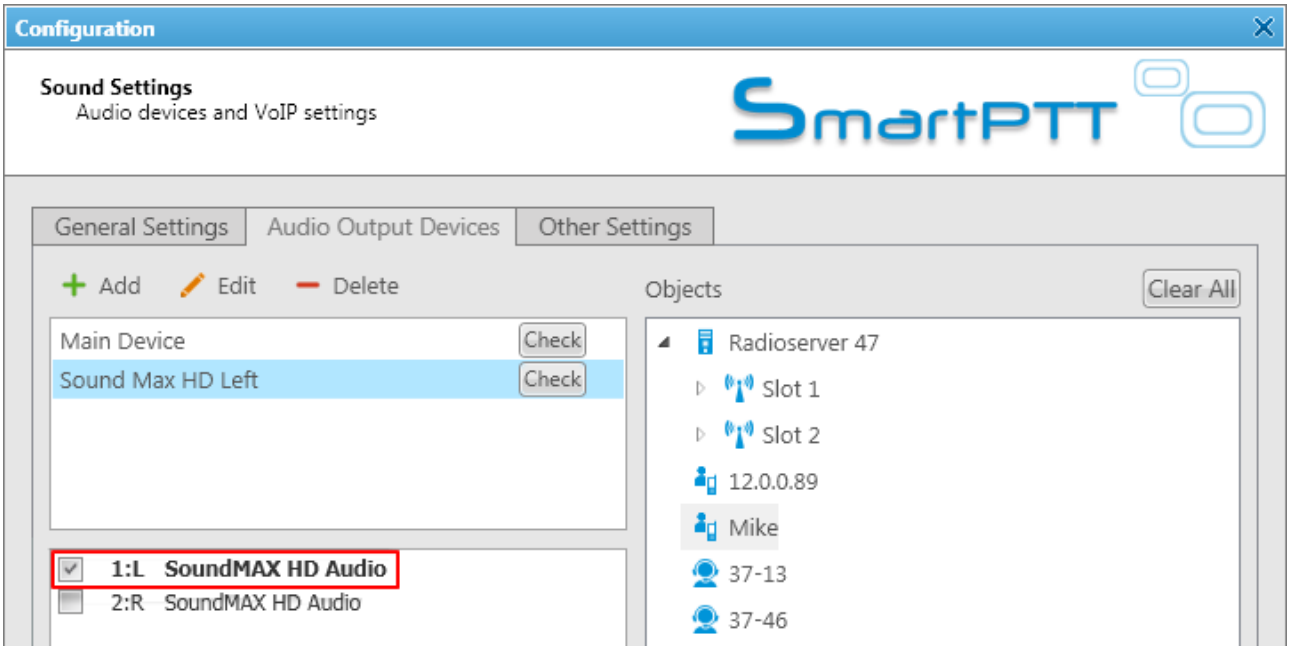
Starting from version 8.3, dispatch console allows you to set up different audio output devices, including multiple channels, for different subscribers, talkgroups, slots, etc. E. g., you can listen to radio subscribers on the headset, and the external dispatcher on the speakers. To do that, open the **Audio Output Devices** tab.



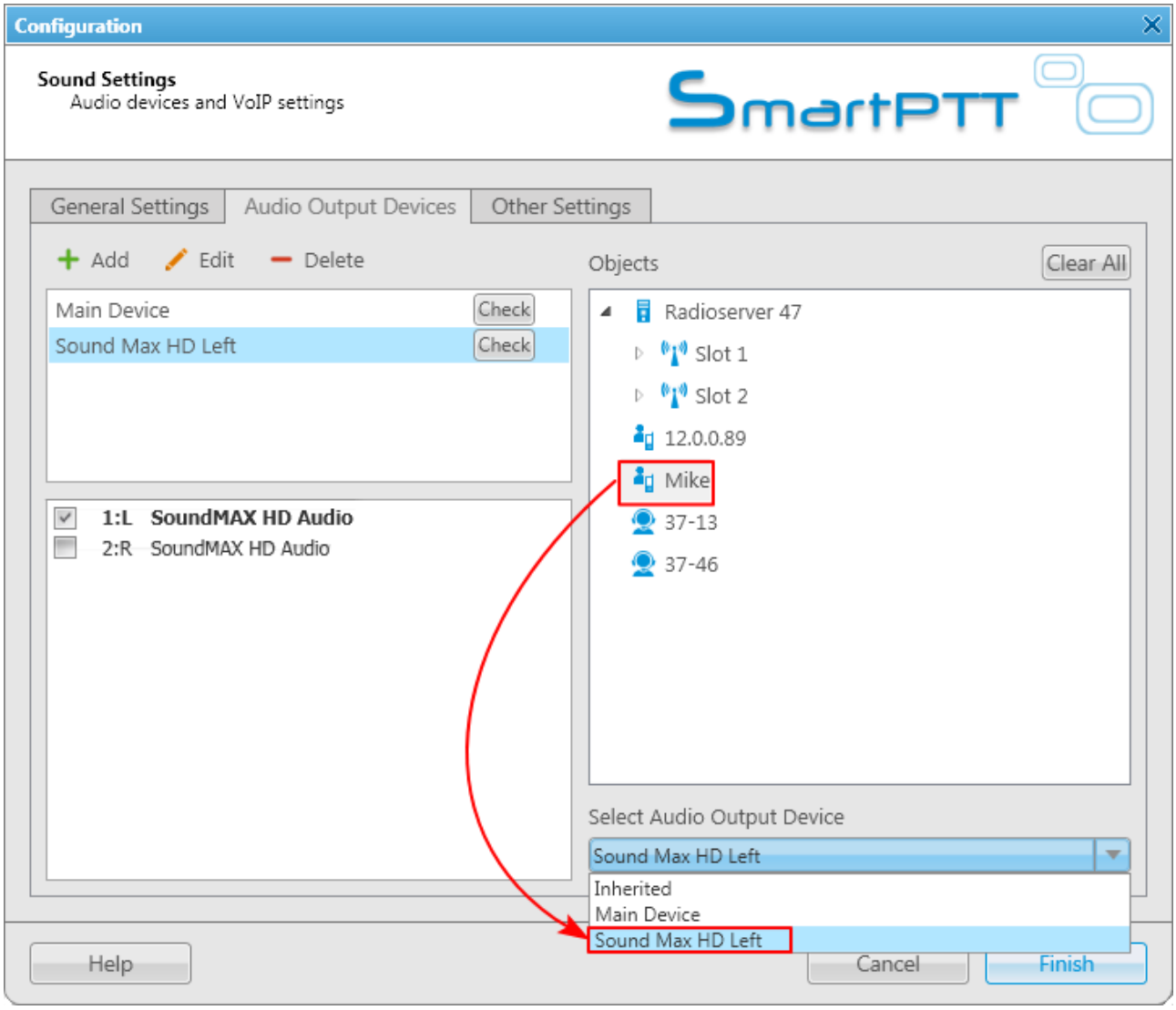
1. Add audio output devices in the first box on the left. These are not real output devices and are used only in dispatch console. To do that click on **Add**. A new record will appear on the list. Change its name, if necessary, by clicking **Edit**, and then select it.



2. In the list below, select the real devices or device channels which will correspond to the added output device.

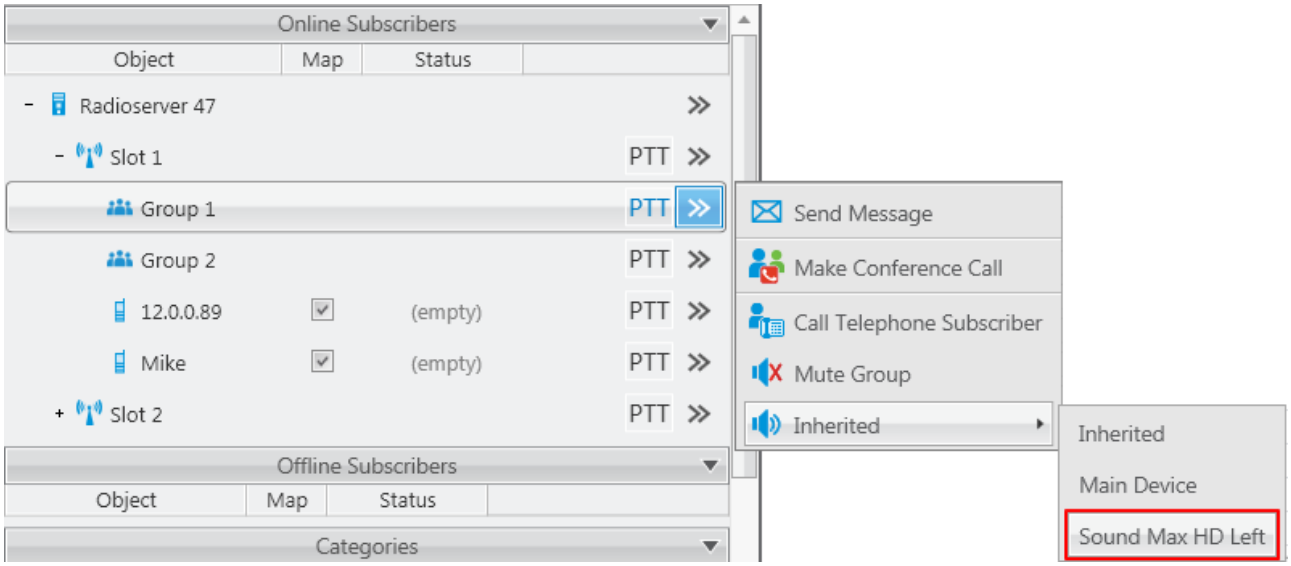


3. In the **Objects** list select the network object, for which you want to set up the new audio device or channel. And in the **Select Audio Output Device** dropdown list select the created output device. Thus, you assign the audio output device or channel to a network object.

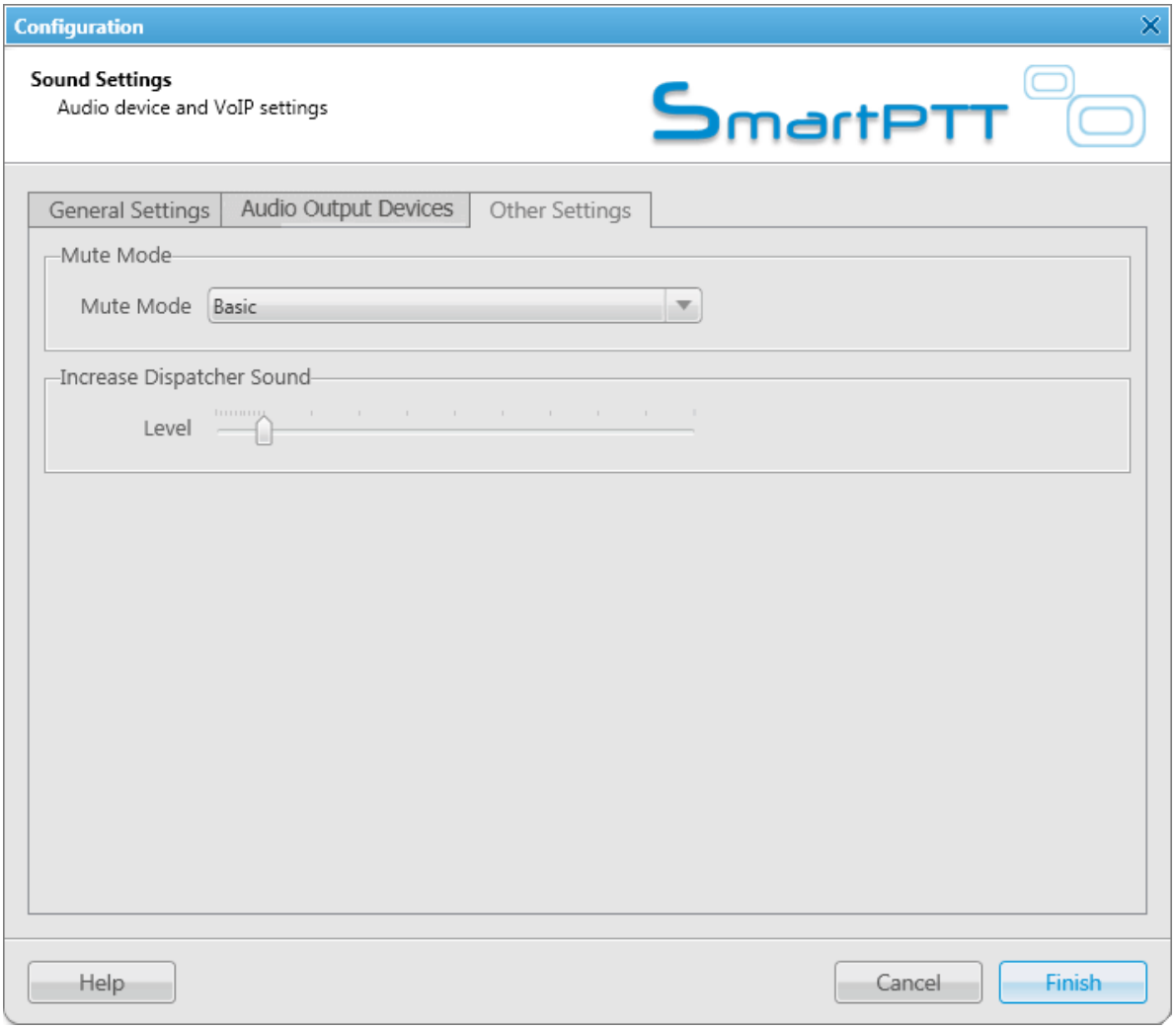


Note: Select **Inherited** if you don't want to set the audio output device explicitly. In this case the object will use the audio output device which is assigned to the parent object.

To assign another device to an object, you can do it in its **Action List** in the **Subscriber Panels**.



The **Other Settings** tab:



Mute Mode – provides options for muting.

Basic – in this mode when you click to mute the control station, the system will work in a standard way, that is you will hear nothing from the control station.

Advanced – in this mode when you click to mute the control station, the system will work differently. You will still be able to hear private incoming calls, calls initiated on the dispatcher side or calls answered by the dispatcher.

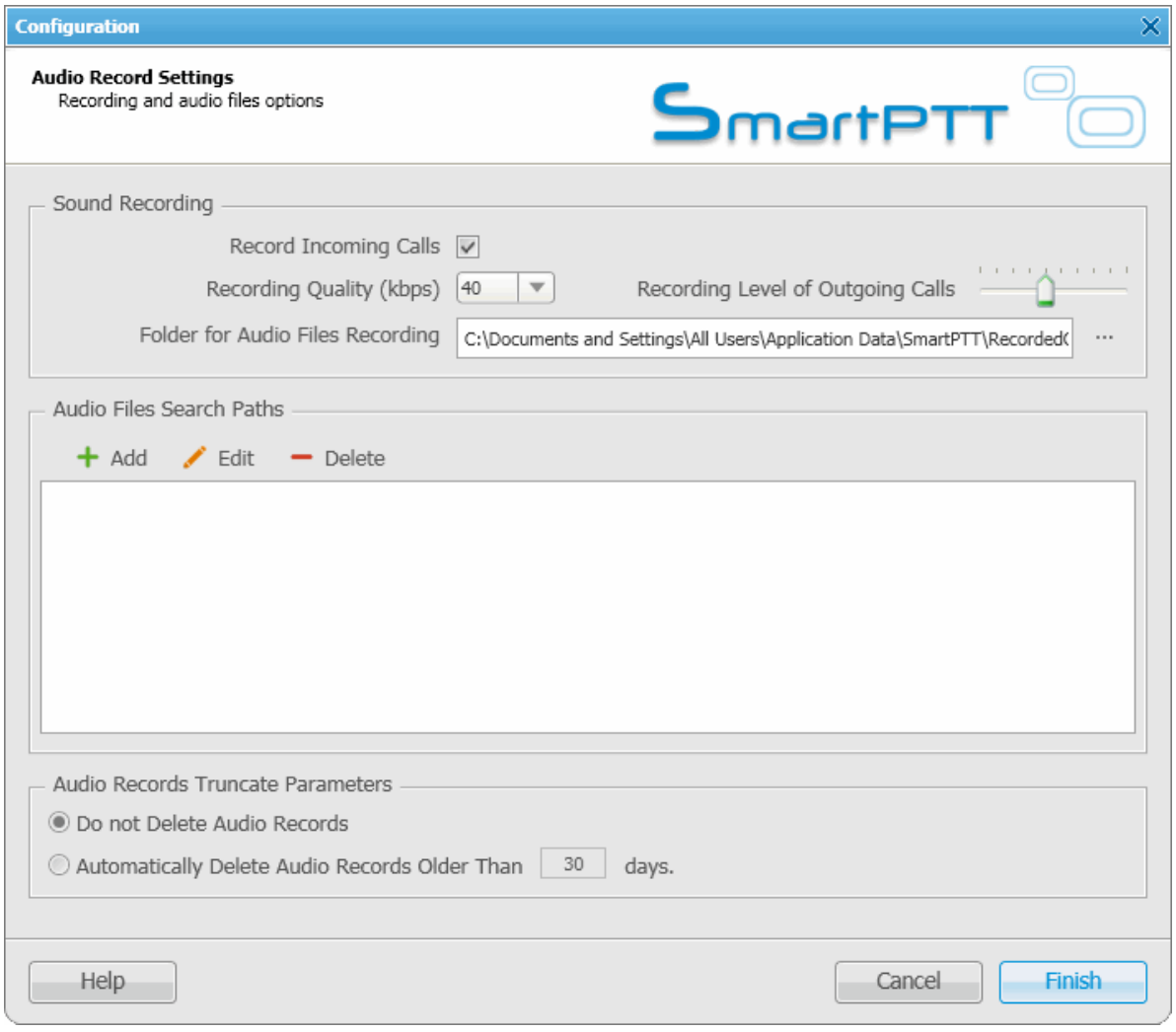
Increase Dispatcher Sound – allows user to adjust the volume level of the dispatcher outgoing call on the

receiving radio (to increase or decrease by the value of selected **Level** coefficient).

Unlike the microphone volume settings in the equalizer window, the microphone volume change applies to all devices. **Increase Dispatcher Sound** regards only the radio receiving a dispatcher call.

2.8.9 Records

To set audio record settings, expand the **Settings** menu in the **Main Menu** of the SmartPTT Dispatcher window and click **Record Settings**. The **Audio Record Settings** window opens.



Record Calls – select this option to record all the incoming and outgoing calls.

Recording Level of Outgoing Calls – increase or decrease the sound volume for recording outgoing calls.

Recording Quality (kbps) – sets sound quality for audio files.

Folder for Audio Files Recording – sets the path to the folder with recorded audio files.

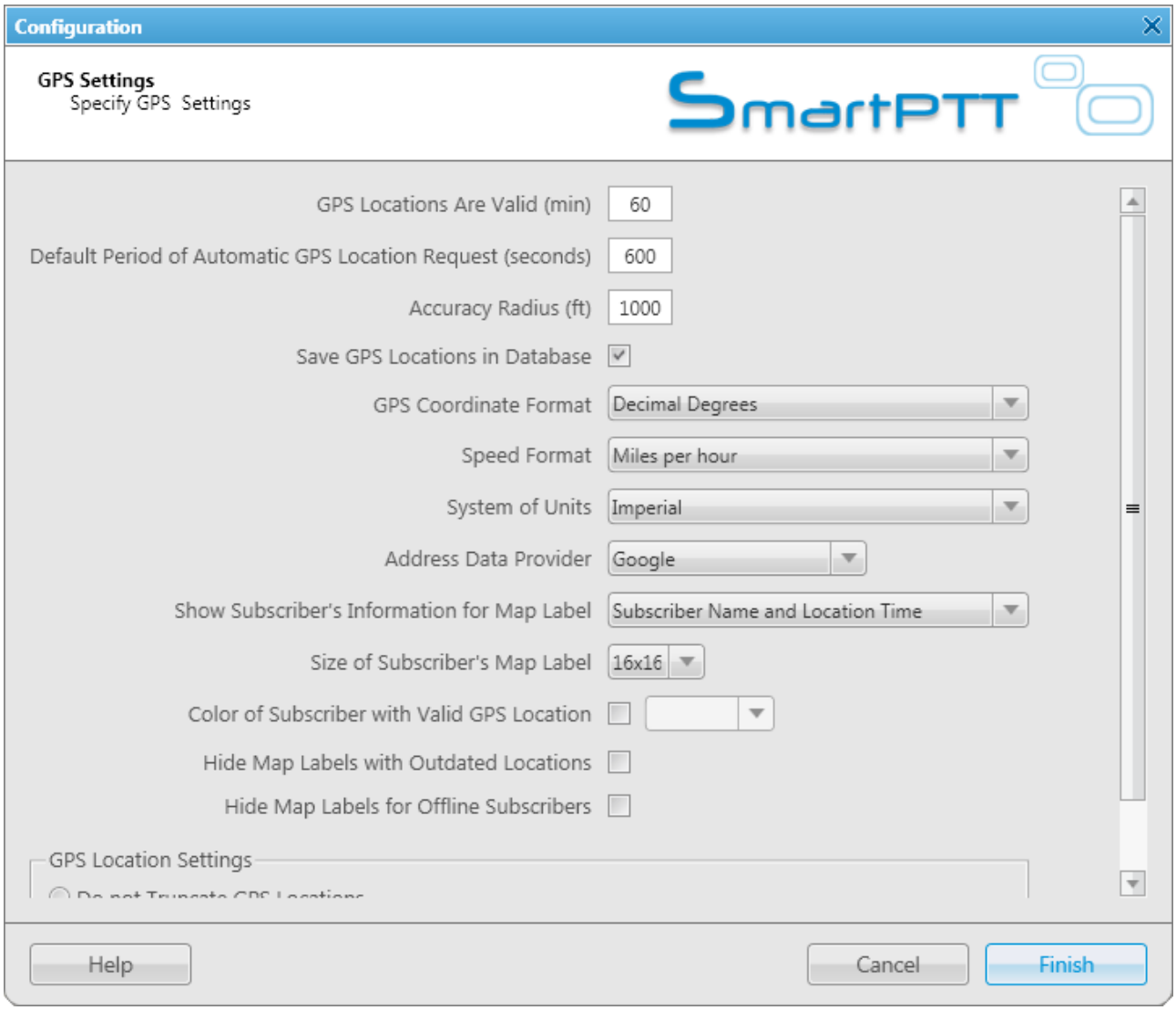
Audio Files Search Paths – sets paths to additional folders for recorded audio files.

Note: After changing the folder path where audio files are stored, the former path is automatically added to the audio files search path field.

Audio Records Truncate Parameters – sets audio record cleaning parameters.

2.8.10 GPS

To set GPS settings, expand the **Settings** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **GPS**. The **GPS Settings** window opens up.



GPS Locations Are Valid – GPS data validity period in minutes.

Default Period of Automated GPS Location Request – interval of GPS data requests in seconds.

Accuracy Radius – sets the maximum coordinate error margin. If the received error value exceeds the value specified in this field, the coordinate is invalid.

Save GPS Locations in Database – select the checkbox to store GPS coordinates received from subscribers in

the database.

GPS Coordinate Format – GPS coordinate format to display in the subscriber **Call** window:

- Decimal degrees. GPS coordinates are displayed as: lat.: 56,47568, lon.:84,98779.
- Degrees, Minutes, Seconds. GPS coordinates are displayed as: lat.: 56°28'32", lon.:84°59'16".
- Universal Transverse Mercator Coordinate System. GPS coordinates are displayed as: 45V 376108 B 6260913 C.

Speed Format – select the way to display subscriber speed.

System of Units – allows selecting measurement system for distance (*Metric* or *Imperial*).

Note: When changing measurement system, the data previously logged won't be recalculated according to the new measurement system.

Address Data Provider – select the map service (Google or OpenStreetMap), which will determine the object address on the map corresponding to the subscriber current GPS-coordinates.

Show Subscriber's Information for Map Label – select the checkbox to permanently display subscriber name and time of the last GPS coordinate behind subscriber map label.

Size of Subscriber's Map Label – choose subscriber map label size.

Color of Subscriber with Valid GPS Location – set color of the subscriber name with valid GPS locations.

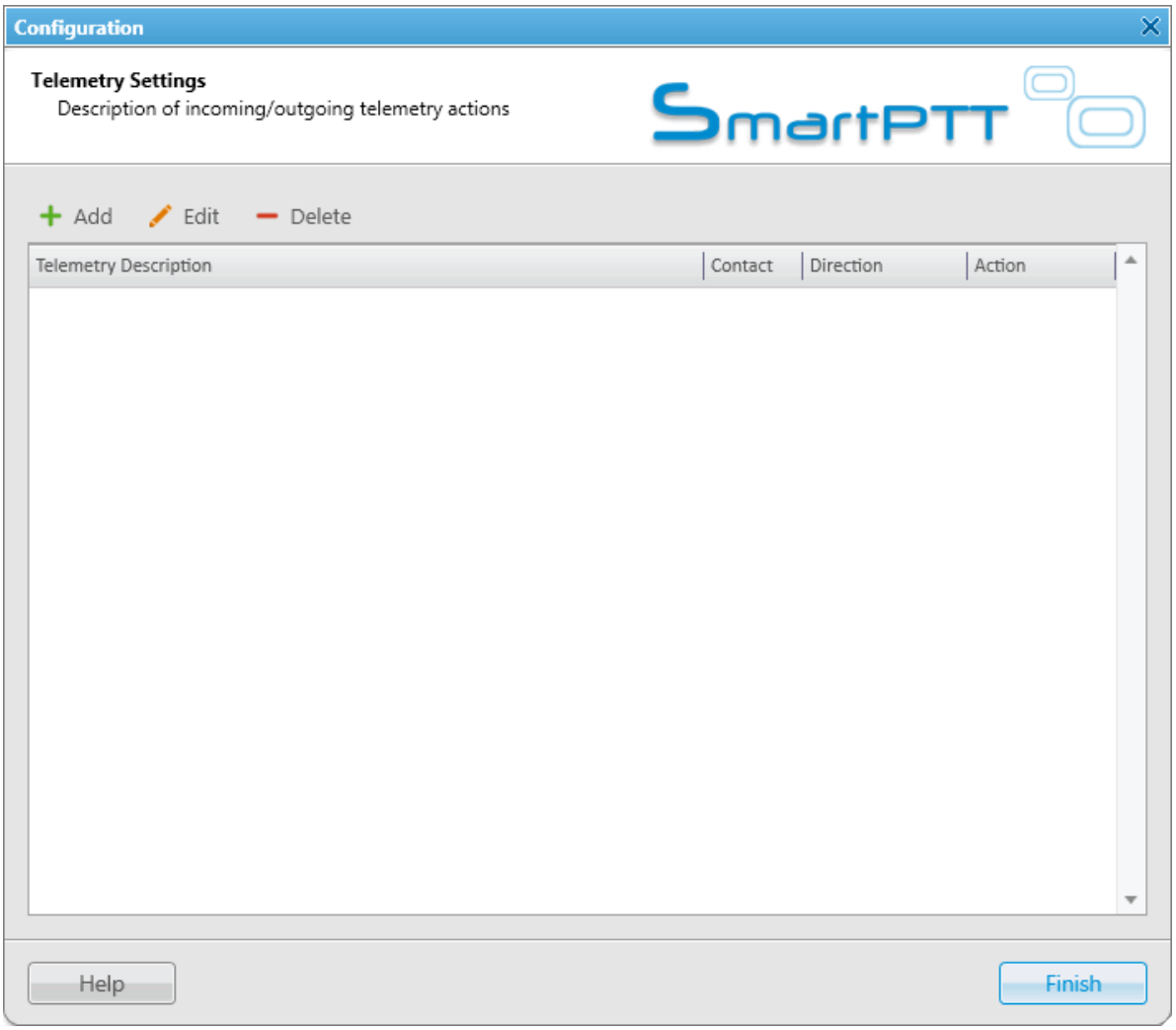
Hide Map Labels with Outdated Locations – select the checkbox to hide map labels for subscribers with outdated GPS locations. GPS location becomes outdated if it was not updated for more than the period set in the **GPS Locations Are Valid** field.

Hide Map Labels for Offline Subscribers – select the checkbox to hide map labels when a subscriber goes offline.

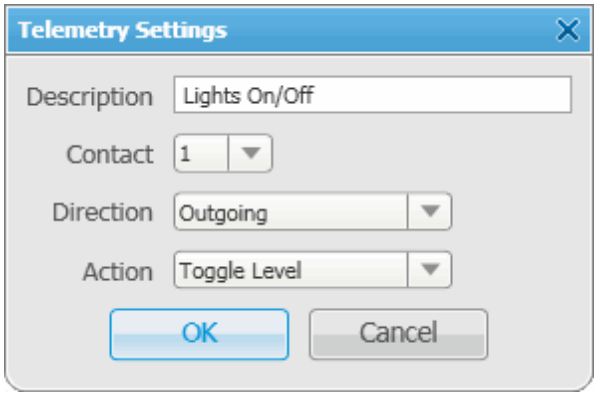
GPS Location Settings – settings to clear coordinates from the database.

2.8.11 Telemetry

To set up actions based on incoming/outgoing telemetry commands, expand the **Settings** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Telemetry**. At that, a configuration window is displayed.



To add a new telemetry command, click **Add**. The **Telemetry Settings** window is displayed.



Description – description of the action to be triggered.

Contact – select a contact or VIO from the list.

Note: Make sure the selected contact or VIO is mapped to a physical GPIO line in MOTOTRBO CPS.

Direction – select direction (incoming or outgoing).

Action – action type: impulse, high level, low level, toggle level.

To save the changes click **OK** – the created settings appear in the list of settings.

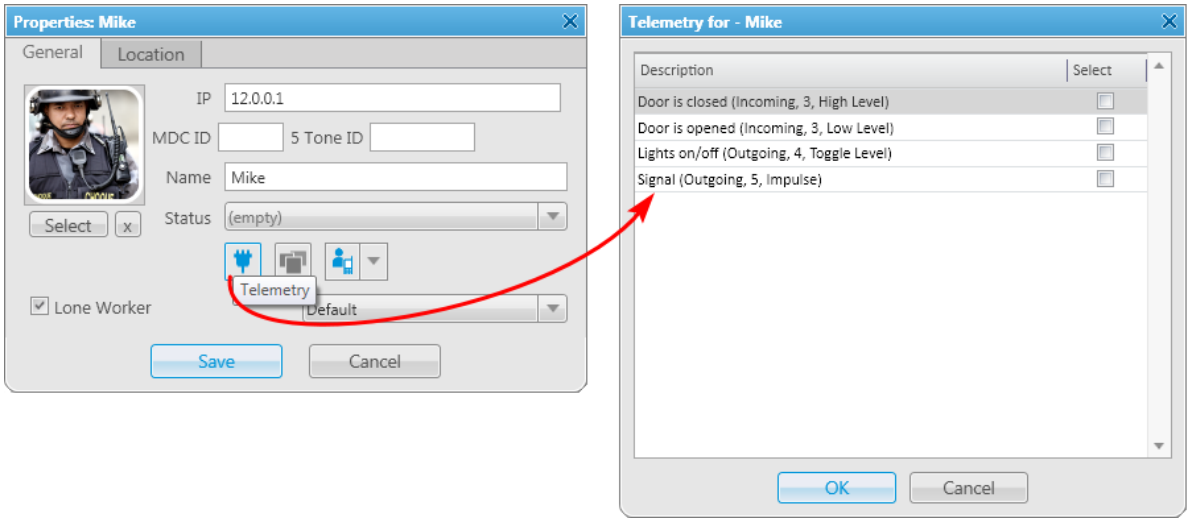
To edit the existing settings, select the entry in the list of settings and click **Edit**.

To delete the settings, select the entry in the list of settings and click **Delete**.

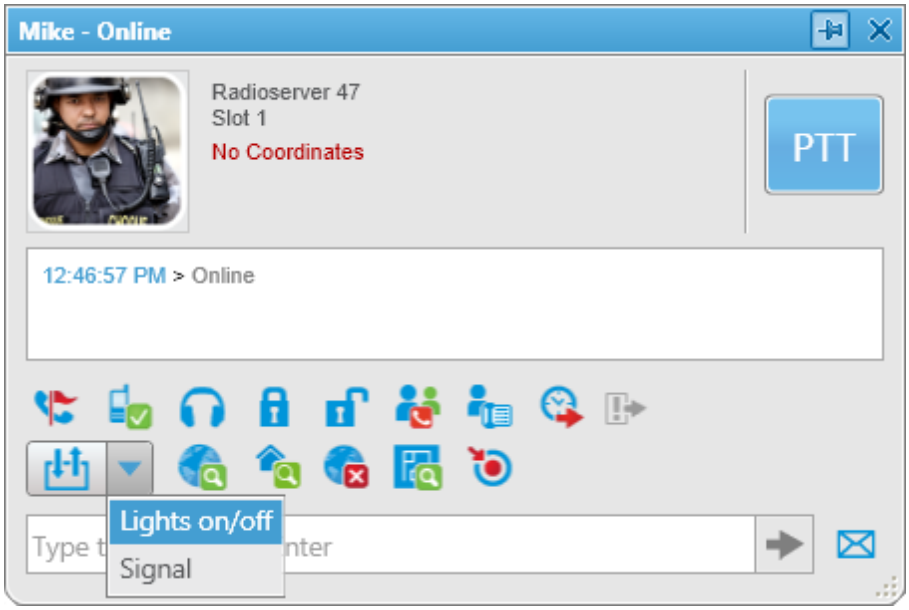
How to Assign Telemetry to the Radio Subscriber

You can select telemetry settings in the subscriber's **Properties** window.

Click the **Telemetry** button to open the window for selecting available telemetry commands for the subscriber.



Then you can run the telemetry command from the subscriber's **Call Window**.

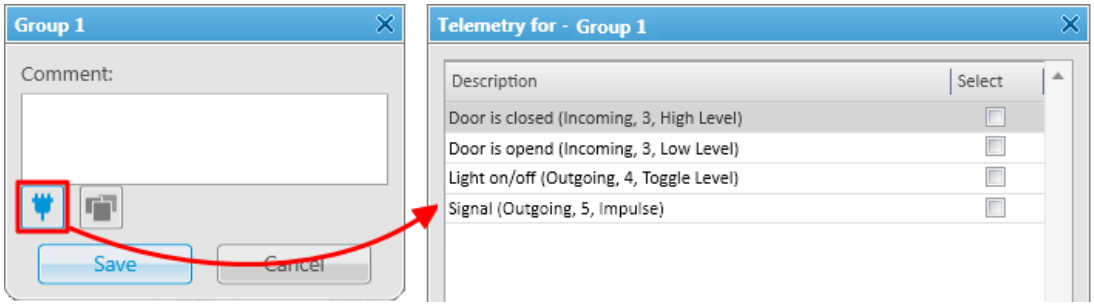


To receive the current telemetry status, click .

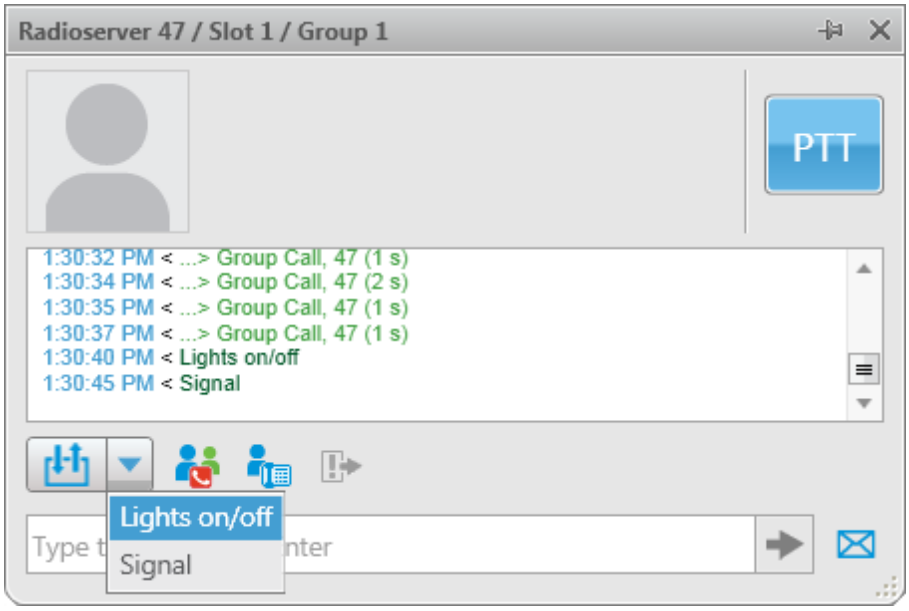
How to Assign Telemetry to the Talkgroup of Radio Subscribers

You can select telemetry settings in the **Properties** window of the talkgroup.

Click the **Telemetry** button and select available telemetry commands for the talkgroup.

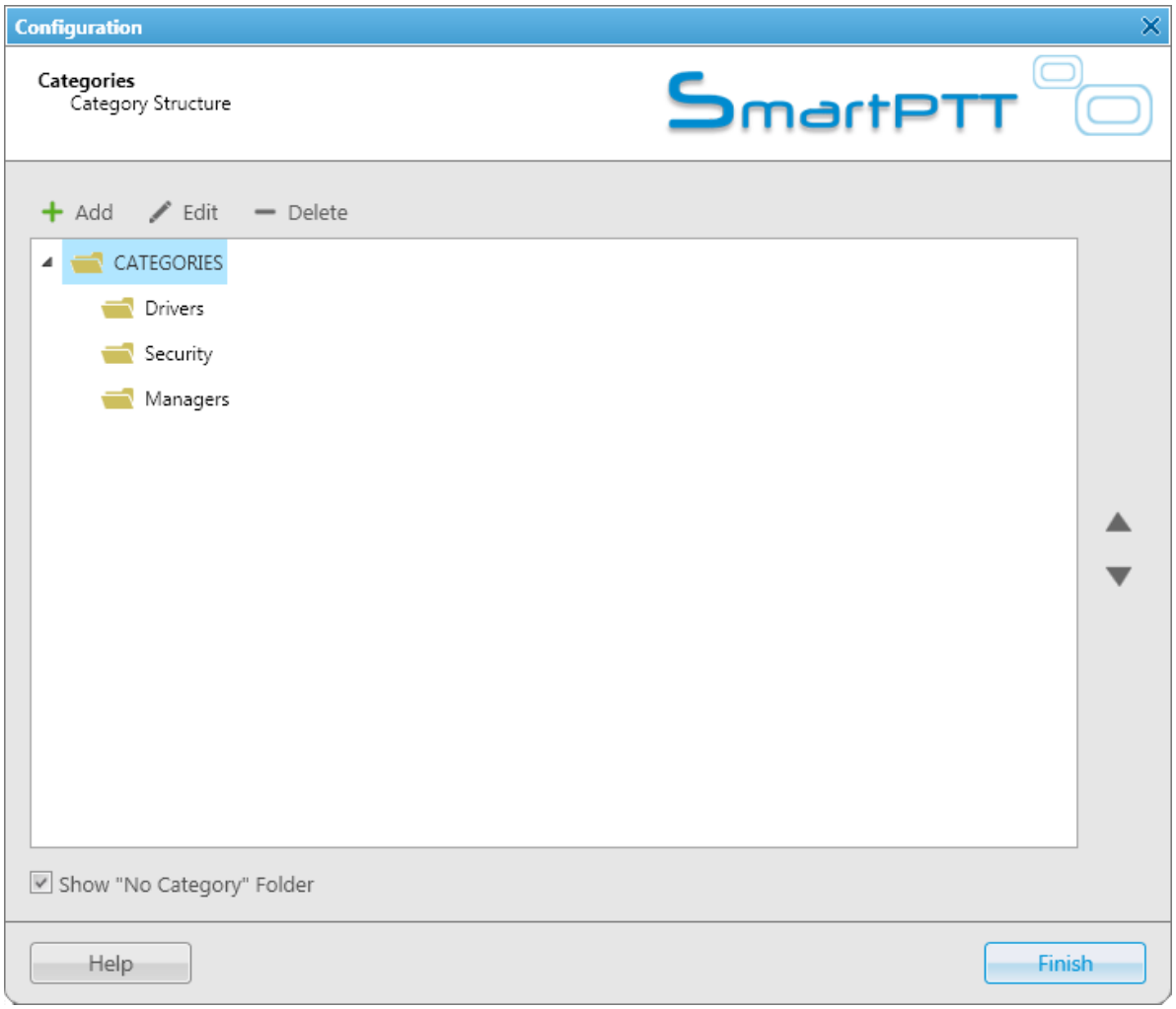


Then you can run the telemetry command from the talkgroup **Call Window**.



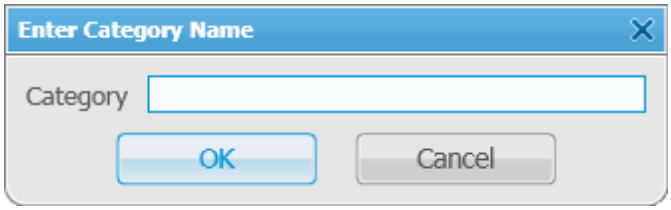
2.8.12 Categories

To create a category structure, expand the **Settings** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Categories**. The configuration window for setting up the category structure opens.



Show "No Category" Folder – displays a list of all online subscribers (radio subscribers, talkgroups, telephone subscribers, dispatchers) in the **No Category** folder of the **Subscriber Management > Categories** panel, without reference to categories.

To create a new category, click **Add**.



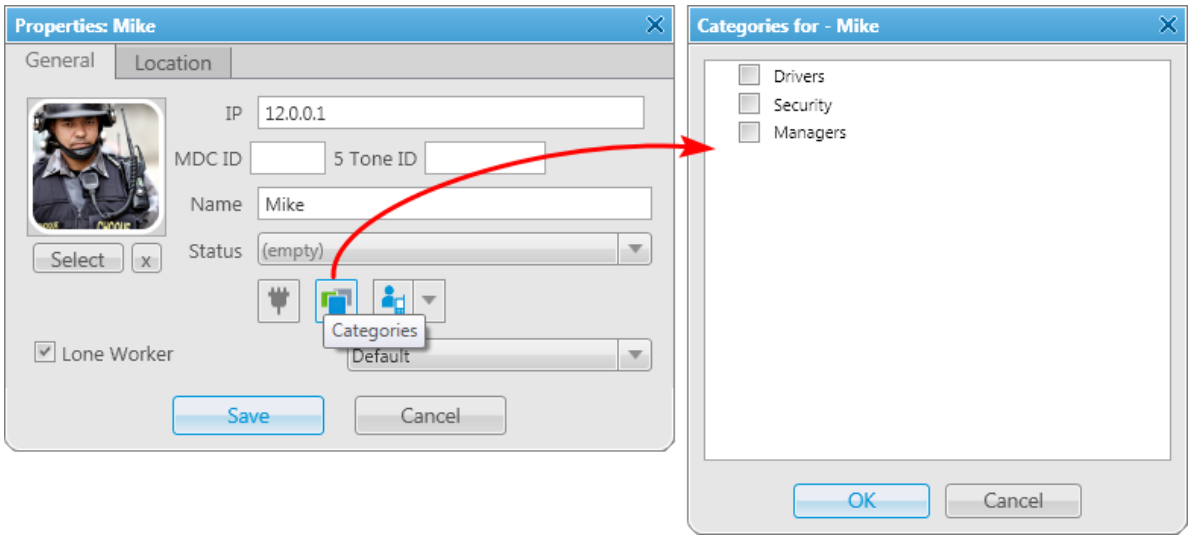
To edit the existing category name, select it in the list and click **Edit**.

To remove a category, select it in the list and click **Delete**.

To move categories inside a parent category, use arrow button on the right.

To move the categories between levels, click on a category, hold the left mouse button and drag it to a new position.

A subscriber can be assigned to the categories from the subscriber's **Properties** window. Click the **Categories** button to display the window where you can assign categories to the subscriber.

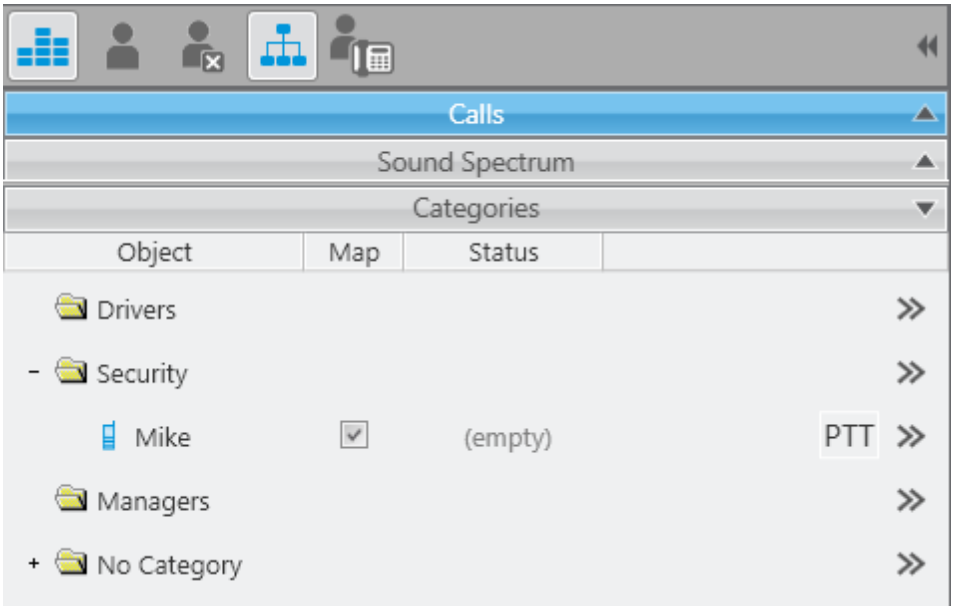


Choose the desired categories and click **OK**.

You can also assign subscribers to categories in the **Subscriber Management Panel** using drag and drop feature.

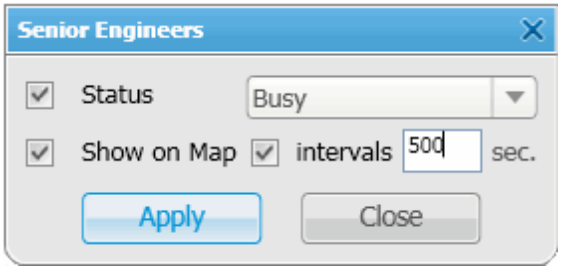
Note: All the three types of subscribers (radio, telephone subscribers and dispatchers) can be assigned to a category. However, the actions applied to the category members will be addressed only to radio subscribers.

The selected categories are displayed in the **Subscriber Management Panel**.

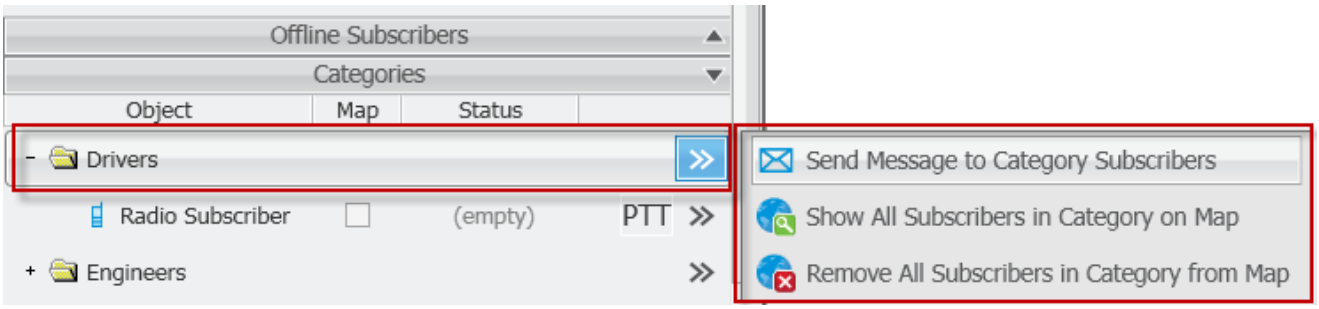


To remove the **Categories** window from the **Subscriber Management Panel**, click .

Right-click on the category name to open the **Properties** window. Here you can change the status of all radio subscribers who belong to this category and set GPS settings for the category subscribers.



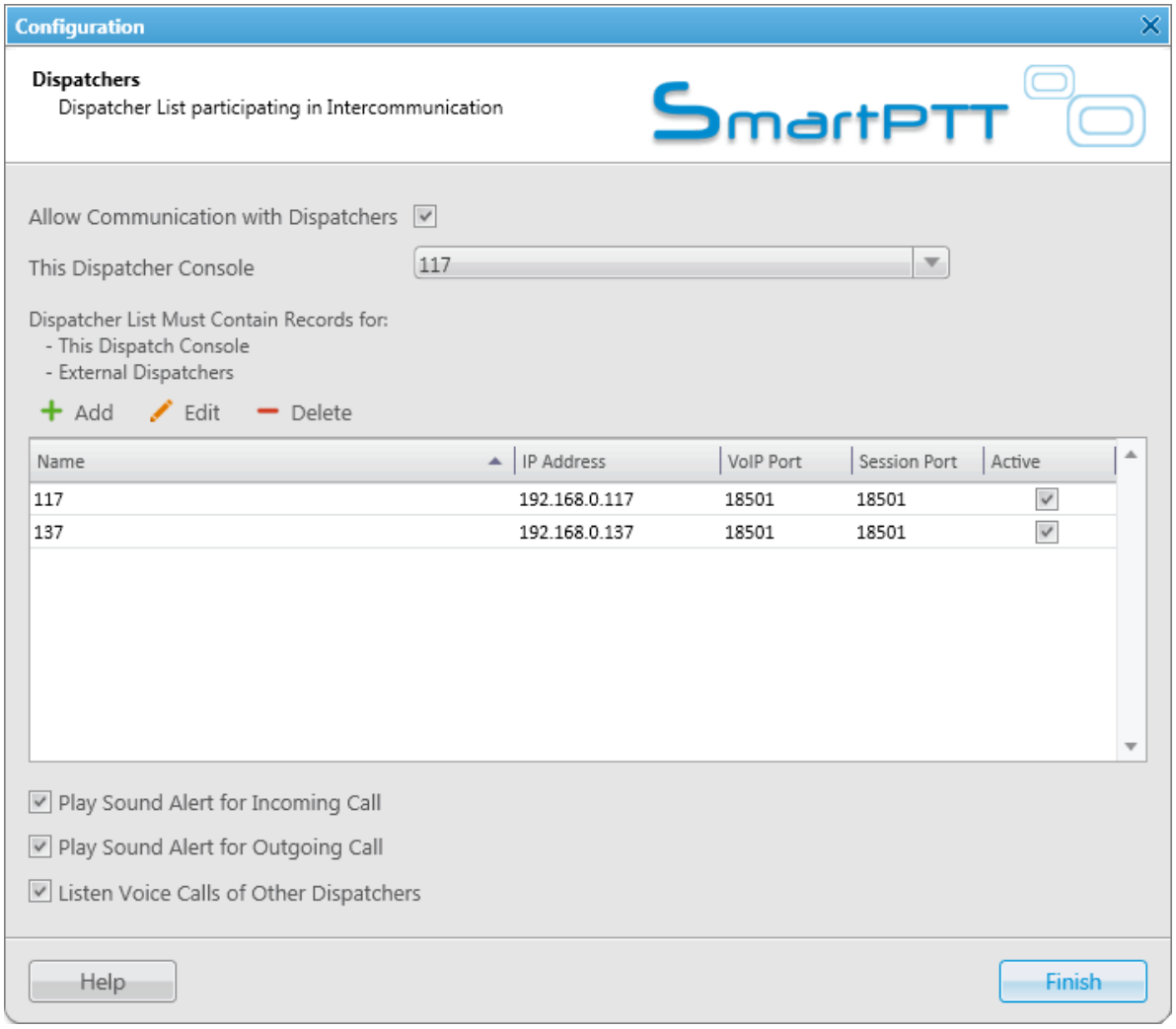
Click the button next to the category name to apply actions to all the subscribers from the category.



- **Send Message to Category Subscribers** – opens the window for sending messages.
- **Show All Subscribers in Category on Map** – displays all subscribers from this category on the map, if it is opened.
- **Remove All Subscribers in Category from Map** – removes all subscribers of this category from the map, if it is opened.

2.8.13 Dispatchers

To set up connection to other dispatchers, expand the **Settings** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Dispatchers**. The configuration window is displayed for setting up a list of available dispatchers.



Allow Communication with Dispatchers – select the checkbox to enable the ability to voice communicate with other dispatchers. If the checkbox is not selected, the button will be unavailable and you cannot access the **Dispatchers** window in the **Subscriber Management Panel**.

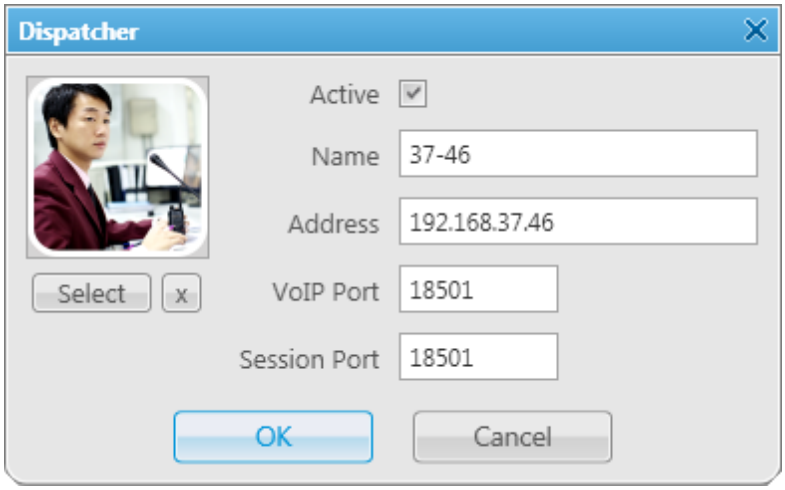
This Dispatcher Console – select your dispatch application name.

Play Sound Alert for Incoming Call – select this checkbox to play a sound alert on incoming calls.

Play Sound Alert for Outgoing Call – select this checkbox to play a sound alert on outgoing calls.

Listen Voice Calls of Other Dispatchers – select this checkbox to be able to listen to other dispatchers' communication.

To add a new dispatcher, click **Add**.



Active – enable this option to display the dispatcher in the **Subscriber Management panel**.

Name – the dispatcher's name displayed in the list of dispatchers.

Address – the dispatcher's workstation IP address (DNS name can be used).

VoIP Port – UDP port for sound transmission.

Session Port – TCP port for transmission of commands and text messages.

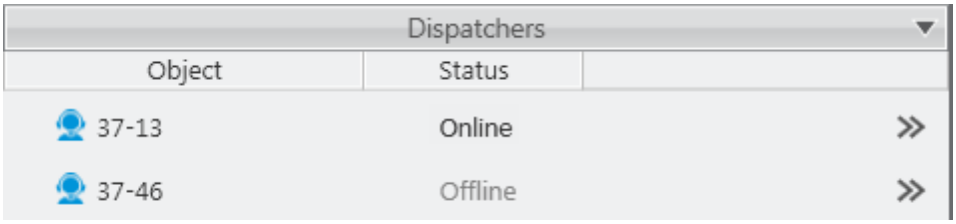
Select – specify the file path to the dispatcher's photo.

To save the changes, click **OK**. At that, the new dispatcher is added to the list of dispatchers.

To edit dispatcher settings, select it in the list of dispatchers and click **Edit**.

To remove a dispatcher, select it in the list of dispatchers and click **Delete**.

When connection to dispatchers is enabled, the **Dispatchers** window is displayed in the **Subscriber Management panel**. It displays a list of dispatchers available for communication.



The dispatchers can have the following statuses:

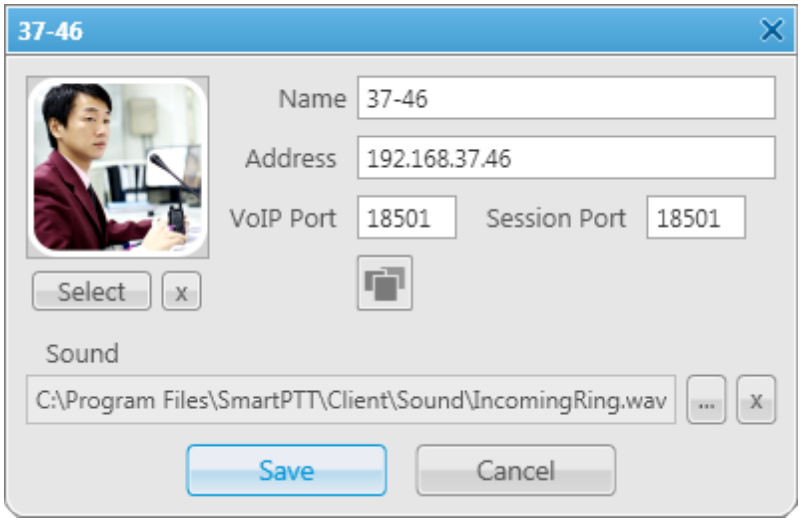
Offline – the dispatcher is not available for communication.

Online – the dispatcher is available for communication.

Ringing – calling to the dispatcher to establish voice communication.

Call – voice communication is established.

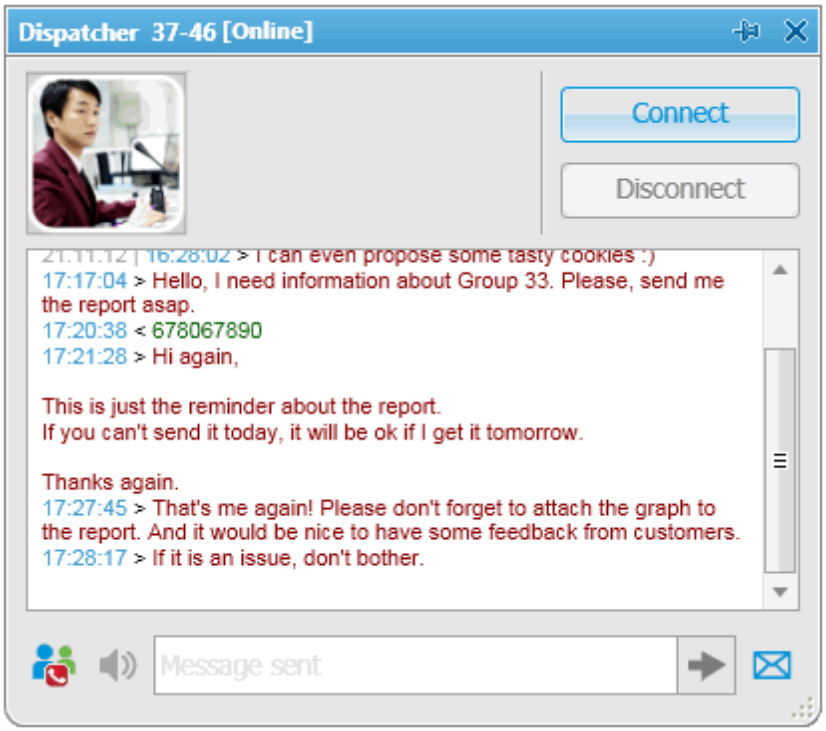
To display the dispatcher settings window, select the dispatcher entry and then right-click on it.



To set an alert sound for incoming calls, click .

To assign the dispatcher to a category, click .

To open the dispatcher **Call Window**, double-click on the dispatcher entry.



Connect – call the dispatcher (voice communication).

Disconnect – terminate voice communication with the dispatcher.

To add the dispatcher to the conference call, click .

To stop sound transmission, while the other dispatchers still can be heard, click . This button is unavailable until you start voice communication with another dispatcher.

Message field – a field used to send a text message. You can type the message text right in the field and click or you can open the **Send Message** window and send a message from there.

If a dispatcher calls another dispatcher, the addressee will change the status to **Ringing** and in the **Call Window** the buttons **Accept** and **Decline** will appear.

Accept – the incoming call is accepted and voice communication is established.

Decline – the incoming call is not accepted and voice communication is not established.

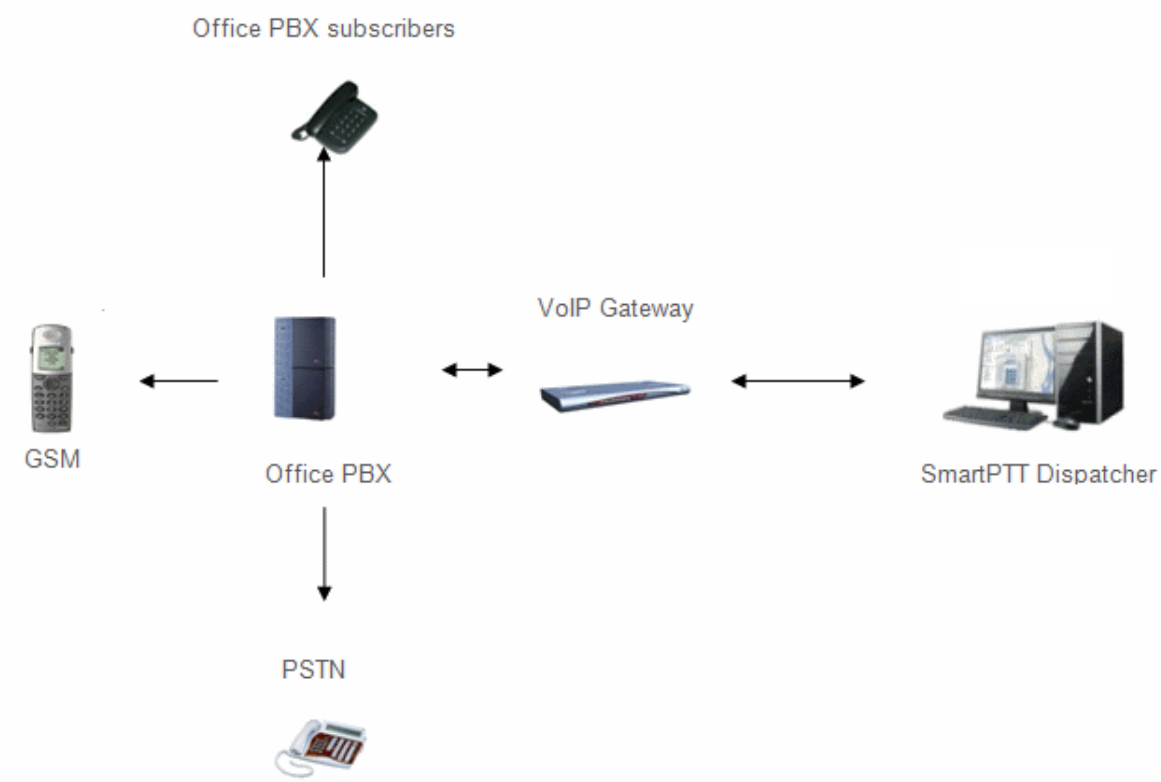
2.8.14 Telephone Settings

SmartPTT Dispatcher has a built-in function to make telephone connections with telephone subscribers. A call can be initiated both by the dispatcher and the telephone subscriber. Standard VoIP gateways are used to connect to telephone subscribers. The following connection options are possible:

1. The dispatcher calls the office PBX subscriber and voice is transmitted in full-duplex mode.
2. The office PBX subscriber calls the dispatcher and voice is transmitted in full-duplex mode.
3. SmartPTT Dispatcher connects telephone and radio subscribers.

Connection and subscriber addressing are implemented via SIP protocol. Voice data is transmitted via RTP protocol.

The connection scheme



A VoIP gateway is a device which bridge conventional telephone networks and equipment to VoIP telephone networks.

A Private Branch eXchange (PBX) is a telephone exchange that serves a particular business or office.

The Public Switched Telephone Network (PSTN) is the network of the world's public circuit-switched telephone networks.

SIP Architecture

Call service management is distributed between different elements of SIP network. The basic functional unit that implements connection management are User Agents, which are endpoints of a call (that is each of the participants in a call). The remaining network elements (SIP-servers) are responsible for call routing and can provide additional services.

1. User Agents

User agents are both the computer that is being used to make a call, and the target computer that is being called. These make the two endpoints of the communication session. There are two components to a user agent: a client and a server. When a user agent makes a request (such as initiating a session), it is the User Agent Client (UAC), and the user agent responding to the request is the User Agent Server (UAS). Even though other devices that we'll discuss are optional to various degrees, User Agents must exist for a SIP session to be established.

2. Proxy Server

Proxy servers are computers that are used to forward requests on behalf of other computers. If a SIP server receives a request from a client, it can forward the request onto another SIP server on the network. While functioning as a proxy server, the SIP server can provide such functions as network access control, security, authentication, and authorization.

3. Registrar Server

Registrar servers are used to register the location of a user agent who has logged onto the network. It obtains the IP address of the user and associates it with their user name on the system. This creates a directory of all those who are currently logged onto the network, and where they are located. When someone wishes to establish a session with one of these users, the Registrar server's information is referred to, thereby identifying the IP addresses of those involved in the session.

4. Redirect Server

The Redirect servers are used by SIP to redirect clients to the user agent they are attempting to contact. If a user agent makes a request, the Redirect server can respond with the IP address of the user agent being contacted. This is different from a Proxy server, which forwards the request on your behalf, as the Redirect server essentially tells you to contact them yourself.

SIP determines the following addressing system: ***[sip:] id [@ fragment]***. ID indicates user name or phone number of the subscriber. Fragment specifies the host, which can be set to the domain name, the IP-address of the computer or the address of the VoIP gateway. Caller ID can be presented in different ways, such as *user_name@[domain name]*, *name@[IPaddress]*, *phone_number@[VoIPgateway]*.

SIP Connection Methods

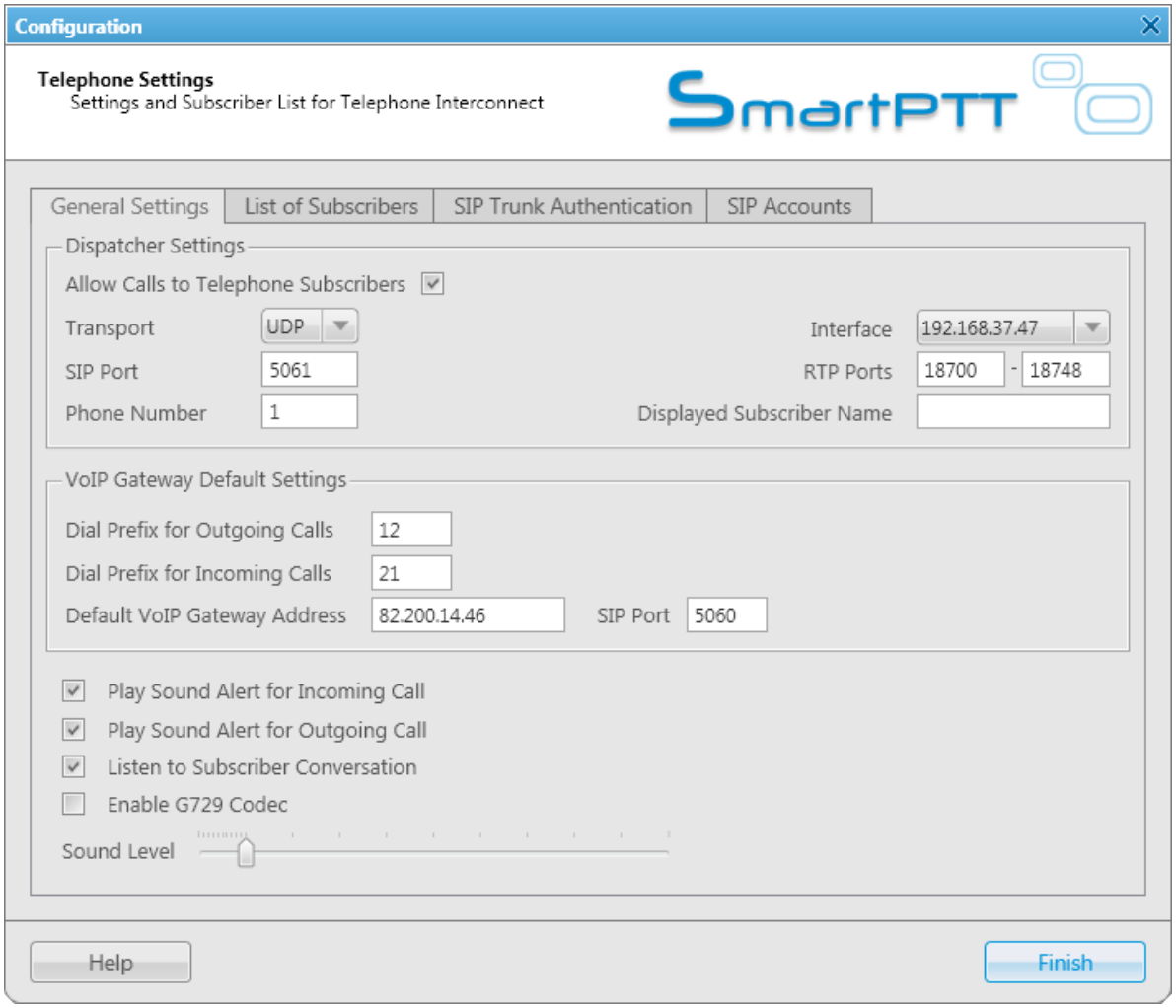
There are two SIP connection types – SIP trunking and using a SIP account.

SIP trunking is used when a user agent (SmartPTT Dispatcher in our case) has a static IP address. This IP address must be prescribed on SIP server only once, and the client does not require to re-register on the SIP server. SIP trunking provides security by means of password authentication for incoming and outgoing calls.

If the client IP address changes periodically, use a SIP server account to establish the connection. When the client turns on, it sends a special package for SIP registration to the server. The package contains authentication data (SIP account user name, login, password) and the current IP address. Since then server knows where to route calls addressed to the client. After a period of time the client automatically updates the registration. If its IP address has changed, SIP server accordingly updates the information on this user.

Telephone Settings Configuration

To configure connection parameters with telephone subscribers, expand the **Settings** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Telephone Settings**. The configuration window is displayed for configuring connection parameters.



The **Telephone Settings** window includes:

1. General Settings tab
2. Telephone Subscriber List tab
3. Authentication tab
4. SIP accounts

General Settings

General Settings tab includes **Dispatcher Settings** and **VoIP Gateway Default Settings** sections.

1. Dispatcher Settings

Allow Calls to Telephone Subscribers – select the checkbox to be able to make and receive calls between SmartPTT Dispatcher and telephone subscribers.

Note: If the checkbox is not selected, the **Telephone Subscribers** window is unavailable.

RTP Ports – each connection with the telephone subscriber requires two UDP ports (even port numbers are used by RTP protocol, uneven – by RTCP). Thus, the specified ports must be available both for incoming and outgoing traffic. The default port range is *18700–18748*.

Warning! If both SmartPTT Dispatcher and SmartPTT Radioserver are installed on one computer, the port range set in the Incoming Sound Port field must differ from the port range set in the RTP Ports field in SmartPTT Radioserver Configurator.

Interface – IP address of the local computer, used to receive and transmit commands and voice data. If the dispatcher's computer has only one IP address, the system can select it automatically; if it has more than one IP address, the IP address (interface) should be specified expressly. The specified IP must be available from the VoIP gateway end.

Warning! If several network interfaces are installed on the computer you may have to configure the routing table using the command "route add ...".

SIP Port – UDP or TCP port number to receive and send SIP data packets. The default value is *5060*. Accordingly, the specified port must be available for incoming and outgoing traffic.

Warning! If both SmartPTT Dispatcher and SmartPTT Radioserver are installed on one computer, their SIP ports must differ. In this example it must be *5061* because *5060* is already taken by the radioserver.

Displayed Telephone Number – type the telephone number which allows you to connect to SmartPTT Dispatcher. This number is also displayed on the screen of the receiving SIP call device (phone or softphone).

Subscriber Name – type the name to be displayed on the screen of the receiving SIP call device (phone or

softphone).

2. VoIP Gateway Default Settings

If **VoIP Gateway Default Settings** are specified, it is enough to set only subscriber phone numbers in the **List of Subscribers** tab. Also, these parameters are used to dial the called subscriber number manually (click the **Dial Pad** button and the **Dial Pad** window opens).

Default VoIP Gateway Address – the VoIP gateway IP address.

SIP Port – a VoIP gateway to receive and send SIP data packets. By default VoIP gateways use the UDP port *5060*.

Dial Prefix for Outgoing Calls – numeric prefix added to the called subscriber number by SmartPTT Dispatcher. VoIP gateway uses the prefix to determine where the call came from and what rules it must apply to the call (block or allow, where the call must be routed).

Dial Prefix for Incoming Calls – numeric prefix value in this field must match the same VoIP gateway prefix.

If default VoIP gateway is used, the telephone subscriber's complete SIP address will be as follows:

SIP address = Dial Prefix for Outgoing Calls + Phone Number + @ + Default VoIP Gateway Address + : + Gateway SIP Port.

> **Example:**
>
> If the following settings are used:
>
> Default VoIP Gateway Address = ***192.168.0.243***
>
> SIP Port = ***5060***
>
> Dial Prefix for Outgoing Calls = ***12***
>
> The telephone subscriber with the phone number 1140 is automatically assigned the following outgoing SIP address = ***121140@192.168.0.243:5060***.

Note: If your network uses a firewall, consult a network administrator about the possibility of using SIP protocol and the required settings. The most common problem is that the media streams (for example, voice) are transferred over dynamically assigned UDP ports that are generally closed. The firewall must be able to dynamically open and close ports based on the transferred SIP signaling. Another problem is that the SIP clients inside the firewall cannot be reached by IP addresses since these most often are private and local to the LAN.

Communication simply does not take place, unless there is specific SIP support in the firewall.

Play Sound Alert for Incoming Call – select the checkbox to enable ringing at the SmartPTT Dispatcher application when a telephone subscriber calls.

Play Sound Alert for Outgoing Call – select the checkbox to enable ringing at the SmartPTT Dispatcher application when making a call to a telephone subscriber.

Listen to Subscriber Conversation – select the checkbox to allow the dispatcher to listen to the conversation between the radio and telephone subscriber.

Enable G729 Codec – select the checkbox to allow using of G729 codec for speech transmission. This codec allows higher data compression, but lower voice quality. Therefore, it must be used for systems with lower data throughput.

Sound Level – allows you to configure the sound level in the dispatch console coming from the telephone subscriber.

3. VoIP Gateway Configuration

The VoIP gateway administrator must ensure that SIP addresses for incoming calls are appropriately interpreted and switched to phone numbers.

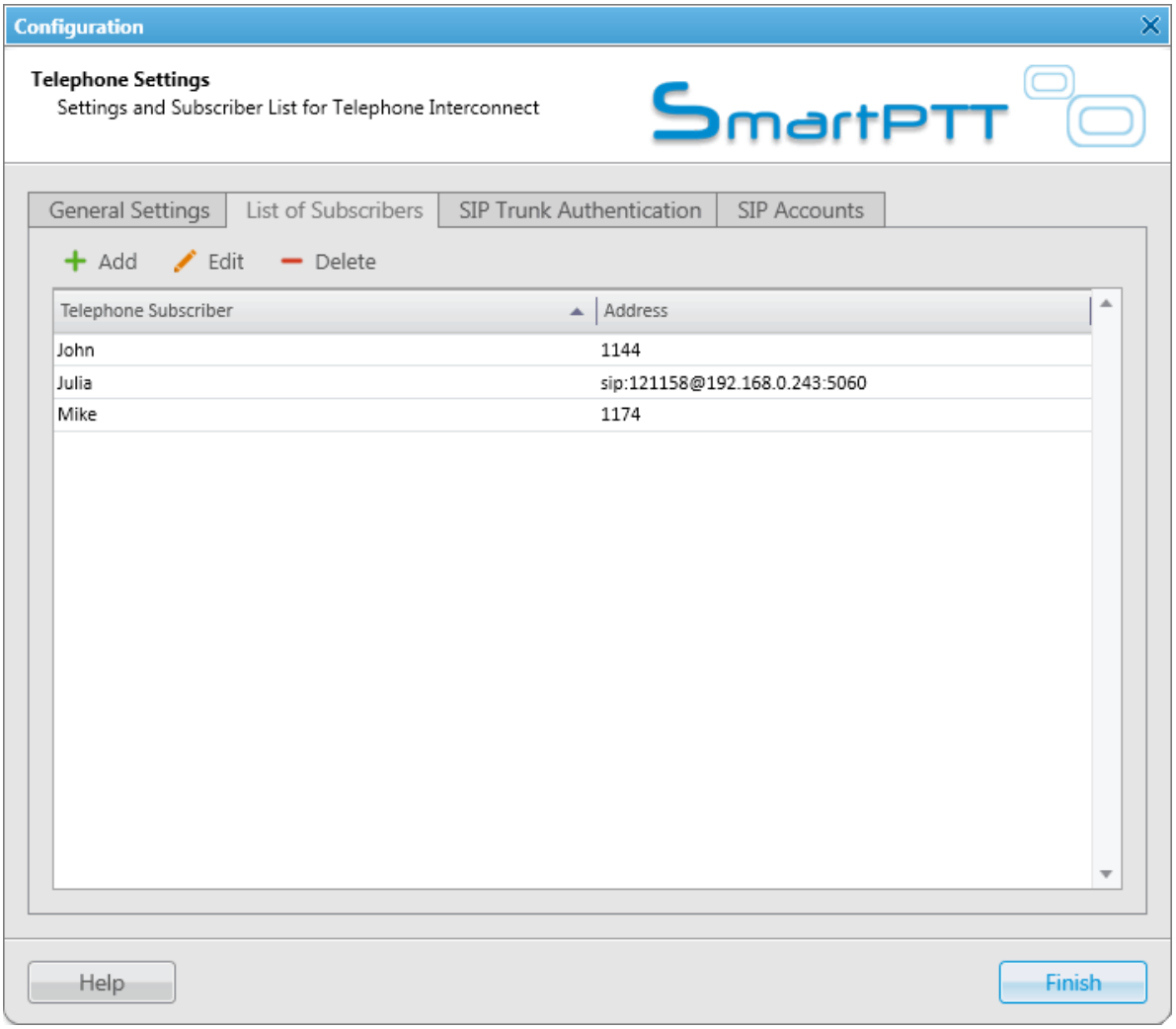
In the example above the telephone subscriber address is ***sip:121140@192.168.0.243:5060*** and the dial prefix for outgoing calls is ***12***. Therefore VoIP gateway rules must discard the incoming prefix ***12*** from the full address and connect the dispatcher to the telephone subscriber number, that is ***1140***.

You should also configure appropriate generation rules for outgoing SIP addresses to call other dispatchers.

For example, if the telephone subscriber with the number ***1140*** assigned wants to connect to the dispatcher with the address ***192.168.0.105:5060***, then generation rules for outgoing SIP addresses on the VoIP gateway must generate the correct destination address ***sip:1@192.168.0.105:5060*** (the **Displayed Telephone Number** value must be set as the SmartPTT Dispatcher identifier) and the sender's correct address ***sip:1140@192.168.0.243:5060*** (a dial prefix for incoming addresses is not set so the name in the sender's address is the same as the phone number).

List of Subscribers

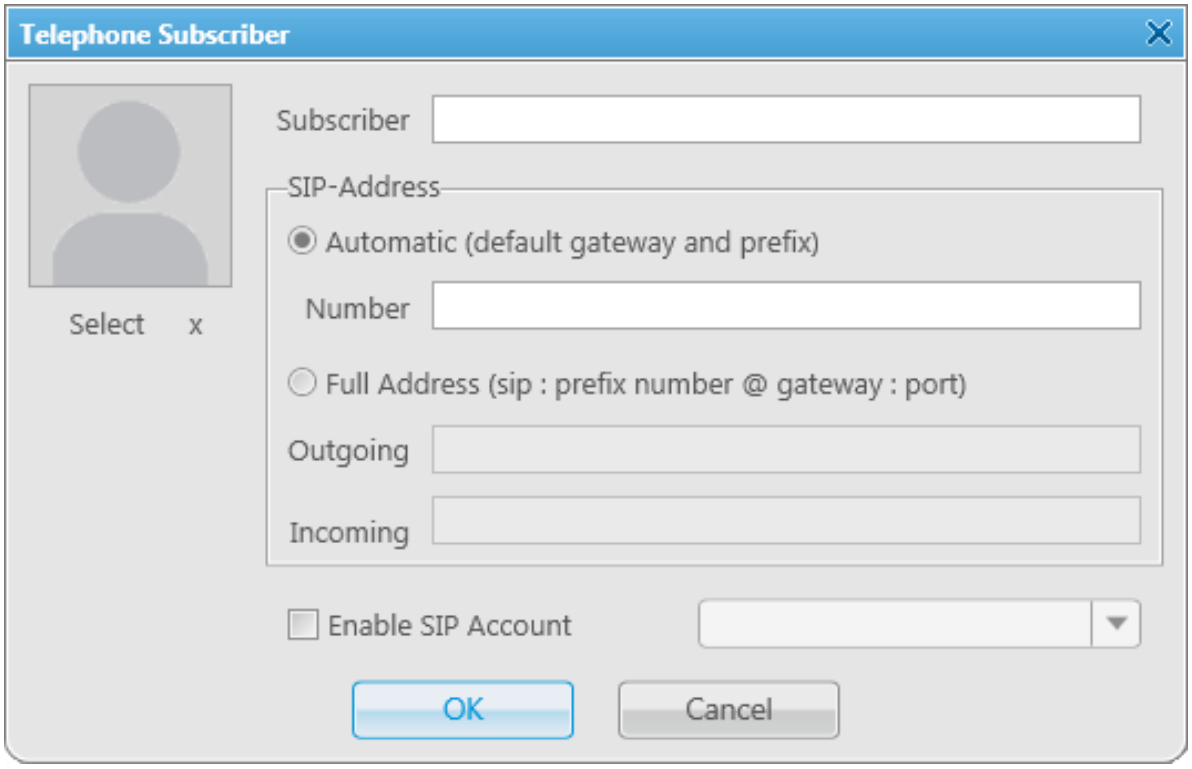
The **Telephone Settings** window contains **Telephone Subscriber List**. The list includes all telephone subscribers that maintain SIP connection. You can modify the existing subscribers or add new subscribers.



Note: SIP connection can be established also with subscribers not from the SmartPTT Dispatcher subscriber list.

To make an outgoing call, use the **Dial Pad** window.

To add a telephone subscriber to the list of subscribers, click **Add**. At that, the following window opens.



Subscriber – type the name of telephone subscriber.

The **SIP Address** area allows you to specify the telephone subscriber address.

There are several options to enter the address of the subscriber. First, the outgoing and incoming address fields can be generated automatically using the default gateway settings. To do that, click **Automatic**.

Second, you can enter the addresses manually by clicking **Full Address** (use the following format – ***sip:prefix number@gateway:port***).

Select the **Enable SIP Account** checkbox and specify the required SIP account from the list of available to carry out SIP connection under the set account. For SIP account setup details in SmartPTT Dispatcher see SIP Accounts.

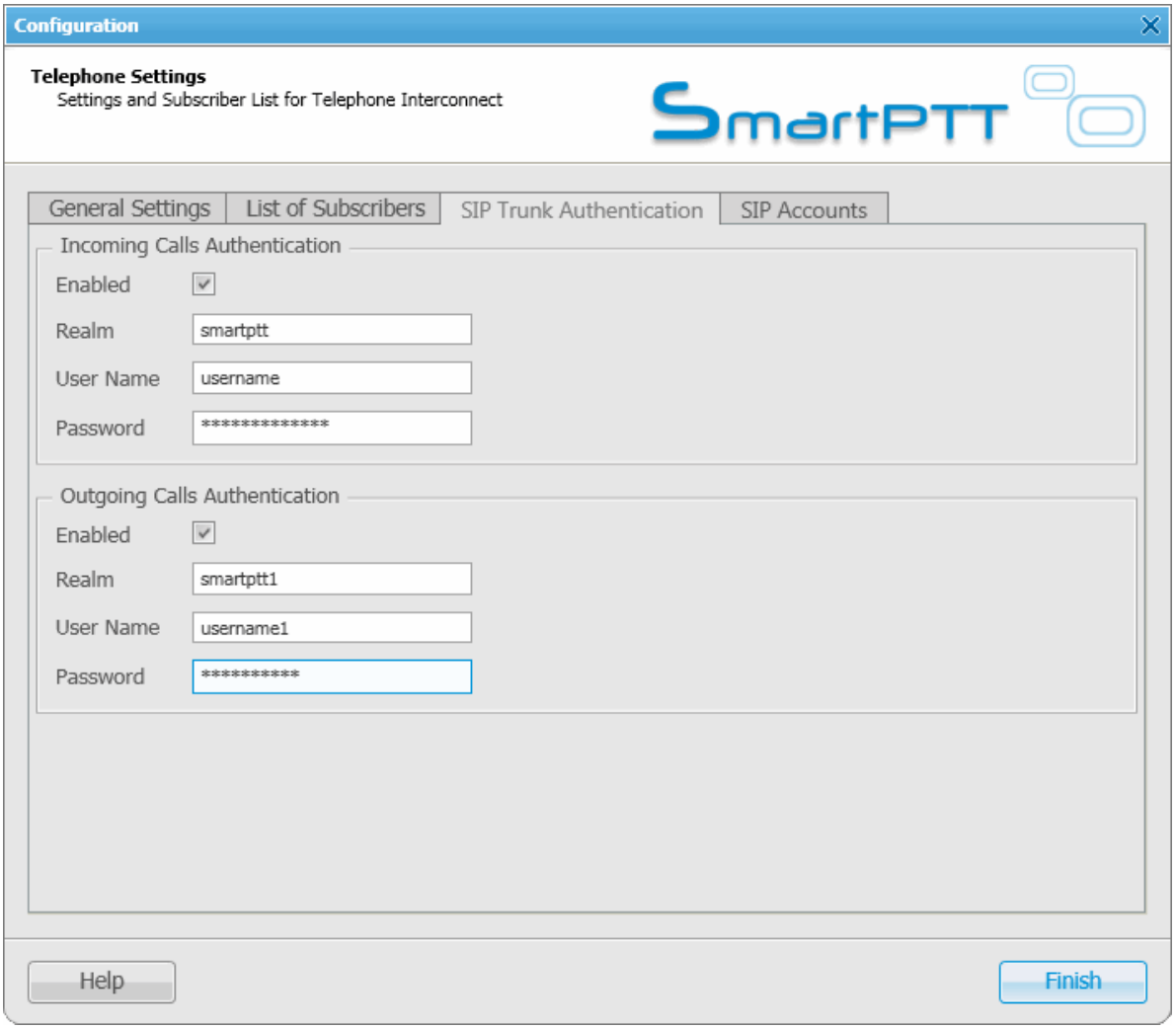
Click **OK** to save the changes.

As soon as you have added a new telephone subscriber, it appears in the **Telephone Subscribers** window in **Subscriber Management panel**. Please remember that the **Allow Calls to Telephone Subscribers** checkbox in the **General Settings** tab must be selected.

To edit or delete the telephone subscriber from the list, click the corresponding button.

Sip Trunking Authentication

The **Telephone Settings** window contains authentication settings in a separate tab.



Incoming Call Authentication – the setting includes parameters required for incoming call authentication. When an incoming call from a phone/softphone is received, dispatcher asks user name and password corresponding to **Realm** in the described setting. Calling subscriber must send back user name and password specified in this setting. The authentication type is not required if the incoming call is addressed to subscriber using SIP account for connection. To activate this ability, select the **Enabled** checkbox.

Realm – parameter used for the incoming telephone calls authentication.

User Name – name of the user used for authentication.

Password – password used for authentication.

Outgoing Call Authentication – the setting includes parameters required for outgoing call authentication.

Realm – if not set, SmartPTT Dispatcher responds to any any authentication request with specified user name and password. If set, SmartPTT Dispatcher responds only to authentication requests that matches the **Realm** value.

User Name – user name used for authentication.

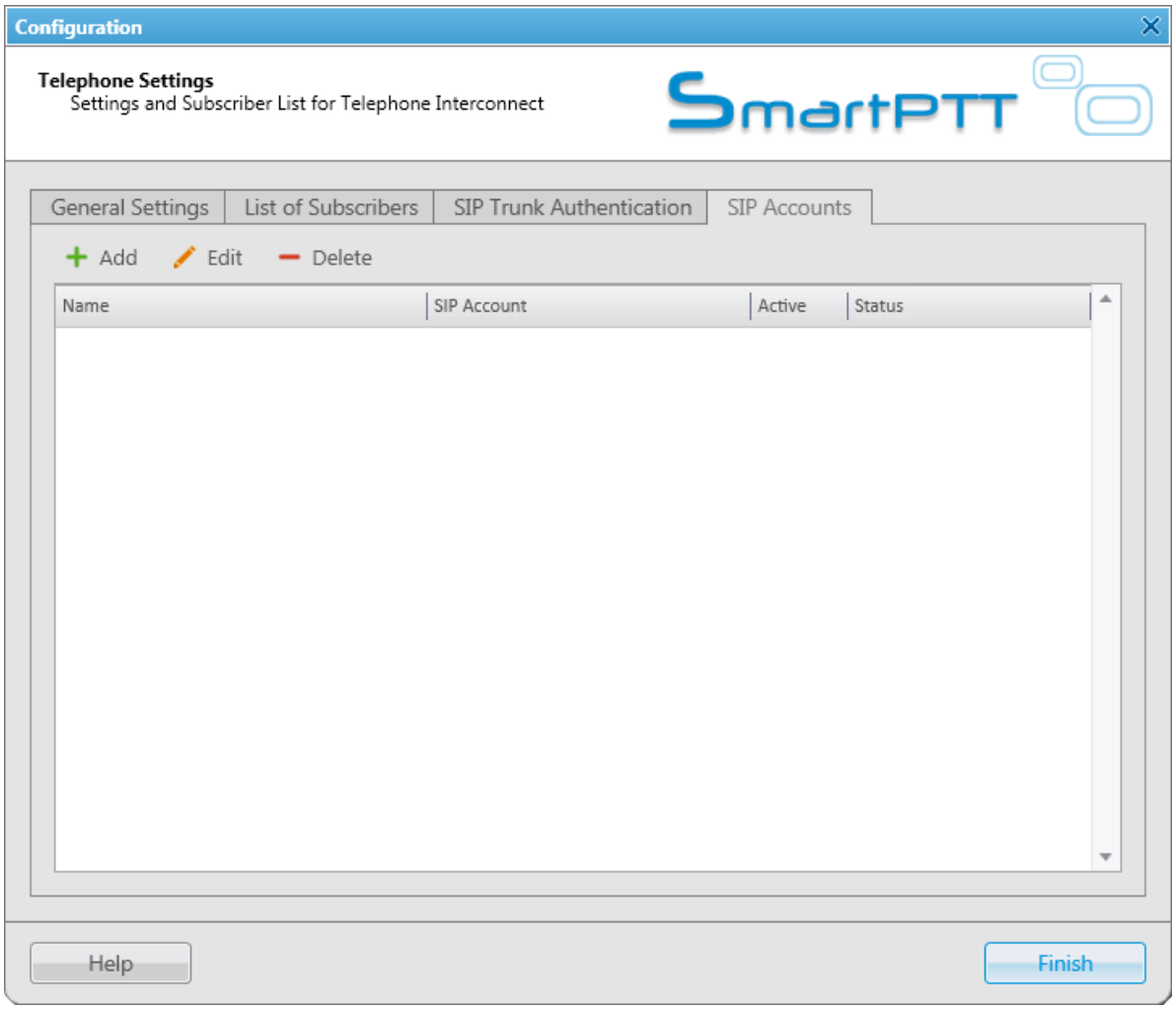
Password – password used for authentication.

SIP Accounts

If SmartPTT Dispatcher IP address varies, there must be a mechanism for determining its current value. In order to do this, SIP registration can be used, allowing the dispatcher to inform SIP server of its actual IP address.

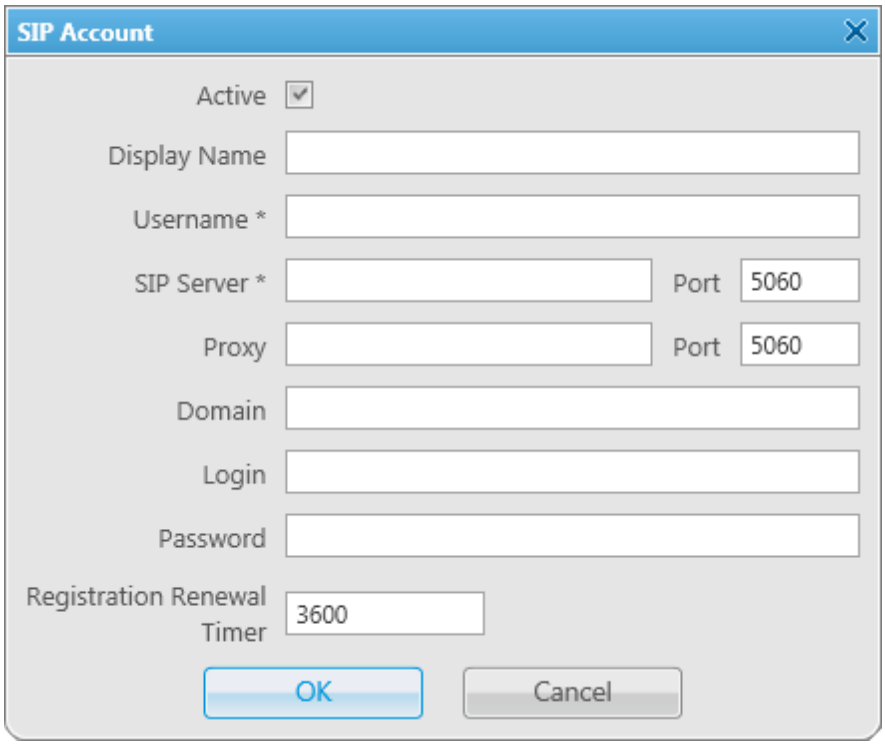
For example, *Client 1* has current IP address *192.168.0.224*, *Client 2 – 192.168.0.98*. It is necessary to establish connection between them, while both subscribers are not aware of each other's IP addresses. To do this, create accounts on SIP server (*sip_server.com*) for both subscribers – *user1* (*sip: user1@sip_server.com*) and *user2* (*sip: user2@sip_server.com*) respectively. SIP server stores current IP addresses relevant to the SIP accounts of *Client 1* and *Client 2*. Therefore, *Client 1* is not required to know current IP address of *Client 2* to make a call. *Client 1* refers to the SIP server under its account and requests connection with *Client 2* pointing out its SIP account. The SIP server searches its database for the current IP address of *Client 2*, returns it to *Client 1* or redirects the call from *Client 1* to *Client 2*.

The **SIP Accounts** tab in the **Telephone Settings** window contains dispatcher SIP account parameters. These accounts are created by the dispatcher on various SIP servers in advance. The parameters are used to establish connection with other server subscribers.



The **Status** field displays the account registration status on SIP server. Possible values – *Registered*, *Not registered*, *Processing*, and SIP error messages.

To add a record about a new SIP account, click **Add**. At that, the following window opens.



Active – select this checkbox to enable account registration on SIP server.

Display Name – the name that appears on the subscriber device screen.

Username – the account identifier on the SIP server.

SIP server – remote SIP server IP address.

Proxy – proxy server which can be used for special cases (for example, some providers insist on using proxy to request SIP server).

Domain – parameter for SIP server account authentication.

Login – login for SIP server account authentication.

Password – password for SIP server account authentication.

Registration Renewal Timer – time period (in seconds) between requests for the dispatcher IP address update on the SIP server.

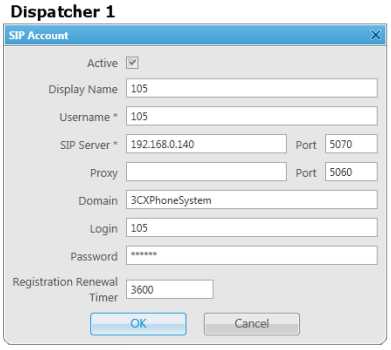
The following example is focused on setting up connection between SmartPTT Dispatcher (*Dispatcher 1*) and two

other SIP clients (Linphone, MicroSIP, 3CX, or SmartPTT Dispatcher) (*Dispatcher 2*, *Dispatcher 3*). These settings allow *Dispatcher 1*, *Dispatcher 2*, and *Dispatcher 3* to interact with one another as 3CX server subscribers.

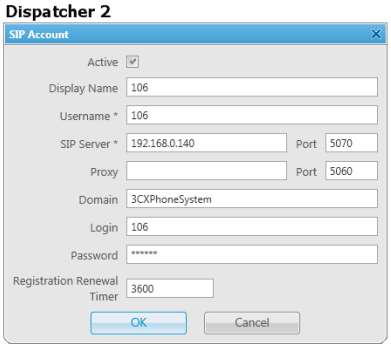
In order to do this:

1. Create SIP accounts for three SIP clients using the selected VoIP service provider, for example, accounts with **ID** = *105*, *106*, and *107* on the 3CX SIP server.
2. In the **SIP Accounts** tab, as *Dispatcher 1* add records corresponding to the created SIP server accounts with **ID** = *105*; *Dispatcher 2* – with **ID** = *106*; *Dispatcher 3* – with **ID** = *107*.

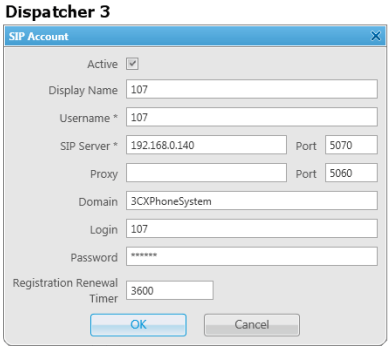
Dispatcher 1



Dispatcher 2



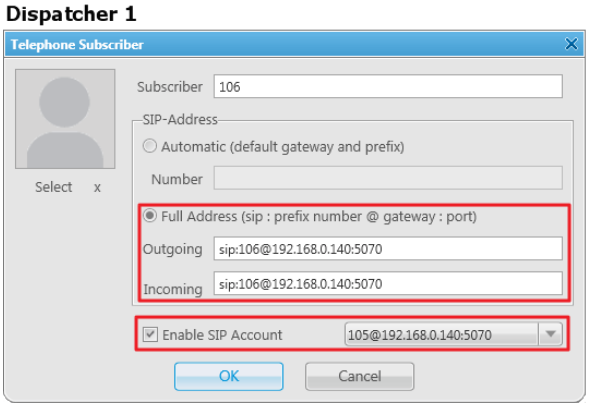
Dispatcher 3

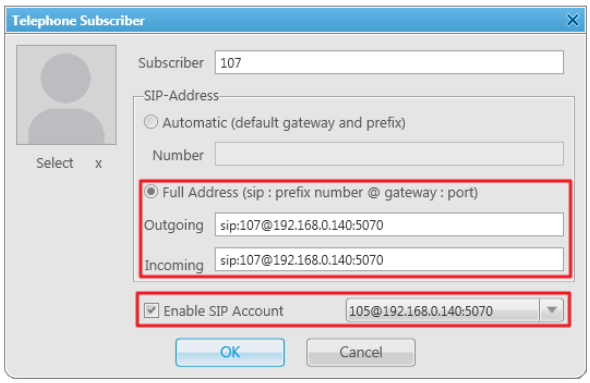


3. As *Dispatcher 1* add records of the two subscribers (*Dispatcher 2*, *Dispatcher 3*). Connection with these subscribers will be established via SIP server accounts.

Create the accounts in the **List of Subscribers** tab. Fill in the **Subscriber** field. Click **Full Address** (**Automatic** can also be ckicked if **VoIP Gateway Default Settings** allow you to connect to the selected SIP server) and specify the outgoing and incoming SIP addresses corresponding to the called subscriber. Select the *Dispatcher 1* SIP account in the **Enable SIP Account** field (see step 2).

Dispatcher 1

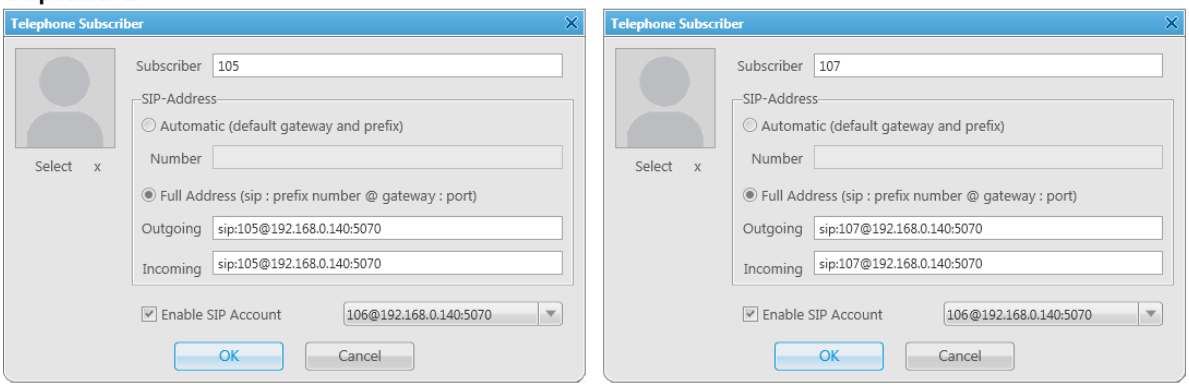




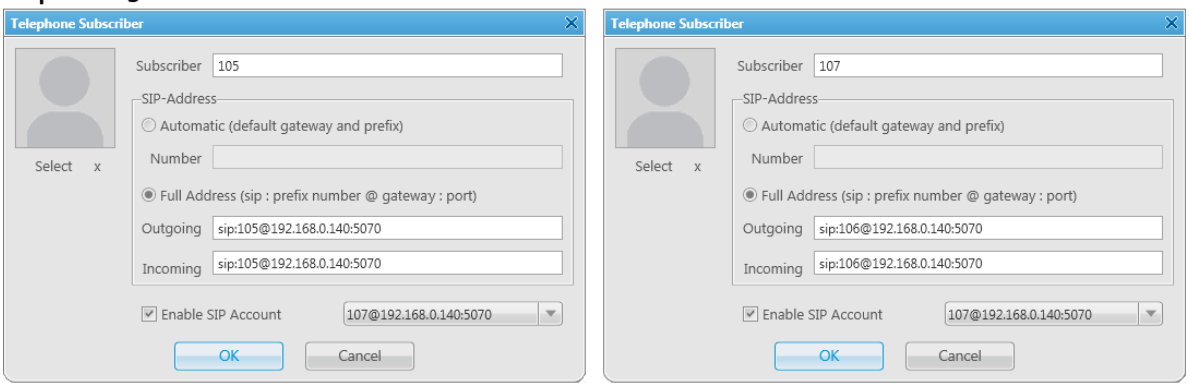
Created subscriber entries appear in the **Telephone Subscribers** window in **Subscriber Management panel**.

4. Complete the same settings for *Dispatcher 2* (create account with **ID** = *106* in the SIP accounts tab; add subscribers *105* and *107* in the **List of Subscribers** tab) and *Dispatcher 3* (create account with **ID** = *107* in the SIP accounts tab; add subscribers *105* and *106* in the **List of Subscribers** tab).

Dispatcher 2



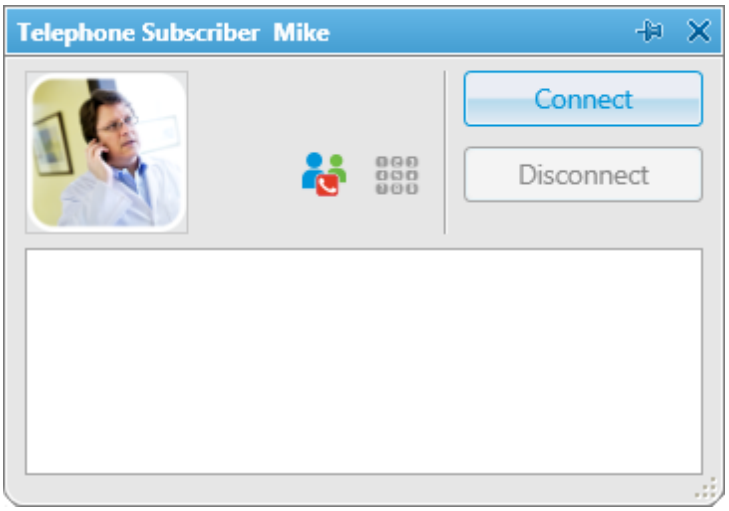
Dispatcher 3



5. To apply settings, click **Finish** in the **Telephone Settings** window.

How to Call Telephone Subscriber

To call the telephone subscriber from the Dispatcher Console, open the corresponding **Call Window**.

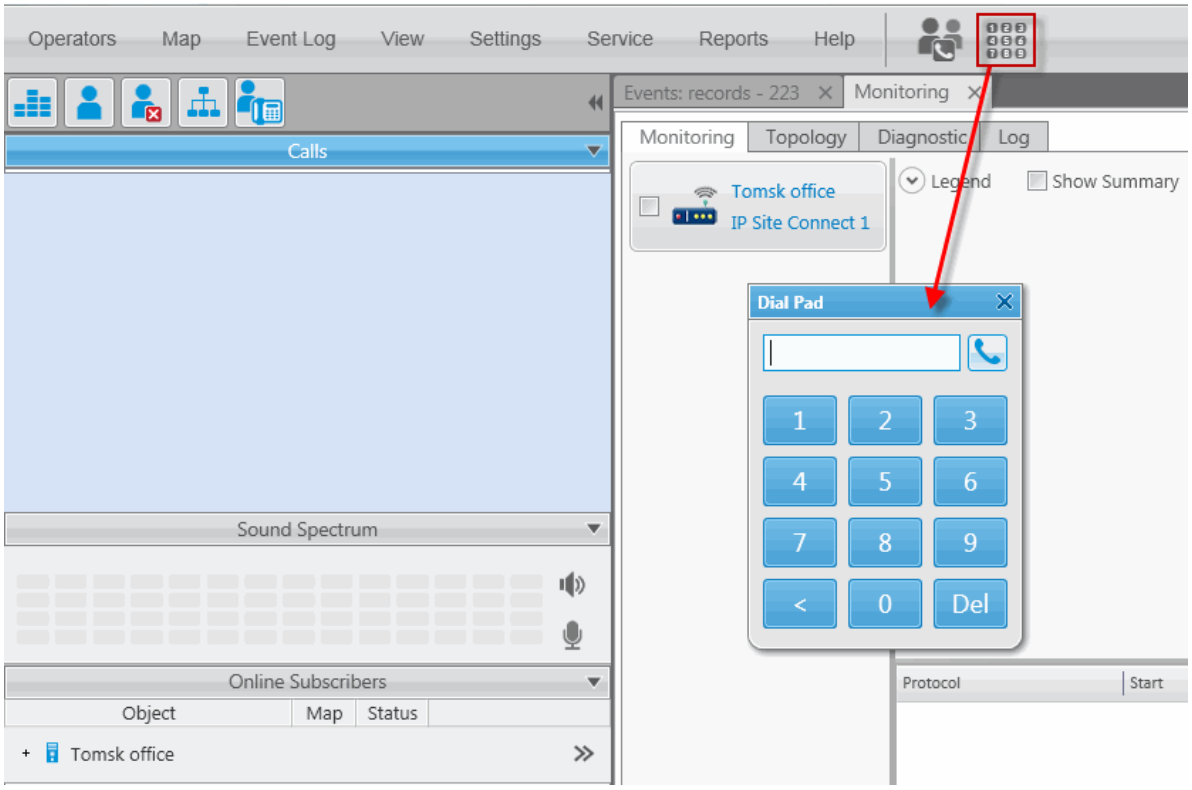


To call the subscriber, click **Connect**.

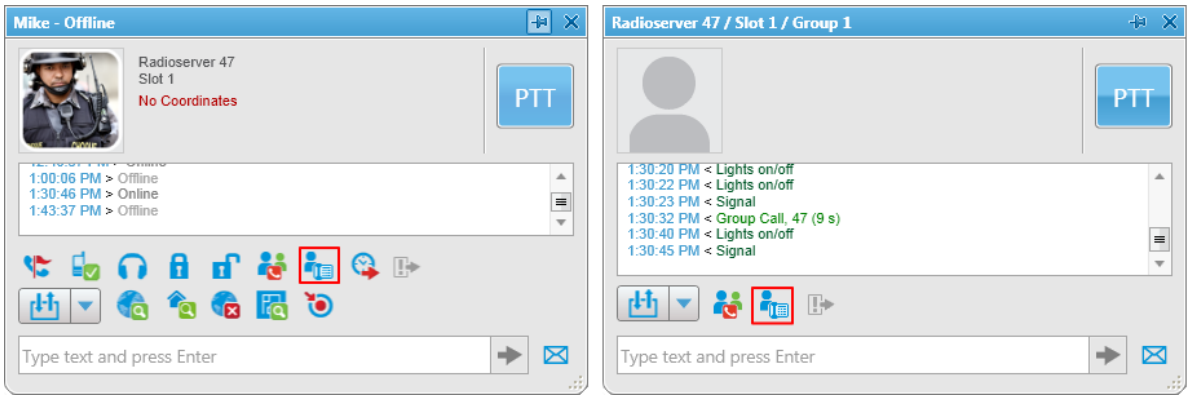
Used for running a conference call with the telephone subscriber. For more information about this function see Conference Calls.

Used for extension dialing in DTMF mode.

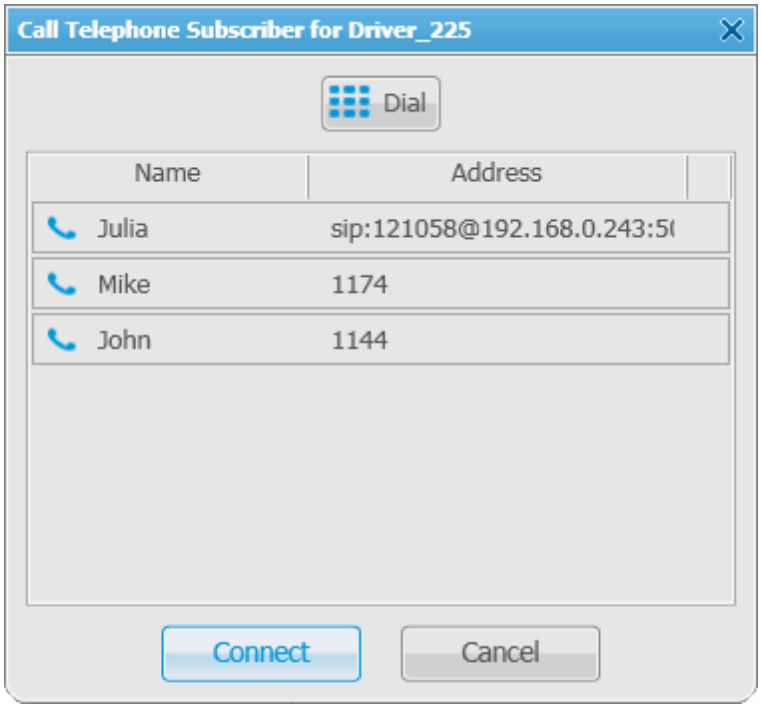
To make a call to a telephone subscriber not on the list, click the **Dial Pad** button in the **Quick Launch** buttons area (default gateway settings are used to generate the full SIP address).



To connect a radio subscriber or a group and a telephone subscriber open the **Call Window** of the radio subscriber or the group and click the **Call Telephone Subscriber** button.



At that, **Call Telephone Subscriber** window opens.



Select the telephone subscriber from the list and click **Connect** or double-click on the list item. This list is taken from the list of telephone subscribers created under **Settings/Telephone Settings.**

If the subscriber is not on the list, click **Dial** to input the telephone number manually.

At clicking **Connect** a new window with the call status opens.

There are three statuses:

- Ringing
- Call
- Call Complete

If the connection attempt is failed, status window shows the corresponding error message.

To manage the call process the dispatcher can use the buttons next to the call status:

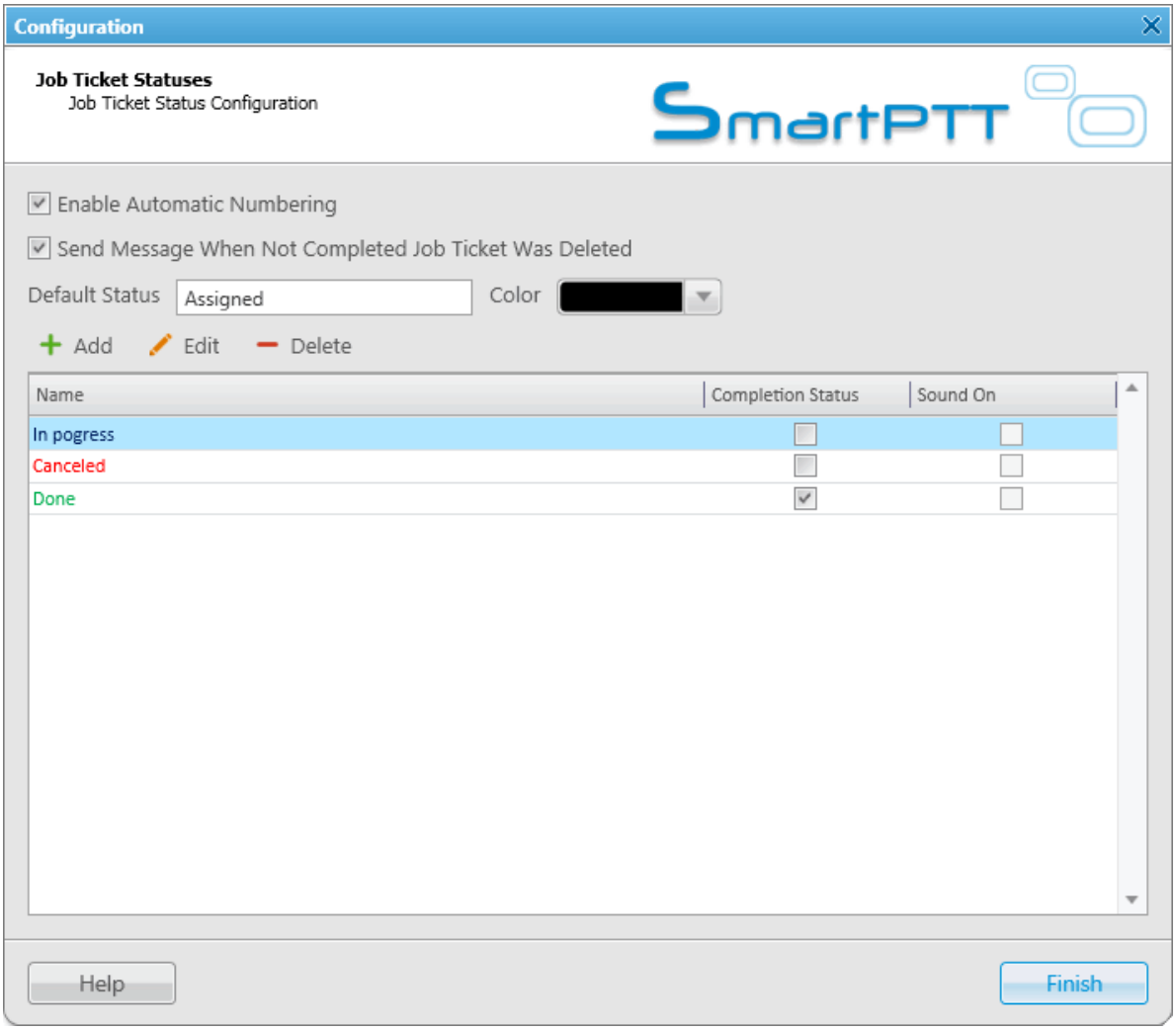
Stops the call.

Initiates reconnection to the telephone subscriber.

2.8.15 Job Ticket Statuses

Here you can create job ticket statuses and specify their settings. For example, assign a color to a status or add alert on status change.

To create job ticket statuses, expand the **Settings** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Job Ticket Statuses**. At that, the following window opens.



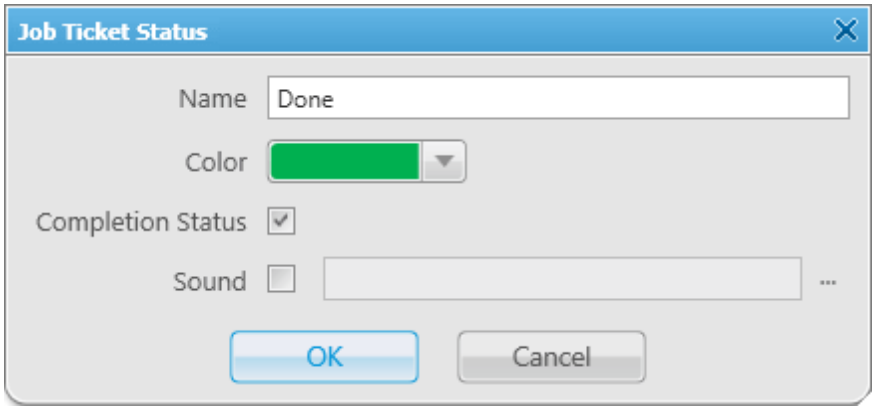
Enable Automatic Numbering – when this option is enabled, a unique number is assigned to each new job ticket. It is necessary to distinguish job tickets with same names.

Send Message When Not Completed Job Ticket Was Deleted – when this option is enabled, a radio subscriber receives a message, if an incomplete job ticket was canceled.

Default status – the job ticket status which is displayed when the operator creates a new job ticket. The status does not change, until the radio subscriber modifies it. You do not need to set this status in the MOTOTRBO CPS settings. It is used only in SmartPTT Dispatcher, so you can add any value you like.

In the **Color** field select the color for the default status.

To add a job ticket status, click **Add**.



Name – name of the status.

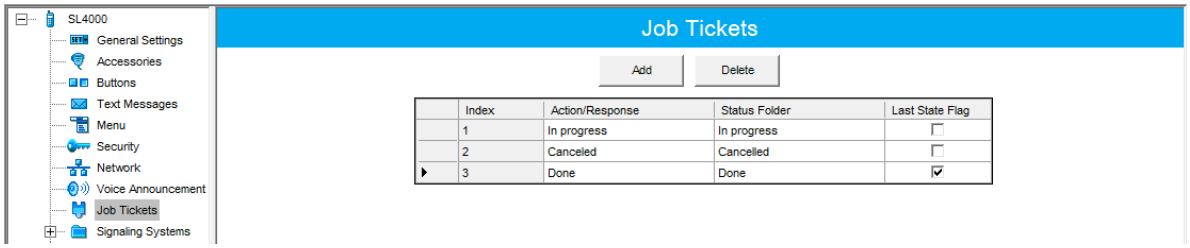
Color – color of the status, which will be used in the job ticket table.

Completion status – it is the final status of a job ticket. If a job ticket has such a status and if **Remove job ticket from the list within *n* seconds after completion** is enabled, the job ticket will be hidden from the list.

Note: You can also select the **Completion status** later in the **Job Tickets** configuration window.

Sound – this setting enables the sound signal which will notify the operator that a job ticket changed its status to this one.

Warning! Added statuses must match the statuses set in MOTOTRBO CPS.



If the statuses of SmartPTT Dispatcher does not correspond to statuses in MOTOTRBO CPS, all settings (color, sound signal and status completion) won't be applied.

2.8.16 Third-Party Equipment

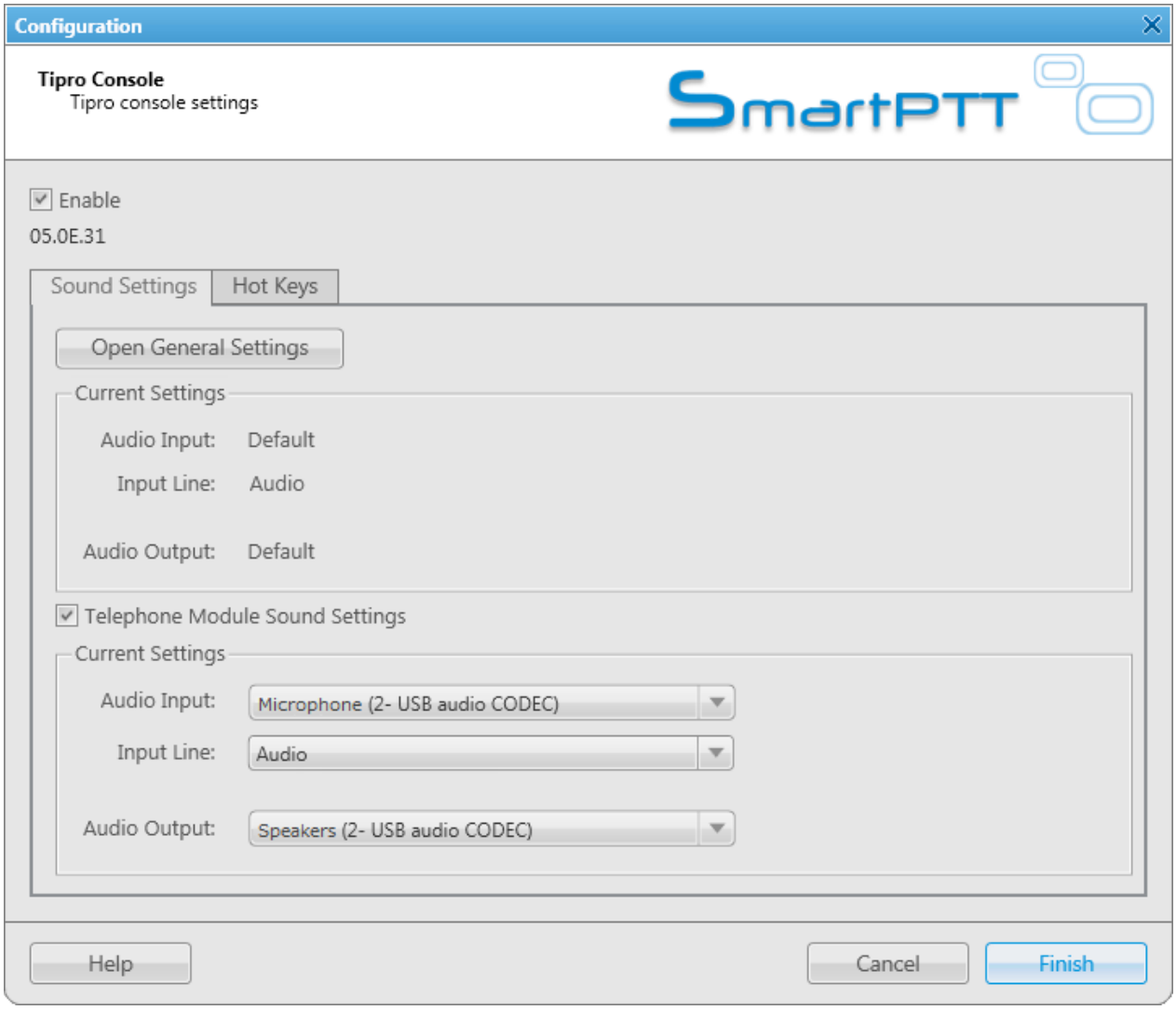
The SmartPTT system supports third-party equipment e.g., Tipro modular console with BeFREE touchcomputer or without it.

To make the console work with the SmartPTT system, take the following steps:

1. For Tipro modular console with BeFREE touchcomputer, install the SmartPTT application and other additional software, such as ChangeMe Utility, Tipro OPOS (these are delivered together with Tipro console), Microsoft Point of Service for .NET (POS for .NET) v1.14 (http://www.microsoft.com/en-us/download/details.aspx?id=42081).
2. For Tipro modular console without touchcomputer, connect Tipro console to the PC with SmartPTT Dispatcher installed. Install other additional software, such as ChangeMe Utility, Tipro OPOS (these are delivered together with Tipro console), Microsoft Point of Service for .NET (POS for .NET) v1.14 (http://www.microsoft.com/en-us/download/details.aspx?id=42081).
3. Contact SmartPTT support team (http://support.smartptt.com/hc/en-us/requests/new) for Tipro configuration file.
4. Apply the received Tipro configuration file using ChangeMe Utility.
5. Configure SmartPTT Dispatcher settings connected to Tipro support.

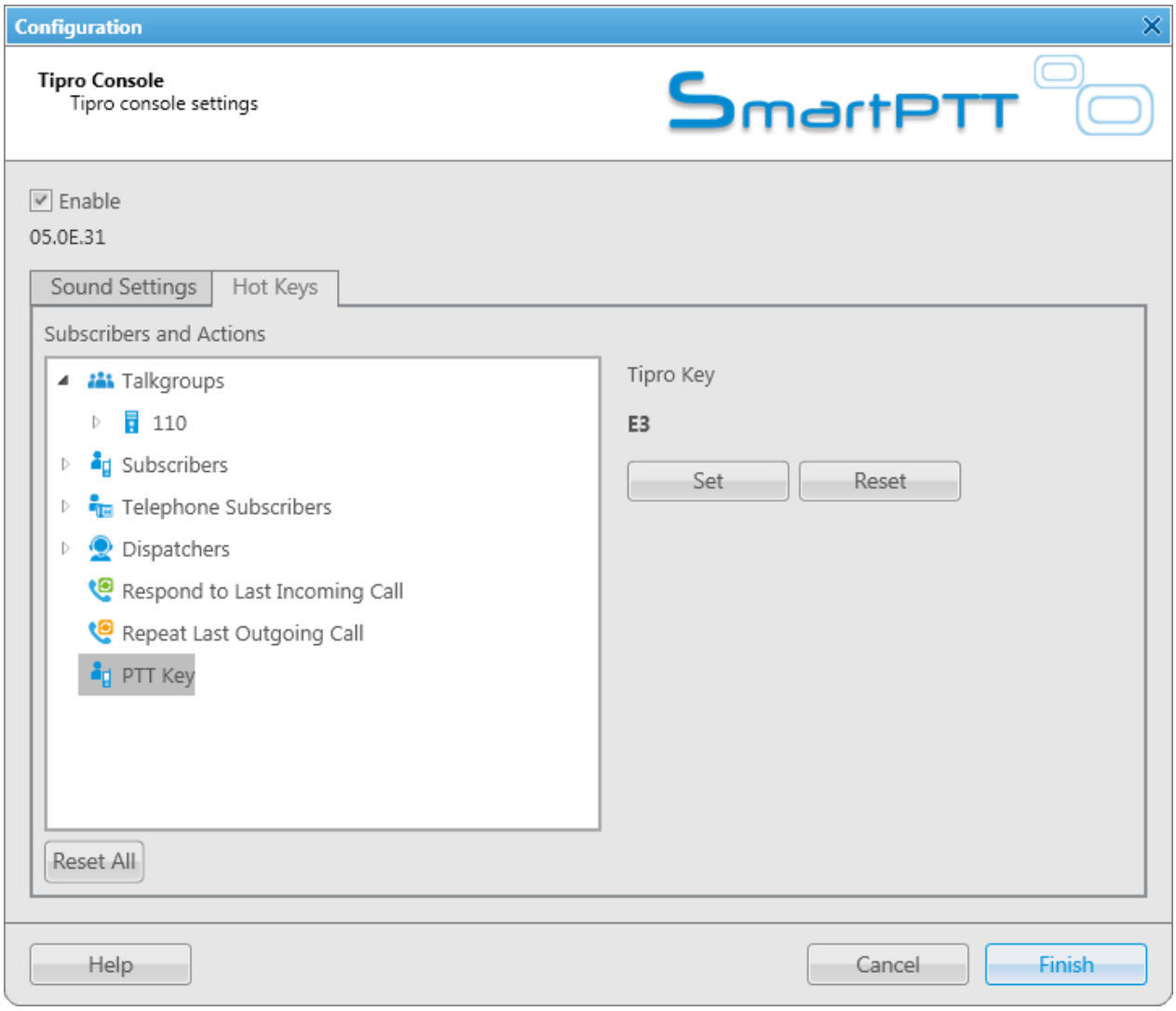
The SmartPTT Dispatcher configuration includes the following steps:

1. Open SmartPTT Dispatcher.
2. Enable Tipro console. On the **Settings** menu select **Third-Party Equipment** and then select **Tipro Console**. In the opened window, select **Enable**.



At that, the version of the main Tipro module appears, and the settings become enabled. If device can't be found, the settings are disabled.

3. Set up sound settings. You can go to the **Sound Settings** by clicking on **Open General Settings** to change the current sound settings. You can also configure sound settings for the telephone module. This is necessary only for Tipro modular console with BeFREE touchcomputer.
4. Add hot keys. To do that, open the **Hot Keys** tab.



In the **Subscribers and Actions** box select the subscriber, subscriber group, dispatcher or action, to which you want to assign a Tipro key. Then click on **Set** and press the required Tipro key. To save changes, click on **Finish**. To get back to previous settings, click **Cancel**.

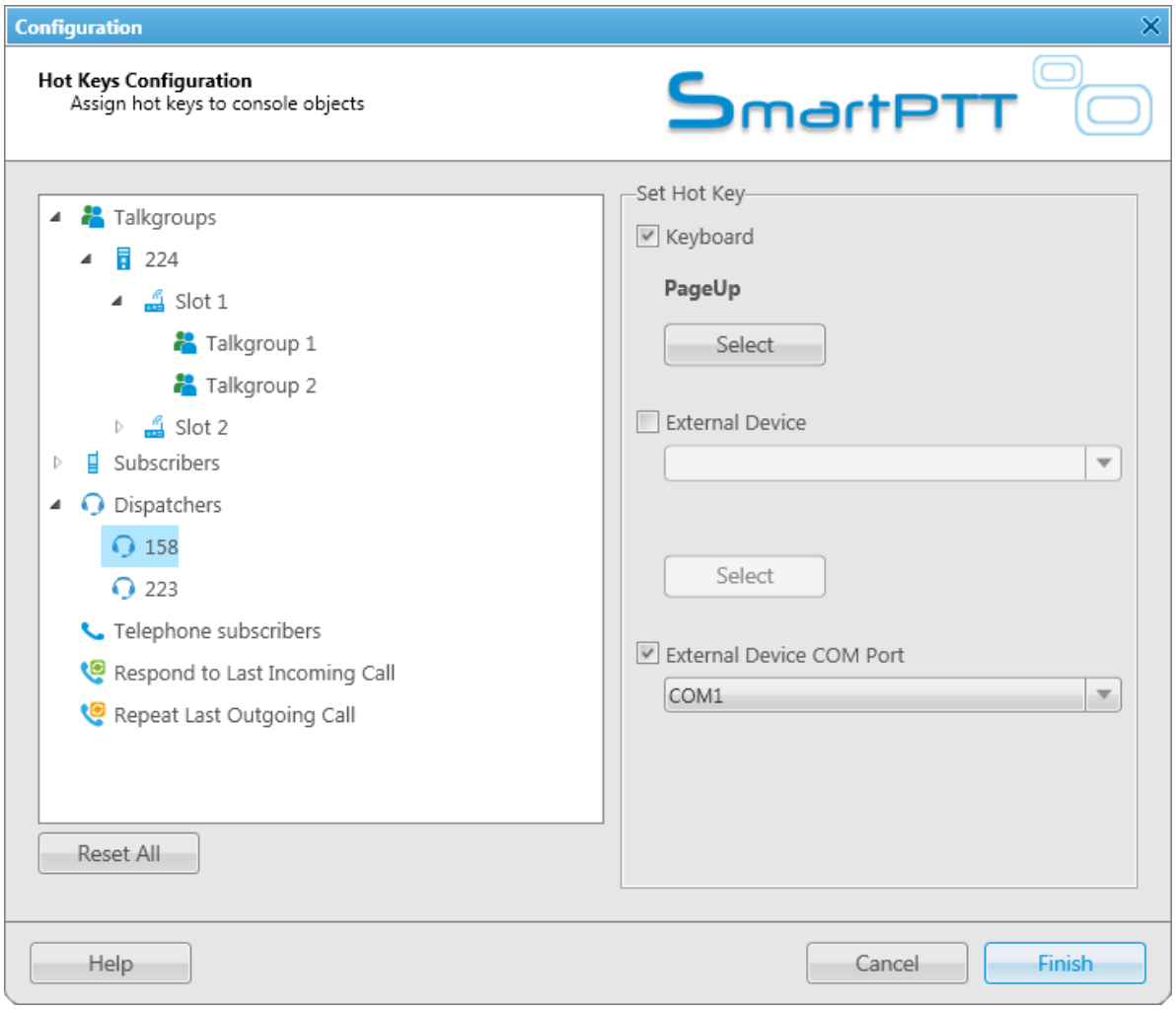
Reset All – removes all assigned hot keys.

2.8.17 Hot Keys

SmartPTT Dispatcher implements the ability to make a call to subscribers (radio subscriber, talkgroups, all call, telephone subscriber, external dispatcher) by clicking on a predetermined keyboard key, its combination or a button of the external input device. Also, dispatcher can repeat the last outgoing call or respond to the last

incoming call by pressing the hot keys.

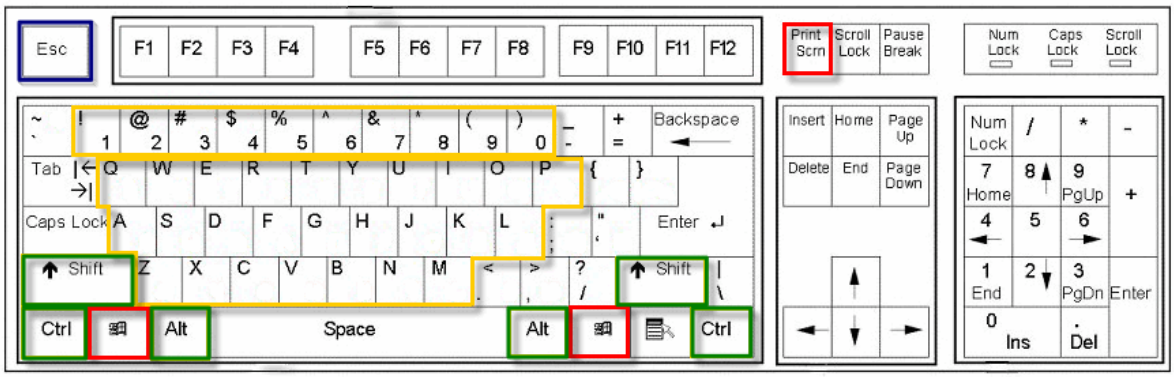
In order to set up hot keys for system subscribers, expand the **Settings** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Hot Keys**.



The window contains a list of subscribers available for the hot key assignment – radio subscribers, talkgroups, telephone subscribers, external dispatchers, last called and last active subscribers. To assign a hot key to the subscriber, select the subscriber from the list, then select the hot key type.

Keyboard – select the field to assign to the subscriber a keyboard key or a key combination as the PTT button. Click **Select**, then press the keyboard key or the key combination.

Not all keyboard keys can be used as hot keys. Here is the keyboard scheme. It shows which keyboard keys can be used and which cannot.



1. The keyboard keys marked red cannot be used as hot keys separately or in combination.
2. The keyboard keys marked yellow cannot be used as hot keys separately, only in combination with the **Ctrl**, **Alt** or **Shift** keys. The **Shift** key can be used only in combination of three keys, for example, **Shift+Alt+F**.
3. The **Esc** key can be used only in combination with **Shift** (**Shift+Esc**).
4. All other keyboard keys can be used as hot keys either separately or in combination with the **Ctrl**, **Alt** or **Shift** keys. The **Shift** key can be used in combination of two or three keys, for example, **Shift+Delete**, **Shift+Alt +Enter**.

Note: Hot keys support single press only.

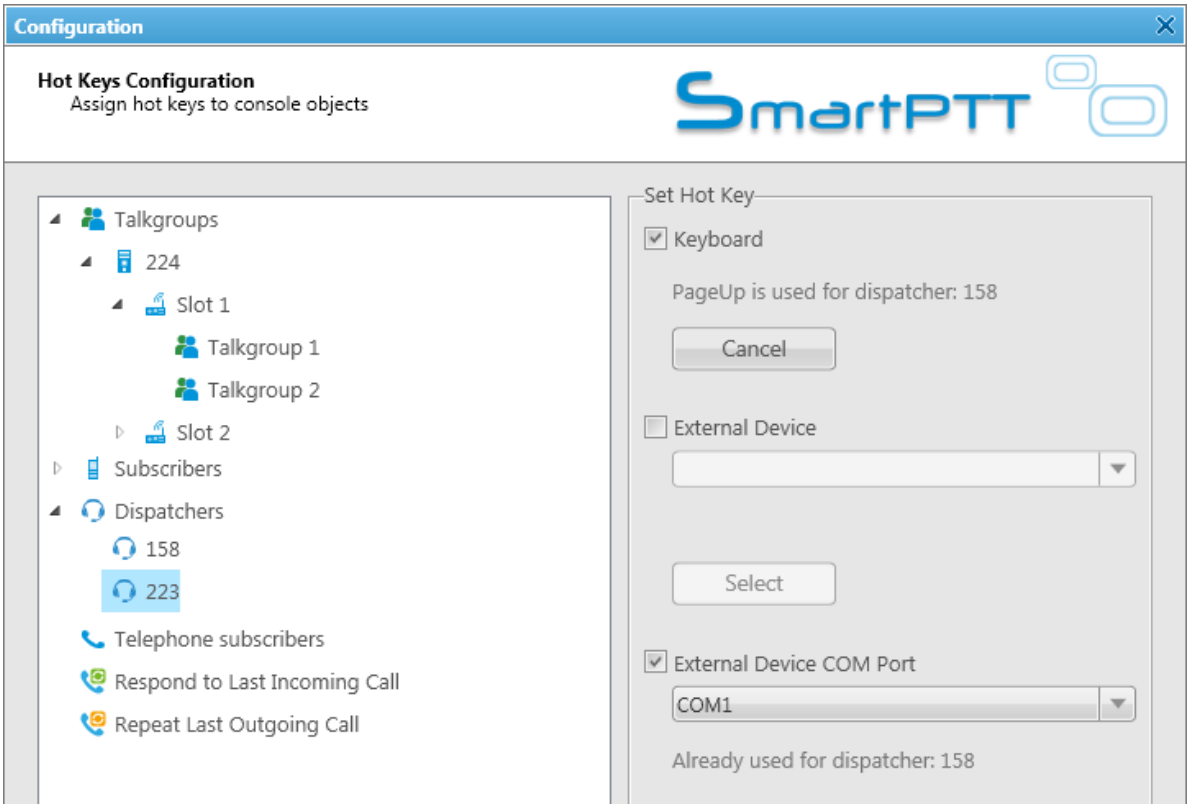
External Device – select the field to assign to the subscriber a key of the external input device connected via USB as the PTT button. Select the external device from the list of available, click the **Select** button, then press the key of the external device.

External Device COM Port – select the field to assign to the subscriber a key of the external PTT pedal connected via COM port as the PTT button. Select the COM port of the PTT pedal from the list of available.

There is only one mode available for the PTT button on external devices – hold to enable.

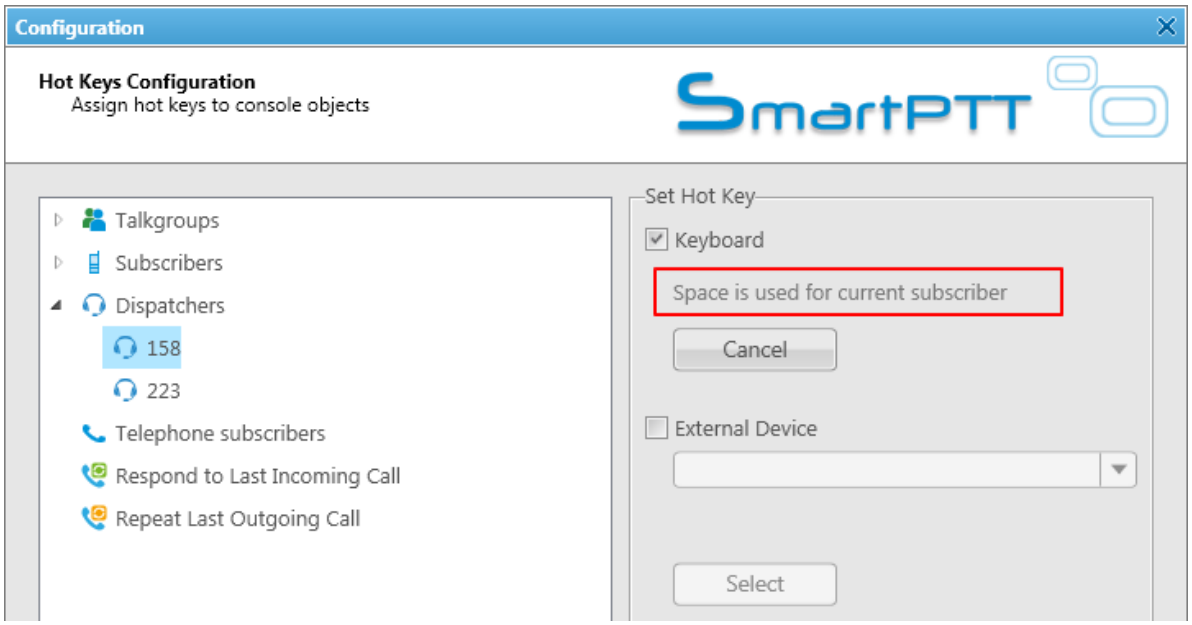
To remove the previously defined hot key for the subscriber, disable the appropriate checkbox. To reset the assigned hot keys for all subscribers, click **Reset All**.

If a designated keyboard key or button of an external input device is already in use, the message appears in the window:



A keyboard key or a key of the external input device which is already in use as the **PTT** button for a current subscriber cannot be used as a PTT button for the selected subscriber.

Note: The **PTT** button used for a call to a current subscriber means that you use this button to call any subscriber of SmartPTT Dispatcher.



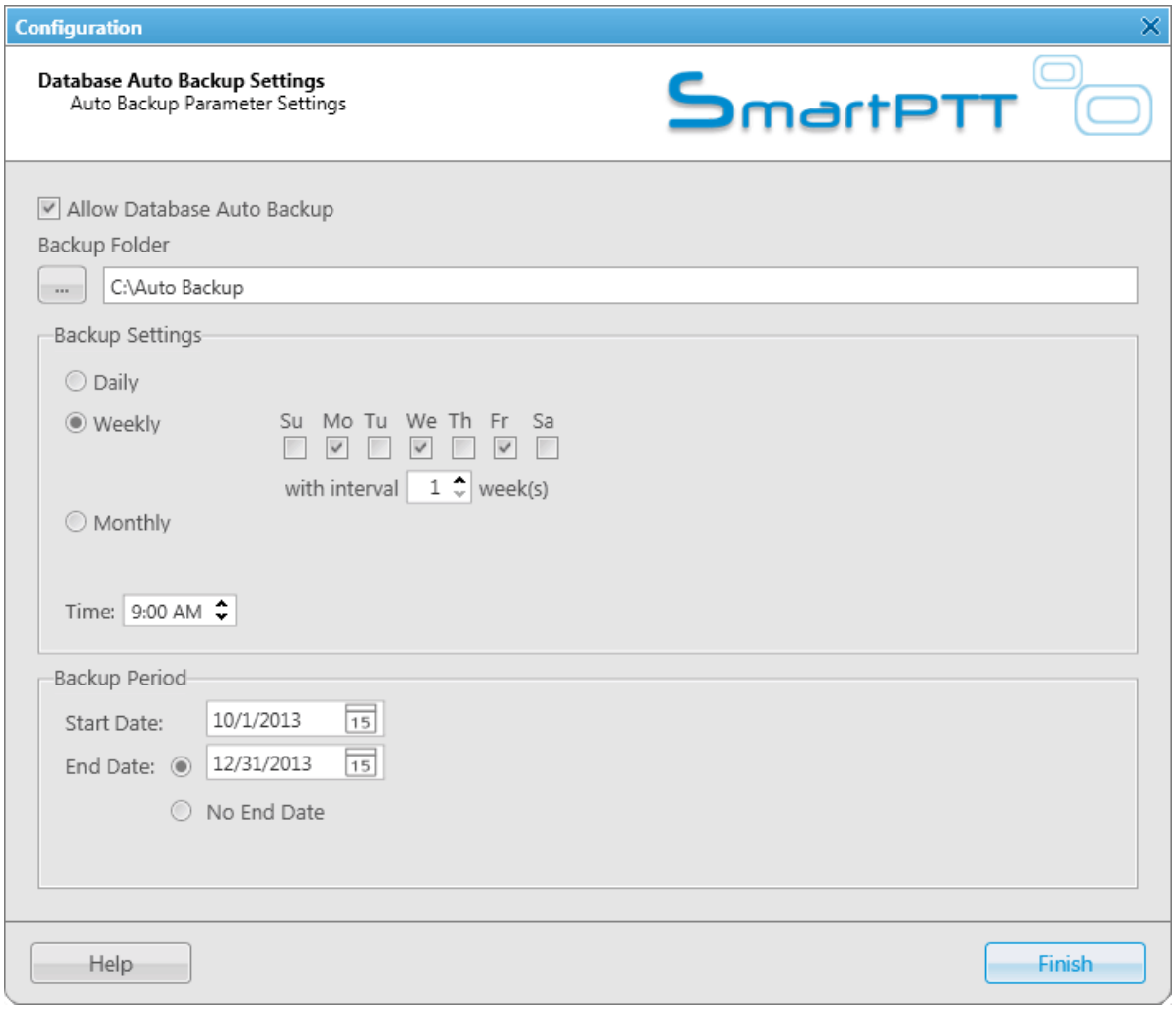
Note: If the hot key that you set matches the **PTT** button for the current subscriber, the hot key settings will be discarded.

Click **Finish** to apply the settings. To get back to the previous settings, click **Cancel**.

2.8.18 Database Auto Backup

Backing up data on a regular basis helps to protect it from being erased in case of the server hardware or software failure. SmartPTT Dispatcher allows the Administrator to back up the database manually or to set up parameters for automatic backup.

In order to set up automatic backup parameters, expand the **Settings** menu in the **Main Menu** bar of SmartPTT Dispatcher and click **Database Auto Backup**.



Allow Database Auto Backup – select the checkbox to enable the ability to create SmartPTT Dispatcher current database backups in the automatic mode.

Backup Folder – full path to the file for saving the database backup.

Backup Settings – schedule for creating the current database backup:

- **Daily** – every fixed day at the specified time (for example, every day, every third day at 9:00 a.m.).
- **Weekly** – every fixed day of the week at the specified time (for example, every Monday, Wednesday and Friday at 11:00 p.m., or every Monday at 11:00 p.m. and Friday at 11:00 a.m.).
- **Monthly** – once a month on the fixed day of the selected month and at the specified time.

Backup Period – allows you to set time period when automatic database backup is to be made according to the selected backup settings.

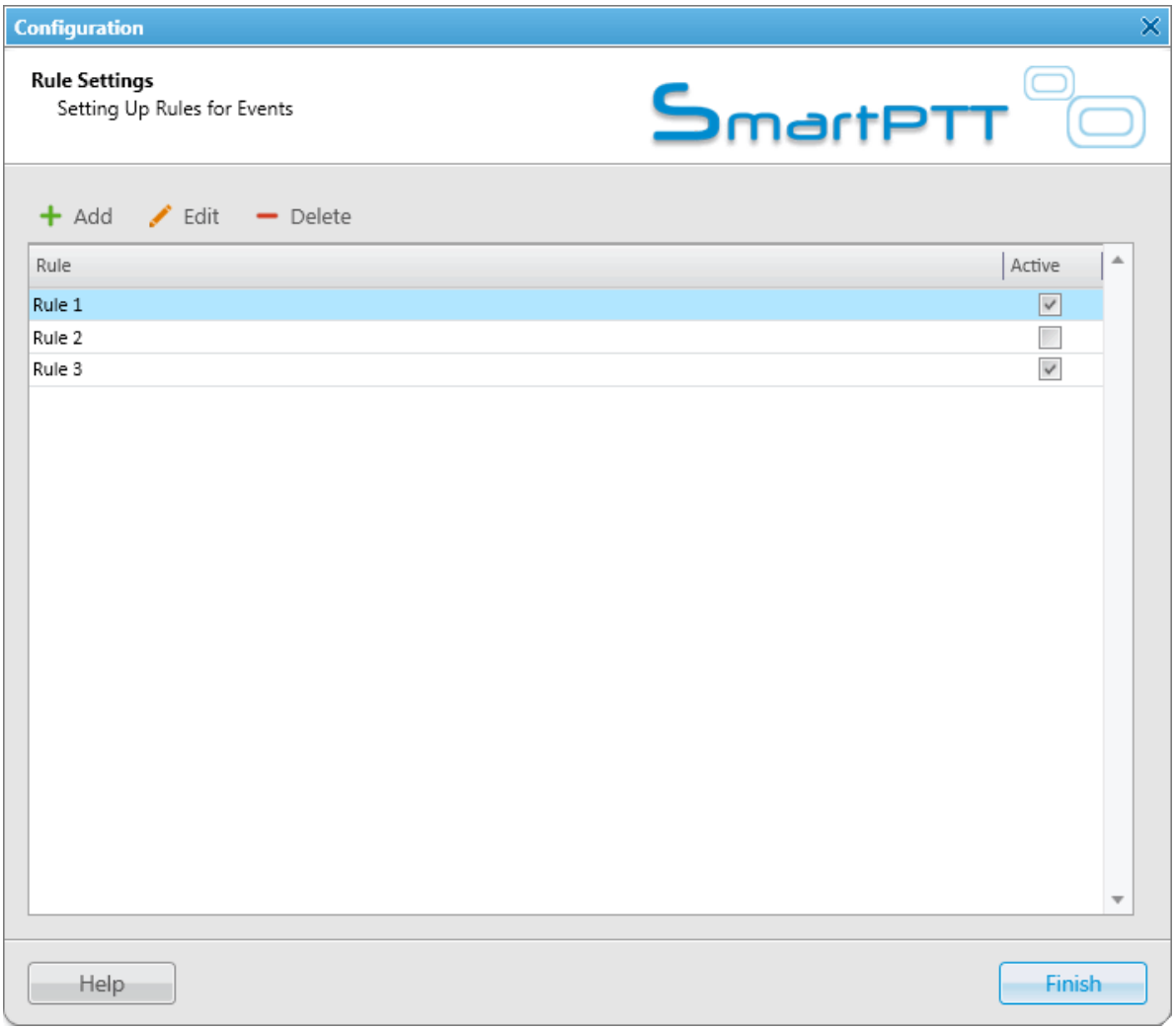
Note. The number of stored backup files in the same folder is limited to 3. Otherwise, when creating a new copy, the old files are deleted.

Note. To restore database from the automatically created backup, see How to Restore from the Created SmartPTT Dispatcher Database Backup.

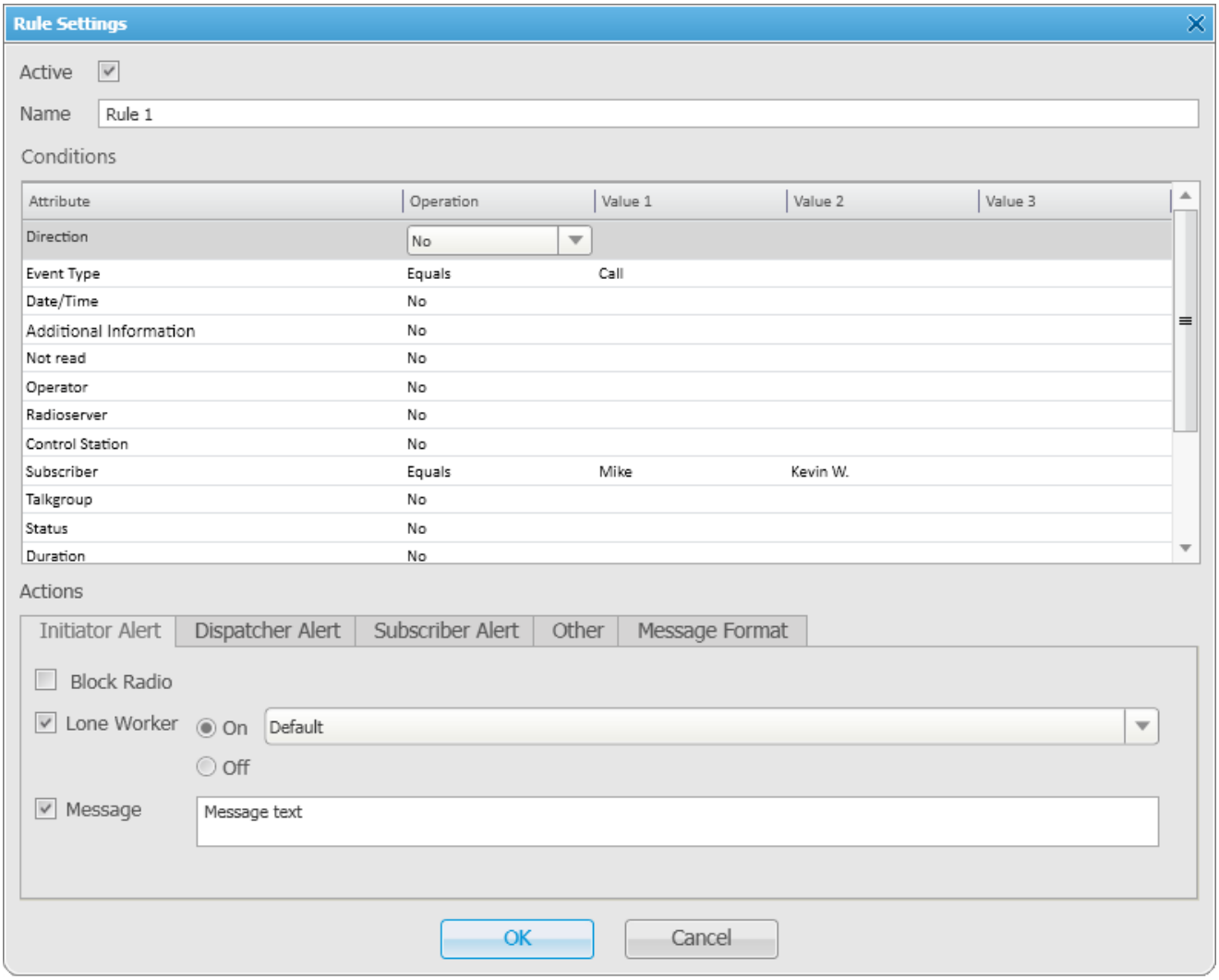
2.8.19 Rules and Alerts

You can set response rules for the events registered in the SmartPTT system. Response rules may include automatic sending of messages, playing alerts in SmartPTT Dispatcher and on the radio, changing radio subscriber status, etc.

To set rules, expand the **Settings** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Rules and Alerts**. The configuration window opens up.



To add a new rule, click **Add**. The window with rule settings opens up.



Name – the name of the rule.

Active – select this checkbox to make the rule enabled.

The following table presents conditions that can be used in rules.

Attribute	Operation	Value
Direction	No, Equals	Incoming, Outgoing
Event Type	No, Equals, Not Equals	Registration, Call, Message, Telemetry,

		Alarm, Status, Block Radio, Job Ticket, Lone Worker
Date/Time	No, In Interval	Time interval
Additional Information	No, Equals, Contains	Type event additional information, e. g. text messages, titles and description of tasks, talkers from a group call.
Not Read	No, Equals	Read, Not Read
Operator	No, Equals, Not Equals	Operator from list of operators
Radioserver	No, Equals, Contains	Radioserver name
Control Station	No, Equals, Contains	Control station name
Subscriber	No, Equals, Not Equals	Subscriber from the list of subscribers
Talkgroup	No, Equals, Contains	Talkgroup name
Status	No, Equals, Not Equals	Status from the list of statuses
Duration	No, Equals, Not Equals, Greater, Greater than or Equal, Less, Less than or Equal, In Interval	Duration in seconds
Connection Type	No, Equals, Not Equals	Connection types used in SmartPTT: • DMR – over-the-air connection made via repeaters and control stations; • PBX – telephone connection • IP – Dispatcher-Dispatcher connection. • Connect+
Repeater IP	No, Equals, Not Equals	Available repeaters' IP addresses
Receiver	No, Equals, Not Equals	Subscriber from the list of subscribers
Record	No, Equals	Available audio records

Attribute – contains the list of existing events which the system can register.

Operation – list of possible system operations for this attribute.

Value – values that can be selected for the attribute.

The rule is a combination of an attribute, operation and value. One rule can contain more than one such combinations.

When the system has registered an event matching the specified rule, the system performs predefined actions:

1. Alerts addressed to the initiator
2. Alerts addressed to the dispatcher
3. Alerts addressed to the radio subscriber
4. Other

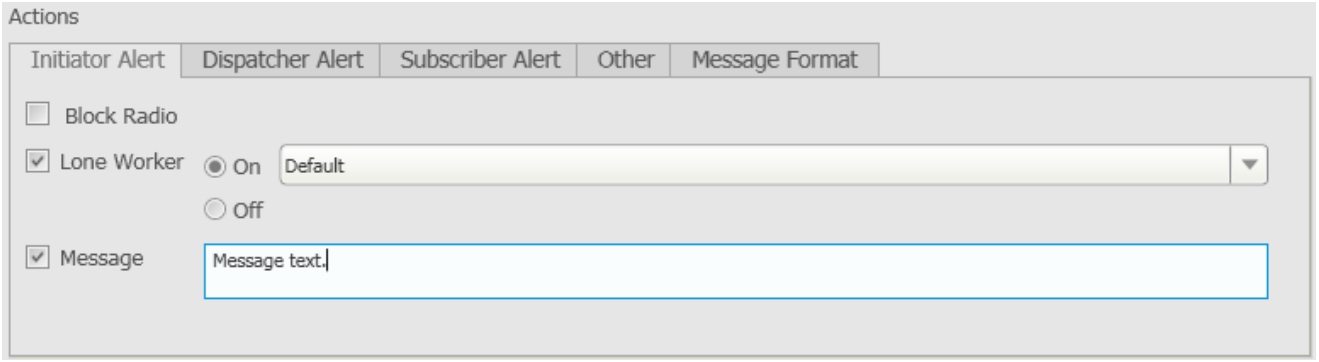
The **Message Format** tab allows you to set the format of the alert massages.

To save the rule, click **OK**. At that, the created rule appears in the list of rules.

To edit the rule, select it in the list of rules and click **Edit**. To remove the rule, select it in the list of rules and click **Delete**.

Initiator Alert

Open the **Initiator Alert** tab. In this tab you can set up actions that will be performed if the rule conditions are fulfilled.



Block Radio – if selected, the radio that triggered the rule, will be blocked.

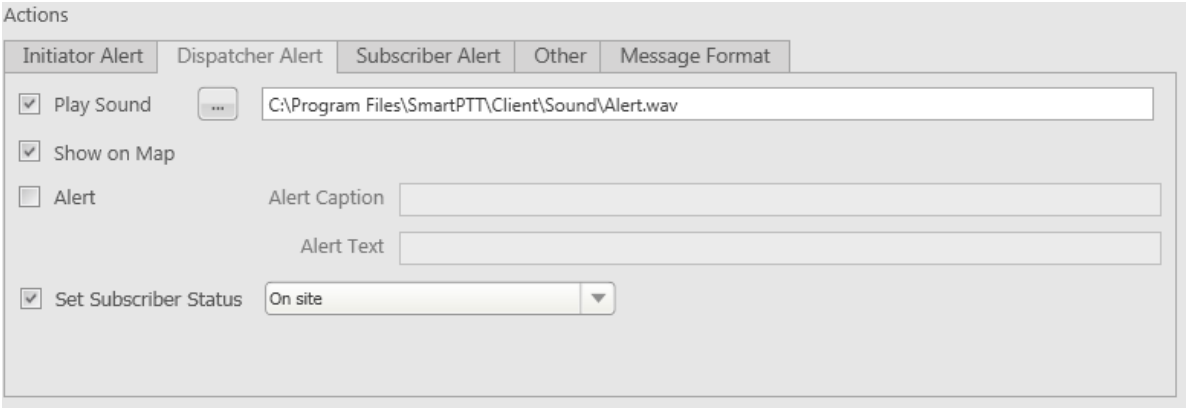
Lone Worker – if selected and **On** clicked, the lone worker profile will be set to the radio that triggered the rule. If **Off** is clicked, the lone worker mode of the radio will be deactivated.

Note: To set up the lone worker profile, see Lone Worker Rules in SmartPTT Dispatcher.

Message – a text message is sent to the subscriber who initiated triggering of the rule. You can specify message format settings in the Message Format tab.

Dispatcher Alert

Open the **Dispatcher Alert** tab.



Play Sound – select .wav audio file to play.

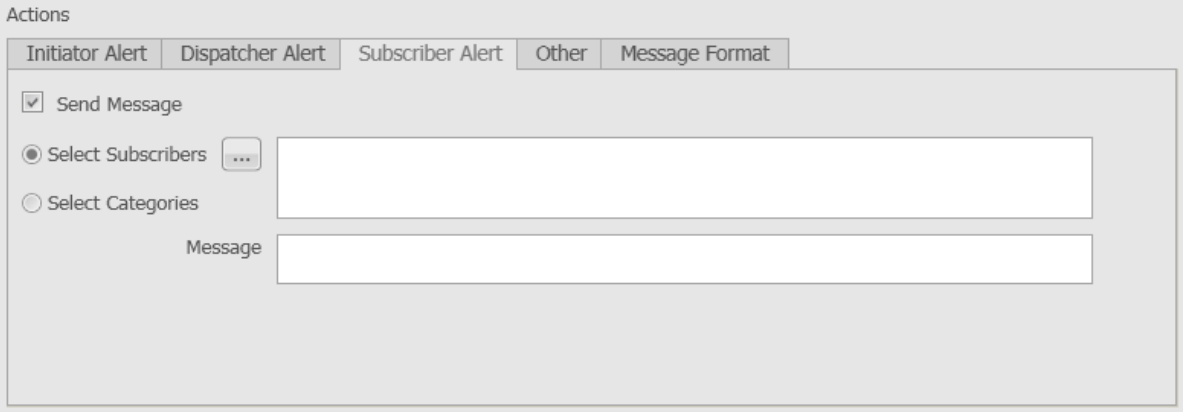
Show on Map – location of the subscriber specified in the rule is shown on the map (with an icon).

Alert – notification with the event description is displayed in the **System Notification** window. You can define the title in the **Alert Caption** field and the description in the **Alert Text** field.

Set Subscriber Status – the subscriber is assigned the predefined status. It is selected from the **Statuses** list (see Statuses).

Subscriber Alert

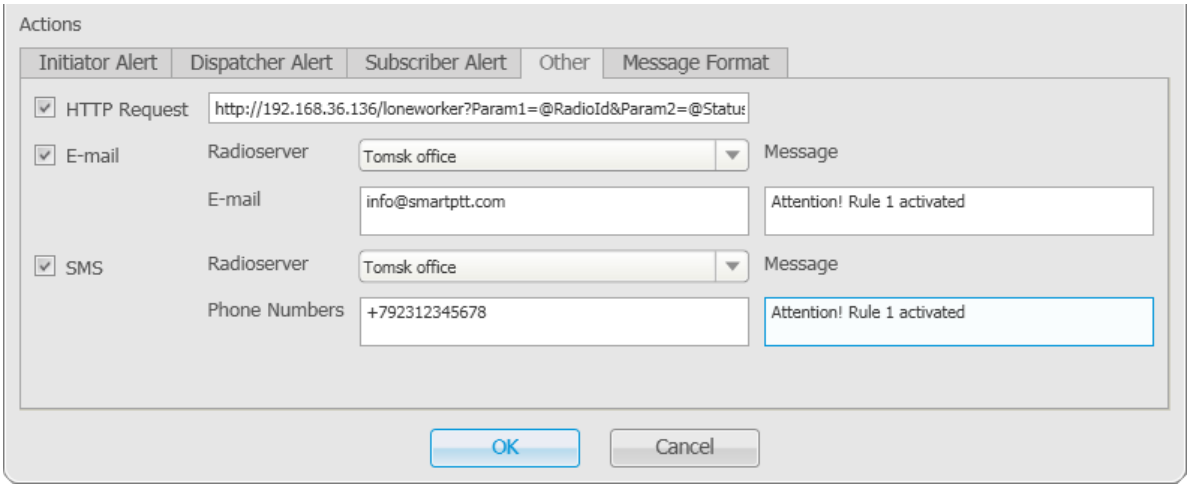
Open the **Subscriber Alert** tab.



Send Message – a text message is sent to the selected subscribers or categories (all subscribers, talkgroups and dispatchers assigned to specific categories). You can specify format settings of text messages in the Message Format tab of the **Actions** area.

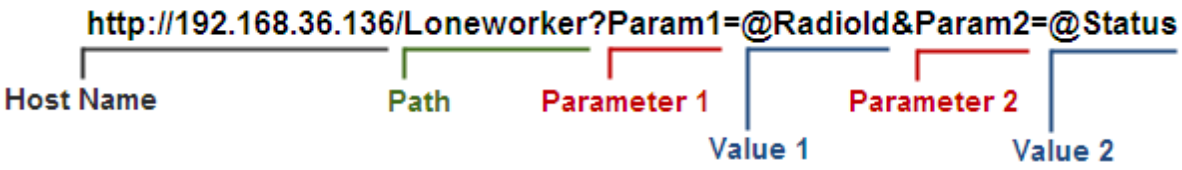
Other

Open the **Other** tab.



HTTP Request – is used for notification of the third party server of the changes occurred in the SmartPTT system. It can render the event initiator radio ID and its status.

The HTTP request includes the following parts:



Note: Make sure that you have specified correct names for parameters 1 and 2. They must correspond to the parameters' names expected by the third party server.

Note: Under "@Status" the SmartPTT system will send the system message corresponding to the newly assigned status selected in the **Dispatcher Alert** tab. Status system messages are set in the Statuses settings.

E-mail – is used for specifying e-mail address where a message should be sent in case the rules specified earlier are not fulfilled. To do this, the following fields are to be filled:

Radioserver – server name which is configured for e-mail sending. The name of the server is selected from the drop-down list.

E-mail – electronic addresses to send messages.

Message – text of the message.

SMS – if selected, the SMS message is sent to the specified phone number in case the rules specified earlier are not fulfilled. To do this, the following fields are to be filled:

Radioserver – server name for SMS messages sending. The name of the server is selected from the drop-down list.

Phone Numbers – telephone numbers to send SMS. The preferred number format is International Number Format, i.e. <+><*country code*><*mobile code*><*phone number*>.

Message – text of the message.

Note: See information about SmartPTT Radioserver configuration for sending and receiving e-mails, and SMS messages in SmartPTT Radioserver Configurator Help under **Telephone Interconnect** and **SMS Gateway**.

You can specify format settings of SMS or E-mail messages in the Message Format tab of the **Actions** area.

Message Format

You can specify message format (text messages, SMS, or E-mail) in the **Message Format** tab of the **Actions**

area. These messages are sent to radio subscribers, defined in the message recipient list in the **Subscriber Alert** or **Other** tab.

Note: The format settings for text messages are valid for specific messages, only if **Send Message** is selected in the **Subscriber Alert** tab; for SMS – if **SMS** is selected in the **Other** tab; for E-mail – if **E-mail** is selected in the **Other** tab.

Event Information:

Event Type – if selected, the message includes the type of the event, which triggered the rule.

Date/Time – if selected, the date and time of the event will be added to the text message. You can set the date format displayed in the message (date and time, or time only).

Time Zone – if selected, the message includes subscriber time zone in Coordinated Universal Time (UTC).

Coordinates – if selected, the subscriber coordinates are displayed in the message. Coordinates are relevant to the moment, when the rule conditions were fulfilled.

Subscriber Information:

Subscriber ID – if selected, the ID of the subscriber, who has triggered the rule, will be added to the text message.

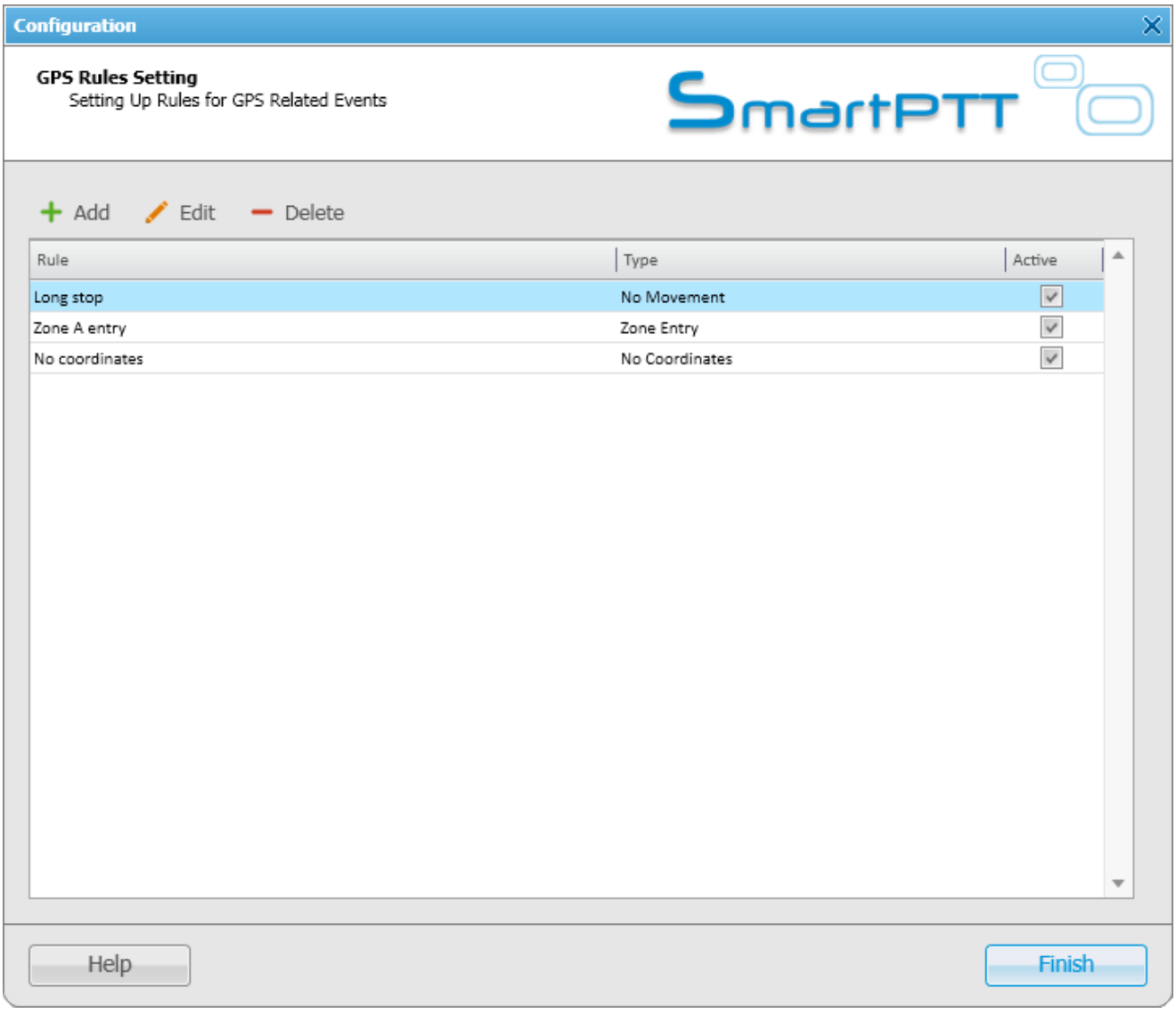
Subscriber Name – if selected, the name of the subscriber, who has triggered the rule, will be added to the text message.

2.8.20 GPS Rules

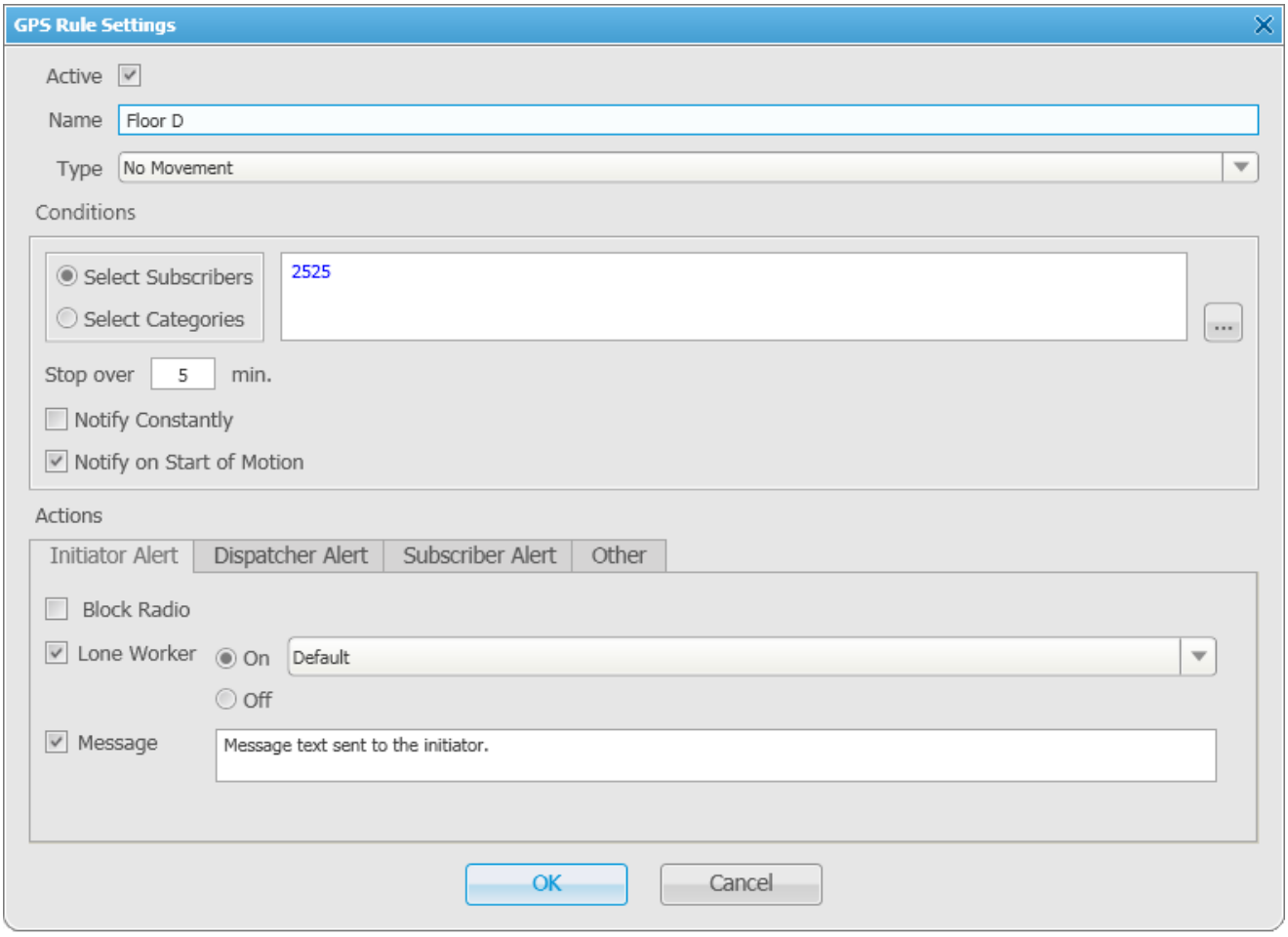
You can set response rules for GPS events registered in the SmartPTT system. GPS event includes receiving or not receiving subscriber's GPS coordinates. Response rules may include automatic sending of messages, playing

alerts in SmartPTT Dispatcher and on the radio, changing radio subscriber statuses, etc.

To set GPS rules, expand the **Settings** menu in the main menu of the SmartPTT Dispatcher window and click **GPS Rules**. The configuration window is displayed. It is used to set and configure a list of response rules applied to GPS events which occur during the system operation.



To add a new rule, click **Add**. The **GPS Rule Settings** window is displayed.



Name – name of the rule.

Type – rule types:

- **No Movement** – subscriber stops, that is the subscriber's GPS coordinates do not change, for a period longer than the specified period of time.
- **Subscriber Appearance** – subscriber appears after being absent for a period longer than the specified period of time.
- **No Coordinates** – no subscriber coordinates for a period longer than the specified period of time. The subscriber's GPS coordinates were received and then stopped, and they have not been received for a period longer than the specified period of time.

Note: Coordinates like "*...Lat: 0 Long: 0*" are not regarded as valid coordinates, and they won't be taken into account when applying GPS rules.

- **Zone Entry** – subscriber enters the zone, that is the subscriber's previous GPS coordinates were outside any of the zones specified in the rule, and the current coordinates are within one of the zones specified in the rule.
- **Zone Leaving** – subscriber leaves the zone, that is the subscriber's previous GPS coordinates were within the zone specified in the rule, and the current coordinates are outside the zone.
- **Speeding** – the latest GPS coordinates of the radio subscriber are compared with the previous GPS coordinates to find out if there is any speeding.

Active – if the checkbox is selected, processing of events starts in accordance with the selected criteria. If the checkbox is not selected, the associated rule is unavailable.

The table presents criteria used in GPS rules.

Attribute	Value
Select Subscribers / Select Categories	Select subscribers or categories
Stop over	Time interval for how long the radio subscriber can stay at one place (min)
Appearance of Subscriber After No Location Data Longer	Period of time after which the subscriber appears on the map again (min)
No Location Longer	Period of time when subscriber's coordinates are not received (min)
Notify Constantly	Select this checkbox to notify the dispatcher about violation of one of the criteria every time it happens. If the checkbox is not selected, the actions which follow the violation of the specified criteria will occur only once.
Notify on Start of Motion	If the subscriber starts moving and before that the subscriber stopped for much more than the specified time period, the notification window will display the message "Motion resumed".
Notify on Location Renewal	If the subscriber coordinates were not received for a longer period than the specified time limit, and then the coordinates are well received again, the notification window will display the message "GPS coordinates resume".

Attribute	Value
Geofences	Select control zones
Speeding	If speeding is registered, the rule is executed.

If the rule meets selected criteria, the system can perform some actions:

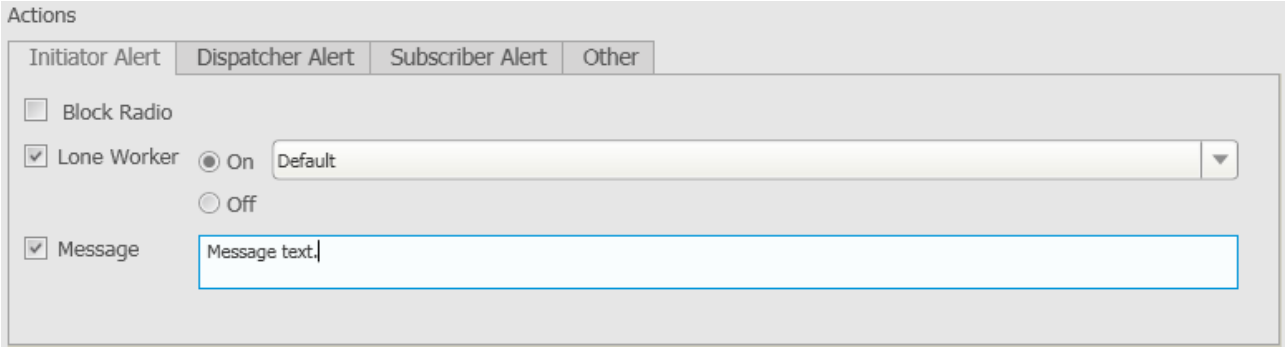
1. Actions addressed to the initiator
2. Alerts addressed to the dispatcher
3. Alerts addressed to the radio subscriber
4. Other

If finished, click **OK** to save the rule, and the created rule appears in the list of rules.

To edit rule settings, select it in the list of rules and click **Edit**. To remove the rule, select it in the list of rules and click **Delete**.

Initiator Alert

Open the **Initiator Alert** tab.



Block Radio – if selected, the radio that triggered the rule, will be blocked.

Lone Worker – if selected and **On** is clicked, the lone worker profile will be set to the radio that triggered the rule.

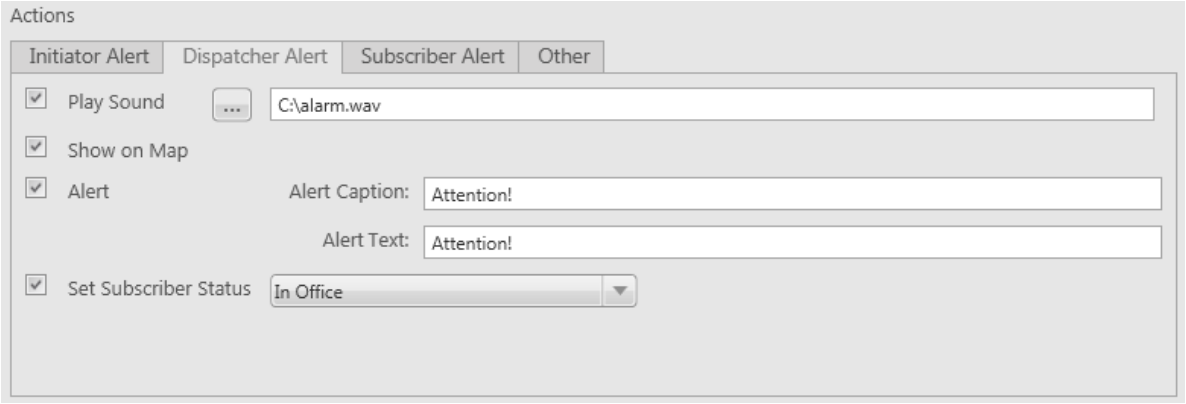
If **Off** is clicked, the lone worker mode of the radio will be deactivated.

Note: To set up the lone worker profile, see Lone Worker Rules in SmartPTT Dispatcher.

Message – a text message is sent to the subscriber who initiated triggering of the rule.

Dispatcher Alert

Open the **Dispatcher Alert** tab.



Play Sound – select .wav audio file to play back.

Show on Map – location of the subscriber specified in the rule is shown on the map (with an icon).

Alert – notification with the event description is displayed in the **System Notification** window. You can define the title in the **Alert Caption** field and the description in the **Alert Text** field.

Note: For rules **No Movement** and **No Coordinates** the text of **Alert** cannot be set – it is generated by the system automatically.

Set Subscriber Status – the subscriber is assigned the specified status. It is selected from the list of statuses.

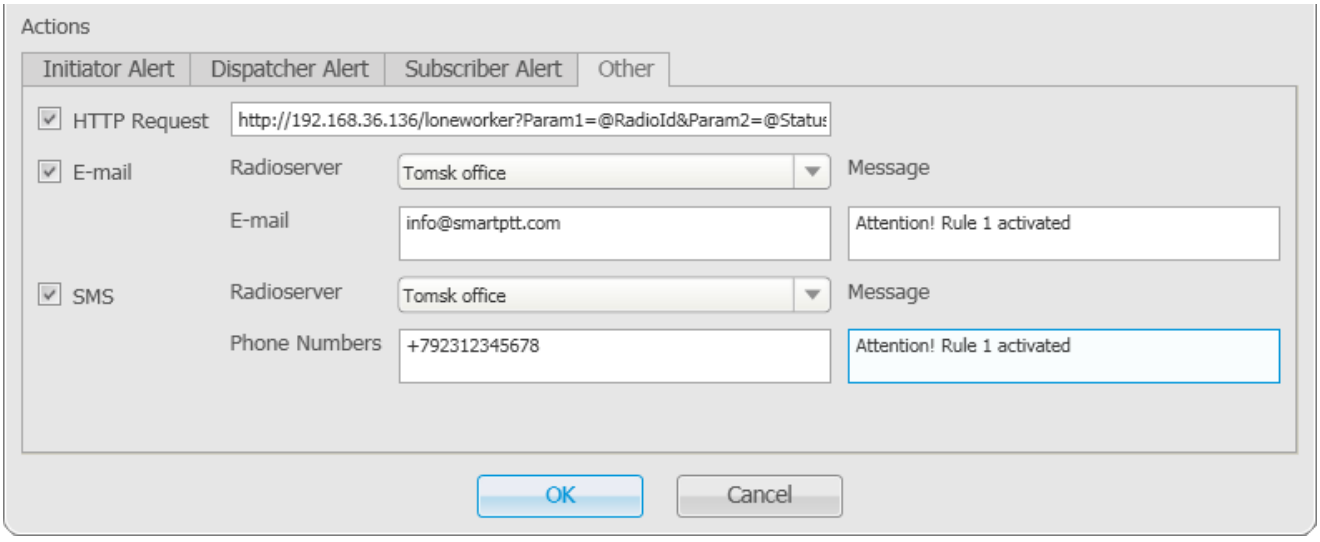
Subscriber Alert

Open the **Subscriber Alert** tab.

Send Message – a text message is sent to the selected subscribers or categories (all subscribers, talkgroups and dispatchers assigned to specific categories).

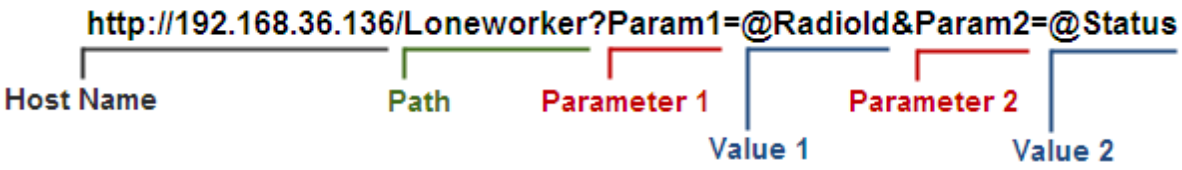
Other

Open the **Other** tab.



HTTP Request – is used for notification of the third party server of the changes occurred in the SmartPTT system. It can render the event initiator radio ID and its status.

The HTTP request includes the following parts:



Note: Make sure that you have specified correct names for parameters 1 and 2. They must correspond to the parameters' names expected by the third party server.

Note: Under "@Status" the SmartPTT system will send the system message corresponding to the newly assigned status selected in the **Dispatcher Alert** tab. Status system messages are set in the Statuses settings.

E-mail – is used for specifying e-mail address where a message should be sent in case the rules specified earlier are not fulfilled. To do this, the following fields are to be filled:

Radioserver – server name for e-mail sending. The name of the server is selected from the drop-down list.

E-mail – electronic addresses to send the message.

Message – text of the message.

SMS – if selected, the SMS message is sent to the specified phone number in case the rules specified earlier are not fulfilled. To do this, the following fields are to be filled:

Radioserver – server name which is configured for SMS messages sending. The name of the server is selected from the drop-down list.

Phone Numbers – telephone numbers to send SMS. The preferred number format is International Number Format, i.e. <+><*country code*><*mobile code*><*phone number*>.

Message – text of the message.

Note: See information about SmartPTT Radioserver configuration for sending and receiving e-mails and SMS messages in SmartPTT Radioserver Configurator Help under **Telephone Interconnect** and **SMS Gateway**.

2.8.21 Lone Worker Rules

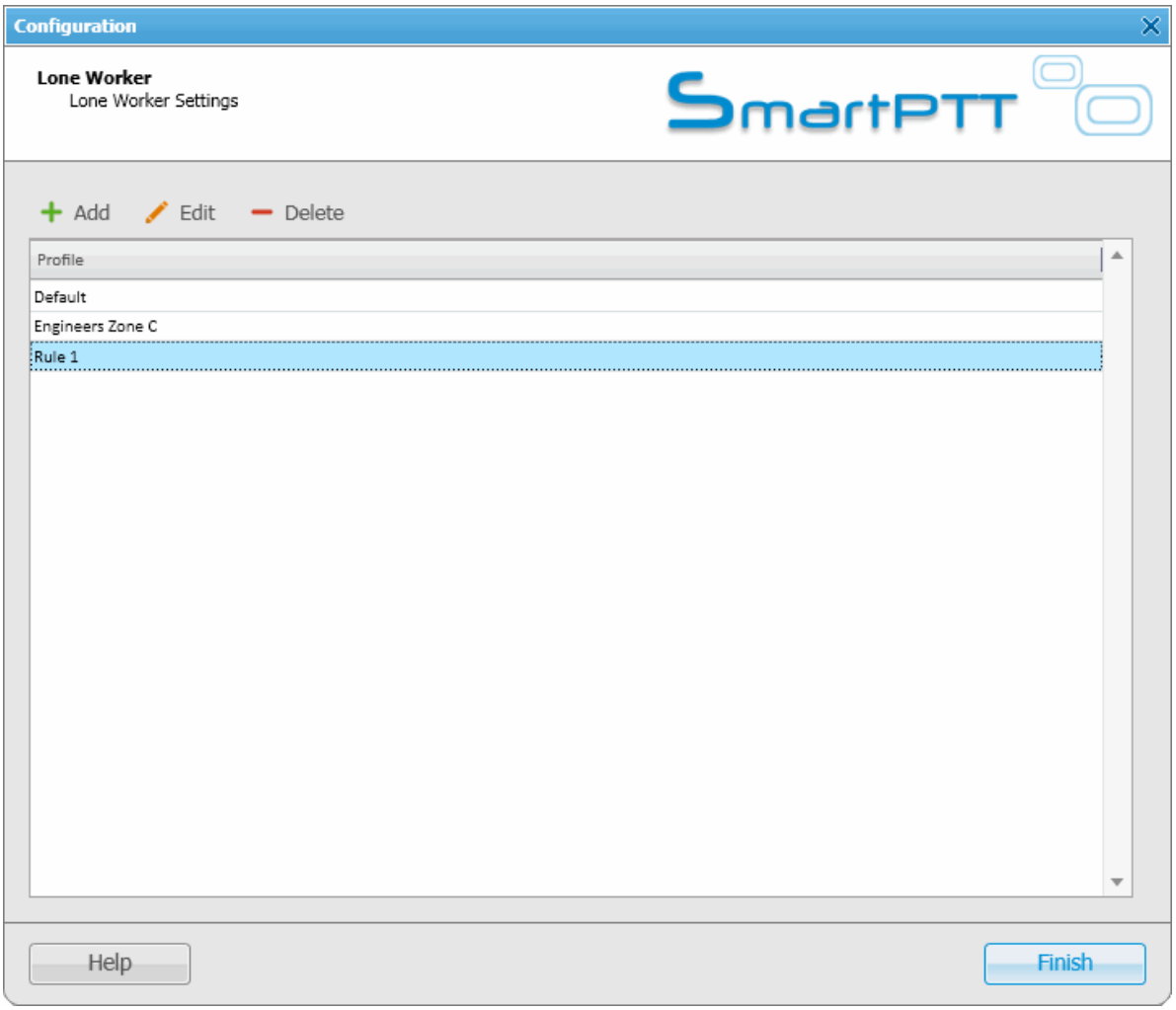
SmartPTT Dispatcher supports the Lone Worker mode for radio subscribers.

When a subscriber is set to the Lone Worker mode, SmartPTT automatically tracks the following conditions:

- Absence of calls from the subscriber during specified period of time.
- Absence of GPS coordinates from the subscriber during specified period of time.
- Immobility of the subscriber during specified period of time.

When one of the specified conditions triggers, SmartPTT Dispatcher executes the actions defined by the settings.

To define **Lone Worker** rules, expand the **Settings** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Lone Worker Rules**. At that, the window for creation and/or editing **Lone Worker Profiles** opens.

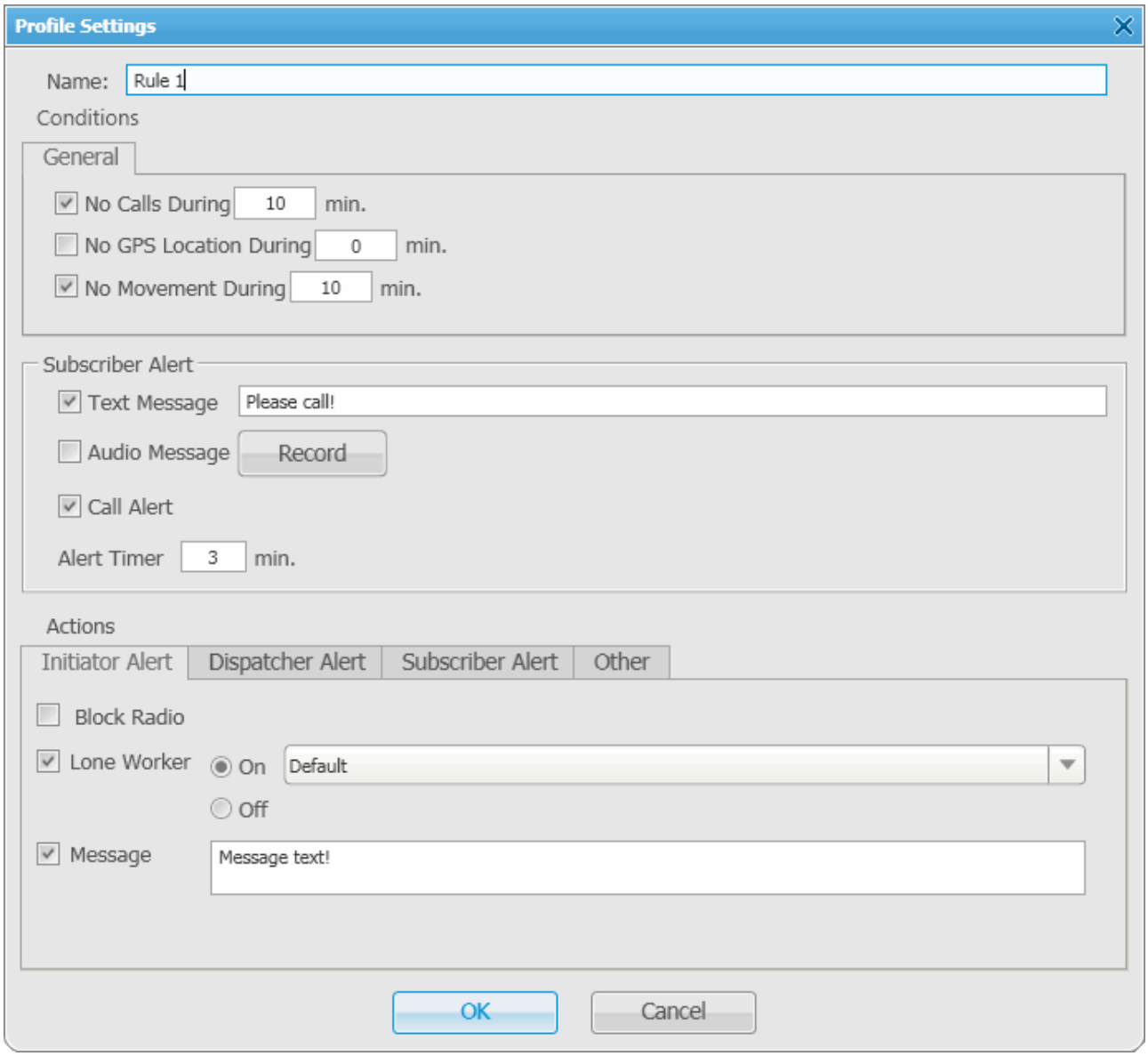


Lone Worker Profile is a rule which gets executed if the specified conditions are fulfilled. SmartPTT supports multiple profiles, so it is possible to create a profile for each radio subscriber.

To add a new profile, click **Add**. To make changes in the existing profile, select the profile and click **Edit**. To delete a profile, select the profile from the list and click **Delete**.

Note: The default profile cannot be deleted.

At clicking **Add** or **Edit**, the **Profile Settings** window opens.



In the **Profile Settings** window you can set up rules for a new profile or edit rules for the existing profile. The window contains the following fields and sections:

Name – name of the profile. It is an obligatory field.

The **General** tab contains rule conditions to trigger an alert:

No Calls During – specifies the period of time for a subscriber to make a voice call. If the subscriber does not make a call during the specified time period, the corresponding actions are executed.

No GPS Location During – specifies the period of time for a subscriber to send GPS data. If the subscriber radio

does not send its GPS data during the specified time period, the corresponding actions are executed.

No Movement During – specifies the period of time to check if a subscriber is moving (deviations in range of 5 meters are ignored). If the subscriber does not move during the specified time period, the corresponding actions are executed.

The **Subscriber Alert** area:

Text Message – when the event specified in one of the filters occurs, the text message is sent to the lone worker.

Audio Message – when the event specified in one of the filters occurs, an audio message is sent to the lone worker. To record the message, click the **Start** button. To stop recording, click the **Stop** button. To listen to the recorded message, click **Play**. To delete the recorded message, click **Delete**.

Call Alert – when the event described by one of the filters occurs, a **Call Alert** is sent to the lone worker.

Alert Timer – specifies the time period for a subscriber to make a call, to send GPS coordinates or to move after **Subscriber Alert** took place.

If the **Alert Timer** has expired but the subscriber did not perform certain actions, or if the **Alert Timer** equals 0, the system executes actions specified in the **Actions** area.

If the rule meets selected criteria, the system can perform some actions:

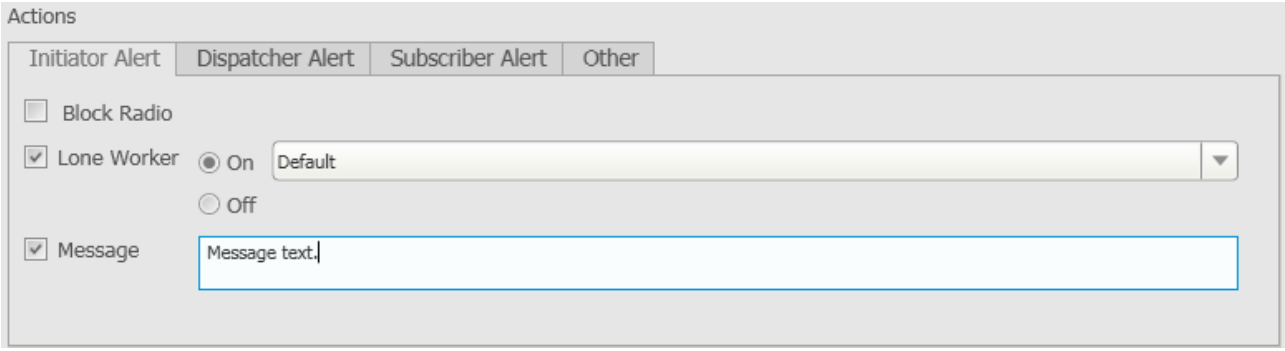
1. Actions addressed to the initiator
2. Alerts addressed to the dispatcher
3. Alerts addressed to the radio subscriber
4. Other

To save the rule, click **OK**. At that, the created rule appears in the list of rules.

To edit rule settings, select it in the list of rules and click **Edit**. To remove the rule, select it in the list of rules and click **Delete**.

Initiator Alert

Open the **Initiator Alert** tab.



Block Radio – if selected, the radio that triggered the rule, will be blocked.

Lone Worker – if selected and **On** is clicked, the lone worker profile will be set to the radio that triggered the rule.

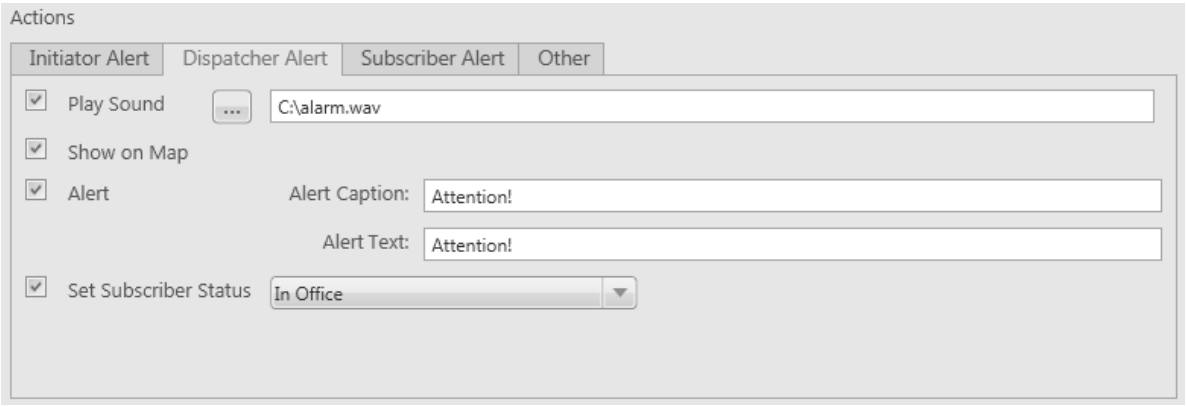
If **Off** is clicked, the lone worker mode of the radio will be deactivated.

Note: To set up the lone worker profile, see Lone Worker Rules in SmartPTT Dispatcher.

Message – a text message is sent to the subscriber who triggered the rule.

Dispatcher Alert

Open the **Dispatcher Alert** tab.



Play Sound – select .wav audio file to play in SmartPTT Dispatcher.

Show on Map – subscriber specified in the rule is shown on the map (with an icon).

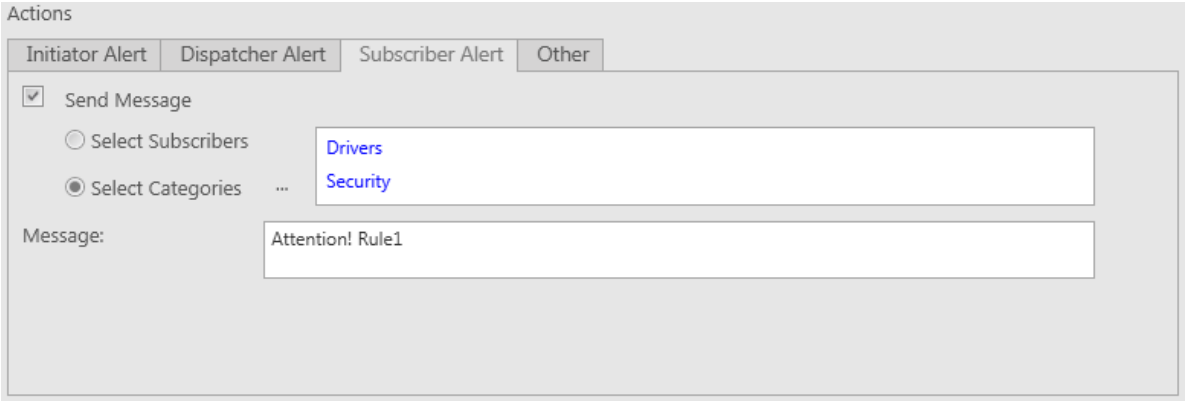
Alert – notification with the event description is displayed in the **System Notification** window. You can define the title in the **Alert Caption** field. and the description in the **Alert Text** field. Description of the event can't be set, it

is generated automatically.

Set Subscriber Status – the subscriber is assigned the specified status. It is selected from the list of statuses.

Subscriber Alert

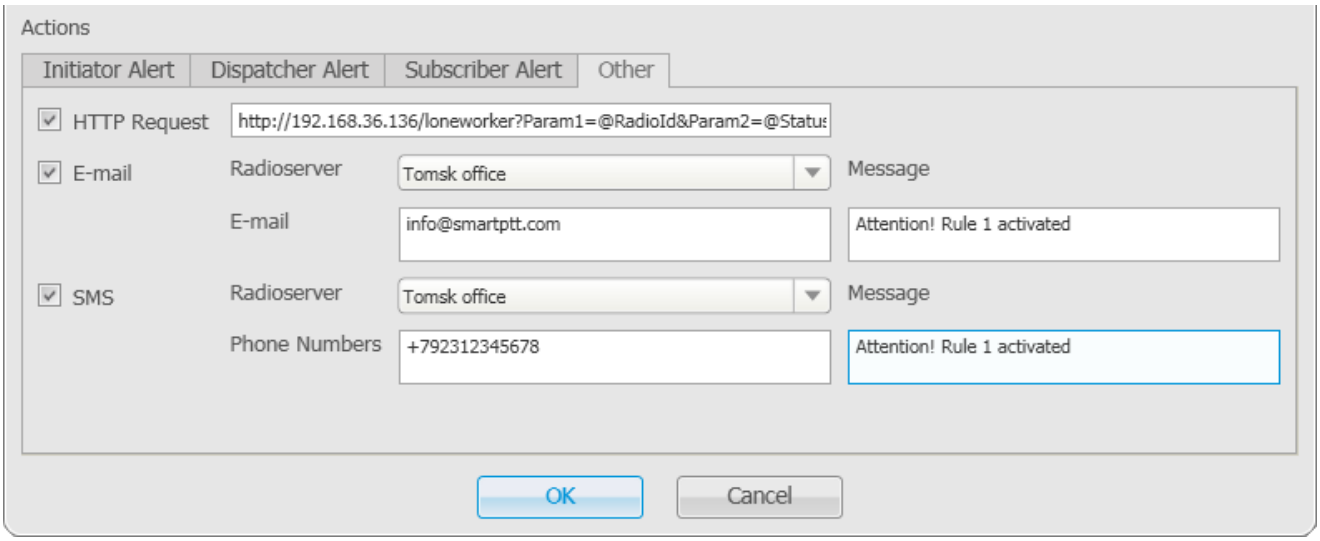
Open the **Subscriber Alert** tab.



Send Message – a text message is sent to the selected subscribers or categories (all subscribers, talkgroups and dispatchers assigned to specific categories).

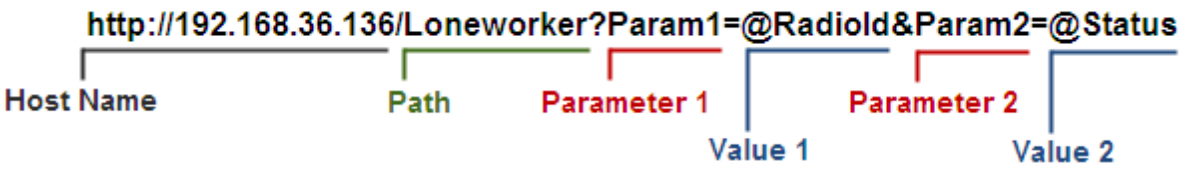
Other

Open the **Other** tab.



HTTP Request – is used for notification of the third party server of the changes occurred in the SmartPTT system. It can render the event initiator radio ID and its status.

The HTTP request includes the following parts:



Note: Make sure that you have specified correct names for parameters 1 and 2. They must correspond to the parameters' names expected by the third party server.

Note: Under "@Status" the SmartPTT system will send the system message corresponding to the newly assigned status selected in the **Dispatcher Alert** tab. Status system messages are set in the Statuses settings.

E-mail – is used for specifying e-mail address where a message should be sent in case the rules specified earlier are not fulfilled. To do this, the following fields are to be filled:

Radioserver – server name for e-mail sending. The name of the server is selected from the drop-down list.

E-mail – electronic addresses to send the message.

Message – text of the message.

SMS – if checked, the SMS message is sent to the specified phone number in case the rules specified earlier are not fulfilled. To do this, the following fields are to be filled:

Radioserver – server name for SMS messages sending. The name of the server is selected from the drop-down list.

Phone Numbers – telephone numbers to send SMS. The preferred number format is International Number Format, i.e. <+><*country code*><*mobile code*><*phone number*>.

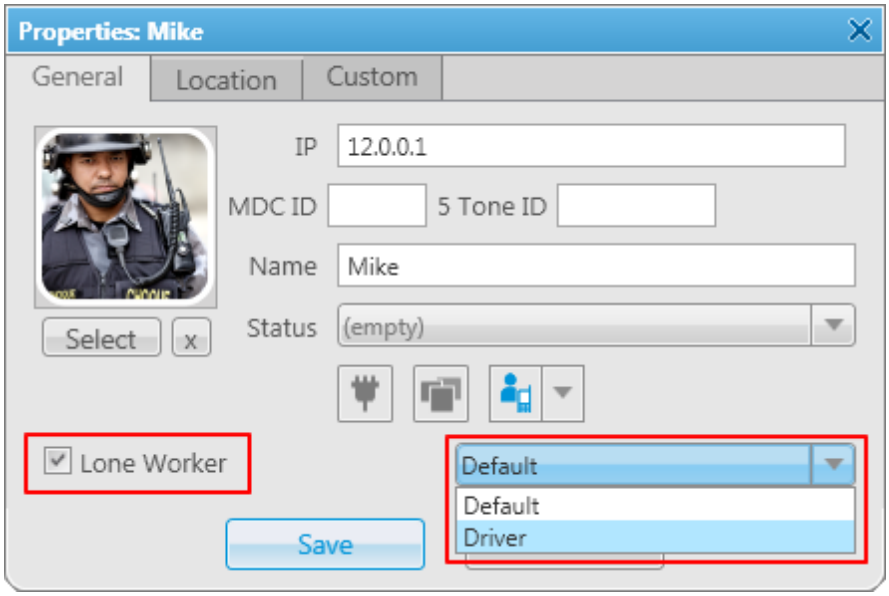
Message – text of the message.

Note: See information about SmartPTT Radioserver configuration for sending and receiving e-mails and SMS messages in SmartPTT Radioserver Configurator Help under **Telephone Interconnect** and **SMS Gateway**.

How to assign a Lone Worker Profile to the radio subscriber

To assign the created **Lone Worker Profile** to a radio subscriber, go to the **Subscriber Management panel** and open the **Properties** window of the subscriber by right-clicking.

In the opened window select the **Lone Worker** checkbox and in the drop-down list select the created profile.



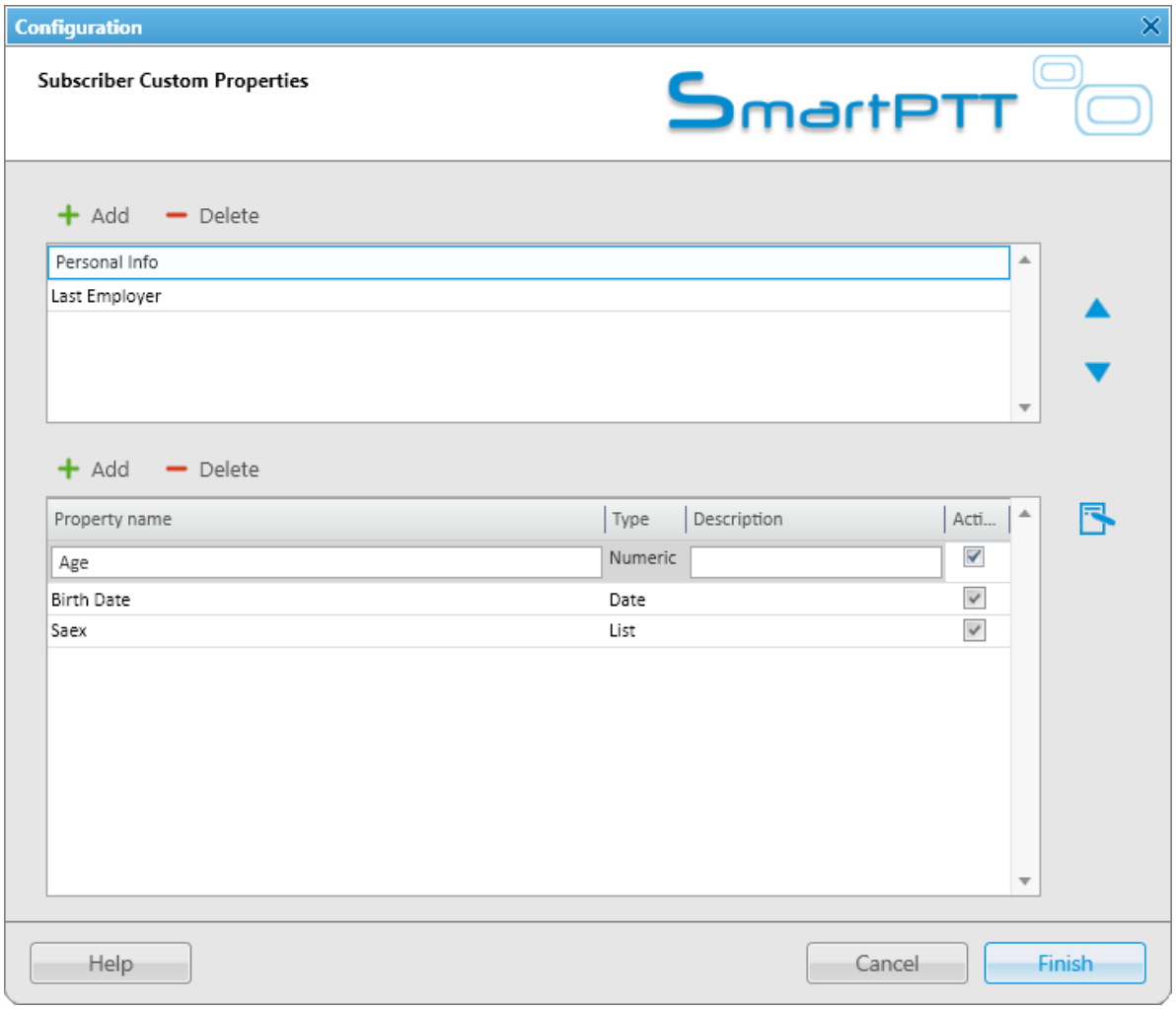
To remove the profile from the subscriber, clear the **Lone Worker** checkbox.

2.8.22 Subscriber Custom Properties

SmartPTT Dispatcher provides the ability to add custom properties of a subscriber, which can be used for giving additional information about the radio subscriber. Subscriber Custom Properties have the following four types:

1. Text
2. Numeric
3. Date
4. List

To create custom properties expand the **Settings** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Subscriber Custom Properties**. At that, the **Subscriber Custom Properties** window opens.



The top list contains subscriber custom property groups.

To add the subscriber custom property group, click **Add** at the top. To delete the group, click **Delete**. Arrows on the right allow moving groups inside the list.

The bottom list contains the properties of the created groups.

Property Name – custom name of the property which will be displayed in the **Properties** window.

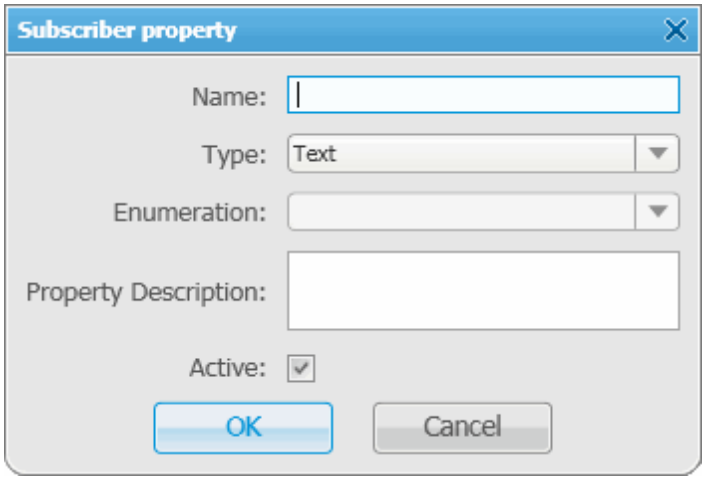
Type – property type (Text, Numeric, Data or List).

Description – text description added by the user when creating a property.

Active – select the checkbox, to have the property displayed in the **Properties** window.

To add a property into the property group, select the created property group in the top list and then click **Add** above the bottom list.

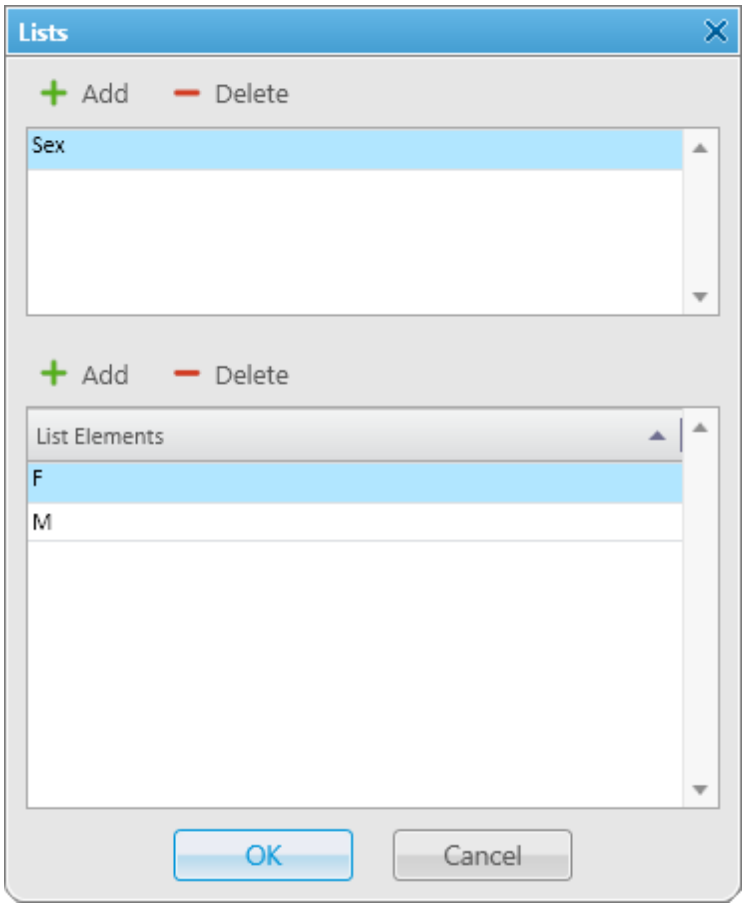
At that, the **Subscriber property** window opens.



Fill all the fields required. Select the **Type** and click **OK**.

Note: If you want to select **List** in the **Type** field, before that you need to create the list. Otherwise, the list will be empty.

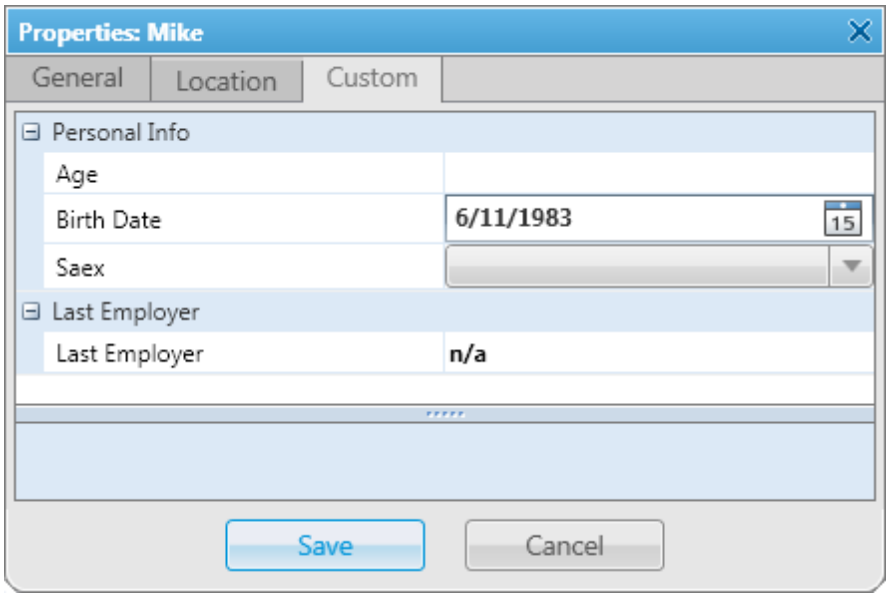
To create the list, click the **Create/Edit Lists** button . At that, the window opens:



In the top box add list names by clicking **Add**.

Select the created list and add elements of the list. To do it, go to the bottom box and click **Add** just above it.

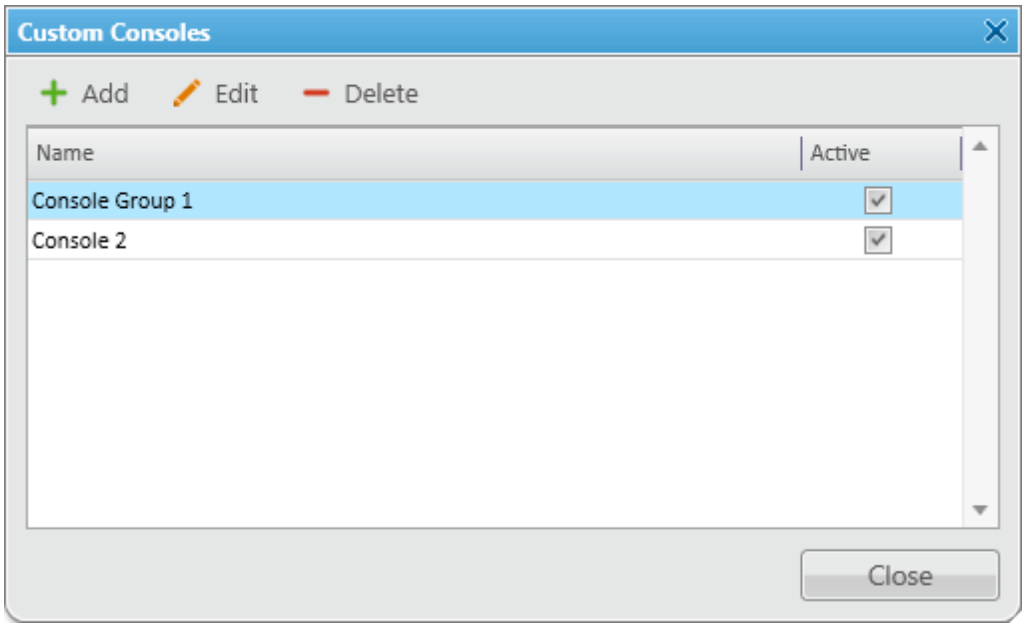
To view the active custom properties go to the subscriber **Properties** window, **Custom** tab.



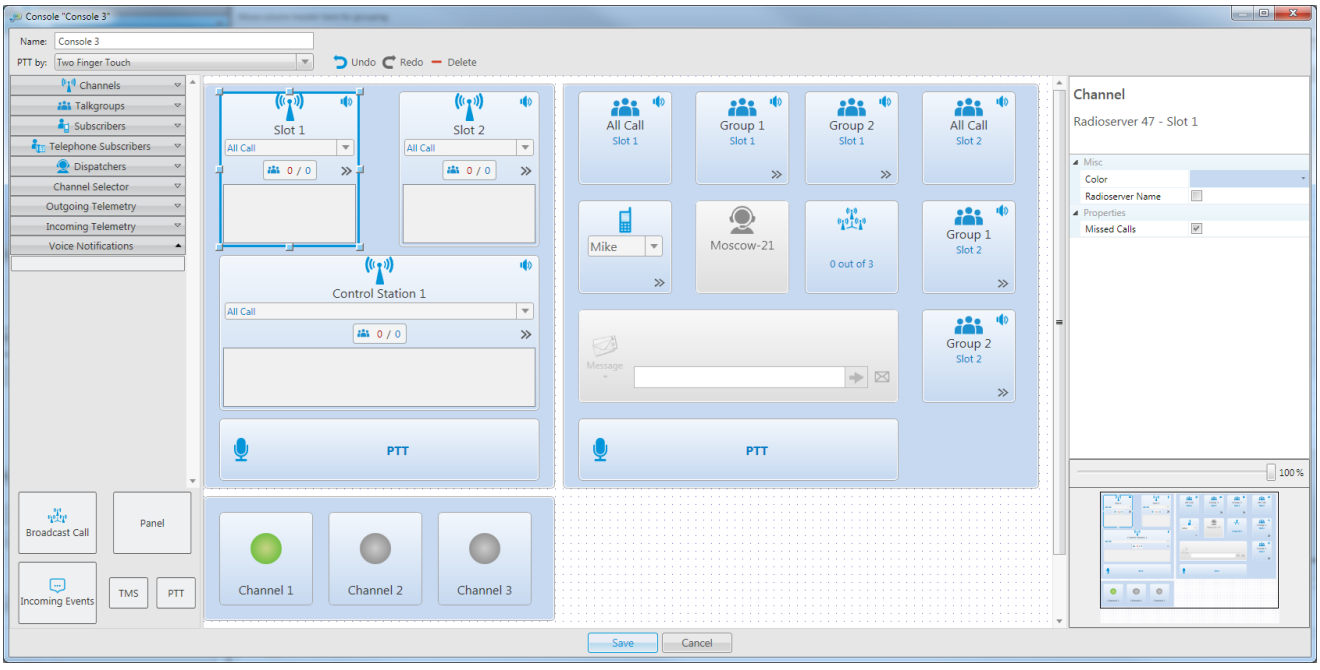
2.8.23 Custom Consoles

Custom Console is a tool that provides the dispatcher with custom workplace. Custom consoles are visual panels containing various elements, e.g. radio subscribers, external dispatchers, talkgroups, in short, everything the dispatcher need for daily work. Every dispatcher can have his own console with all the radio objects necessary for his work.

To create and set up a custom console, expand the **Settings** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Custom Consoles**. At that, the **Custom Consoles** window opens.



To add a new console, click **Add**. At that, the console editor opens.



Name – custom console name which will be displayed in the **View** menu.

PTT by – allows selecting between two modes of PTT activation:

1. Two Finger Touch
2. One Finger Touch / Mouse Click

The **Two Finger Touch** is designed for a multitouch screen. In this mode one-finger touch selects an object on the custom console, and a two-finger touch initiates a call to this object. If non-multitouch screen is used, then to make a call, select the object by clicking on the corresponding element, and then press the keyboard key that is assigned to PTT.

One Finger Touch / Mouse Click is designed for any PC touch screens and non-touch screens to use with the mouse. One finger touch / mouse click starts the transmission right away.

There are 14 types of visual elements available in **Custom Consoles**.

To add an item to the custom console, drag and drop the desired element onto the work space of the console designer. To remove the element from the work space, select it and press **Delete**. To erase the last change or perform the redo function click the **Undo** or **Redo** buttons.

You can adjust size, color or location of each element on the custom console. You can also add or remove different properties. To do this, select the element and use the **Misc** or the **Properties** sections on the right of the console designer work space.

To move an element up, down, left, or right, press the arrow keys. To move an element diagonally, press the Up or Down Arrow key and the Left or Right Arrow key. For example, to move an element diagonally toward the upper-right corner, press Right Arrow-Up Arrow.

Channel

The **Channel** element stands for a physical or logical channel. It gives the following information about the channel:

- information about the current call on the channel – the call state, the called party and the call originator;
- default target for outgoing calls (it can be either All Call or any particular talkgroup);
- muted or unmuted;
- the number of missed incoming calls.

To mute the channel, click .

Note: Check the Mute Mode settings before applying this function.

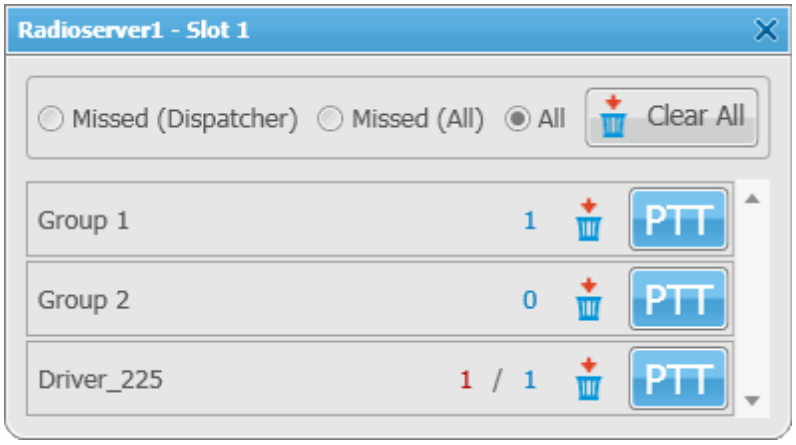
To open the Action list which can be applied to an element, click .

To display the channel name as *Radioserver name – Channel name*, select the **Radioserver Name** checkbox in the **Misc** section. Otherwise, only the channel name will be displayed.

To view the number of missed incoming calls, select the **Missed Calls** checkbox in the **Properties** section.

shows the number of calls not answered by the dispatcher. The red figure stands for the number of private calls not answered by the dispatcher. The blue one shows the total number of calls not answered by the dispatcher, including private and group calls. As soon as the dispatcher called back the talkgroup or the radio subscriber, the counter is set to zero.

By clicking the button, the window with details appears.



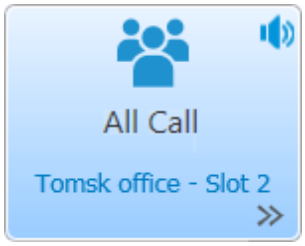
Missed (Dispatcher) – filters only private calls not answered by the dispatcher.

Missed (All) – filters private and group calls not answered by the dispatcher.

All – removes all filters and shows all available talkgroups and radio subscribers and their call statistics.

Clear All – sets all counters to zero.

Talkgroup



The **Talkgroup** stands for a talkgroup on the channel. You can make a call to the selected talkgroup by clicking on the element.

To open the Action list which can be applied to an element, click ».

Also, the element displays that the radio subscriber enters emergency mode (the **Emergency** label), when the Emergency button of the radio is pressed. Once the dispatcher solves the problem by clicking in the **Emergencies** panel, he clears the emergency state on the element of the **Custom Console**. Once the initiator clears the emergency on the initiator radio, the emergency is considered over.

You can mute the group call by clicking on the **Mute** icon. The element also shows the state of the current call.

To display the channel name as *Radioserver name – Channel name*, select the **Radioserver Name** checkbox in the **Misc** section. Otherwise, only the channel name will be displayed.

Subscriber

The **Subscriber** element is used for making private voice calls and shows the state of the current call. By right-clicking on the element you can open the subscriber's **Call Window** to perform other actions on the subscriber. You can assign the element to different subscribers from the drop-down list. To enable this option, select the **Allow Changes** checkbox in the **Properties** section.

To open the Action list which can be applied to an element, click ».

Also, the element displays that the radio subscriber enters emergency mode (the **Emergency** label), when the Emergency button of the radio is pressed. Once the dispatcher solves the problem by clicking in the **Emergencies** panel, he clears the emergency state on the element of the **Custom Console**. Once the initiator clears the emergency on the initiator

radio, the emergency is considered over.

– the icon on the subscriber element shows that the dispatcher did not answer to the subscriber call. The figure next to it shows the number of missed calls.

Telephone Subscriber

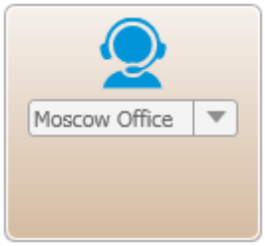
The **Telephone Subscriber** element is used for making calls to telephone subscribers.

Note: For proper operation of the element select **Allow Calls to Telephone Subscribers** in the **General Settings** tab of the Telephone Settings window.

You can assign the element to different telephone subscribers from the drop-down list. To enable this option, select the **Allow Changes** checkbox in the **Properties** section.

Note: To set the list of telephone subscribers, go to the **List of Subscribers** tab in the Telephone Settings window.

Dispatcher



The **Dispatcher** element is used for making connection to a specific external dispatcher. Clicking on the element opens the dispatcher's **Call Window**.

Note: For proper operation of the element select **AllowAllow Communication with Dispatchers** in the Dispatchers configuration window.

You can assign the element to different dispatchers from the drop-down list. To enable this option, select the **Allow Changes** checkbox in the **Properties** section.

Note: The list of dispatchers consists of the active external dispatchers

added in the Dispatchers configuration window.

Channel Selector

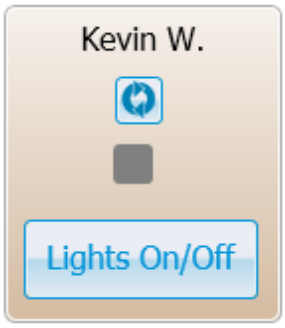
The **Channel Selector** element allows the dispatcher to switch from one channel of the control station to another.

Note: The functionality requires the control station to be connected to the PC and its channels to be set up via MOTOTRBO CPS and SmartPTT Radioserver Configurator.

Channel setting in SmartPTT Radioserver Configurator is carried out on the **Channels** tab of the control station. **Channels** listed on this tab must match the channels set in MOTOTRBO CPS (channel number, zone number).

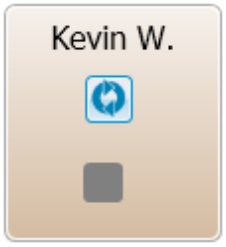
To configure this functionality in SmartPTT Dispatcher, add the **Channel Selector** element into the console designer work space. One element can be assigned to one channel. To allow switching between channels, you should add the required number of elements.

Outgoing Telemetry



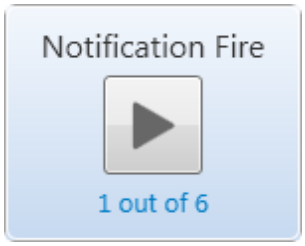
The **Outgoing Telemetry** element is used for sending telemetry commands to the radio subscriber. You can assign only one telemetry command per element. Before assigning the telemetry command to the element, add it to the telemetry list of commands and to the radio subscriber. Apart from sending commands, you can also check the current status and the time of the last status update.

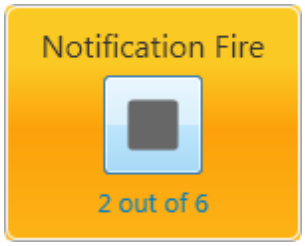
Incoming Telemetry



The **Incoming Telemetry** element is used for receiving the current status of the selected pin. You can also see the time of the last status update.

Voice Notification





The **Voice Notifications** element starts or stops the voice notification and displays how many times the voice notification is reproduced. To configure voice notifications see the **Voice Notification** section in SmartPTT Radioserver Configurator.

Note: To monitor the current status of the voice notification playing, open the Voice Notification window (**Service > Voice Notifications**).

To display the element name as *Radioserver name – Voice Notification name*, select the **Radioserver Name** checkbox in the **Misc** section. Otherwise, only the voice notification name will be displayed.

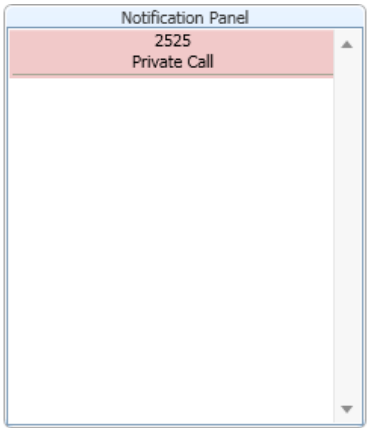
Broadcast Call

The **Broadcast Call** element is used for making group calls or an All Call within all the channels of the dispatch console simultaneously. Select the required talkgroup or All Call ID in the **Talkgroup ID** field of the **Properties** section. When such a call is initiated, SmartPTT Dispatcher tries to call all of the subscribers with the given identifier.

Panel

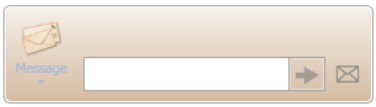
The **Panel** element is used for uniting several elements. The panel can have its own color, size and placement. All inside elements of one panel are moved together with the panel.

Incoming Events



The **Incoming Events** informs about incoming messages, call alerts and calls in SmartPTT Dispatcher.

TMS

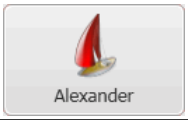
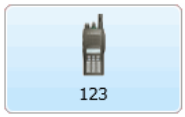
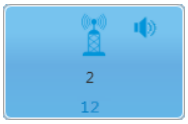
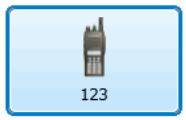


The **TMS** element is used for sending short text messages to subscribers or talkgroups. To do this, select the necessary subscriber in the custom console area, enter the text of the message or select a template, and send it.

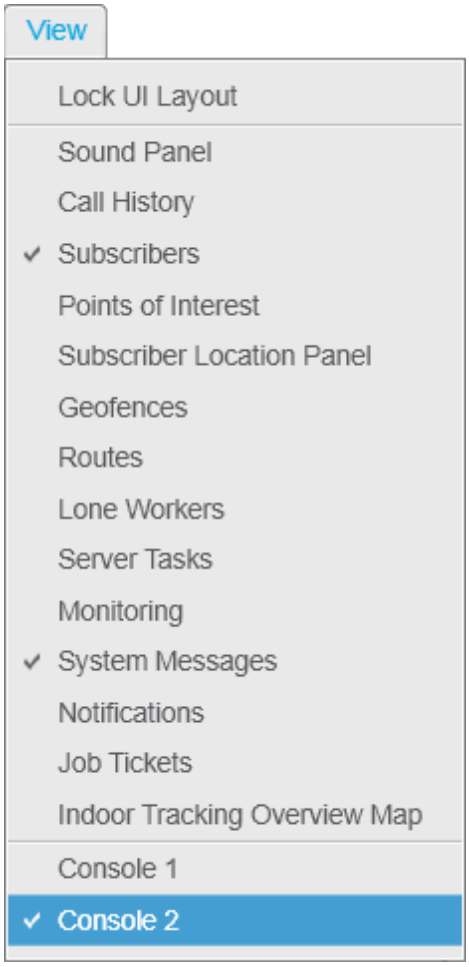
PTT

The **PTT** element is used for a multiple-user call. If it is located inside the panel, then clicking the **PTT** element makes a call to all the subscribers located within this panel. If it is located outside the panel, the **PTT** element becomes disabled.

When in work, color of the elements with the assigned subscribers differs depending on the status.

Element	Description
	Gray – the subscriber is offline or outside the network coverage
	Gray blue – the subscriber is online
	Light yellow – the oprerator is trying to make an outgoing call Yellow – outgoing call from SmartPTT Dispatcher to radio subscriber
	Green – incoming call to SmartPTT Dispatcher or the radio is being monitored
	Blue – none of the parties transmit or receive voice. The subscriber can answer the call by pressing the PTT button within hang time. After the hang time expires, the subscriber initiates a new call by pressing the PTT button. The calling subscriber is the subscriber linked with the PTT button by default.
	Blue frame – the subscriber is selected

The custom consoles created in the designer are displayed in the **View** menu. Select one of the custom consoles to open in the dispatcher main area. SmartPTT Dispatcher allows opening multiple custom consoles simultaneously.



2.9 Service

The **Service** menu allows you to carry out secondary functions, namely:

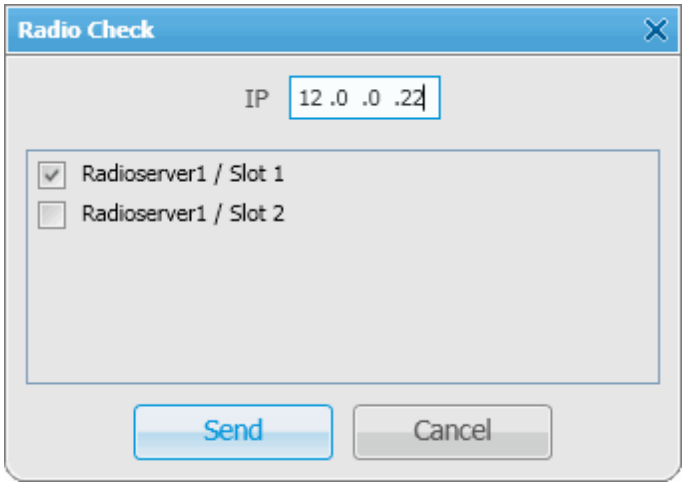
- Radio Check allows you to send the radio check command to radio subscribers.
- Save Dispatcher Settings allows you to save current settings of the dispatcher console and database to restore them in the future.
- Restore Dispatcher Settings allows you to restore saved settings of the dispatcher console and the database.

- Database Backup allows you to save database copy and then restore it.
- Export Radio Subscribers allows you to save the list of registered radio subscribers in XML or XLS formats.
- Import Radio Subscribers allows you to import previously exported list of radio subscribers.
- Upload to KML allows you to export current geographical position of radio subscribers in KML format.
- Import Connect Plus Logs allows you to import data from the Connect Plus network.
- View Received Files allows you to view files received by the radioserver via SmartPTT File Transfer.
- View Deferred Actions allows you to view and edit deferred actions.
- Voice Notifications allows you to play voice notifications.
- Check for updates. Details about update process see in General Settings.
- View System Information allows you to check event statistics registered on the radioserver or in the dispatcher console and other information on the system.

2.9.1 Radio Check

The **Radio Check** function can be executed on the selected control stations available to the dispatcher. The result of the **Radio Check** is displayed in the subscriber **Call Window**. It can be: "Subscriber is available" or "Subscriber is unavailable".

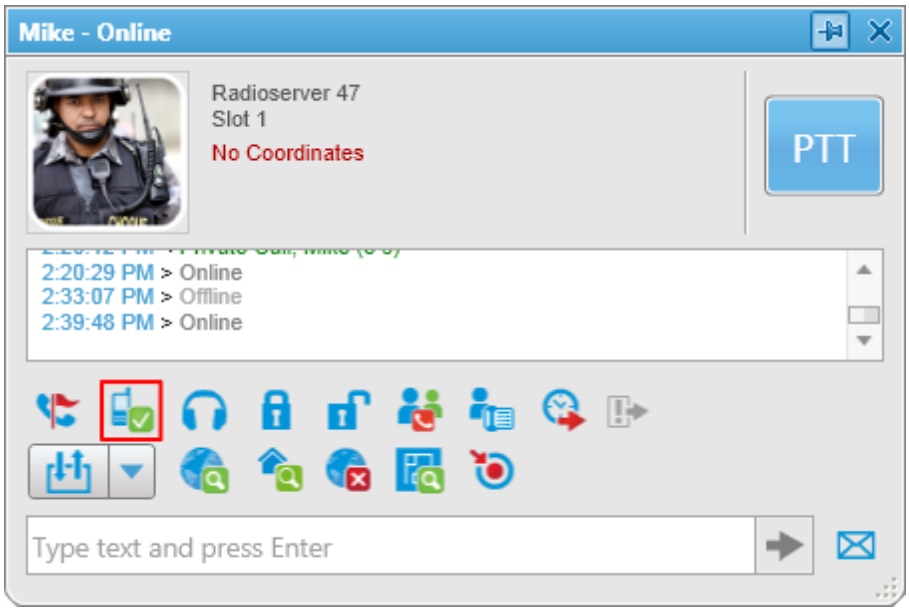
To do **Radio Check**, expand the **Service** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Radio Check**. At that, the **Radio Check** window opens.



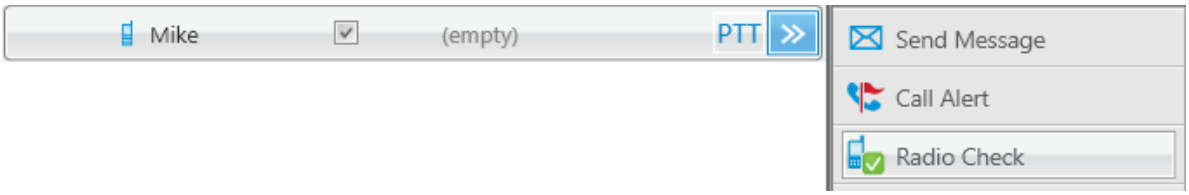
Specify the **IP** of the subscriber radio. Select control stations which should be used to check the subscriber

availability and click **Send**.

Alternatively, **Radio Check** can be done from the **Call Window** or the **Action List**.



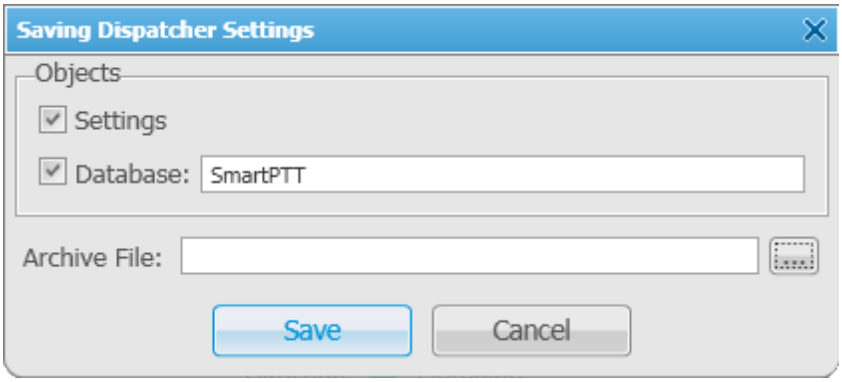
In the **Action List**:



2.9.2 Save Dispatcher Settings

Starting from version 8.3 you can save and restore not only the event log database, but also the dispatcher console settings. These includes: opened panels, subscriber list, the application interface language and many other things.

To save current settings or database, open the **Service** menu and select **Save Dispatcher Settings**. At that, the following window opens up:



Objects – define what you want to save. You can select both, if needed.

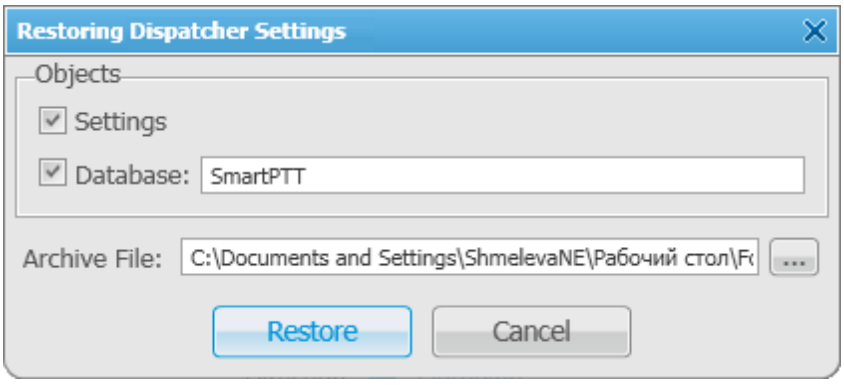
Archive File – specify the path to the folder where you need the archive to be saved.

To save the selected objects, click **Save**. To quit the window without saving, click **Cancel**.

To restore the saved settings and database, see Restore Dispatcher Settings.

2.9.3 Restore Dispatcher Settings

To restore the dispatcher console settings or the event log database, open the **Service** menu and select **Restore Dispatcher Settings**. At that, the following window opens up:



Objects – define what you want to restore. You can select both, if needed. When selecting **Database** to restore, do not forget to enter its name.

Archive File – specify the path to the archive folder.

To restore the selected objects, click **Restore**. To quit the window, click **Cancel**.

Note: To apply the restored settings, restart the application.

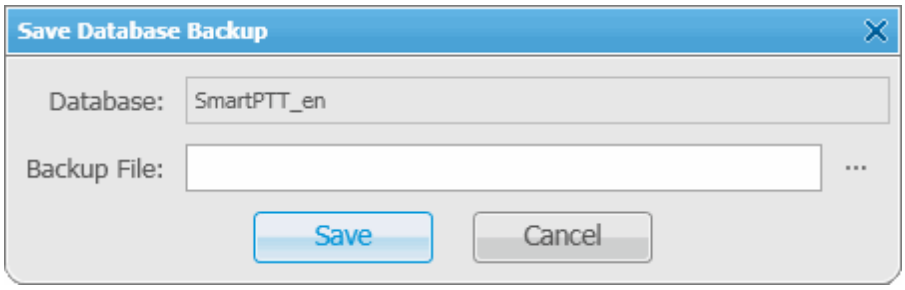
Note: To connect to the restored database, expand the **Settings** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Database Settings**. Specify the restored database name in the **Database Name** field and click **Finish**.

2.9.4 SmartPTT Database

Since SmartPTT Dispatcher has its own database, it is necessary to be able to do backups and restore them. Both of these functions are available in SmartPTT Dispatcher: saving database backup and restoring from it. However, backup saving and restoring are available only for local databases.

How to create SmartPTT Dispatcher database backup

To save the database backup, expand the **Service** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Save Database Backup**. At that, the following window opens.



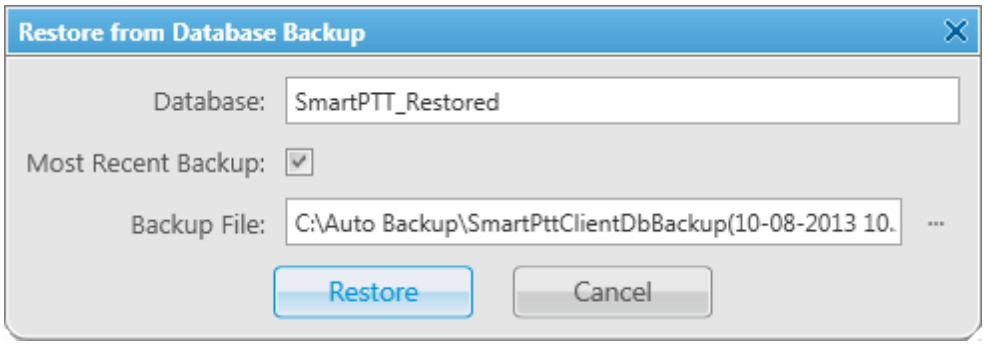
Database – name of the current database.

Backup File – full path to the file for saving the database backup.

Click **Save** to create the backup file.

How to restore from SmartPTT Dispatcher database backup

To restore from the database backup, expand the **Service** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Restore from Database Backup**. At that, the **Restore from Database Backup** window opens.



Database – new database name which will be created after backup restore.

Most Recent Backup – allows you to restore the database using the latest automatically created backup. To set the SmartPTT Dispatcher database auto backup see Database Auto Backup.

Backup File – path to the backup file. If the **Most Recent Backup** checkbox is selected, the **Database** field is automatically filled with the name of the actual backup file.

Click **Restore** to create the database from the backup file.

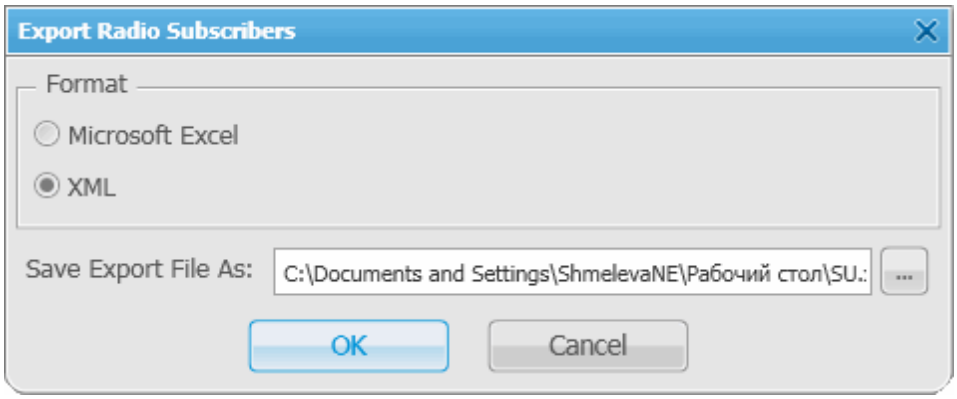
Note: You cannot restore the backup of the database which is currently connected.

To connect the restored database, expand the **Settings** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Database Settings**. Specify the restored database name in the **Database Name** field and click **Finish**.

2.9.5 Export Radio Subscribers

SmartPTT Dispatcher provides the ability to export subscriber list from one SmartPTT Dispatcher and then to import it into another. Only registered radio subscribers can be exported.

To export the list of radio subscribers, expand the **Service** menu in the **Main Menu** bar and click **Export Radio Subscribers**. At that, the following window opens.



In the **Format** area select the format in which you want to export the subscriber list.

To select the file for export, click ... . Supported file formats: XLS and XML.

Then click **OK**. At that, the file with the exported data is opened.

The example of the exported file in XLS format

Export Radio Subscribers

ID	IP-Address	Network ID	Radio ID	Name	GPS	MDC ID	Icon
-520093684	12.0.0.225	12	225	Lead engineer_225	False		
1694498831	15.0.0.101	15	101	Junior Engineer_101	True		
2063597580	12.0.0.123	12	123	Security_123	False		

ID — automatically generated ID of the radio subscriber.

IP Address – radio subscriber IP address.

Network ID – network ID which is specified in MOTOTRBO Customer Programming Software (see parameter **CAI Network**).

Radio ID – unique identifier of the radio unit.

Name – radio subscriber name specified in the subscriber window of SmartPTT Dispatcher.

GPS – shows whether the radio supports GPS. There are two possible values: "True" or "False".

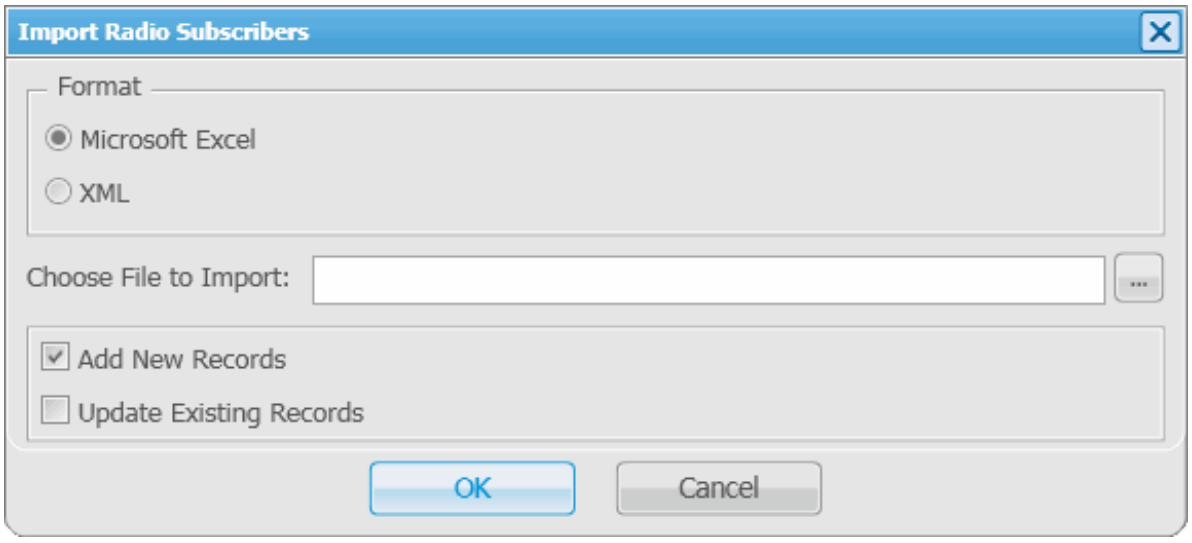
MDC ID – radio ID in the analog data channel.

Icon – path to the icon selected per subscriber. If a radio subscriber has a default icon, the corresponding field in the export file is empty.

2.9.6 Import Radio Subscribers

SmartPTT Dispatcher provides the ability to import subscribers (in XLS and XML format) from one SmartPTT Dispatcher to another.

To import the list of radio subscribers, expand the **Service** menu in the **Main Menu** bar and click **Import Radio Subscribers**. At that, the following window opens.



In the **Format** area select the format in which you want to import the subscriber list.

To select the file for import, click ... . Then select the import options.

Add New Records – when the checkbox is selected, at importing, new subscribers (not existing in SmartPTT Dispatcher) will be added to the list of subscribers.

Update Existing Records – when the checkbox is selected, at importing, the existing data on the subscribers in SmartPTT Dispatcher is replaced with the data from the imported file.

Note: It is possible to select both import options at a time. At that, new records will be added and the existing records will be updated.

Click **OK** to launch import process.

To close the window, click **Cancel**.

Note: To apply changes after importing, it is important to restart SmartPTT Dispatcher.

The example of the imported file in XLS format

ID	IP-Address	Network ID	Radio ID	Name	GPS	MDC ID	Icon
-520093684	12.0.0.225	12	225	Lead engineer_225	False		
1694498831	15.0.0.101	15	101	Junior Engineer_101	True		
2063597580	12.0.0.123	12	123	Security_123	False		

ID – automatically generated ID of the radio subscriber.

IP Address – radio subscriber IP address.

Network ID – network ID which is specified in MOTOTRBO Customer Programming Software (see parameter **CAI Network**).

Radio ID – unique identifier of the radio unit.

Name – radio subscriber name added in the subscriber window of SmartPTT Dispatcher.

GPS – shows whether the radio supports GPS. There are two possible values: "True" or "False".

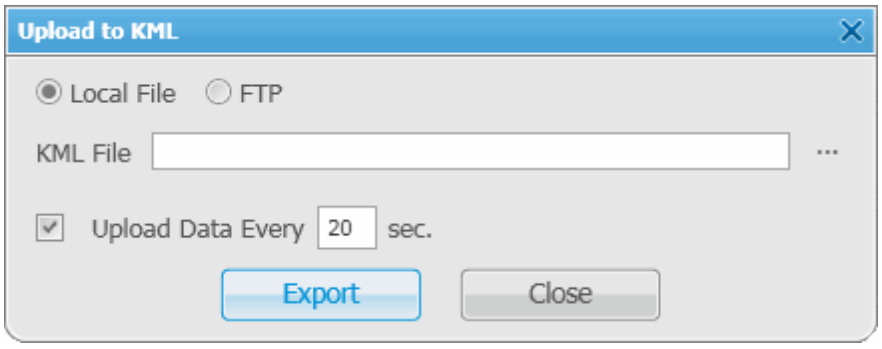
MDC ID – radio ID in the analog data channel.

Icon – path to the icon selected per subscriber. If a radio subscriber has a default icon, the corresponding field in the export file is empty.

2.9.7 Upload to KML

SmartPTT Dispatcher supports export of the current subscriber coordinates in KML format. This format is used in Google Maps/Google Earth systems.

To save subscriber coordinates in KML file format, expand the **Service** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Upload to KML**. At that, the following window opens.



The interface of the window depends on where you selected to store the KML file – to a local folder or to FTP.

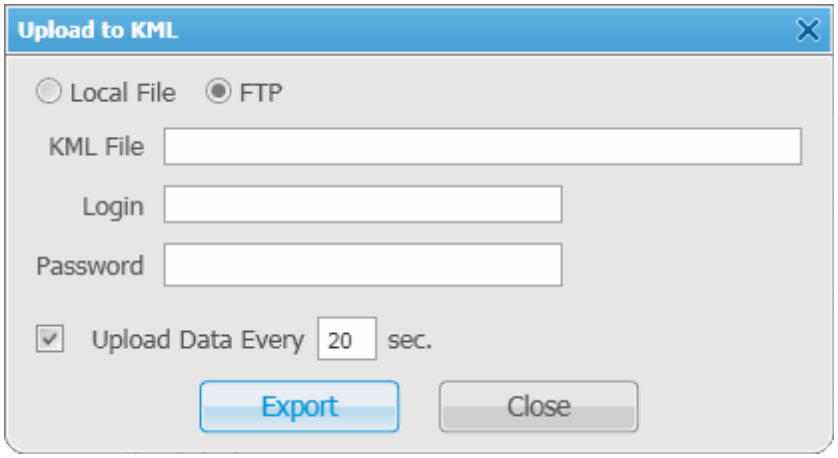
Click **Local File** to keep the uploaded KML file locally.

KML File – specify the destination folder and the name of the KML file with the subscriber coordinates.

You can also set up the upload as a continuous process. Simply, select the **Upload Data Every** checkbox and enter the time interval.

When everything is ready click **Export** to launch the upload process.

You can also store the uploaded file on FTP. To do that, click **FTP** at the top of the window.



KML File – specifies the destination folder and the name of the KML file with the subscriber coordinates on the FTP server (for example, *ftp://myserver/smartptt/abonents_smartptt.kml*).

Fill in the **Login** and **Password** fields if the FTP server requires authentication.

To exit and save the settings, click **Close**.

To exit without saving the settings, press **Esc**.

How to Display Subscriber Coordinates

To view subscriber coordinates from the FTP file:

1. Open the website *http://www.google.com*.
2. Click on **Maps** (the page *http://maps.google.com/maps?hl=en&tab=wl* is displayed).
3. Enter a direct HTTP link to the file located on the FTP server (for example, *http://myserver/smartptt/abonents_smartptt.kml*) in the Google maps field and click **Search Maps**.

To view subscriber coordinates from the local file in Google Earth:

1. Start Google Earth.
2. Select **Open** (from the **File/Open** menu or press **CTRL+O**).
3. Specify the path to the local file with the subscriber coordinates in KML format and click **Open**.

How to Configure Subscriber Coordinates Display with Automatic Update in Google Earth

1. Start Google Earth.
2. Select the menu command **Add/Network Link**.
3. In the **Name** field specify the place mark name to be displayed in Google Earth.
4. To view the file from the FTP server, enter a direct HTTP link to the file located on the FTP server (for example, *http://myserver/smartptt/abonents_smartptt.kml*).

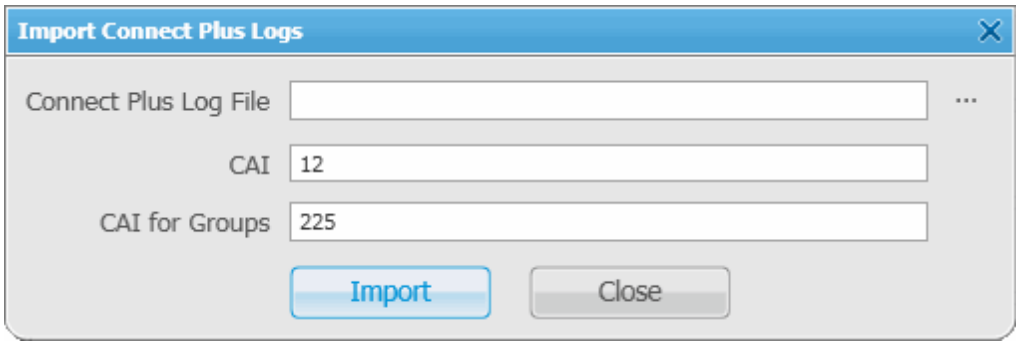
To view the file from the local disk, click **Browse**, specify the path to the file with subscriber coordinates in KML format and click **Open**.

5. Click the **Refresh** tab, select the **Periodically** option and set an update interval.
6. Click **OK**: SmartPTT subscribers should now be displayed in Google Earth.
7. To open the added KML file automatically the next time Google Earth is run, you should save the temporary place mark "Subscribers (SmartPTT)" to **My Places** list. To do this please select the menu command **File/ Save/Save to My Places** or press CTRL+SHIFT+S.

2.9.8 Import Connect Plus Logs

SmartPTT Dispatcher allows importing **Connect Plus Logs** to the **Event Log**. This is useful for dispatchers joining a new Connect Plus radio network to get data on the events in this network. The data is taken from the XRC Controller.

To import **Connect Plus Logs**, expand the **Service** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Import Connect Plus Logs**. The **Import Connect Plus Logs** window opens.

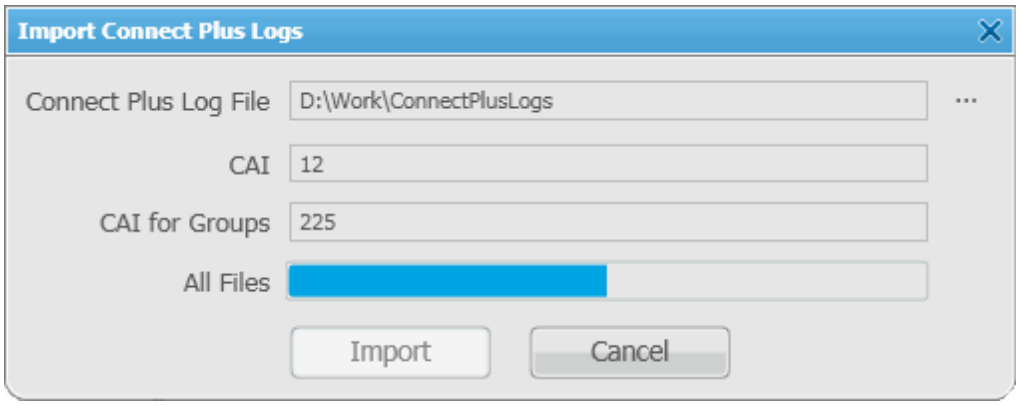


Connect Plus Log File – specifies the path to the folder where **Connect Plus Log** file is stored.

CAI – CAI-Network identifier. It's recommended to use the default value 12. It is set in the range from 1 to 126.

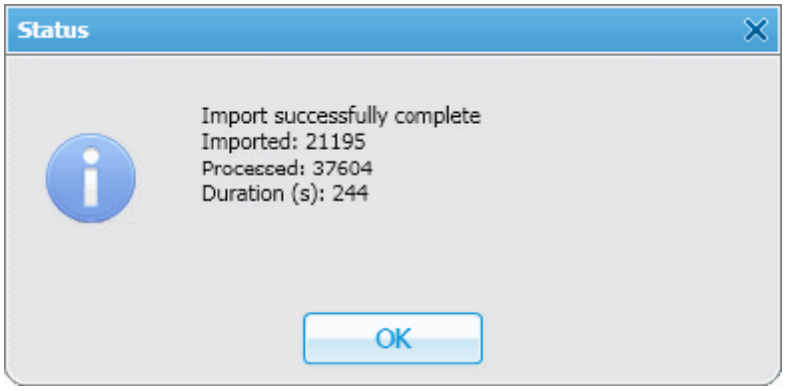
CAI for Groups – the identifier of the group's CAI-Network. It's recommended to use the default value 225. It is set in the range from 225 to 239.

If you click **Import**, Connect Plus data import to the **Event Log** will be started.



All Files – displays the total download progress.

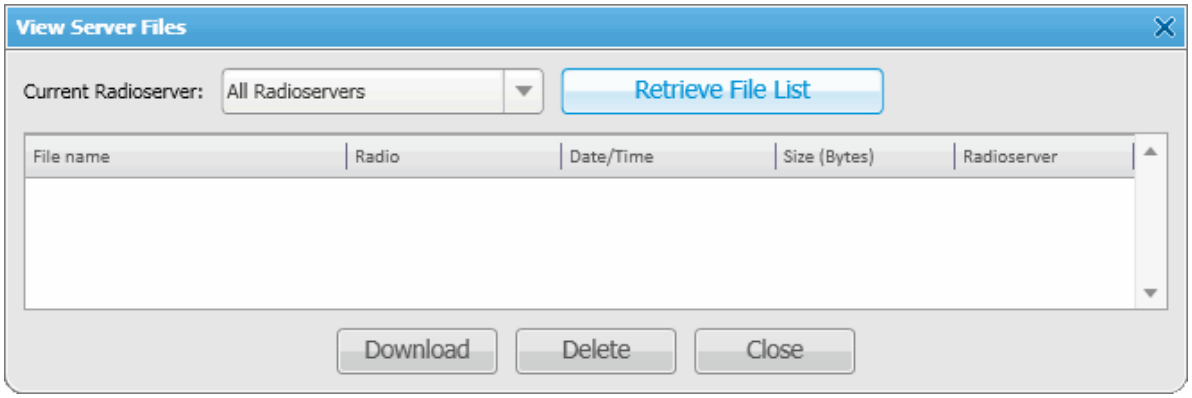
When **Connect Plus Log** file is imported, you will see the following notification window.



2.9.9 View Received Files

SmartPTT Dispatcher provides the ability to view files sent from radio stations with the help of a free application SmartPTT File Transfer.

To view the files received from radio stations, expand the **Service** menu in the **Main Menu** bar and click **View Received Files**. At that, the following window opens.



Current Radioserver – allows selecting files from one available radioserver or all available radioservers.

Retrieve File List – loads received files for the selected radioserver.

Download – opens the window for saving the selected file.

Note: You can also open the window for saving a file by double-clicking on the selected file.

Delete – deletes the selected file from the list.

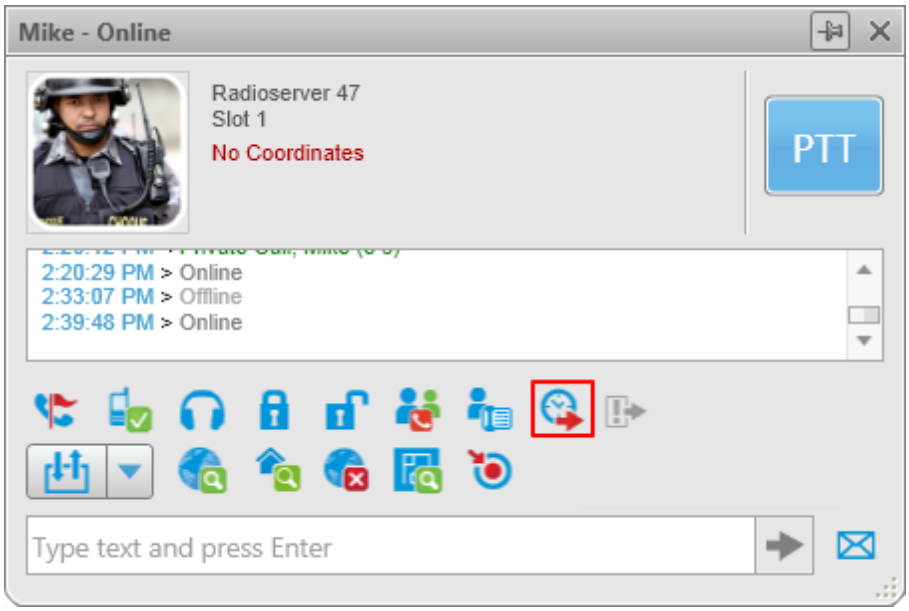
Close – closes the **View Server Files** window.

2.9.10 View Deferred Actions

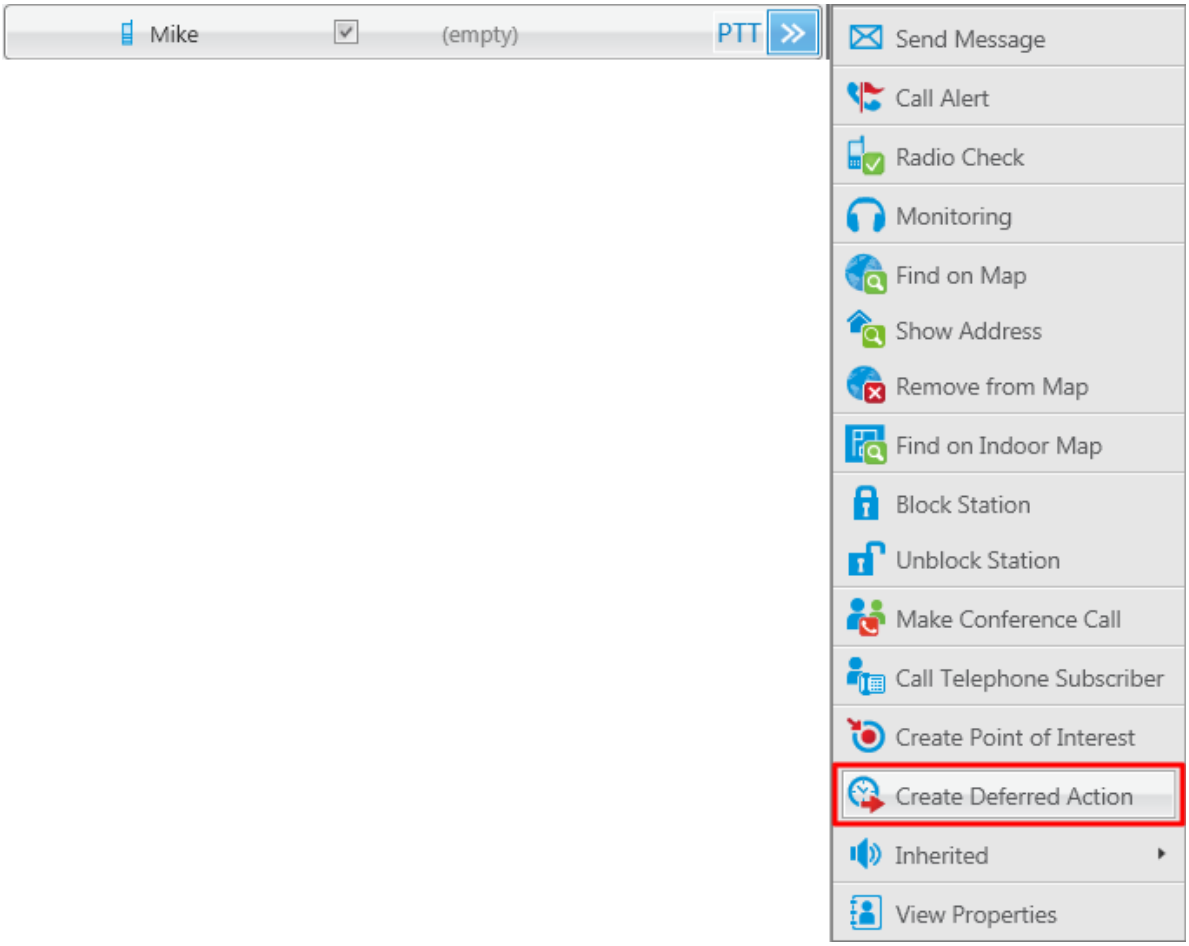
SmartPTT Dispatcher allows creating deferred actions. In this version these are audio and text messages, which are to be delivered to a radio subscriber even if the radio subscriber is offline at the moment of message transmission. As soon as the radio subscriber becomes available, the message is sent to the addressee. If the radio subscriber is online at the moment of message transmission, the message is delivered at once.

Note: Dispatcher can create, edit or view deferred actions only if the **Allow Deferred Actions** permission is selected. For more information see the Operators section.

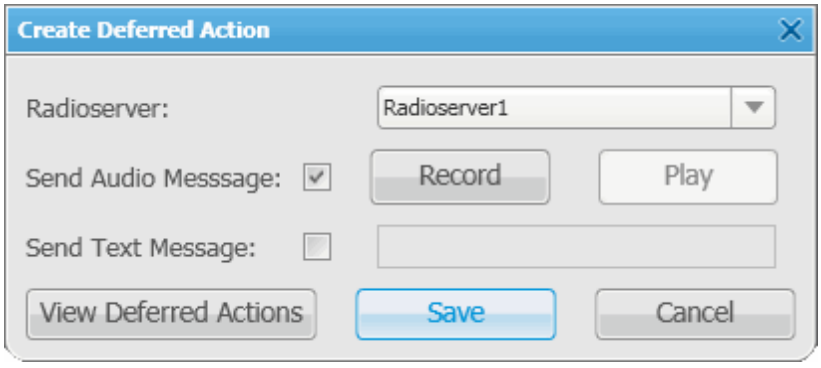
To create a deferred action open the **Action List** or the **Call Window** and select **Create Deferred Action**. The radio subscriber can be either online or offline.



Or in the **Action List**



At that, the following window opens.



Radioserver – lists all the available radioservers, where a deferred action can be created. The drop-down list contains radioservers with the status “Active” only (see **Radioservers** in the **Settings** menu in the **Main Menu**

bar).

Send Audio Message – allows creating audio messages. To record a message make sure the **Send Audio Message** checkbox is selected. Then click **Record**. After you have recorded the message, click **Stop**.

To replay the recording, click **Play**. To stop the playback, click **Stop**.

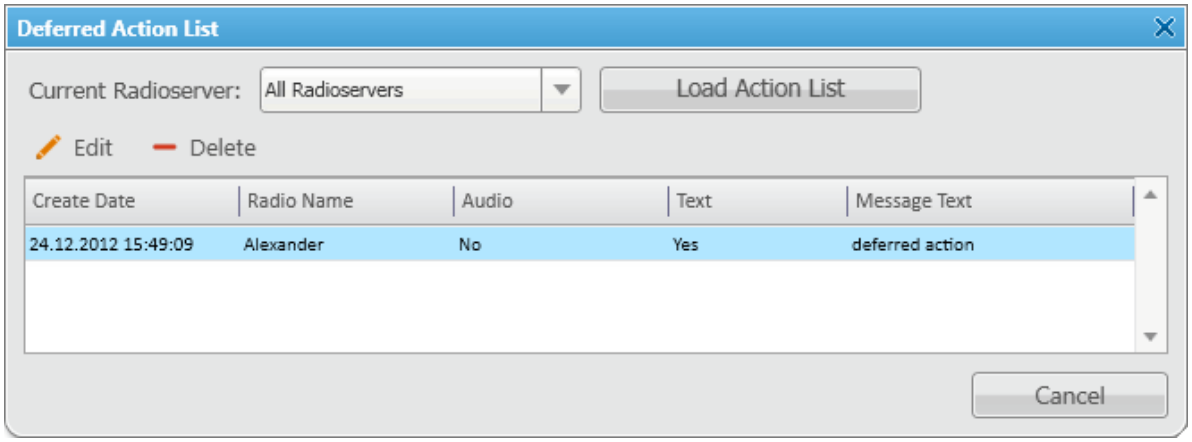
Note: The buttons **Record** and **Play** are unavailable if **Send Audio Message** is not selected.

Send Text Message – allows creating text messages. To enable the input field, select the **Send Text Message** checkbox.

Save – saves the newly created audio or text message or updates the existing message.

Cancel – closes the window. At that, unsaved changes will be lost.

View Deferred Actions – opens the list of deferred actions.



Deferred Action List – allows checking the list of audio and text messages which are to be sent. As soon as the message is sent to the radio subscriber, it is removed from the list.

Current Radioserver – allows selecting the radioserver whose list of deferred actions is to be viewed. The drop-down list contains only registered radioservers (see **Settings** > **Radioservers**).

Note: If the radioserver is registered but not running, it won't be on the drop-down list.

Load Action List – loads the list of unsent deferred messages per selected radioserver.

Delete – deletes selected message.

Cancel – closes the **Deferred Action List** window.

Edit – allows making changes in the existing, that is unsent, message. To edit a message, select the message

you need and click **Edit**.

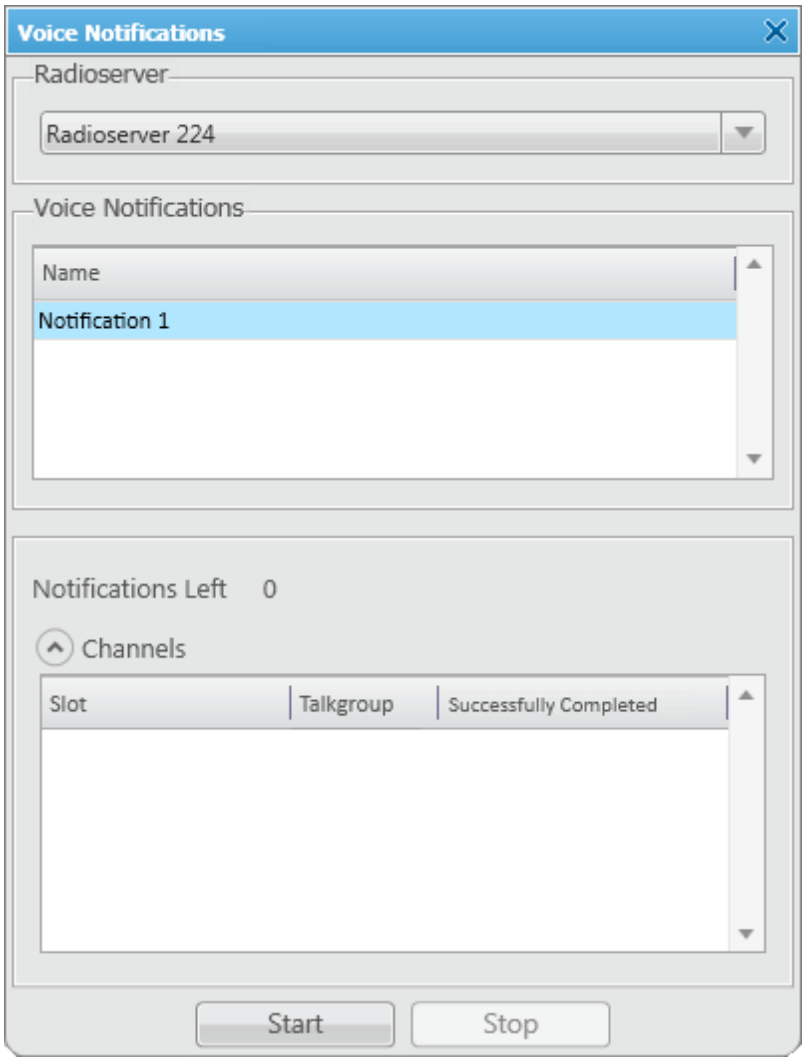
After changes have been made, click **Save**.

Note: You can also get to the edit mode by double-clicking on the message.

2.9.11 Voice Notifications

The main purpose of the voice notification functionality is to warn talkgroups about the fire or other emergency and to manage evacuation. However, in normal mode voice notification can be used for usual voice announcements.

To set up a sound alert in SmartPTT Dispatcher, expand the **Service** menu in the **Main Menu** bar and click **Voice Notifications**. At that, the **Voice Notifications** window opens.



Radioserver – select the radioserver from the list. The list contains only active and running radioservers, registered in the dispatch console .

Voice Notifications – select a voice notification from the list of items created in SmartPTT Radioserver Configurator.

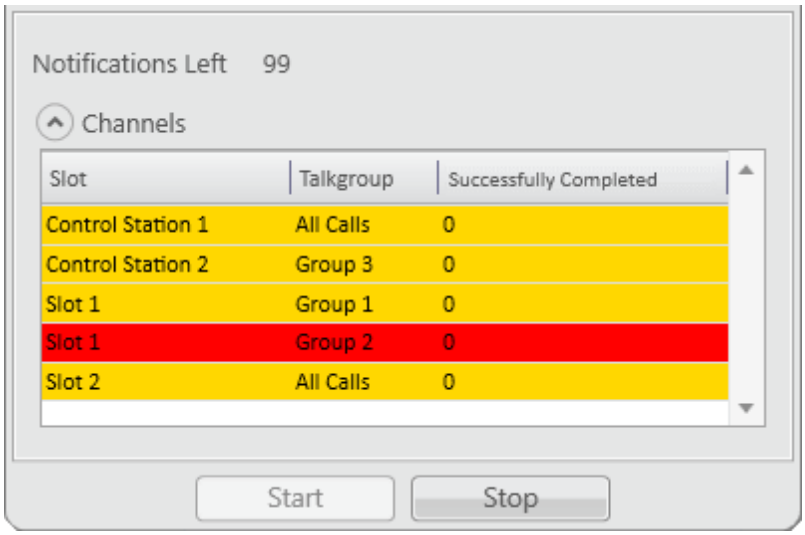
To play the voice notification, select the radioserver and the voice notification, and click **Start**. To stop playing, click **Stop**.

Note: To start a voice notification, you can use the **Voice Notification** element, added to the custom console.

Note: When the voice notification is stopped, it does not stop playing immediately, but only after it played on all selected channels within a single repetition.

Notifications Left – specifies the number of remaining voice notification repetitions.

Channels – contains a list of channels specified for the selected voice notification. Here you can also see the current status of the voice notification playing, and the number of completed playbacks. The channel is highlighted green, when voice notification playing was successfully completed on this channel. When voice notification can't be played on the channel (for example, hardware or virtual device is not available at the moment), the channel is highlighted red. While voice notification is played on the channel, the channel is highlighted yellow.



2.9.12 View System Information

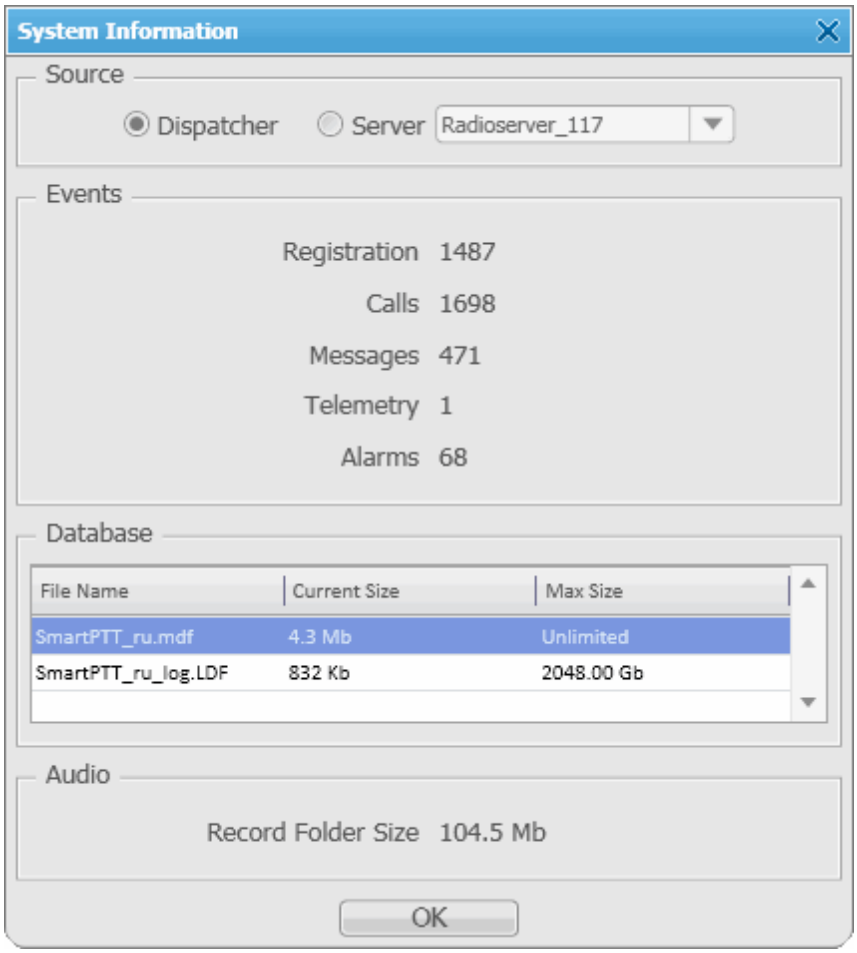
In the **System Information** window the dispatcher can see:

1. The total number of events taking place either on the dispatcher console or on the radioserver.
2. Database file size and free space.
3. Size of the record folder.

To open the **System Information** window, expand the **Service** menu in the **Main Menu** bar of SmartPTT

Dispatcher.

Click **View System Information**. At that, the following window opens.



2.10 Reports

The **Reports** menu presents all the reports available in the system:

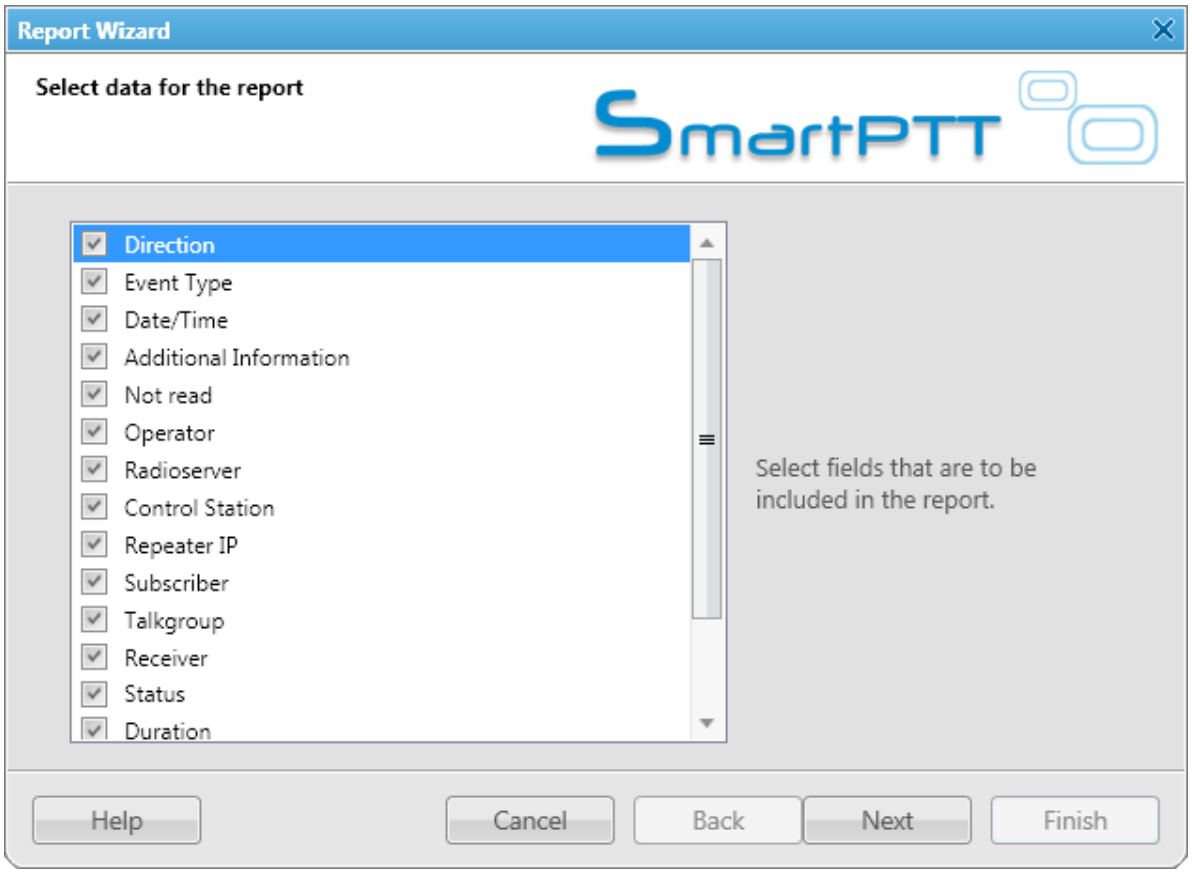
- Report Wizard allows you to build a report on the basis of the **Event log**.
- Radio Activity Report allows you to view the number of all calls and group calls during a defined time period.
- Subscriber Location Report is a special report that displays GPS coordinates of the selected radio subscribers.

- Online Subscribers report gives you a list of registered and non-registered subscribers online.
- Lone Workers report gives you the information about events that occur when the radio is in the Lone Worker mode.

2.10.1 Report Wizard

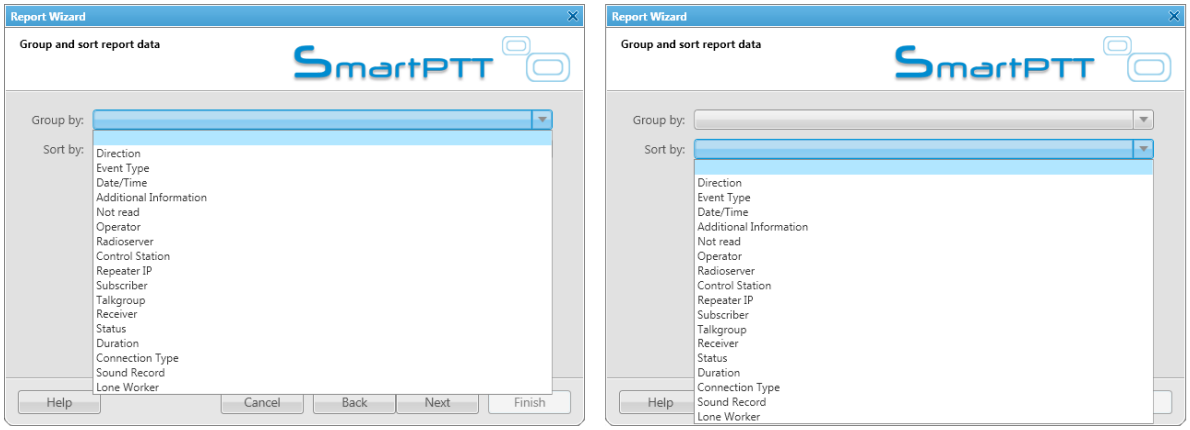
Report Wizard functionality provides flexible report creation based on the information stored in the SmartPTT Dispatcher **Event Log**. Using the **Report Wizard** it is possible to select the necessary fields for the report, specify grouping and sorting fields, specify filtering criteria. Reports generated by the **Report Wizard** are exported to Microsoft Excel.

To use the **Report Wizard**, expand the **Reports** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Report Wizard**. At that, the **Report Wizard** window opens.



Select fields which you want to include in the report and click **Next**.

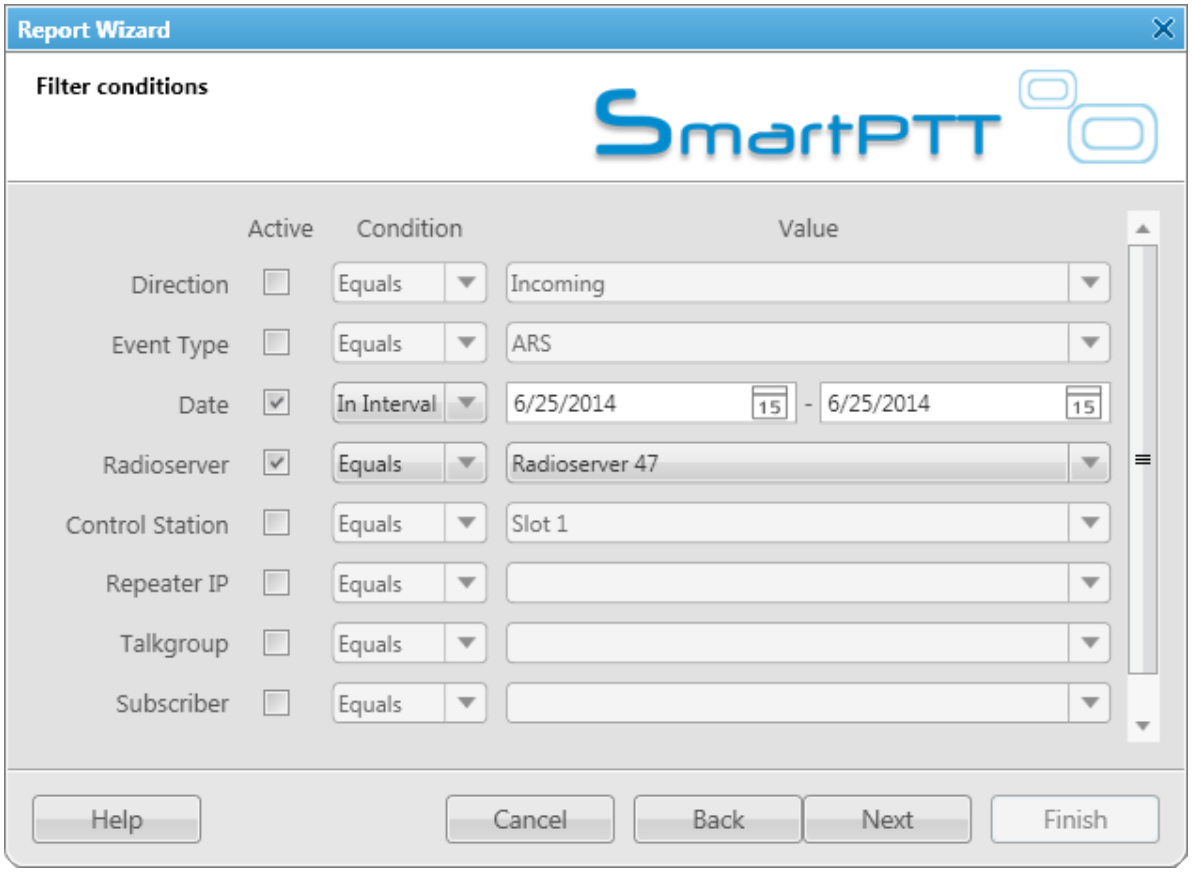
Define the structure of the report – its grouping and sorting.



Note: If both fields are not specified, the report will be grouped and sorted by default.

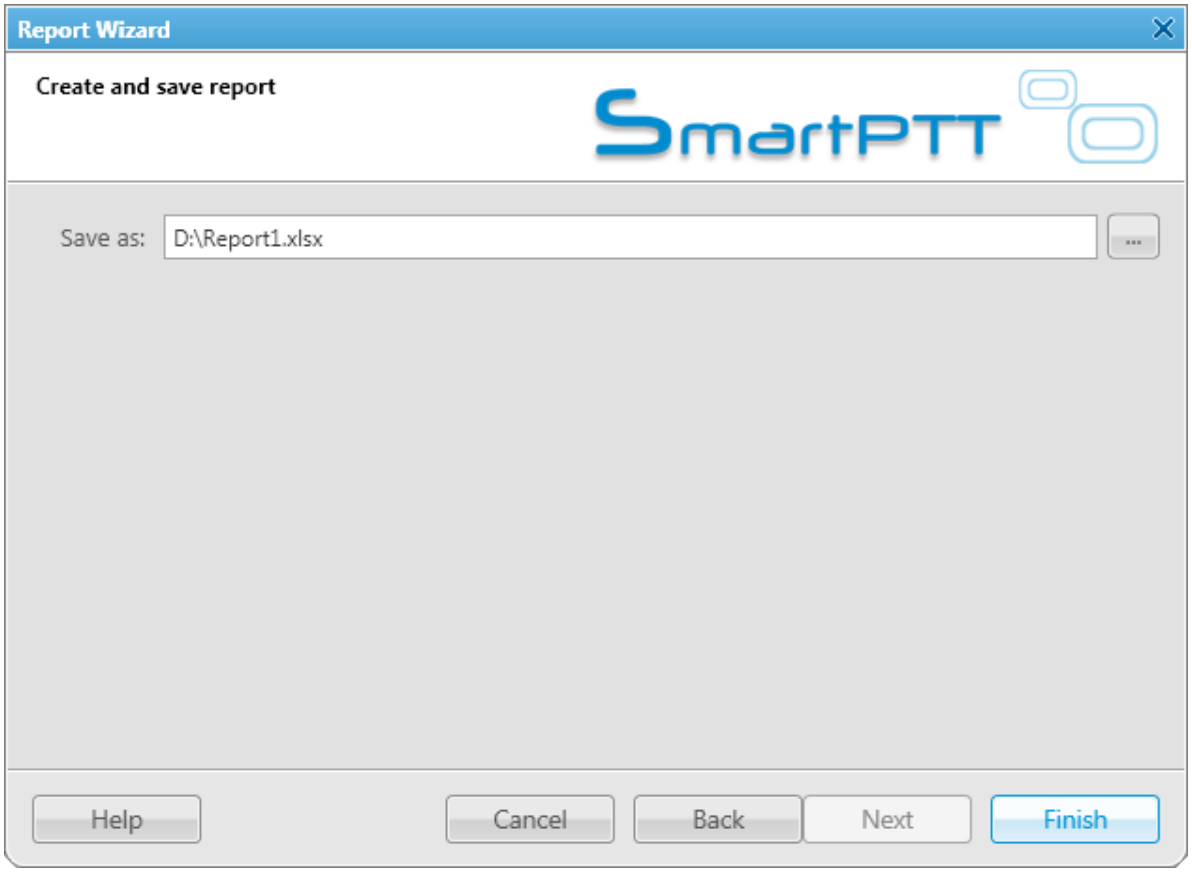
When ready, click **Next**.

In the following window filter the report by values.



Click **Next** to continue.

Then specify the file name of the report.

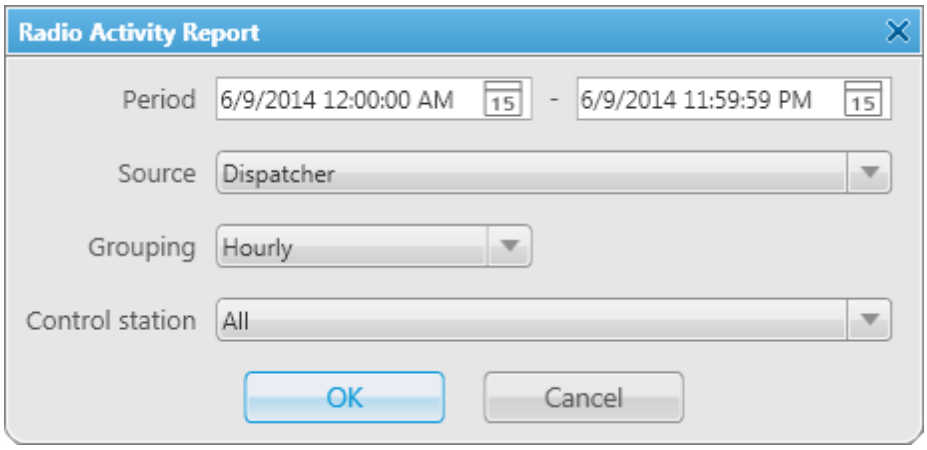


To complete the process, click **Finish**. The report can be saved in HTML, MHT, XLS, XLSX, CSV, and TXT formats.

2.10.2 Radio Activity Report

Radio Activity Report presents information about quantity and duration of all calls and group calls with a breakdown into hours or days.

To create the report expand the **Reports** menu and select **Radio Activity Report**. The **Radio Activity Report** window opens.



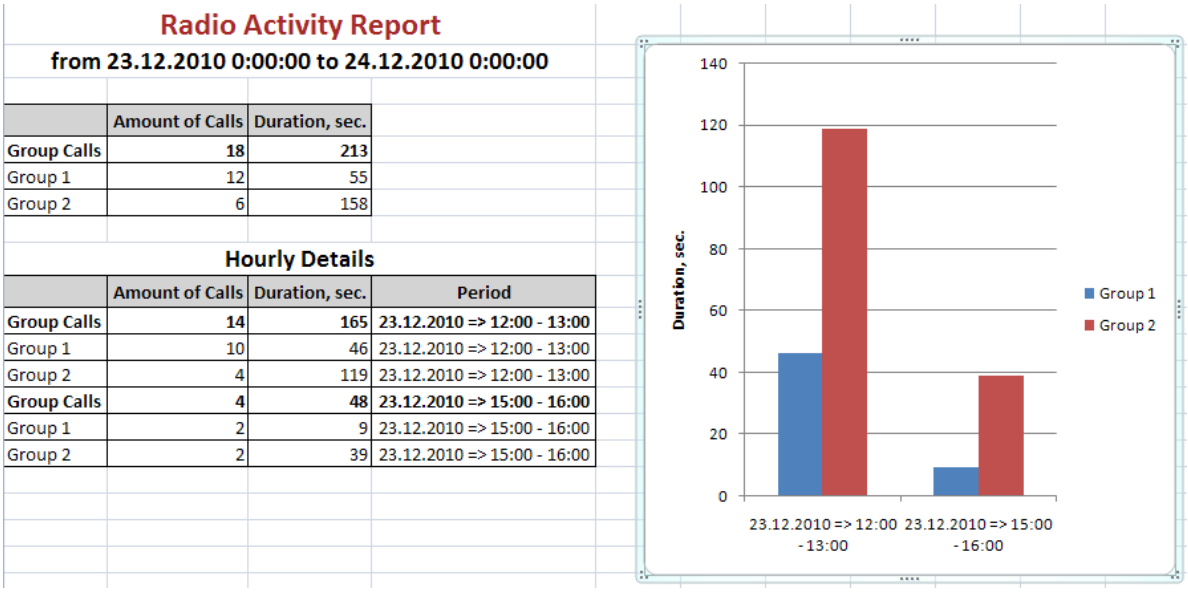
Period – defines the time frame for the report data.

Source – defines the source, which database will be used for the report. If *Dispatcher* is selected, the data is taken from the local database. Apart from *Dispatcher*, any available radioserver can be chosen as a data source. In that case all data is taken from the database of the chosen radioserver.

Grouping – defines the level of detail, whether you want to see the report information divided into days, hours or minutes.

Control Station – allows building a report for a particular control station or for all control stations.

The report can be saved in PDF, HTML, MHT, RTF, XLS, XLSX, CSV, TXT, Image or XPS formats.



Radio Activity Report

from 23.12.2010 0:00:00 to 24.12.2010 0:00:00

	Amount of Calls	Duration, sec.
Group Calls	**18**	**213**
Group 1	12	55
Group 2	6	158

Hourly Details

	Amount of Calls	Duration, sec.	Period
Group Calls	**14**	**165**	**23.12.2010 => 12:00 - 13:00**
Group 1	10	46	23.12.2010 => 12:00 - 13:00
Group 2	4	119	23.12.2010 => 12:00 - 13:00
Group Calls	**4**	**48**	**23.12.2010 => 15:00 - 16:00**
Group 1	2	9	23.12.2010 => 15:00 - 16:00
Group 2	2	39	23.12.2010 => 15:00 - 16:00

2.10.3 Subscriber Location Report

SmartPTT Dispatcher allows creating report on subscriber locations. The report can be saved in PDF, HTML, MHT, RTF, XLS, XLSX, CSV, TXT, Image or XPS formats.

To create the report, expand the **Reports** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Subscriber Locations**. At that, the **Subscriber Locations** window opens.

Period in UTC – defines the time frame of the report.

Source – defines the source, which database will be used for the report. If *Dispatcher* is selected, the data is taken from the local database. Apart from *Dispatcher*, any available radioserver can be chosen as a data source. In that case all data is taken from the database of the chosen radioserver.

Subscriber – defines subscriber for whom the report is to be generated. The list of subscribers is taken from the connected database.

Note: When **All** is selected, the report will be generated for all subscribers which have GPS coordinates in the database.

Decimal Degrees – displays GPS coordinates in decimal degrees, for example, latitude: 56,47568, longitude: 84,98779.

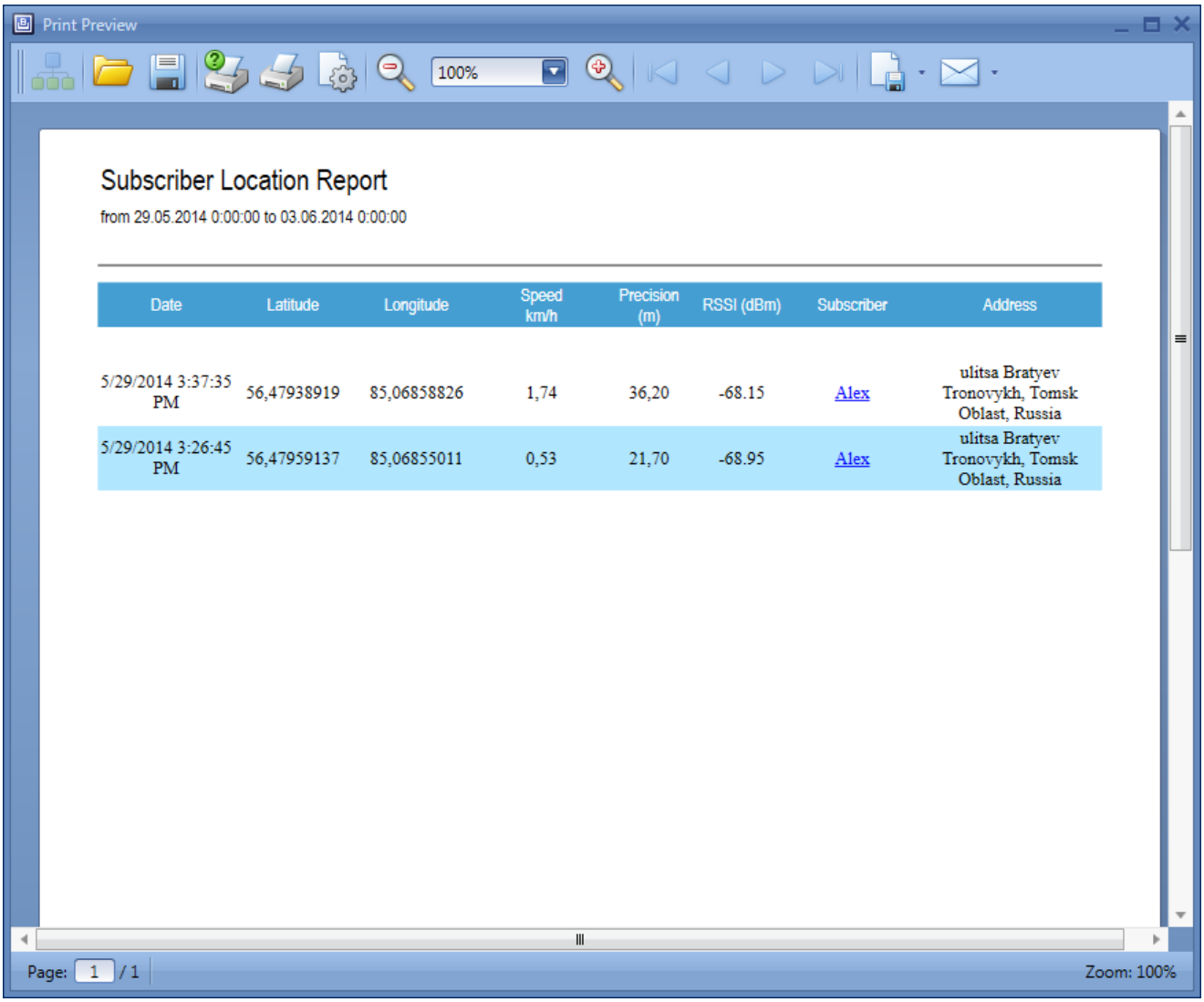
UTC Time – if selected, the report time will be converted to UTC format. If **UTC Time** is not selected, the local time of the radioserver PC will be shown in the **Subscriber Locations Report**.

Route – define the route on the basis of which the **Subscriber Locations Report** is to be generated.

Only Key Point – displays only the key points of the route in the report.

Address – displays the address, corresponding to the coordinates of the map object. In order to do that, the selected map service is used – Google Maps or OpenStreetMap.

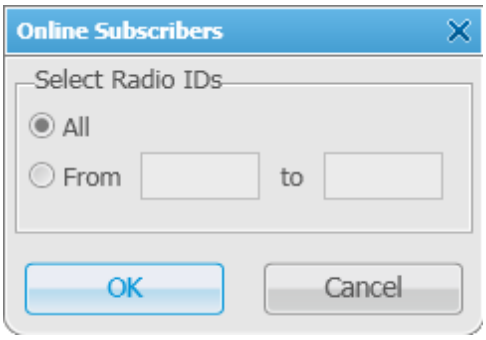
Click **OK** to create the report. In the report you can open Google map with the subscriber location on it.



2.10.4 Online Subscribers

SmartPTT allows exporting online subscribers (registered and not registered) in no time by means of the **Online Subscribers** report.

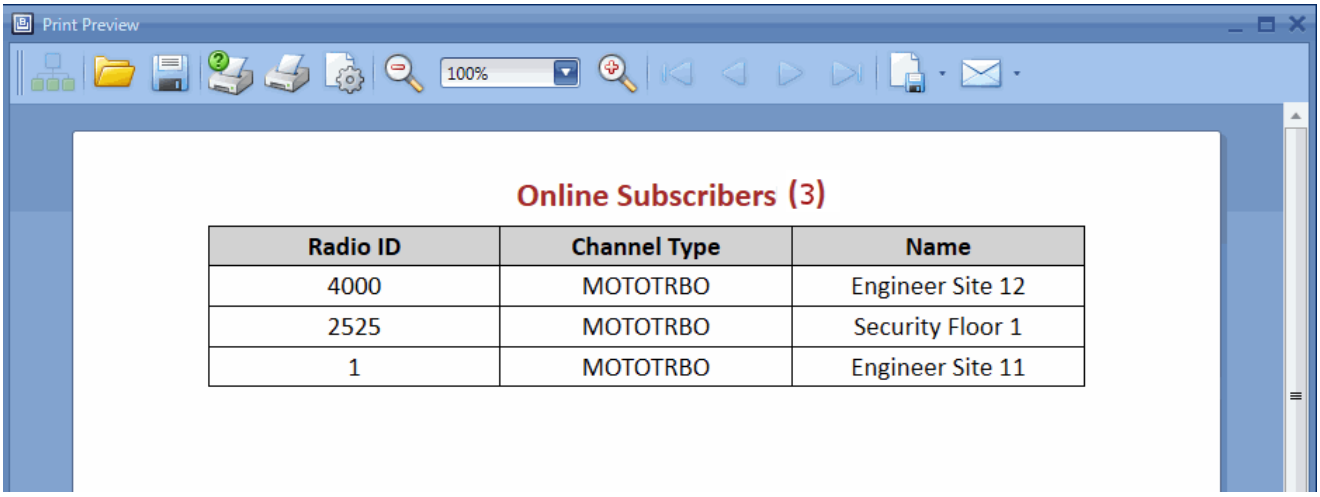
To create the report, expand the **Reports** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Online Subscribers**. At that, the following window opens.



All – select this radio button to include all registered and not registered online subscribers in the report.

From ... to ... – select this radio button to limit the number of subscribers in the report.

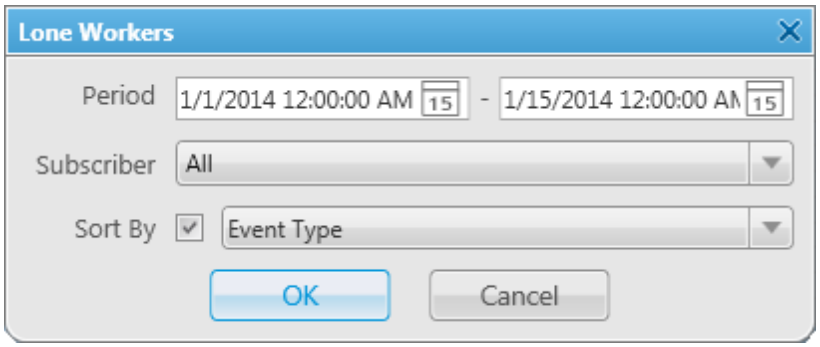
Click **OK**. At that, the report opens. The report can be exported to PDF, HTML, MHT, RTF, XLS, XLSX, CSV, TXT, Image or XPS formats. The report contains three columns: **Radio ID**, **Channel Type** and **Name**. The **Channel Type** column can have three values: MOTOTRBO, Analog, Select 5.



2.10.5 Lone Workers

The **Lone Workers** report provides information about the radio subscriber events when the radio is in the "lone worker" mode, for example, registration on the network, the incoming or outgoing calls and messages.

To create the report expand the **Reports** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and select **Lone Workers**. The **Lone Workers** window opens.

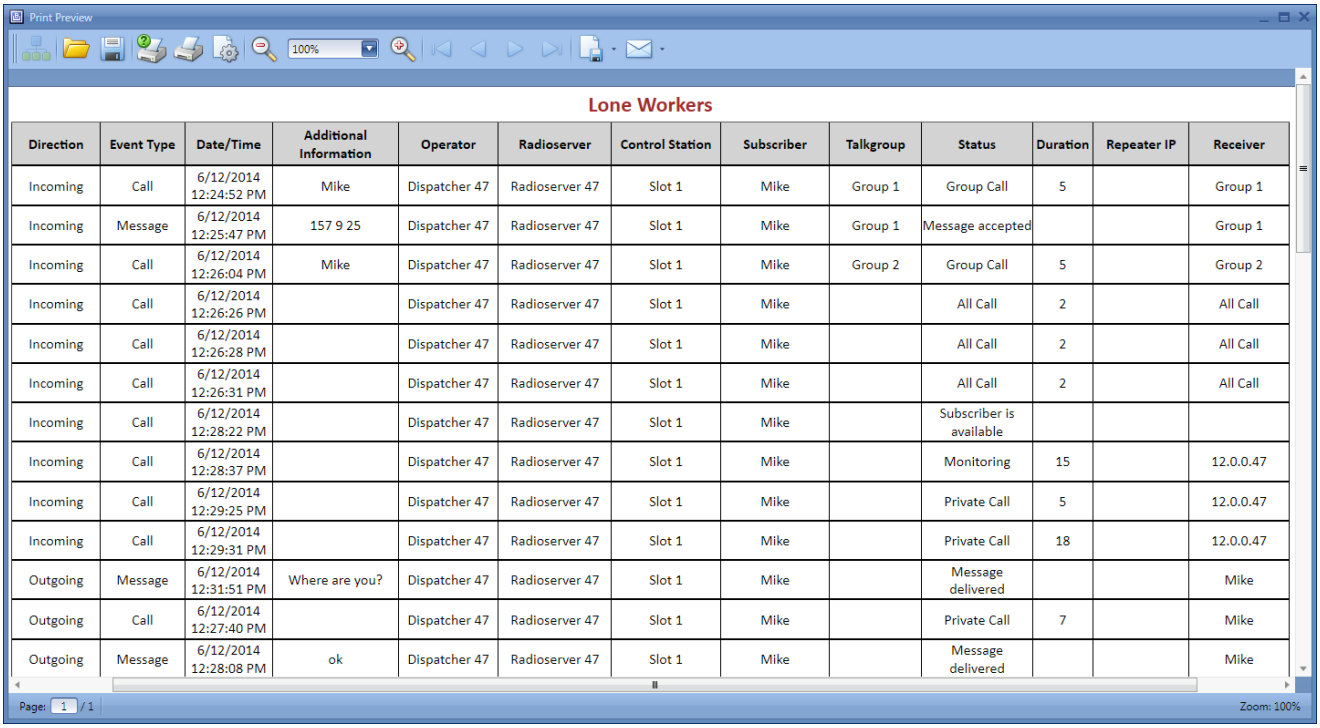


Period – defines the time frame for the report data.

Subscriber – defines the subscriber for whom the report is to be generated. The list of subscribers is taken from the connected database.

Sort By – defines the sorting field for the report events. Sorting parameters: direction, event type, date and time, additional information, operator, control station, subscriber, group, status, duration, repeater IP address, receiver.

The report can be saved in PDF, HTML, MHT, RTF, XLS, XLSX, CSV, TXT, Image or XPS formats.



Lone Workers

Direction	Event Type	Date/Time	Additional Information	Operator	Radioserver	Control Station	Subscriber	Talkgroup	Status	Duration	Repeater IP	Receiver
Incoming	Call	6/12/2014 12:24:52 PM	Mike	Dispatcher 47	Radioserver 47	Slot 1	Mike	Group 1	Group Call	5		Group 1
Incoming	Message	6/12/2014 12:25:47 PM	157 9 25	Dispatcher 47	Radioserver 47	Slot 1	Mike	Group 1	Message accepted			Group 1
Incoming	Call	6/12/2014 12:26:04 PM	Mike	Dispatcher 47	Radioserver 47	Slot 1	Mike	Group 2	Group Call	5		Group 2
Incoming	Call	6/12/2014 12:26:26 PM		Dispatcher 47	Radioserver 47	Slot 1	Mike		All Call	2		All Call
Incoming	Call	6/12/2014 12:26:28 PM		Dispatcher 47	Radioserver 47	Slot 1	Mike		All Call	2		All Call
Incoming	Call	6/12/2014 12:26:31 PM		Dispatcher 47	Radioserver 47	Slot 1	Mike		All Call	2		All Call
Incoming	Call	6/12/2014 12:28:22 PM		Dispatcher 47	Radioserver 47	Slot 1	Mike		Subscriber is available			
Incoming	Call	6/12/2014 12:28:37 PM		Dispatcher 47	Radioserver 47	Slot 1	Mike		Monitoring	15		12.0.0.47
Incoming	Call	6/12/2014 12:29:25 PM		Dispatcher 47	Radioserver 47	Slot 1	Mike		Private Call	5		12.0.0.47
Incoming	Call	6/12/2014 12:29:31 PM		Dispatcher 47	Radioserver 47	Slot 1	Mike		Private Call	18		12.0.0.47
Outgoing	Message	6/12/2014 12:31:51 PM	Where are you?	Dispatcher 47	Radioserver 47	Slot 1	Mike		Message delivered			Mike
Outgoing	Call	6/12/2014 12:27:40 PM		Dispatcher 47	Radioserver 47	Slot 1	Mike		Private Call	7		Mike
Outgoing	Message	6/12/2014 12:28:08 PM	ok	Dispatcher 47	Radioserver 47	Slot 1	Mike		Message delivered			Mike

2.11 Bridging

SmartPTT Bridging service allows joining multiple network systems into a single radio network. The bridging service is implemented by SmartPTT Radioserver and provides intelligent means of patching for voice and data streams between various network systems.

In SmartPTT Plus the bridging service allows you to :

- join various radio networks;
- bridge two or more radioservers to cover distributed regions;
- bridge selected voice and data;
- bridge private and group calls dynamically;
- break the barrier of 15 repeaters per IP Site Connect;
- have calls bridged with only a short voice delay (from 60 ms), when joining IP Site Connect systems.

Radio network configurations supporting bridging:

1. NAI networks
2. Connect Plus networks

Note: The current version of SmartPTT Dispatcher supports only talkgroup call exchange between Connect Plus networks and analog control stations, digital control stations (analog or digital conventional channels) or NAI networks (the *Voice* connection type). Bridging of Connect Plus networks with other network types is not supported yet. Any other data exchange between Connect Plus and other networks is not supported yet.

3. Digital conventional channels
4. Analog conventional channels

How to Configure Bridging in SmartPTT Dispatcher Console

You can configure bridging settings in the call bridging table in SmartPTT Dispatcher. It was designed to make the process of bridging configuration simple and easy. The main idea of the configuration process is to manage bridging with the help of the so-called "Profiles" and "Route Groups". The profiles contain information on the bridging rules, which are specified in route groups and further in routes. So, there are three levels:

1. Routes
2. Route Groups
3. Profiles

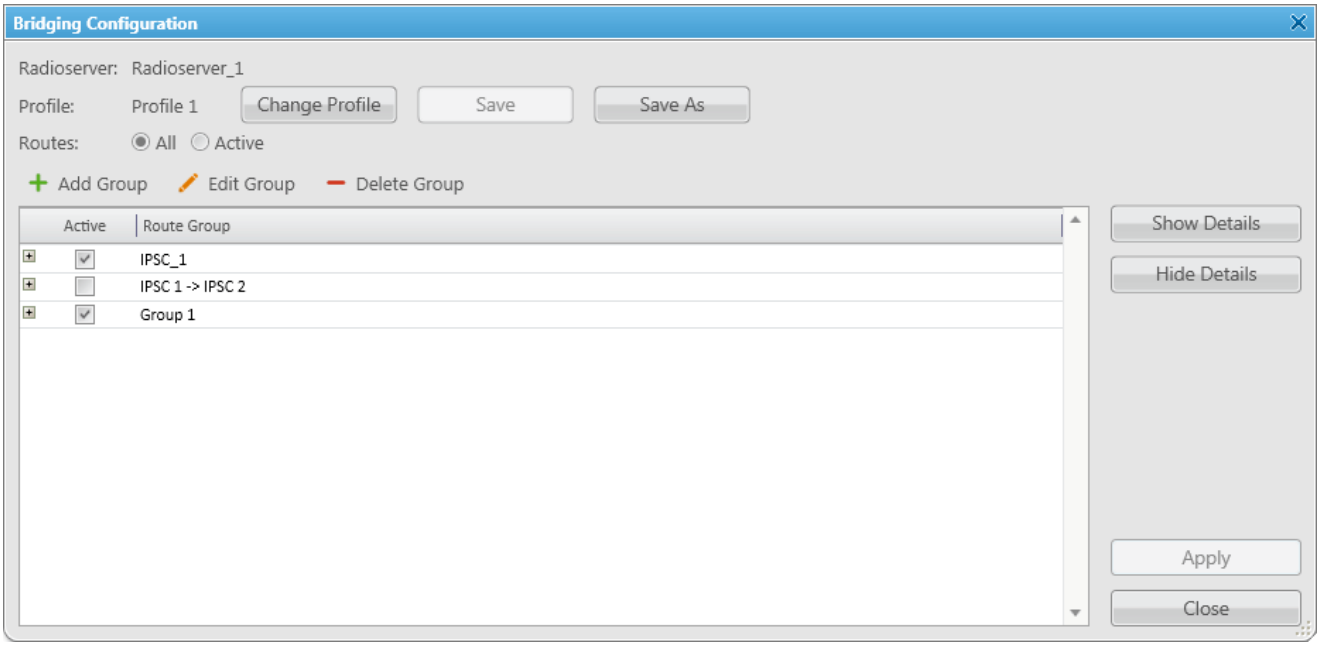
Route – basic unit of the bridging process and an integral part of the route group, that is a route cannot be used separately. It is in the route where you define the source and the destination networks, and other main characteristics of the route.

Route Group – group which unites several routes. It was designed to provide a neat look to profiles. Route groups can be easily activated and deactivated, which will either make routes inside route groups usable or not usable.

Profile – saved template of route groups. Profiles can be created for various business fields, for example, there can be profiles for general purposes, for carrying out engineering work or for emergency situations, etc.

You can configure bridging settings individually for each radioserver from SmartPTT Dispatcher. To open the call bridging table, open the **Action List** by clicking the button next to the radioserver and select **Configure Call Bridging Table**.

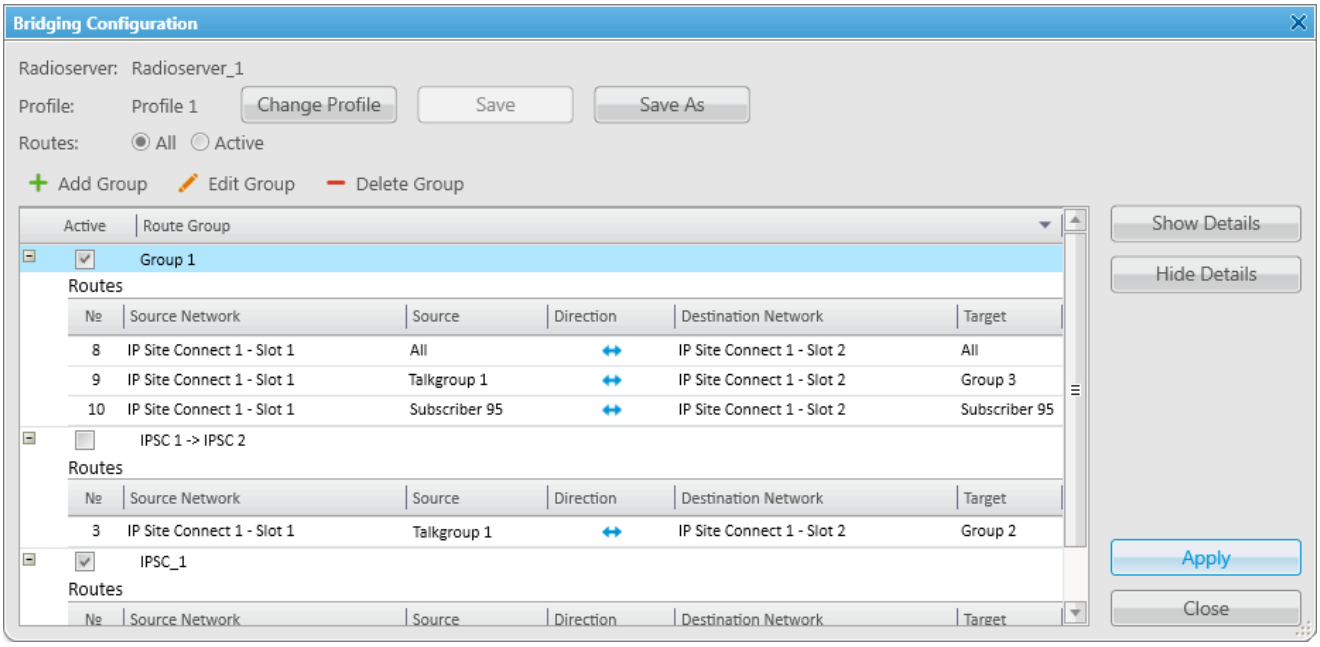
At that, the **Bridging Configuration** window opens.



This is the main window from where you can create routes, route groups and add them to new profiles. The window also informs about the name of the current radioserver, its current profile, the list of available routes organized in groups.

Show Details – displays details of the route groups. You can also check the details of a particular route group by clicking a plus sign next to the route group name.

Hide Details – displays only route group names and the **Active** checkbox.



By default, the bridging table displays only active route groups, which belong to the selected profile. To display all route groups, select the **All** option.

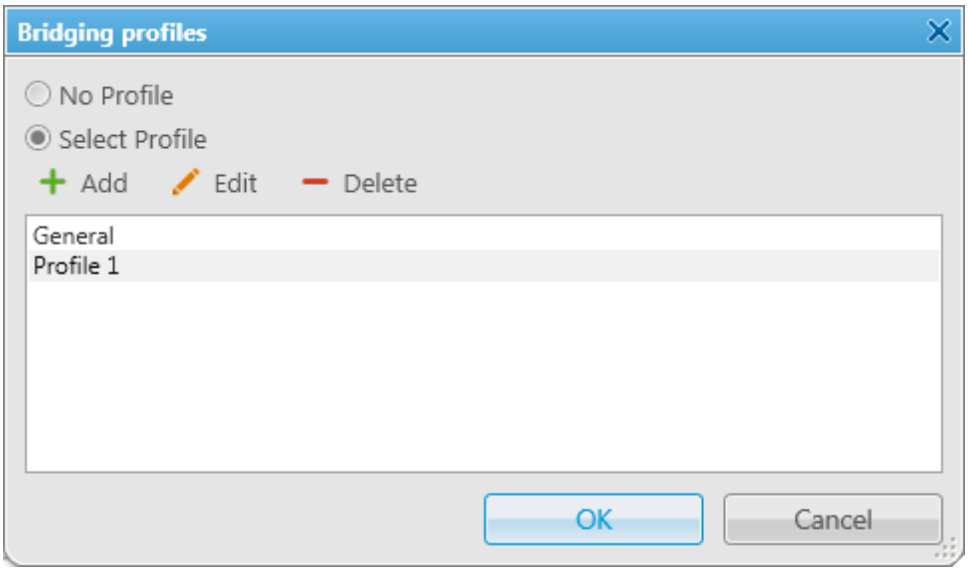
The buttons **Change Profile**, **Save**, **Save As** allow you to create a new profile or edit the existing one.

The buttons **Add Group**, **Edit Group**, **Delete Group** allow creating new route groups and attach routes to groups.

1. Profiles

Profiles are used for quick switching between predefined bridging tables.

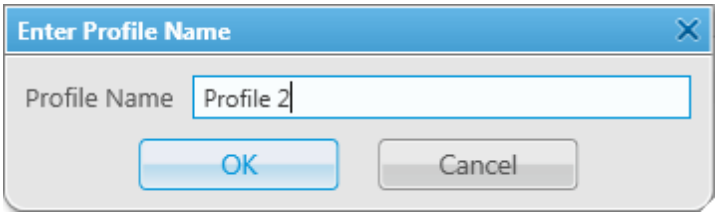
To add, modify or delete a profile, click **Change Profile** in the **Bridging Configuration** window.



If **No Profile** is selected, the created groups have no reference to a specific profile. The profile list and buttons for profile edition are not available in the **Bridging Profiles** window.

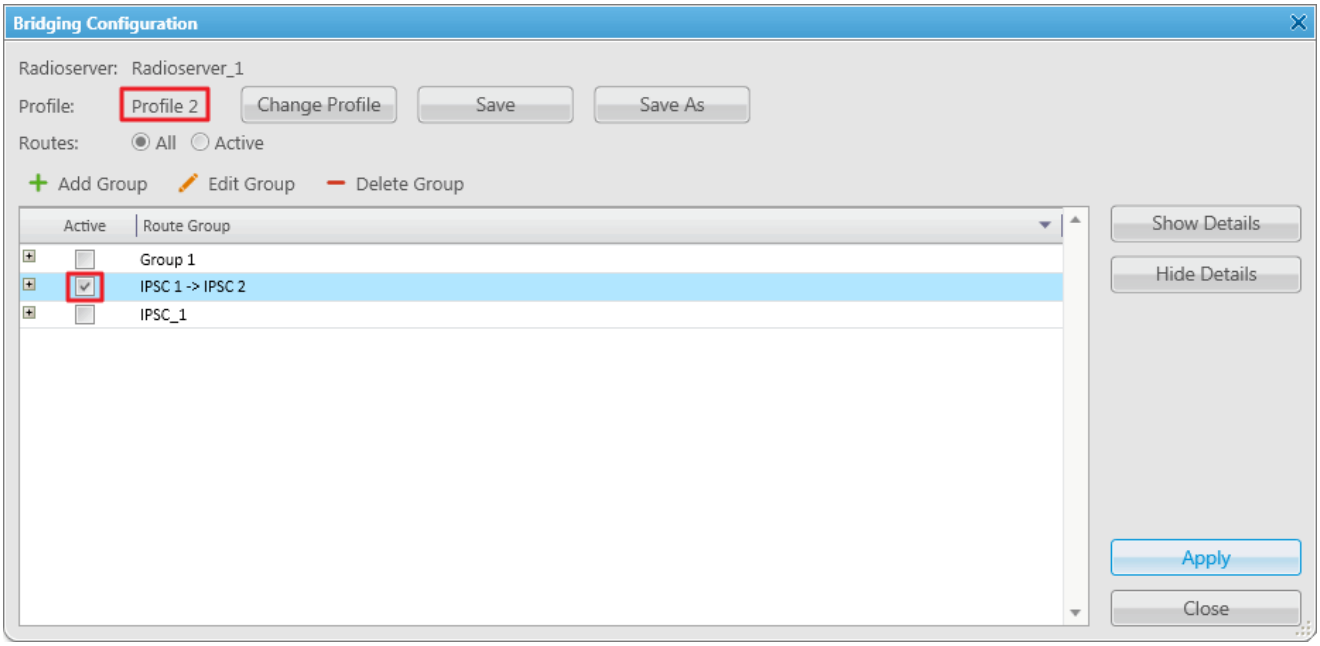
If **Select Profile** is enabled, the profile list is available for editing and route groups can be assigned to the selected profile.

In the **Bridging Profiles** window, click **Add** to create a new bridging profile. At that, the **Enter Profile Name** window opens. Use the **Profile Name** field to specify the profile name, click **OK**.

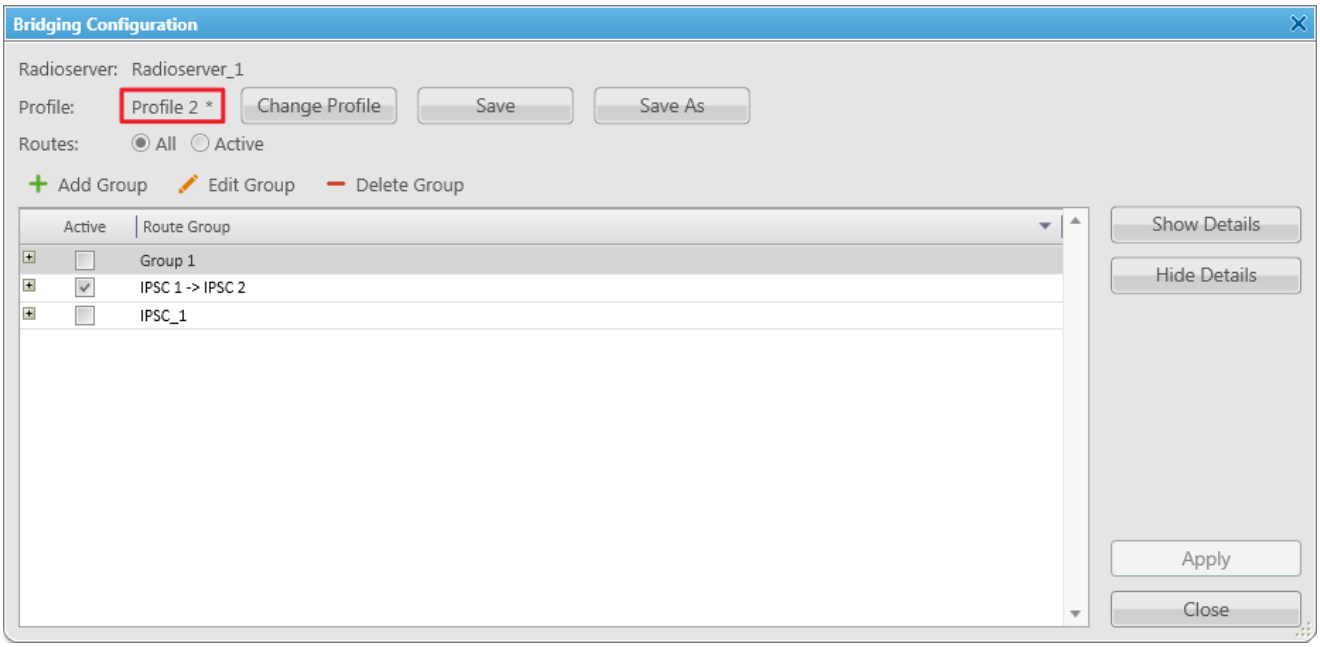


Left-click on the profile name in the **Bridging Profiles** window and click **OK**.

In the list of groups, select **Active** checkboxes near the route groups that should apply to the chosen profile.

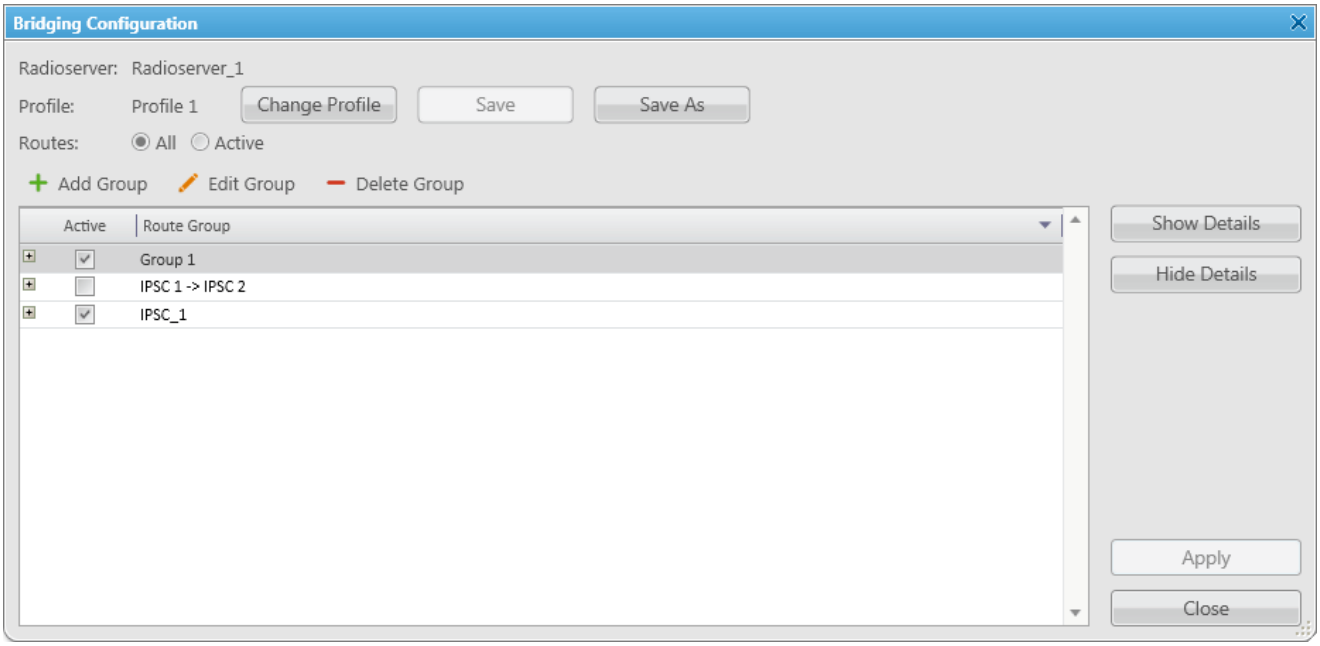


As you finished editing the profile settings, click **Apply** to activate the current profile settings. At that, the asterisk character ("*") appears in front of the profile name.



Click **Save** to save the profile settings.

To switch the profile, click **Change Profile** in the **Bridging Configuration** window, select a profile from the list and click **OK**. The **Bridging Configuration** window displays settings of the selected profile – active route groups.

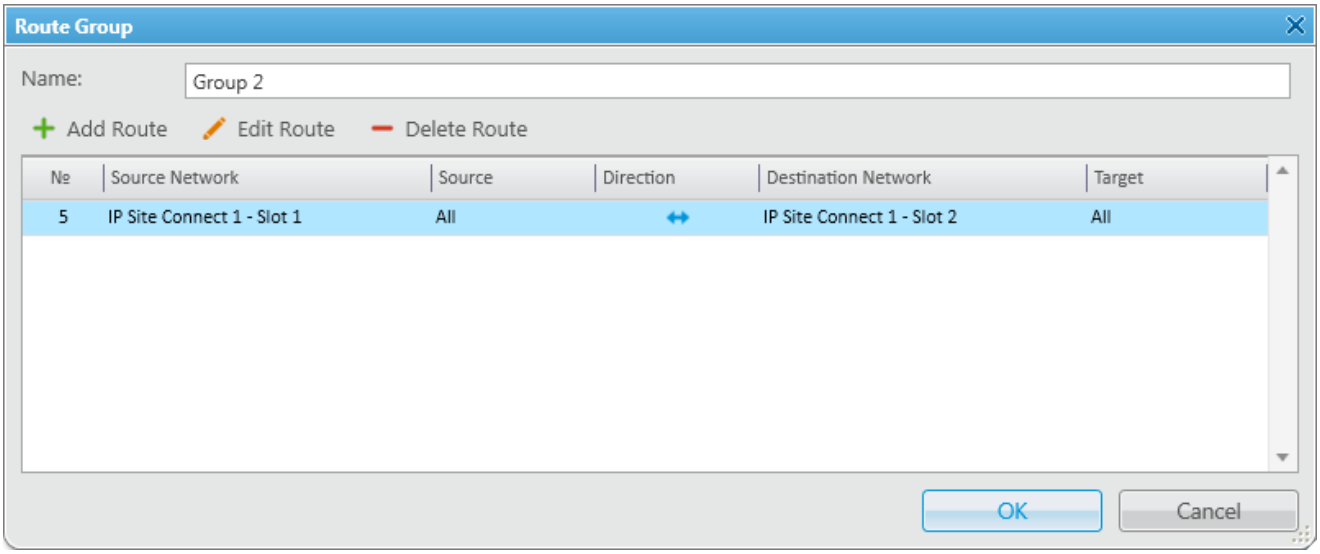


Save As allows you to save a copy of the current profile with a new name.

2. Route Groups

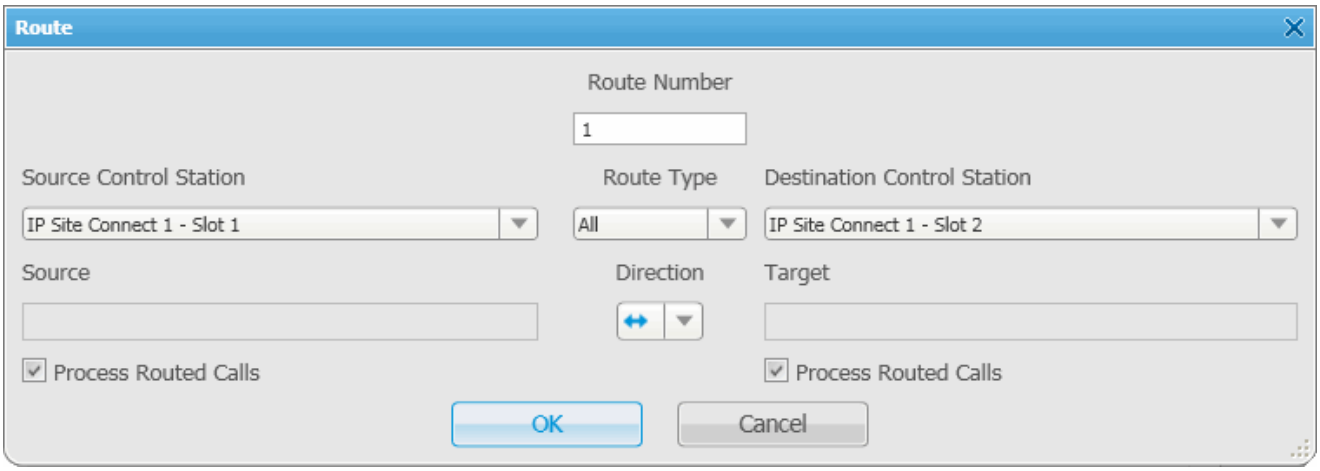
To create a new bridging route group and add routes to it, click **Add Group** in the **Bridging Configuration** window.

In the **Route Group** window, specify name of the route group, add routes to the group and click **OK**.



To save the changes in the route groups, click **Apply**.

Add routes to the group by clicking **Add Route** in the **Route Group** window. At that, the window for adding routes opens up.



This is the window where you create routes. Here you can define the source and the target networks, route direction (one-way or two-way), the source radio or talkgroup and the target radio or talkgroup. You can also select the **Route Type**, which depends on the data type you want to patch.

Here you can find a detailed description how to configure routes of different types.

2.1. Configuring "All" Route Type

If you need to patch all voice and data packets from the source network to the destination network, select **All** in the **Route Type**.

In this case you need to fill in the following fields:

Route Number – ordinal number of the route.

Source Control Station – select any of the added control stations serving as a source. You can add control stations of various networks in SmartPTT Radioserver Configurator.

Destination Control Station – select any of the added control stations serving as a destination. You can add control stations of various networks in SmartPTT Radioserver Configurator.

Direction – allows you to select either one-way or two-way.

Process Routed Calls – if selected the call which is already routed once (by one route) also can be routed another time by another route. It takes place only when several routes are added.

Example:

You can add all these routes without the **Process Routed Calls** checkbox selected:

IPSC 01 slot 01 <---> IPSC 02 slot 01

IPSC 01 slot 01 <---> IPSC 03 slot 01

IPSC 01 slot 01 <---> IPSC 04 slot 01

IPSC 02 slot 01 <---> IPSC 03 slot 01

IPSC 02 slot 01 <---> IPSC 04 slot 01

IPSC 03 slot 01 <---> IPSC 04 slot 01

Or, you can select the checkbox and create only three routes:

IPSC 01 slot 01 <---> IPSC 02 slot 01

IPSC 02 slot 01 <---> IPSC 03 slot 01

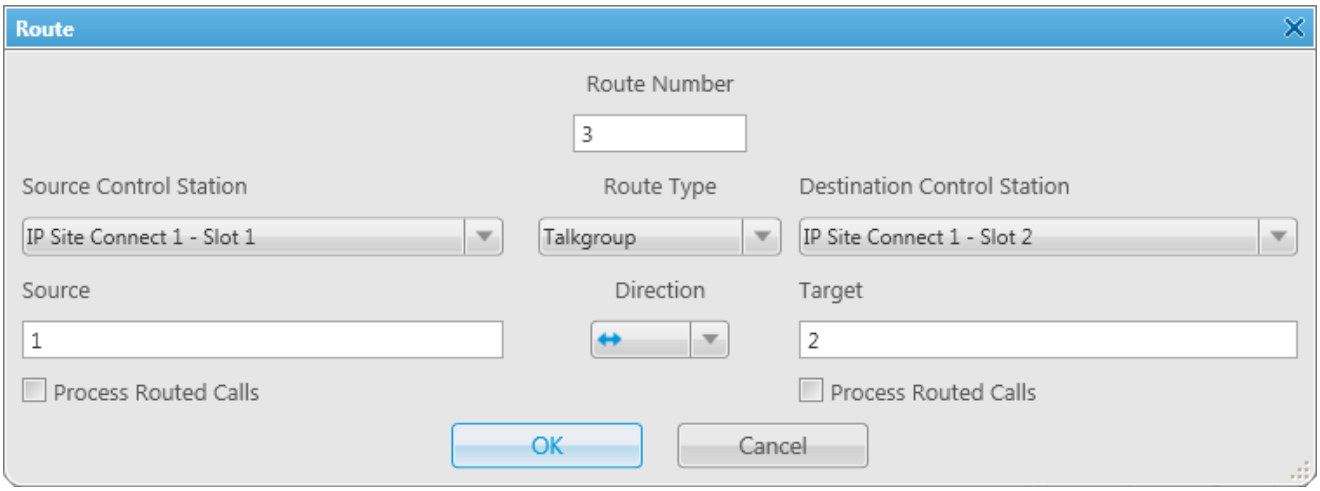
IPSC 03 slot 01 <---> IPSC 04 slot 01

Warning! Please don't use round routes. They can cycle all routes and lead to unstable system operation (for example, IPSC 01 slot 01 <---> IPSC 04 slot 01).

2.2. Configuring "Talkgroup" Route Type

In order to patch a group call, select **Talkgroup** in the **Route Type**. Specify the source and the destination networks, and other parameters as if you were configuring the "All" **Route Type**.

The only difference is that for this route type you need to specify the groups' IDs, that is the source talkgroup ID in the **Source** field and the destination talkgroup ID in the **Target** field.



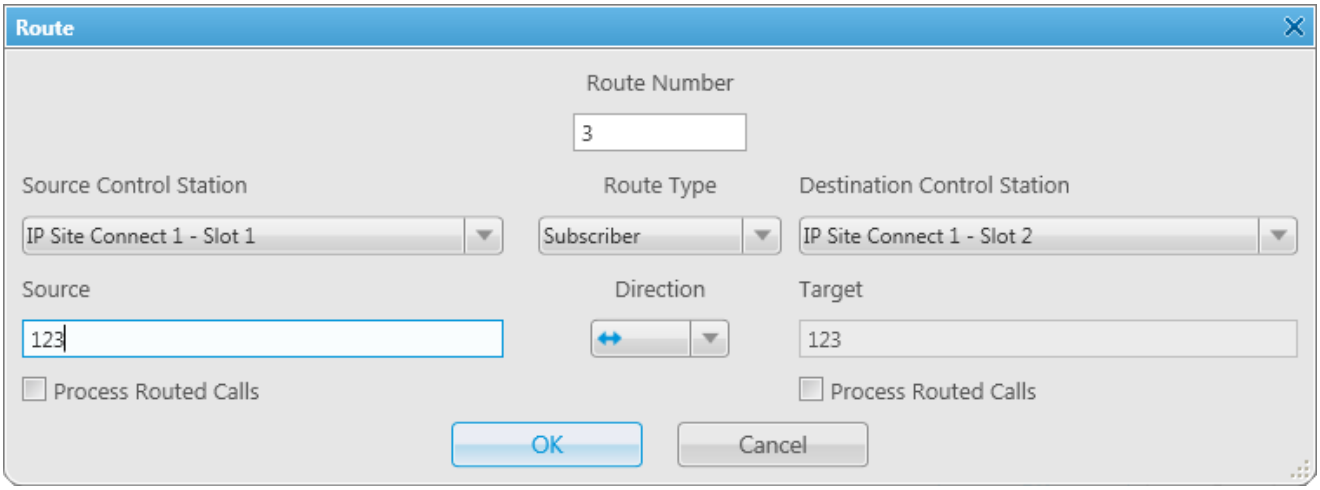
2.3. Configuring "Subscriber" Route Type

Note: This route type is not supported in SmartPTT Basic, since private calls can't be bridged in control station networks.

To patch individual calls or text messages, select **Subscriber** in the **Route Type** field.

Specify the source and the destination networks, and other parameters as if you were configuring any of the previous route types.

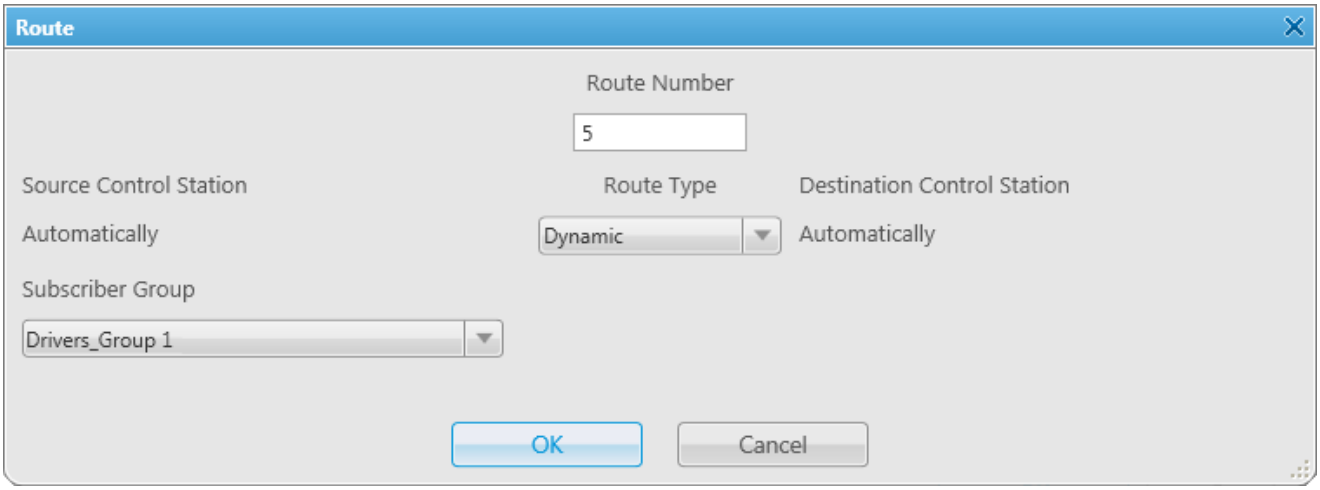
In the **Source** field specify the subscriber radio ID from the source network. The **Target** field will be populated automatically. In this case, all the subscribers from the destination network (see **Destination Control Station**) will be able to call to radio subscriber 123 and v.v.



2.4. Configuring "Dynamic" Route Type

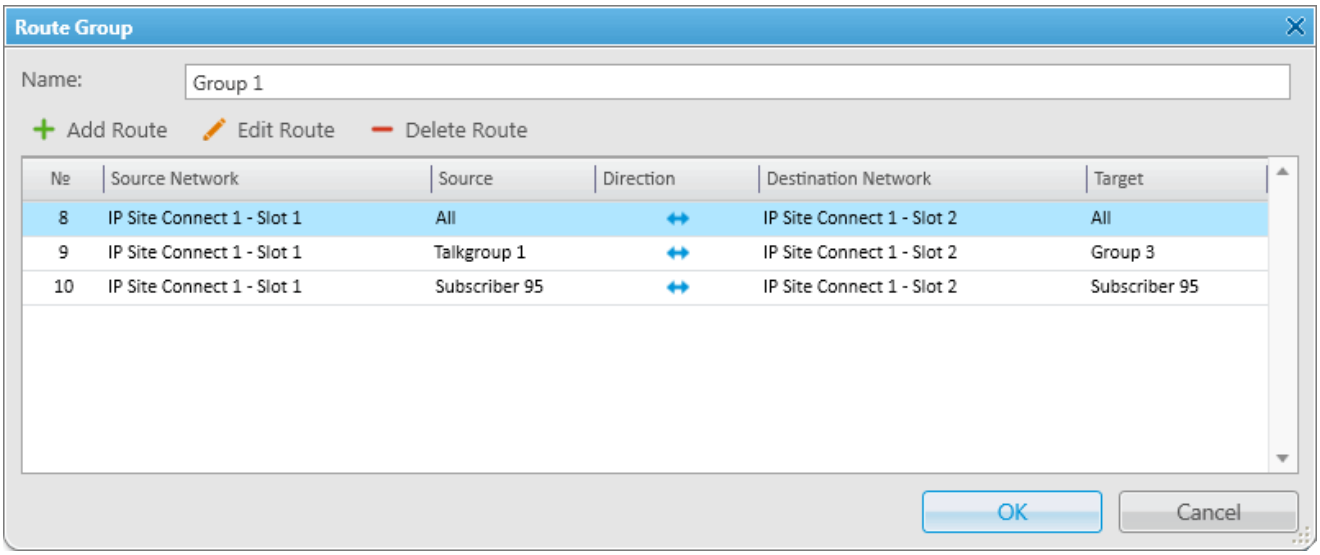
Note: This route type is not supported in SmartPTT Basic, since private calls can't be bridged in control station networks.

To patch private voice calls or text messages of the subscribers from the **Subscriber Groups**, select **Dynamic** in the **Route Type** field.



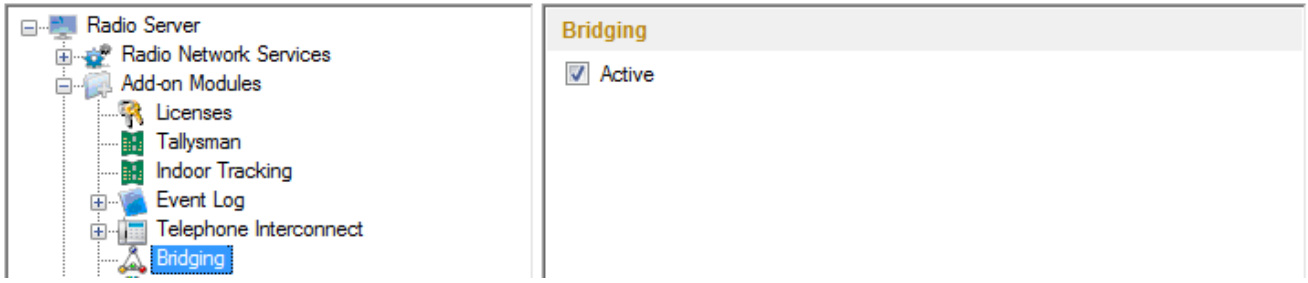
In the **Subscriber Group** select a group, which was added in **Subscriber Group** of SmartPTT Radioserver Configurator.

Once created, the routes will display in the **Route Group** window. Here is the example of the route group containing routes of three types (**All**, **Group**, **Subscriber**).



Activating Bridging Service

To make bridging active go to SmartPTT Radioserver Configurator, select **Bridging** in the tree and select the **Active** checkbox. Save the settings and restart the radioserver to apply the changes.



2.12 Conference Calls

The **Conference Call** is a type of call in which the dispatcher wishes to have more than one subscriber of different types at a time. At that, all the participants of the conference call can hear and talk to each other.

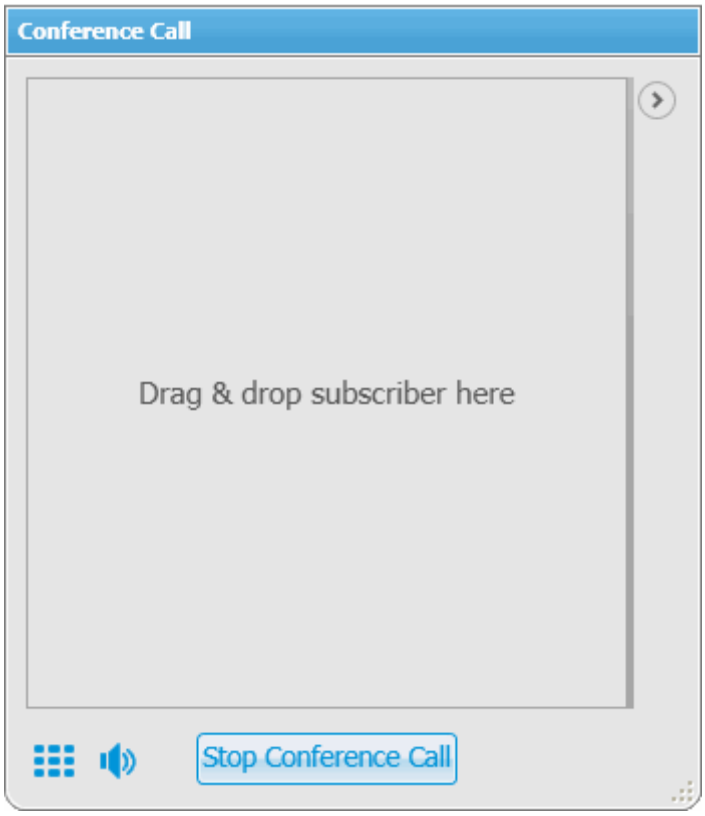
SmartPTT Dispatcher allows the dispatcher to organize conference calls and to connect the following subscriber types:

- Telephone subscribers (over SIP protocol)
- SmartPTT Dispatcher
- Radio subscribers
- Talkgroups

Note: To be able to organize conference calls the dispatcher must have the permission “Allow conference calls”. If the permission is not given, the dispatcher cannot make conference calls.

To organize a conference call click the **Conference Call** button in the **Main Menu** bar of SmartPTT Dispatcher.

At that, the **Conference Call** window appears.



The main list shows the conference call participants. You can also see the log of the conference call by opening

the right part of the window. To do it, click .

The button opens the dial pad to make a phone call and to add a telephone subscriber into the conference call.

– allows switching off sound of the conference call. At that, the dispatcher does not hear the conference call participants, and the participants cannot hear the dispatcher.

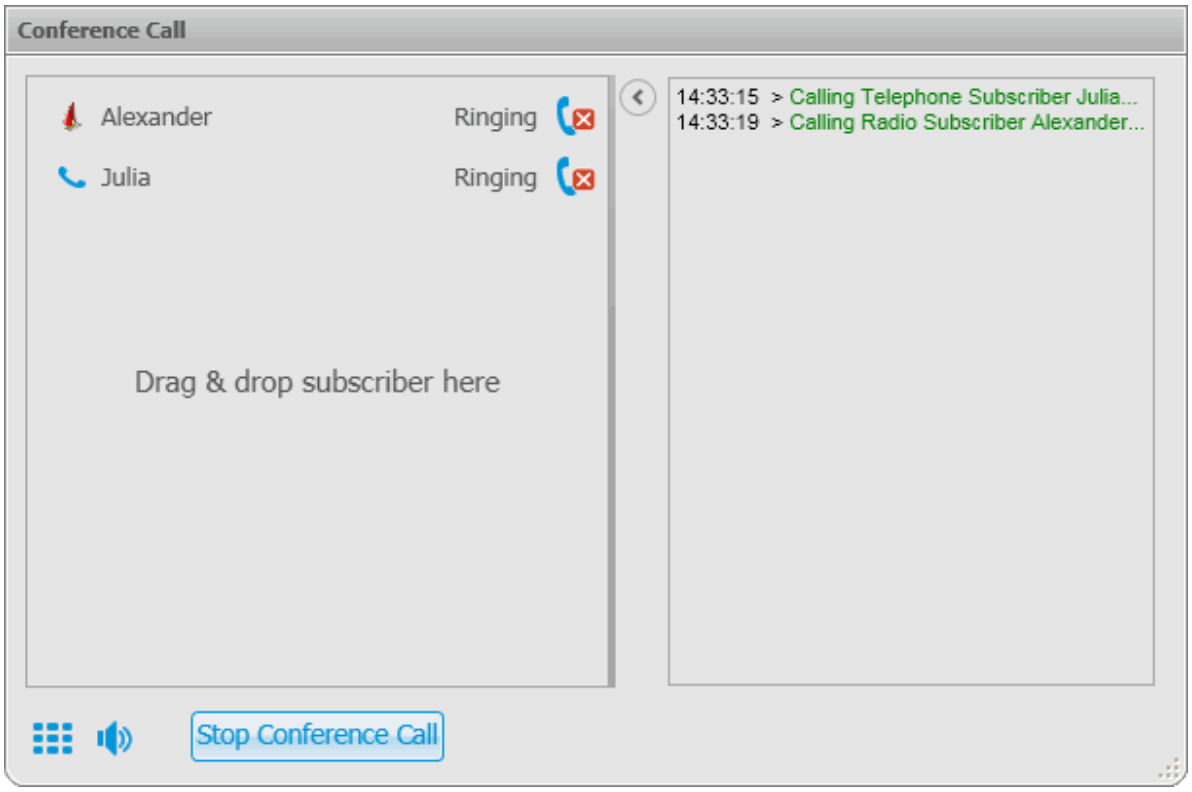
Stop Conference Call – stops current conference call and closes the **Conference Call** window.

To add a subscriber into a conference call, select the subscriber from the **Online list**, then drag the subscriber into the left section of the **Conference Call** window. As soon as the subscriber is shown in the **Conference Call** window, a call to the subscriber is initiated.

Note: Only subscribers, talkgroups or dispatchers online can be added to the conference call. Connect Plus networks do not support conference calls.

Note: Conference calls with radio subscribers only, i.e. without telephone subscribers, can be done without enabling SIP support.

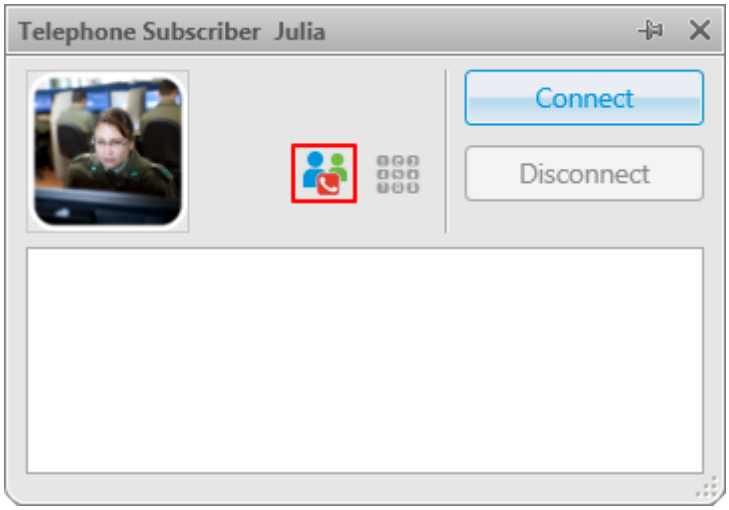
To finish the ongoing conference call with one of the participants, click the button next to the participant.



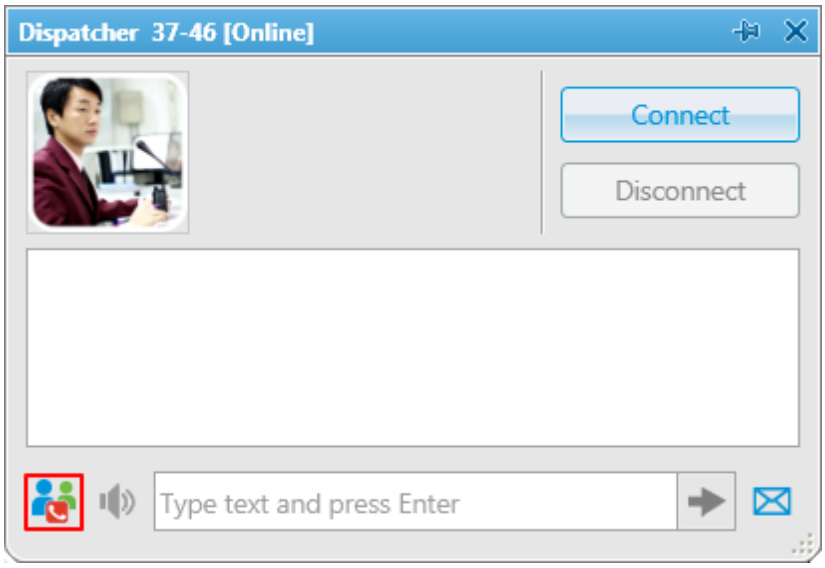
There is another way how to organize a conference call.

1. In order to invite subscribers, open the **Call Windows** of the subscribers. Click the **Make Conference Call** button to open the **Conference Call** window. As soon as the window opens, the call is initiated.

Telephone subscriber

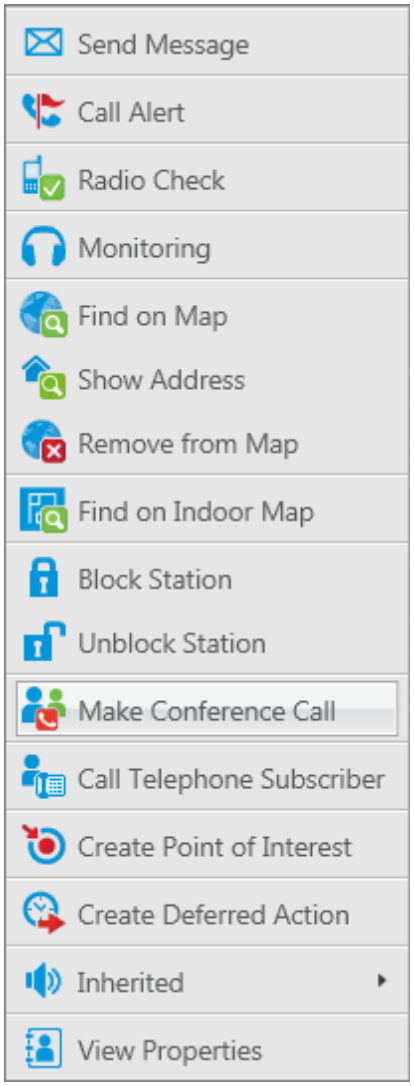


Dispatcher



Note: Only dispatchers from the **Dispatcher List** with the status “Active” can be invited into the conference call.

2. Use **Action List** to select the **Make Conference Call** option. At that, the **Conference Call** window appears and the call is initiated.



2.13 Window Configuration

Working with SmartPTT Dispatcher the operator tends to open many different windows. Some of them are used very often. Usually, at every launch of the application all the windows are closed and the operator needs to spend considerable time to configure the main area. This is quite inconvenient and time-consuming. In order to avoid this, the operator can save his/her windows configuration at the end of the work day, prior to the application shutdown,

and restore the configuration the next day. There can be more than one window configuration and the operator can switch between them.

To save the current window configuration for future use, click the **Window Configurations** button in the **Main Menu** bar.

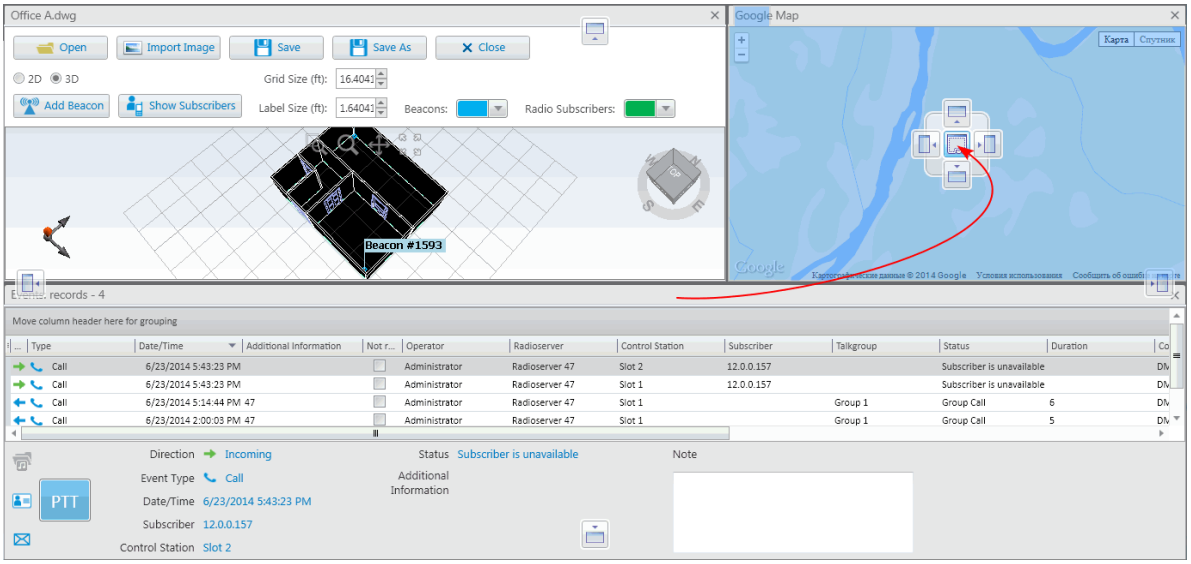
Click **Add** to give the name to the current window configuration. At that, the opened windows will be grasped and saved.

Click **Apply** to restore the saved windows configuration.

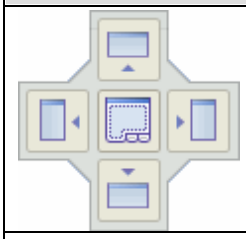
Click **Delete** to remove the saved windows configuration.

2.14 Panel Positioning

There is an ability to adjust the layout of the opened panels in the **Main area**. In order to do that, click on the tab of the opened panel, drag it to the location where you would like to place it and release. As soon as you start dragging a panel, new icons appear on the screen. The icons represent a new location of the panel on the screen.



The table displays the icon description.

Icon	Description
	Appears inside a panel, which means that you can either place the panel in any of the four positions beside the panel or or insert it as a tab inside the panel.
	The four standalone icons can be used to place the panel in any position of the **Main area** outside any other panel.

2.15 Help

The **Help** menu includes:

- **SmartPTT Help**. Here you can find useful information on the system objects and functionality. You can also open the **SmartPTT Help** file any time by pressing F1.
- **About**. It contains information on the application version, license, and the third-party software used in development process.

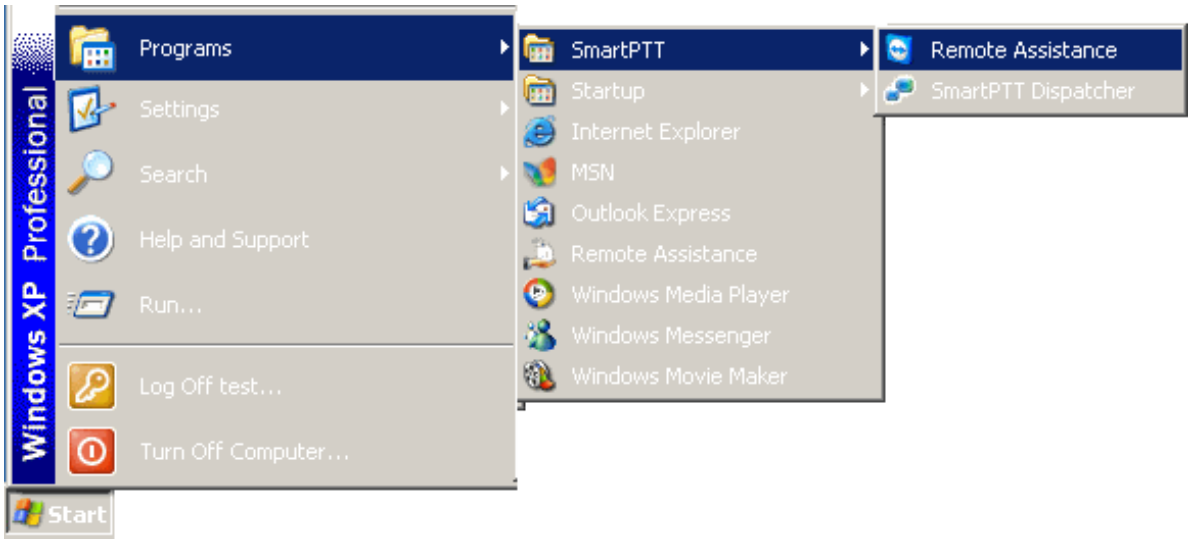
2.16 Remote Assistance

SmartPTT contains a special technical support tool providing remote access to the PC to resolve possible technical issues.

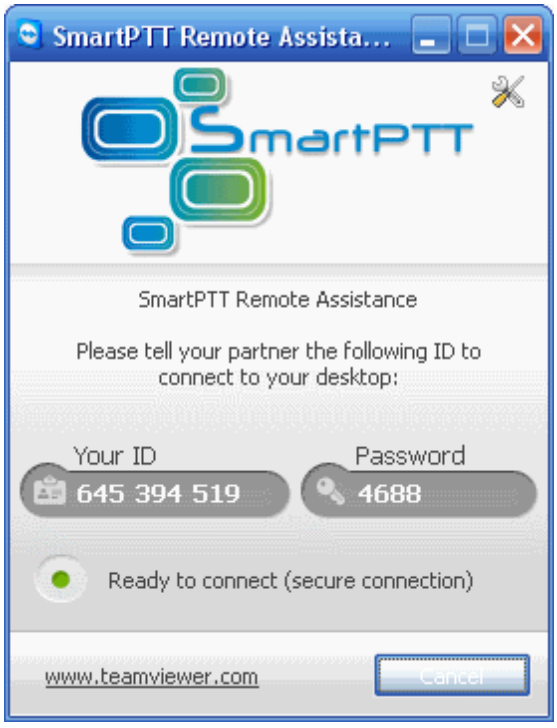
To give the technical support engineer remote access to the PC, launch SmartPTTRemoteAssistance.exe. SmartPTTRemoteAssistance.exe window will show ID and Password which should be passed to the engineer.

Steps to follow to get remote assistance:

1. Launch Remote Assistance (**Start > Programs > SmartPTT > Remote Assistance**).

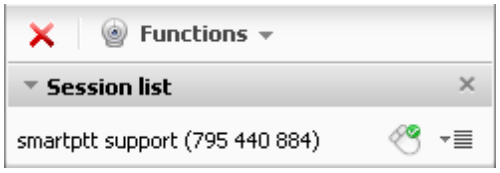


SmartPTT Remote Assistance window

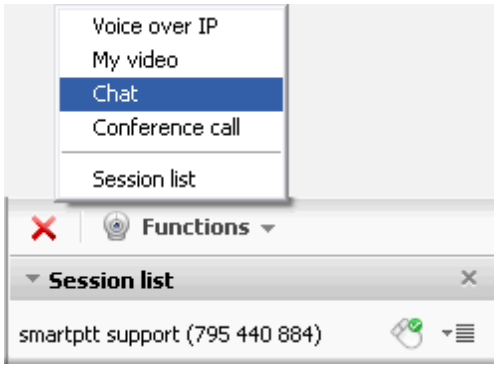


2. Pass **Your ID** and **Password** to the engineer who is going to provide technical support.

3. When the connection is established, you will see session window on the screen.



4. Chat function can be used for communication with the engineer.



5. To stop the session click .

3 Troubleshooting

Can't launch SmartPTT Dispatcher and/or Radioserver

1. *(for control stations)* Make sure you have a sound card on your computer. If SmartPTT Dispatcher and radioserver are installed on one PC, there must be two sound cards (this is true if there is only one control stations connected to the radioserver). Each additional control stations connected to the radioserver requires additional sound card (if the control station is used for transmitting both data and voice).

2. Make sure the installed license is correct (for example, the license for the Basic version can be installed for the Enterprise version and vice versa).

3. Select the correct interface in SmartPTT Radioserver Configurator.

4. Make sure that the ports used by SmartPTT system are available by other applications.

5. Open the sound card properties in Windows audio configuration interface and check if the card functionality is enabled.

6. Connect your microphone to the sound card. Sometimes, when microphone is not connected, audio input is not defined.

Can't install SQLExpress

1. Make sure Windows user name and Computer name are different.

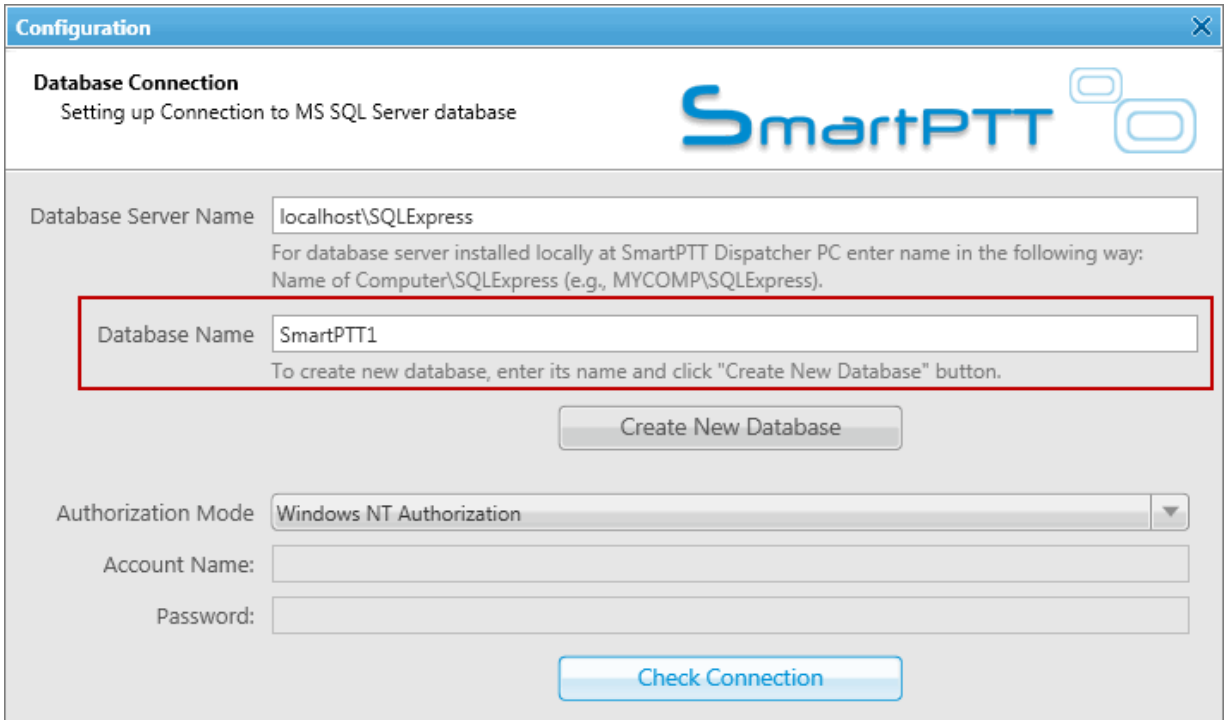
2. To install SQL Express to run on x64 Windows, download SQL Server 2008 R2 Express 64-bit here: *http://www.microsoft.com/betaexperience/pd/SQLEXP08V2/enus/default.aspx* or *http://www.microsoft.com/en-us/download/details.aspx?id=26729*

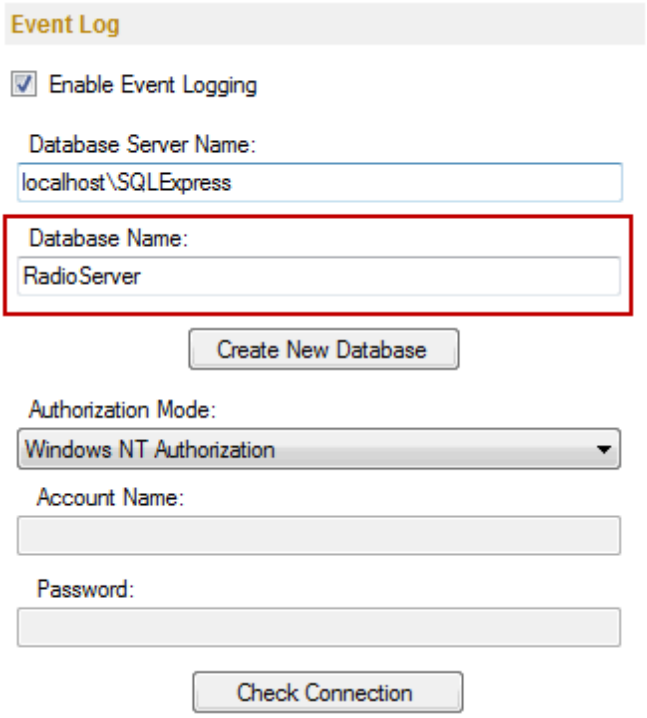
Can't create database

1. Make sure the **Database Name** field is filled correctly. Read carefully the comments below the **Database Name** field. Right-click **My Computer** and select **Properties** to find the computer name in the **Computer Name** tab. Make sure that the computer name in the **Database Name** field is specified without the domain name, that is only the first part of the name that goes before the dot.

2. Your database name must be other than *database*. This name is used by SQL Server.

3. Make sure **Database Name** is filled correctly. There can be three different databases. One for registering events on SmartPTT Dispatcher (mandatory). Use unique database names.





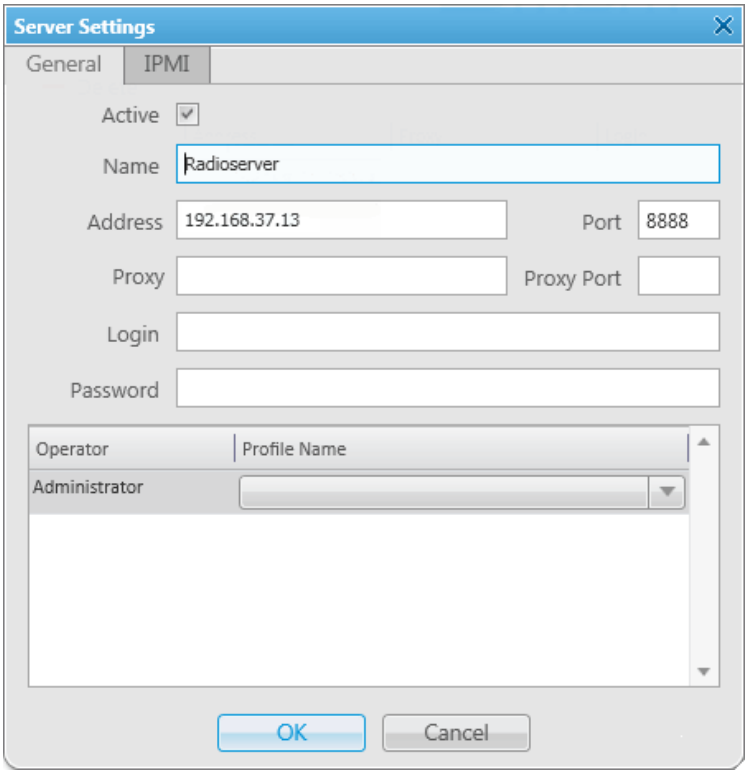
4. Check authentication type. By default, **Windows NT Authorization** is used.

No connection between SmartPTT Dispatcher and Radioserver

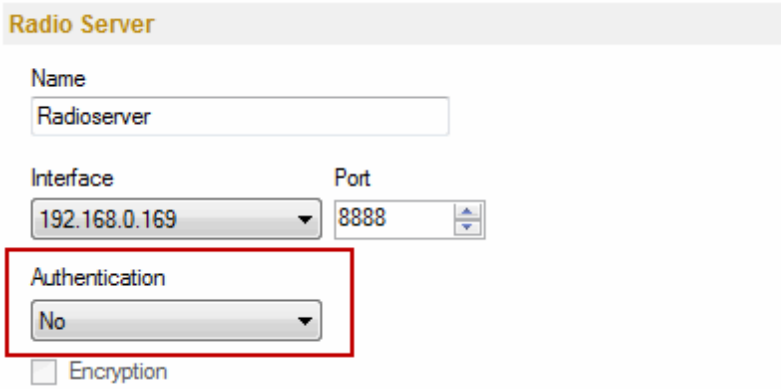
1. If SmartPTT radioserver and dispatch console are installed on different PCs, check network connection between them by executing the ping command.

```
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation.  All rights reserved.

C:\Users\surkovasv>ping 192.168.7.111

Pinging 192.168.7.111 with 32 bytes of data:
Reply from 192.168.7.111: bytes=32 time=2ms TTL=254
Reply from 192.168.7.111: bytes=32 time=1ms TTL=254
Reply from 192.168.7.111: bytes=32 time=2ms TTL=254
Reply from 192.168.7.111: bytes=32 time=2ms TTL=254

Ping statistics for 192.168.7.111:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 2ms, Average = 1ms
```

2. Make sure that SmartPTT Dispatcher and radioserver are configured correctly (**Settings > Radioservers**), that is host:port, login, password, proxy, if necessary.



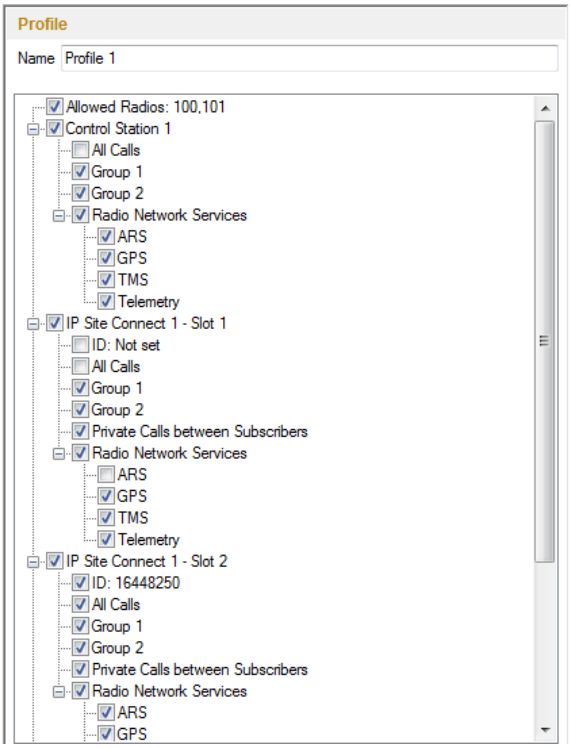
3. Check the **Authentication** field in SmartPTT radioserver settings. If *No* is selected in the **Authentication** field, the fields **Login** and **Password** must be empty (SmartPTT Radioserver Configurator, **Settings > Radio Servers**). If *Windows* authentication is used, read documentation on Windows Authentication.

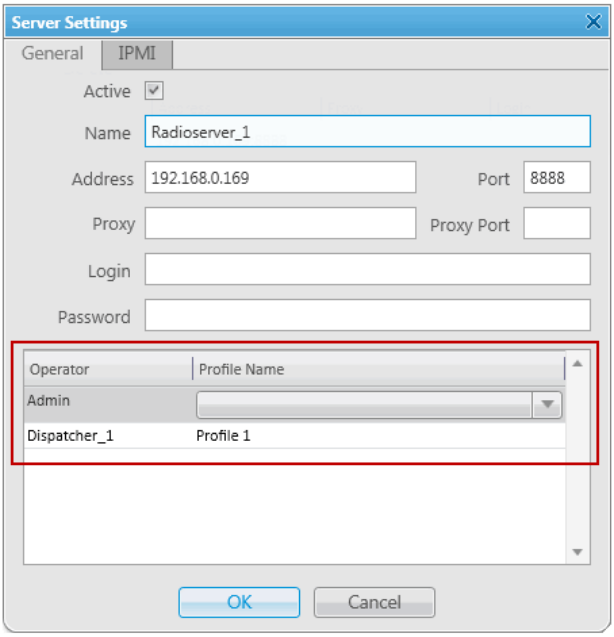


4. Check if Windows Firewall is disabled.

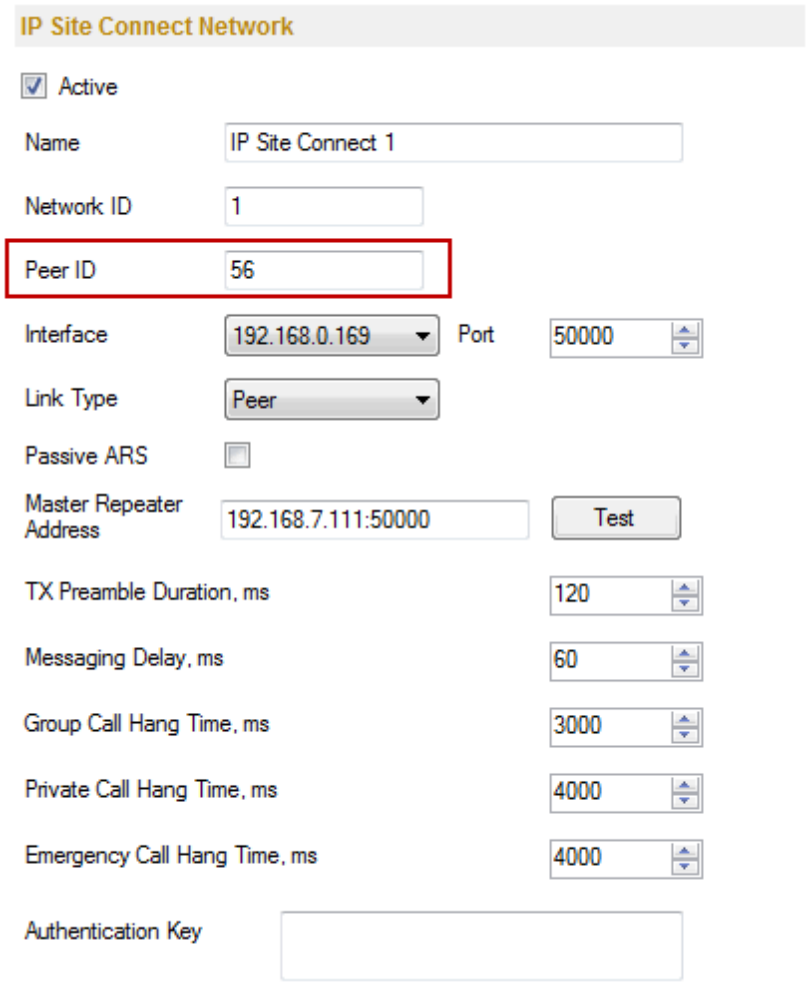
Slots are not displayed in SmartPTT Dispatcher

1. Check if Windows Firewall is disabled.
2. Check whether a profile (**Settings > Radio Servers > Operator (Profile name)**) for this dispatcher is added and allows using this system. If a profile name is added in the radioserver settings, delete it, in case it was not designed to restrict functionality.



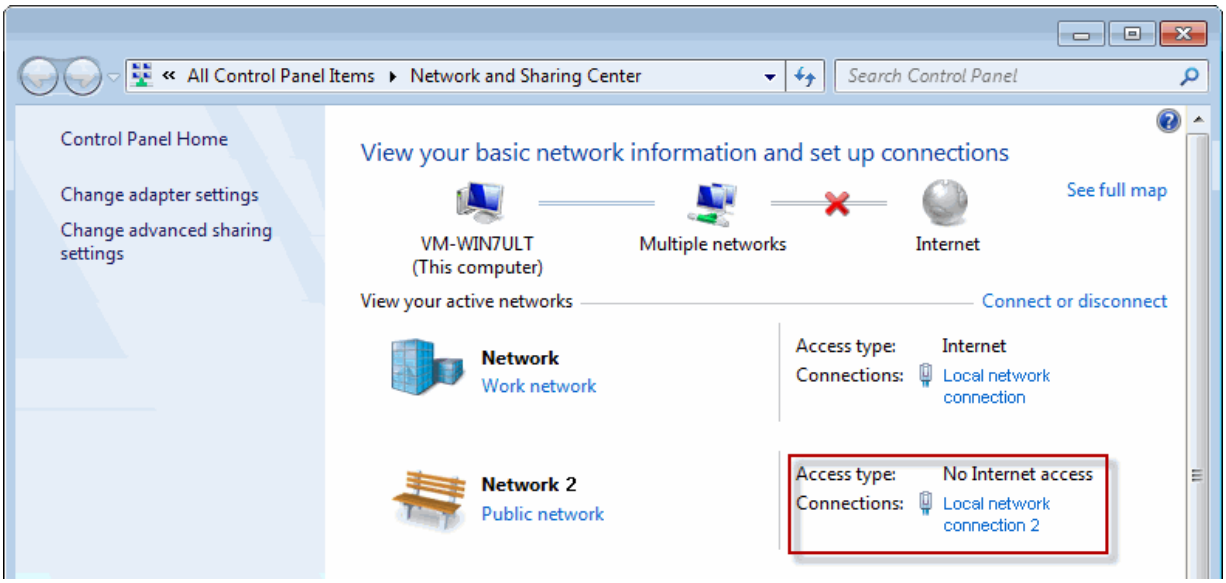


3. **Peer ID** specified in SmartPTT Radioserver Configurator must be unique. Other peer ID's in the system must be different. Make sure that none of the repeaters in the system has the same peer ID.

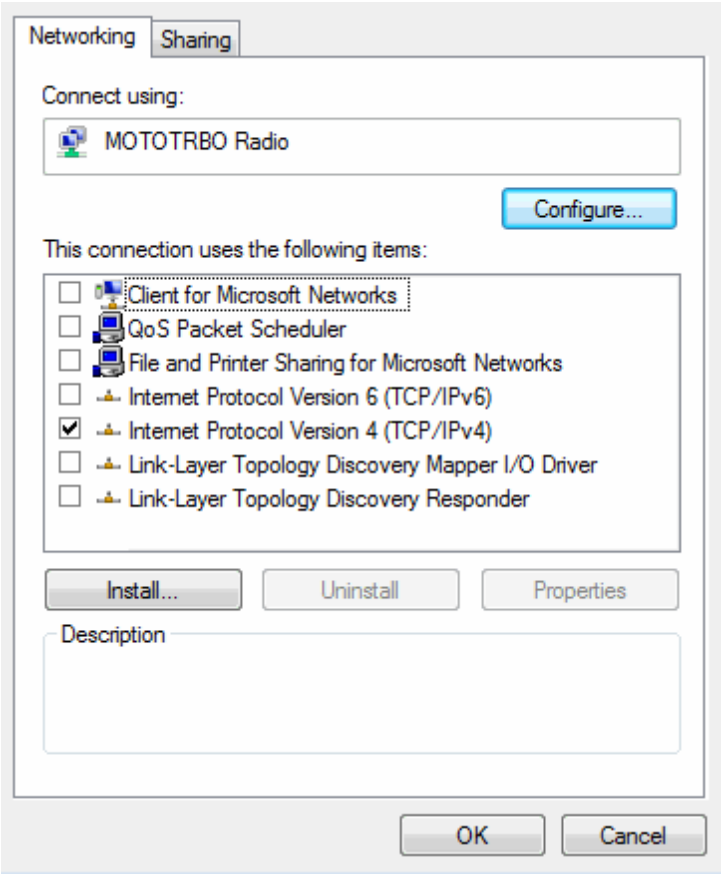


Control station is not displayed in SmartPTT Dispatcher, but Radioserver is there

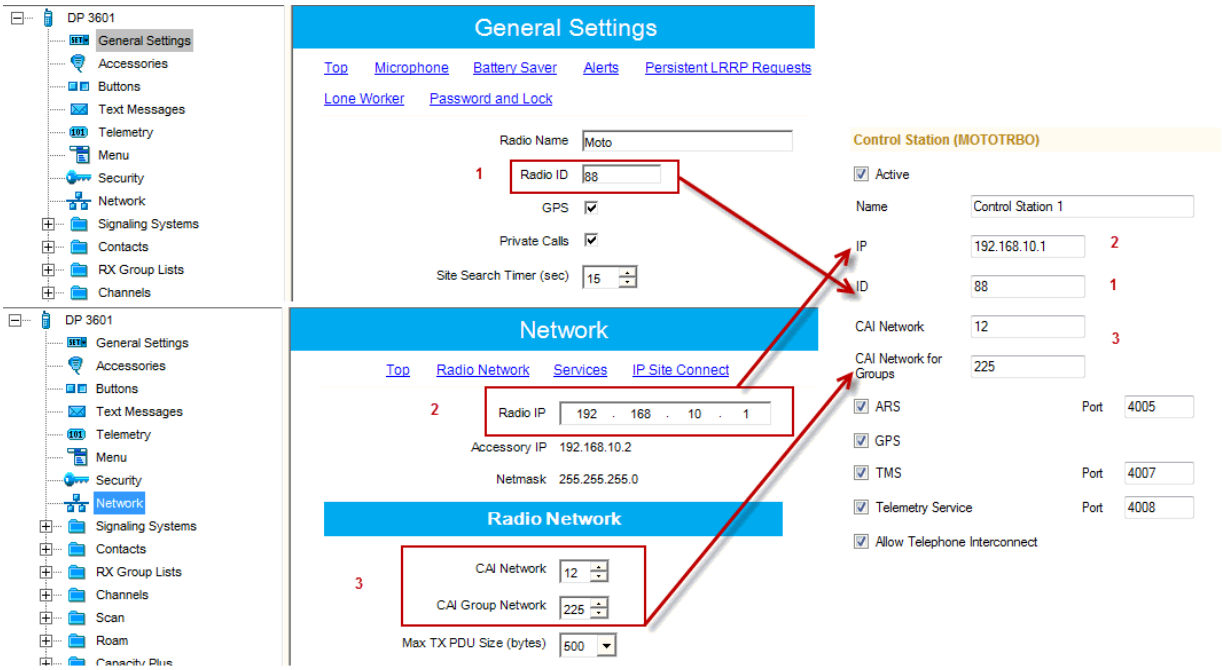
1. Make sure MOTOTRBO control station is installed properly on the computer where the radioserver is installed (MOTOTRBO Radio connection should appear in the state **Connected** in the **Network Connection Properties** window).



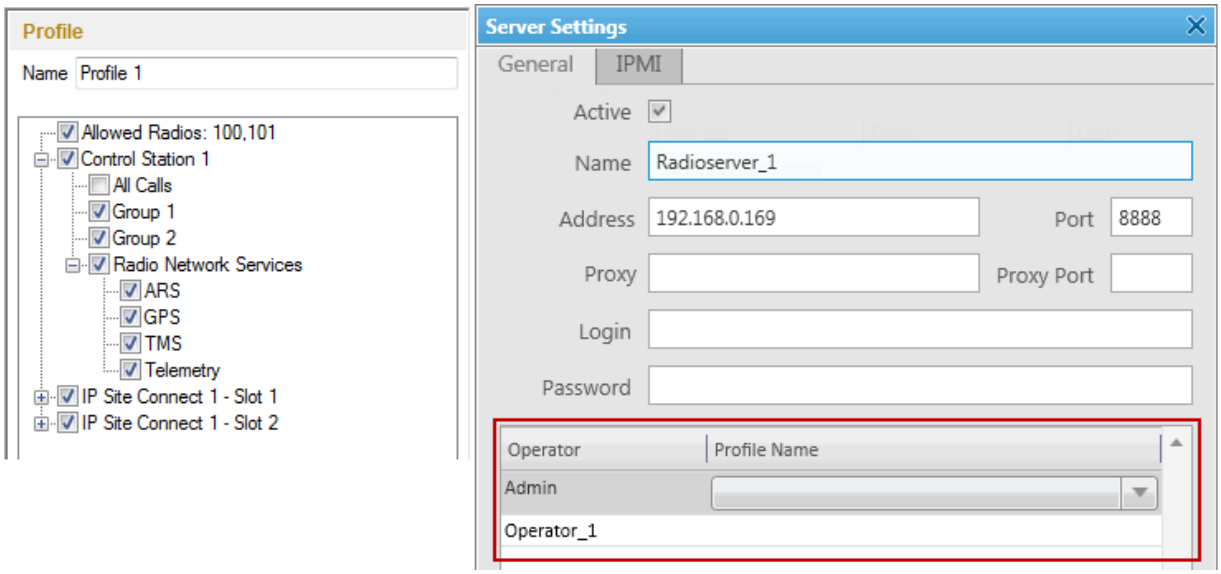
2. In the network connection properties of MOTOTRBO, which is created automatically at connecting the control stations to the computer via USB, disable all the interfaces except for TCP/IP v4.



3. Please check that the control station settings in SmartPTT Radioserver Configurator match the settings of the control station in MOTOTRBO CPS (**IP Address**, **CAI Network**, **CAI Network for Groups**).



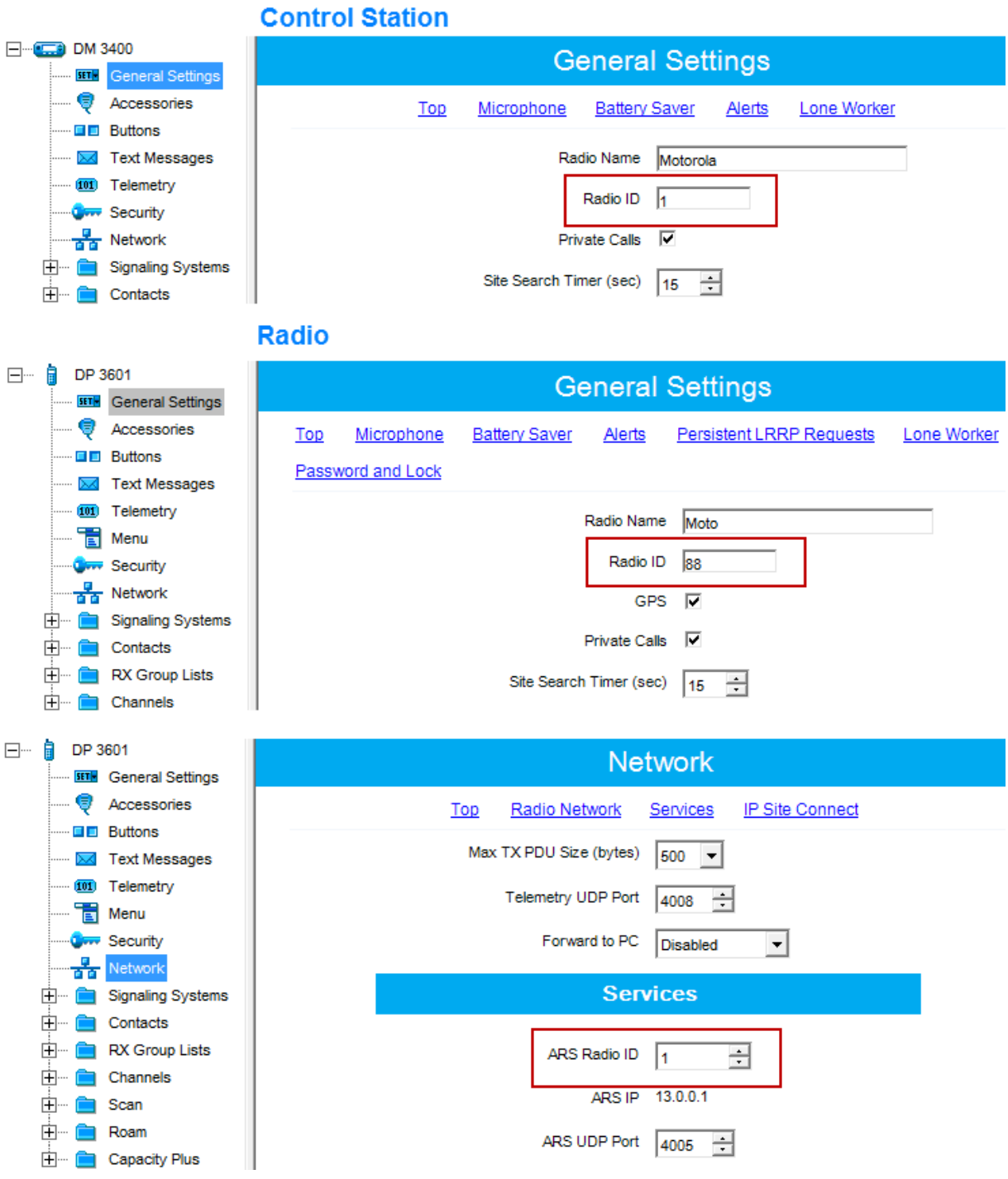
4. Please check whether a profile (**Settings > Radio Servers > Operator (Profile name)**) for this dispatcher exists and allows using this control station. If a profile name is added in the **Server Settings** window, delete it, in case it was not designed to restrict functionality.



Radio subscribers are offline

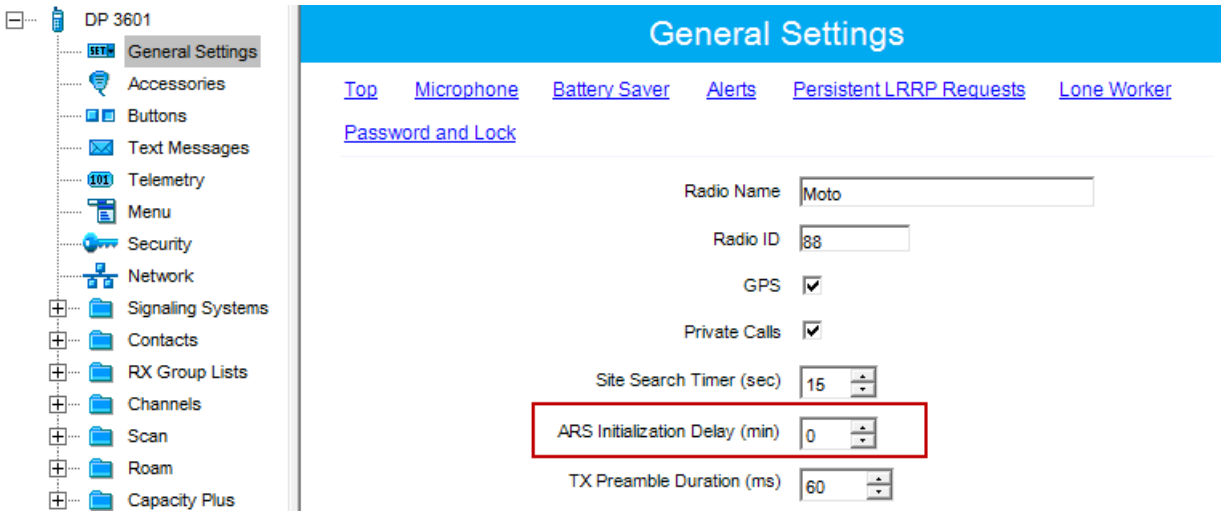
1. *(for control stations)* Check subscriber radio settings in MOTOTRBO CPS. The **Radio ARS ID** value of

the radio (the **Network** section) and the **Radio ID** value (the **General Settings** section) must match.

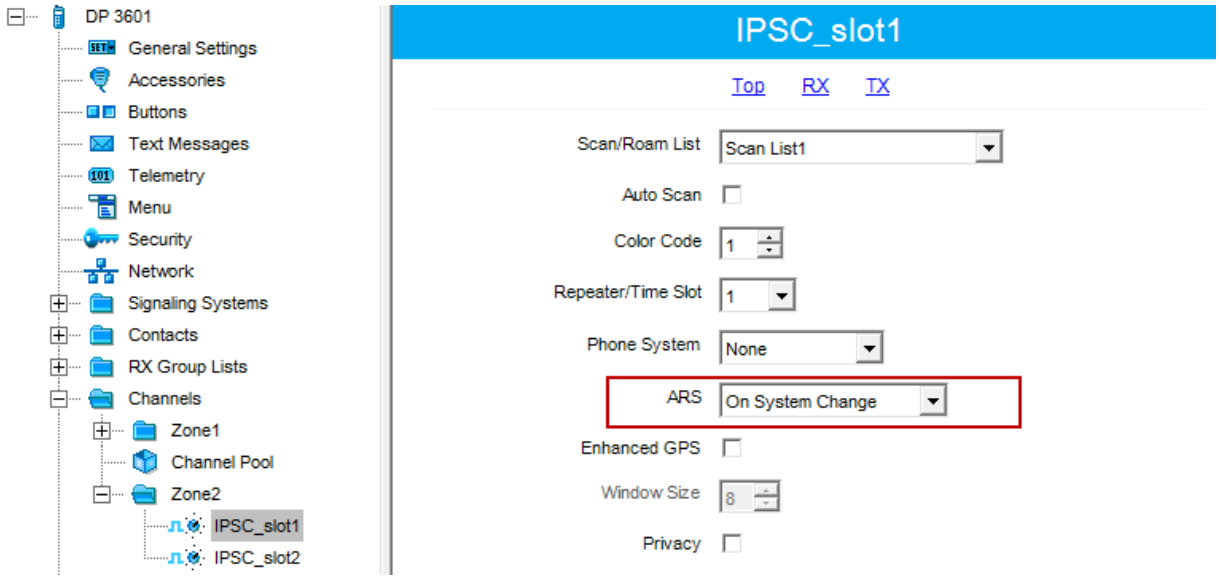


2. *(for system configuration)* Check radio settings in MOTOTRBO CPS. The **Radio ARS ID** and **ID** values of both slots 1 and 2 in SmartPTT Radioserver Configurator in the IP Site Connect system must match.

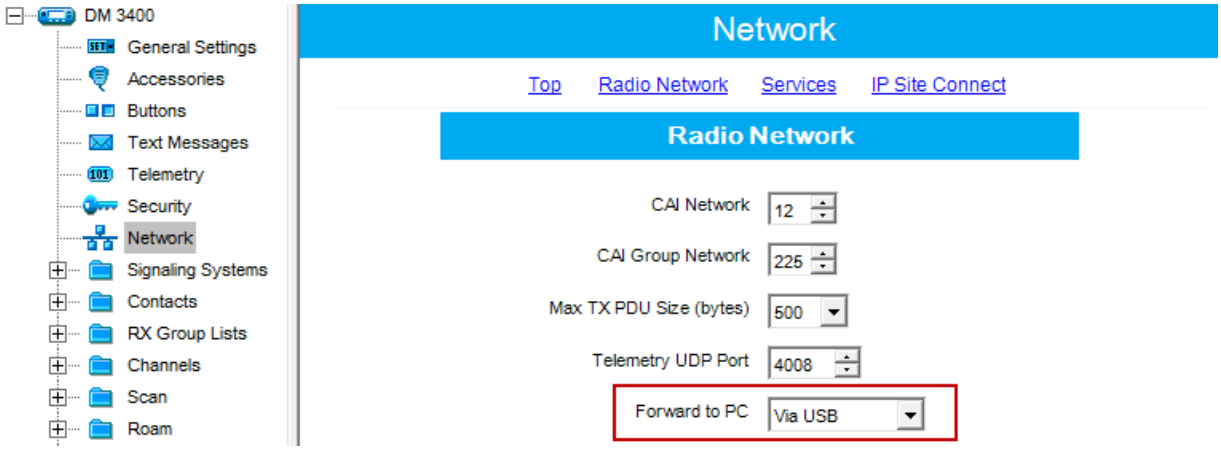
3. Set the **ARS Initialization Delay** value to *0* in the **General Settings** section of the radio in MOTOTRBO CPS.



4. Enable **ARS** in MOTOTRBO CPS in the channel settings of the radio. Select either *On System Change* or *On System/Site Change*.



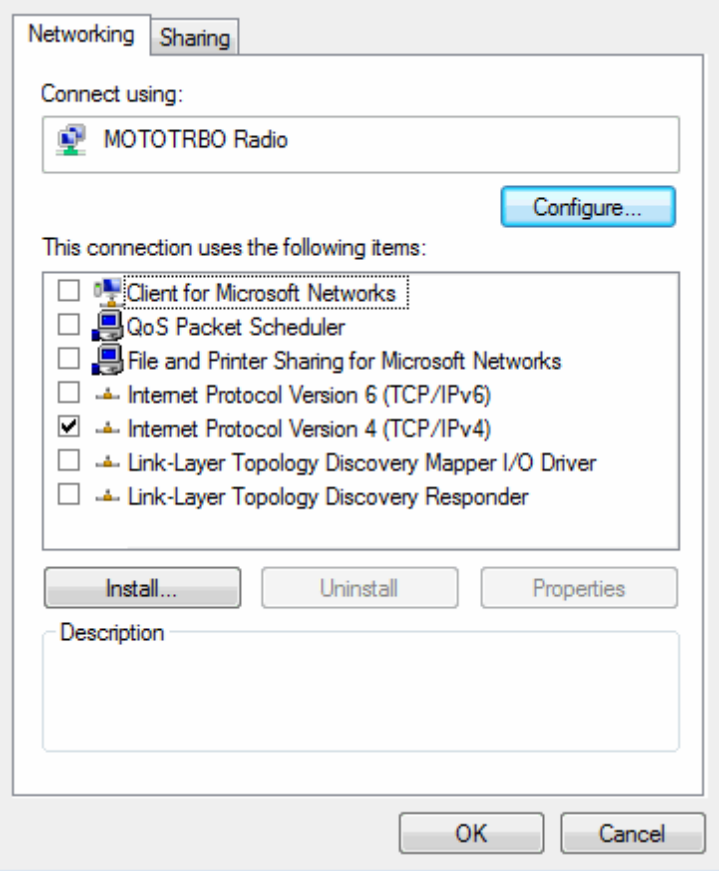
5. *(for control stations)* In the **Forward to PC** field select *Via USB* in the **Network** settings in MOTOTRBO CPS.



6. *(for IP Site Connect configuration)* Make sure that both slots 1 and 2 are selected in the **Network** section in the repeater codeplug.

7. Check **Privacy Type** set for the radio, repeater and SmartPTT radioserver. It is important that the **Privacy Types** and **Privacy Keys** values match. Otherwise, the radio should transmit without privacy set up.

8. *(for control stations)* In the network connection properties of MOTOTRBO, which is created automatically at connecting the control stations to the computer via USB, disable all the interfaces except for TCP/IP v4.



9. Check if Windows Firewall is disabled.

10. *(for control stations (SmartPTT v7.2.0 and older))* Make sure that routing is configured for the control stations. If the dynamic rout is not added in the routing table, add the following static route:

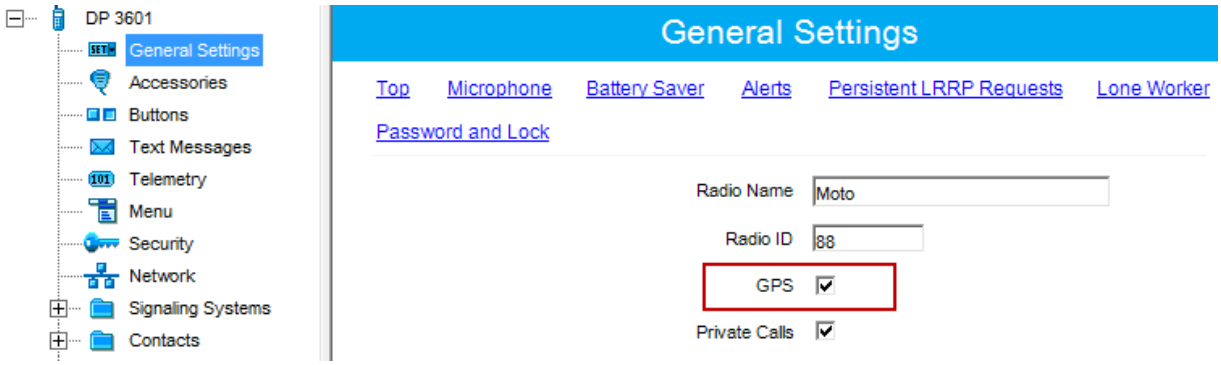
route -p add 12.0.0.0 mask 255.0.0.0 192.168.10.1, where ***192.168.10.1*** is the IP address of the control station.

Can't get GPS coordinates

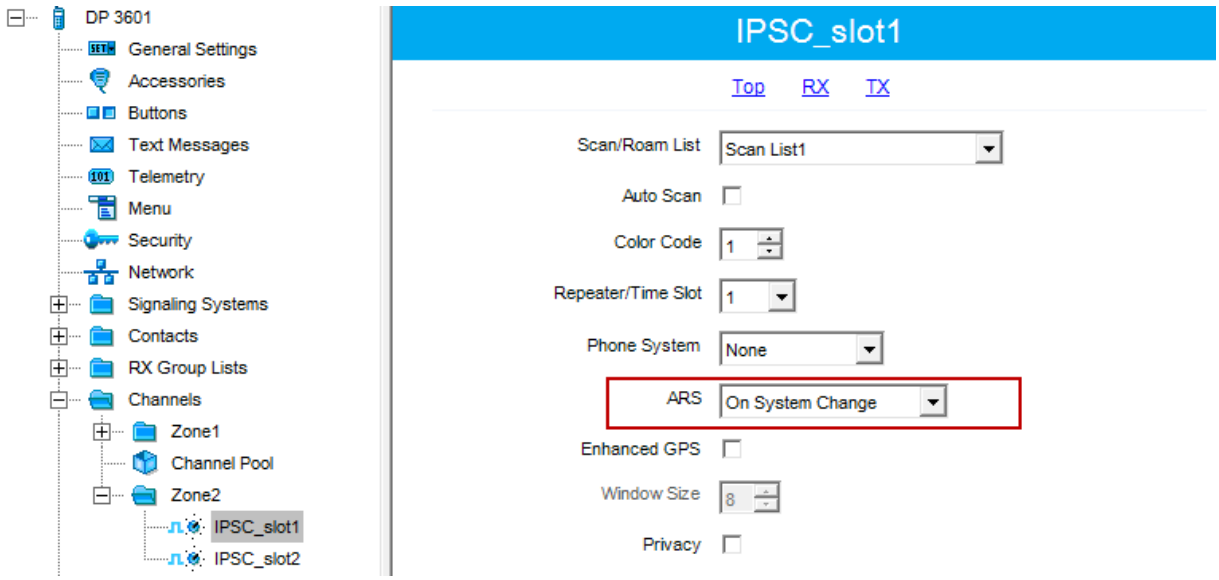
1. In one radio system control stations, repeater and all the subscriber radios must share the same firmware version. Firmware version can't be older than R01.07.00. The recommend version is R01.08.00 and later.

2. Subscriber radios must have an inbuilt GPS module (models DP/DM 3401/3601). The control station can be of any model, even without the GPS module.

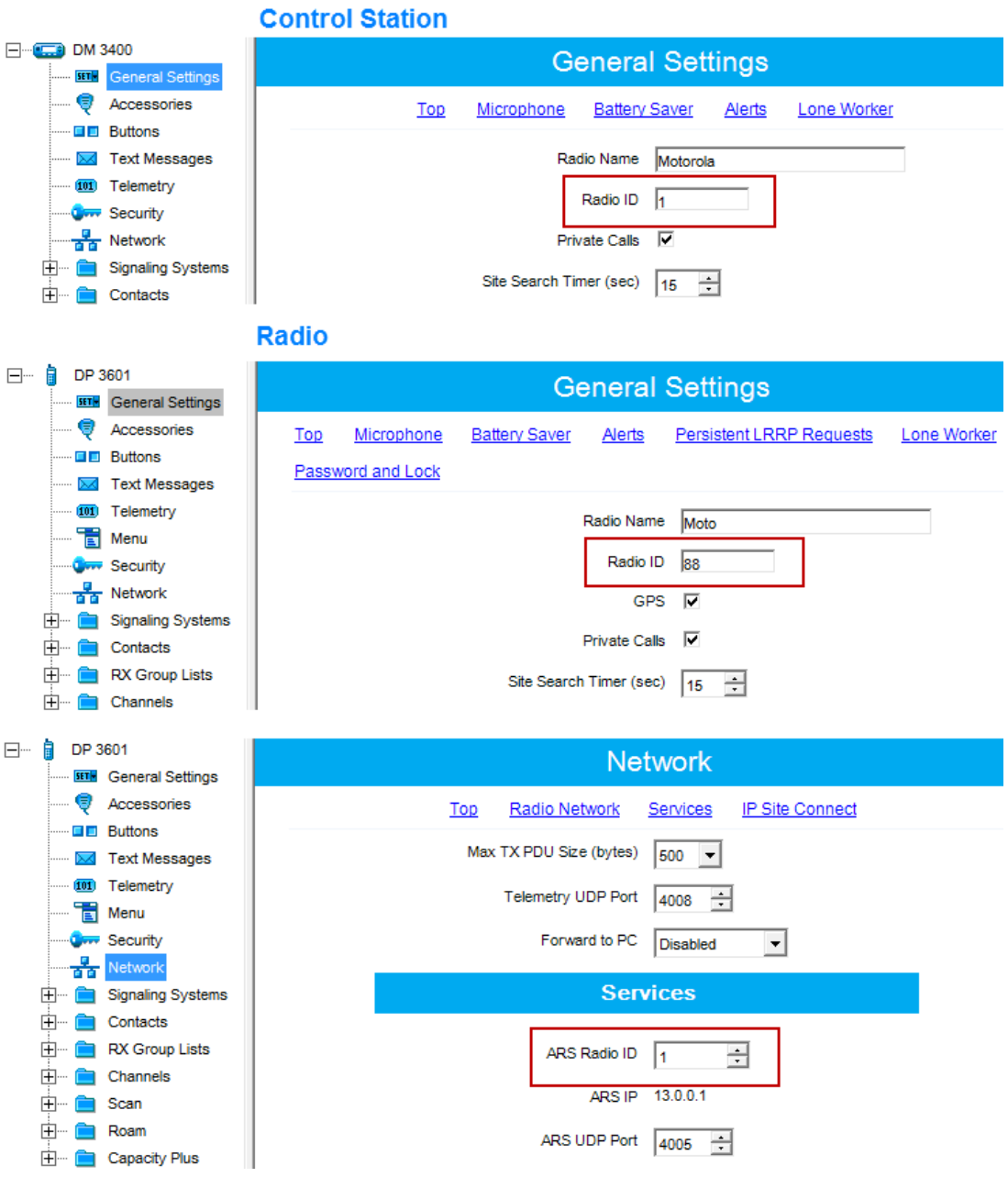
3. Enable **GPS** functionality in the **General Settings** of the subscriber radio in MOTOTRBO CPS.



4. Enable **ARS** in the channel settings of the radio in MOTOTRBO CPS. Select either *On System Change* or *On System/Site Change*.

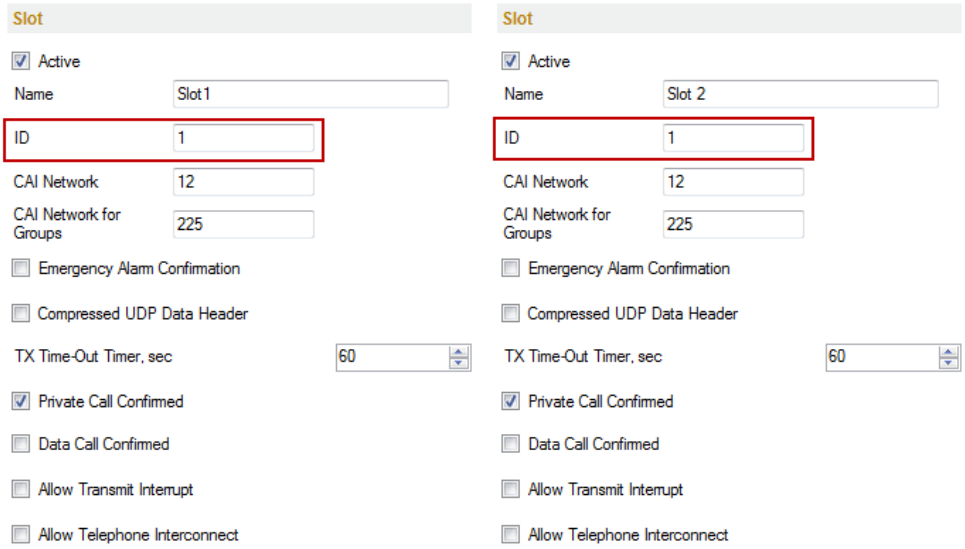


5. *(for control stations)* Check subscriber radio settings in MOTOTRBO CPS. The **Radio ARS ID** of the radio (the **Network** section) and the **Radio ID** (the **General Settings** section) must be the same.

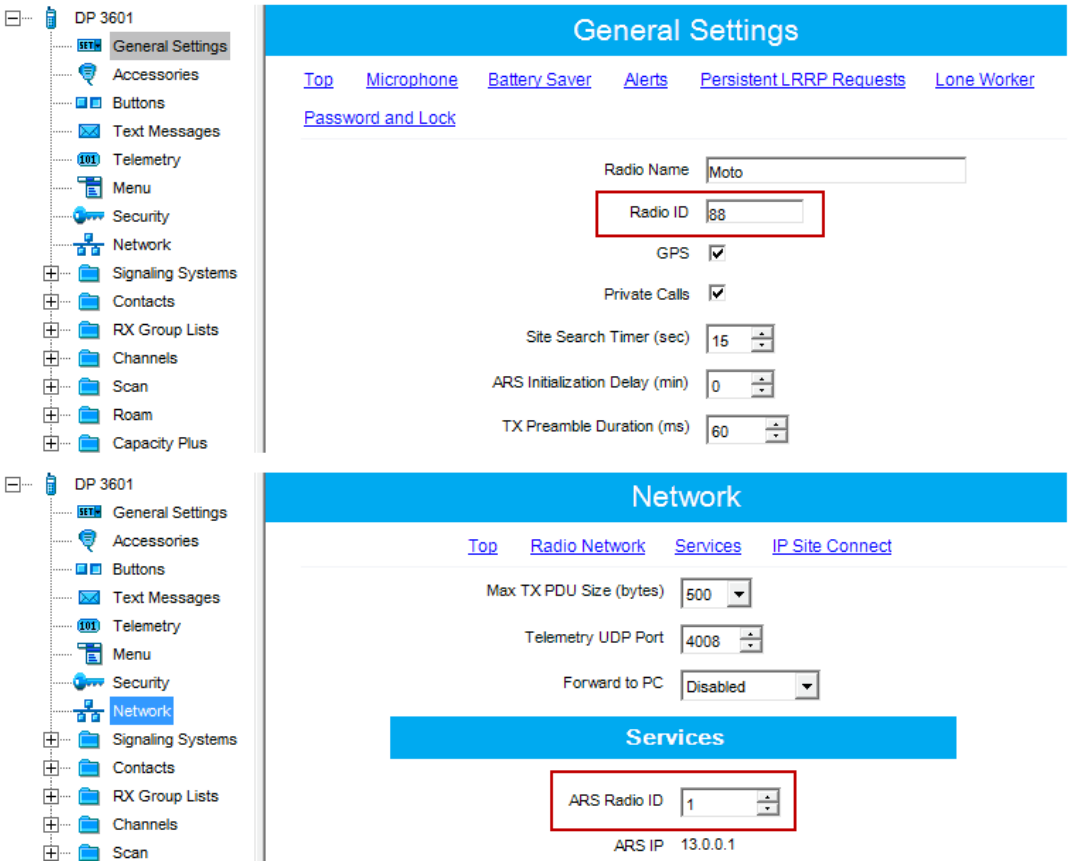


6. *(for system configuration)* Check radio settings in MOTOTRBO CPS. The **Radio ARS ID** and **ID** values of both slots 1 and 2 in SmartPTT Radioserver Configurator in the system must be the same.

Radio Server (IP Site Connect)

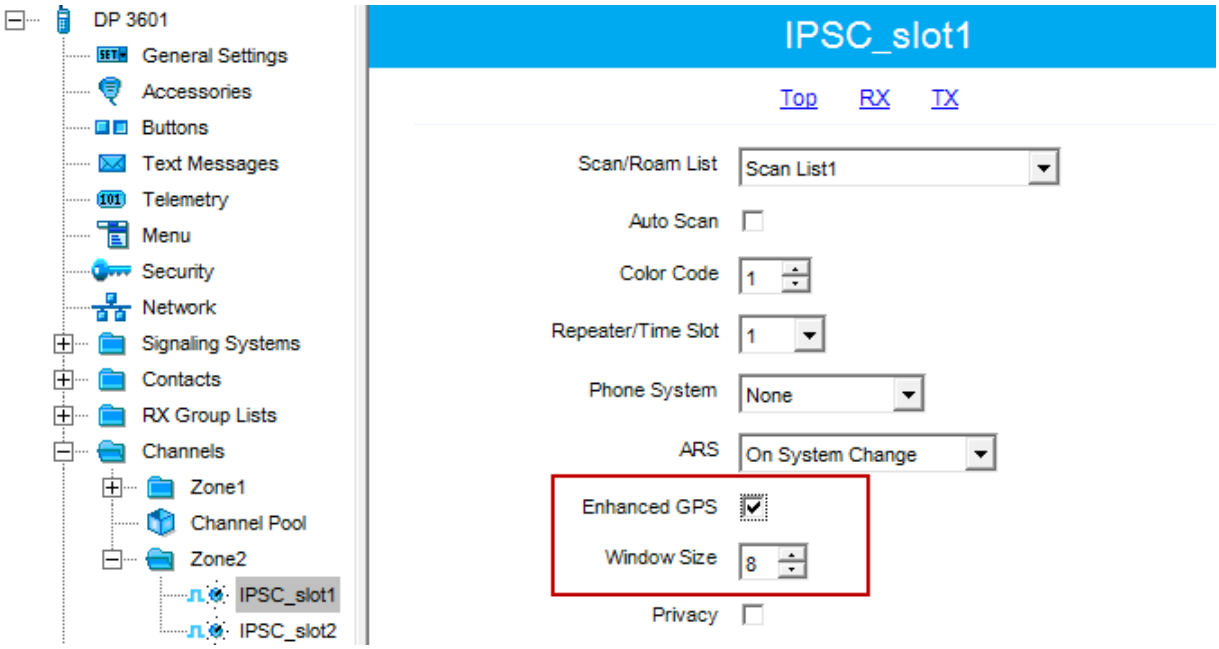


Radio



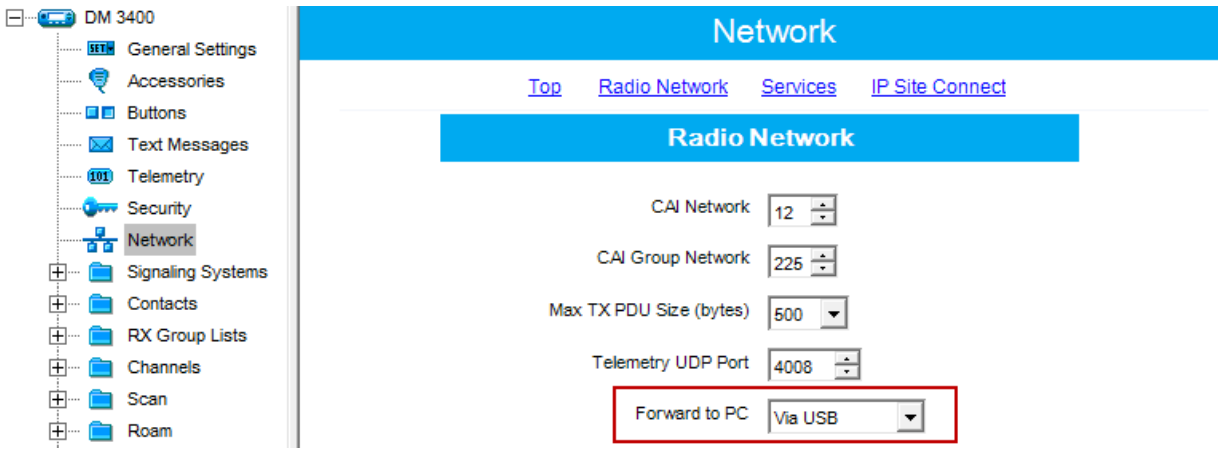
7. *(for system configuration)* Make sure that both slots 1 and 2 are selected in the **Network** section in the repeater codeplug.

8. If enhanced GPS is used, check that the **Window size** is set to *8* in the channel settings of the repeater and subscriber radios in MOTOTRBO CPS.

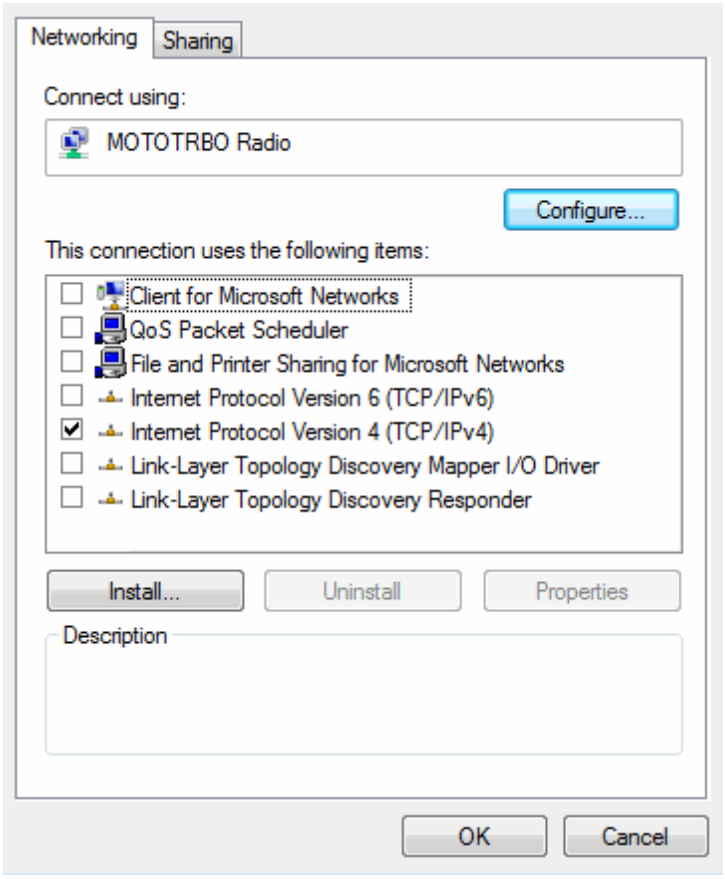


9. Check if Windows Firewall is disabled.

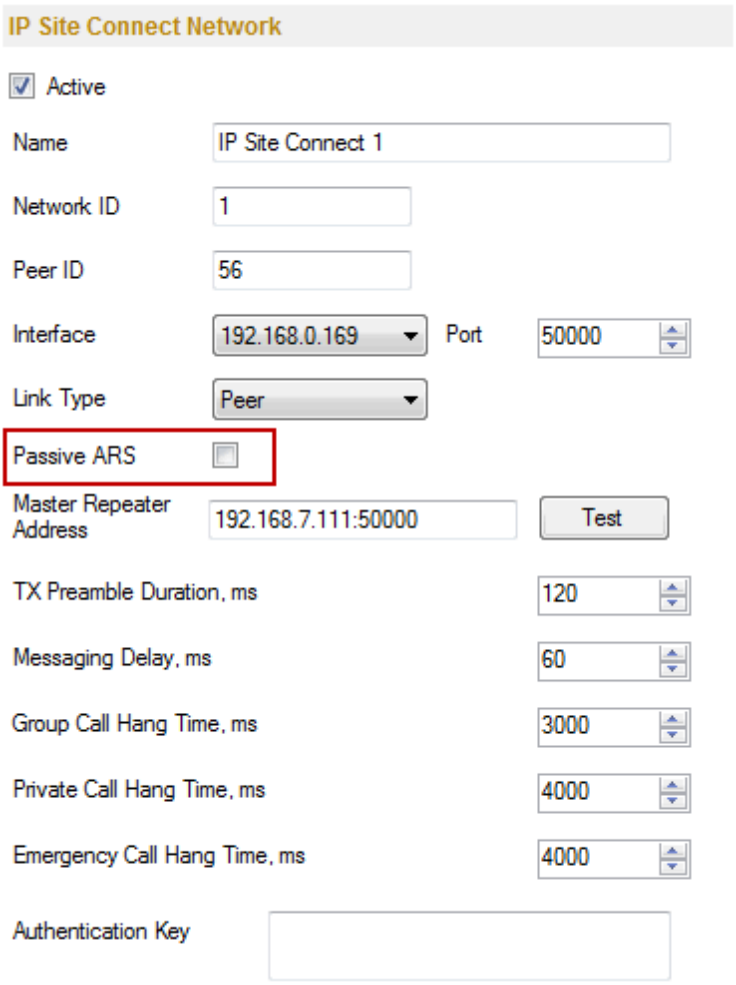
10. *(for control stations)* For the field **Forward to PC** select *Via USB* in the **Network** settings in MOTOTRBO CPS.



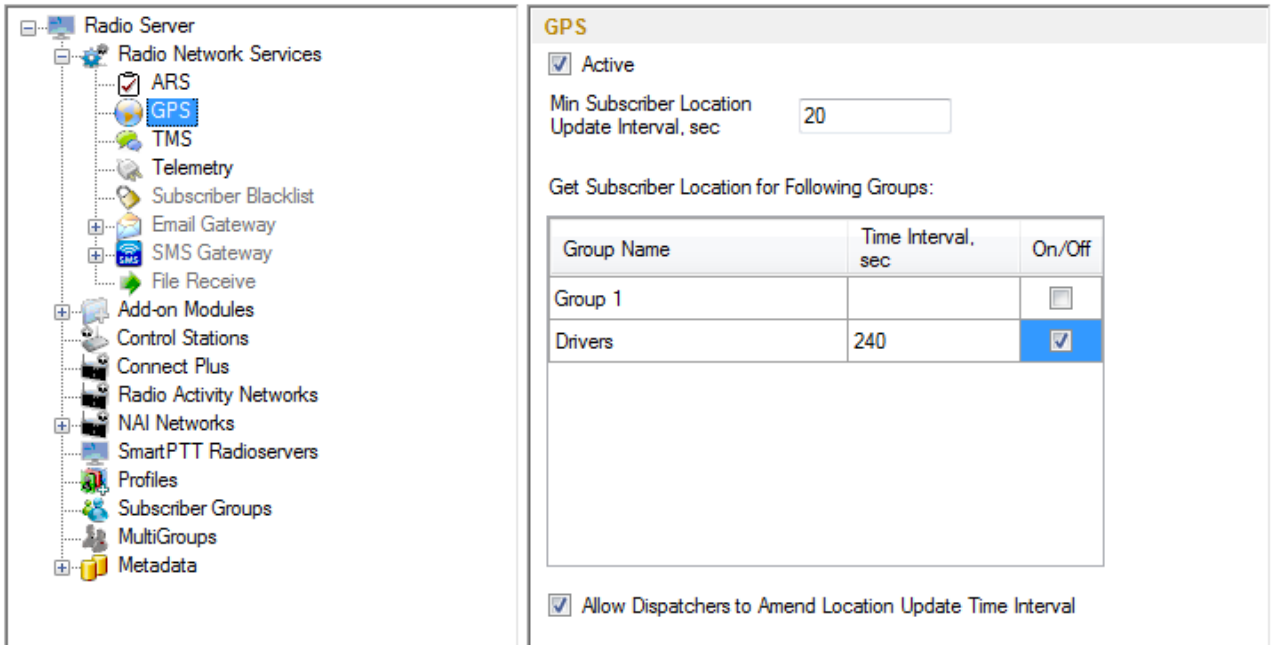
11. *(for control stations)* In the network connection properties of MOTOTRBO, which is created automatically at connecting the control stations to the computer via USB, disable all the interfaces except for TCP/IP v4.



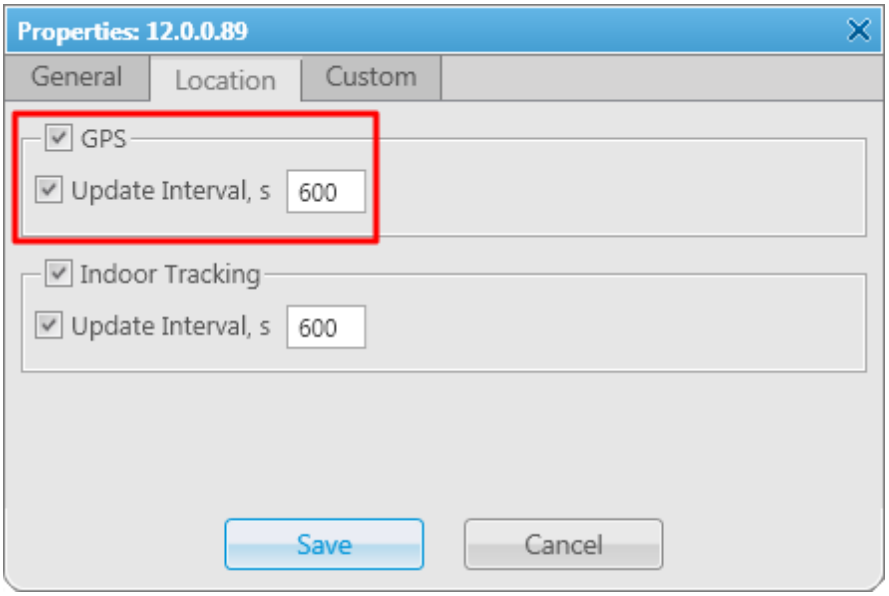
12. *(for system configuration)* Clear the **Passive ARS** checkbox in the system settings in SmartPTT Radioserver Configurator.



13. Select the **GPS** settings in SmartPTT Radioserver Configurator. If the **Allow Dispatcher to Amend Location Update Time Interval** checkbox is not selected, the dispatcher won't be able to change the location update time interval, which is specified in SmartPTT Radioserver Configurator for a group of radio subscribers. If the **Allow Dispatcher to Amend Location Update Time Interval** checkbox is not selected and **GPS** is disabled for a particular group of radio subscribers, the dispatcher won't be able to receive GPS coordinates from the radio subscribers of this group.



14. If the **Allow Dispatcher to Amend Location Update Time Interval** checkbox is selected in the **Location Service** window of SmartPTT Radioserver Configurator, make sure that in the **Location** tab of the **Subscriber Properties** window the **GPS** checkbox is selected, and the time interval for GPS coordinates update is set (the **Update Interval, s** field).



15. *(for control stations (SmartPTT v7.2.0 and older))* Make sure that routing is configured for the control stations properly. If the dynamic rout is not added, add the following static route:

route -p add 12.0.0.0 mask 255.0.0.0 192.168.10.1, where ***192.168.10.1*** is the IP address of the control station.

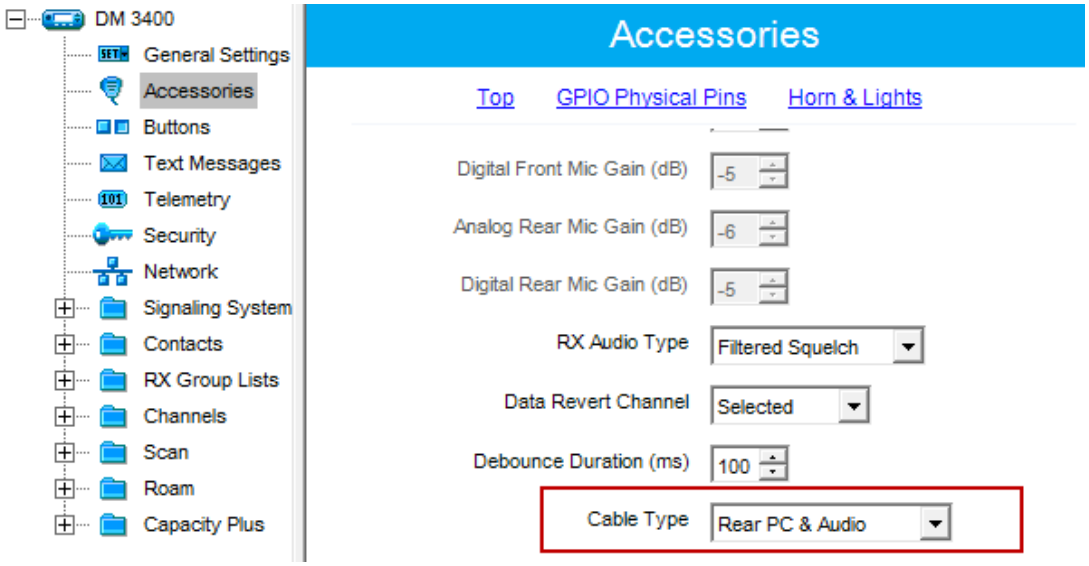
Calls do not get through

1. Reboot your PS(s) where SmartPTT Radioserver Configurator and SmartPTT Dispatcher are installed.

2. Switch off/on the control station and/or repeater.

3. *(for system configuration)* Make sure that both slots 1 and 2 are selected in the **Network** section in the repeater codeplug.

4. Select *Rear PC and Audio* in the control station settings (**MOTOTRBO > Accessories > Cable Type**).



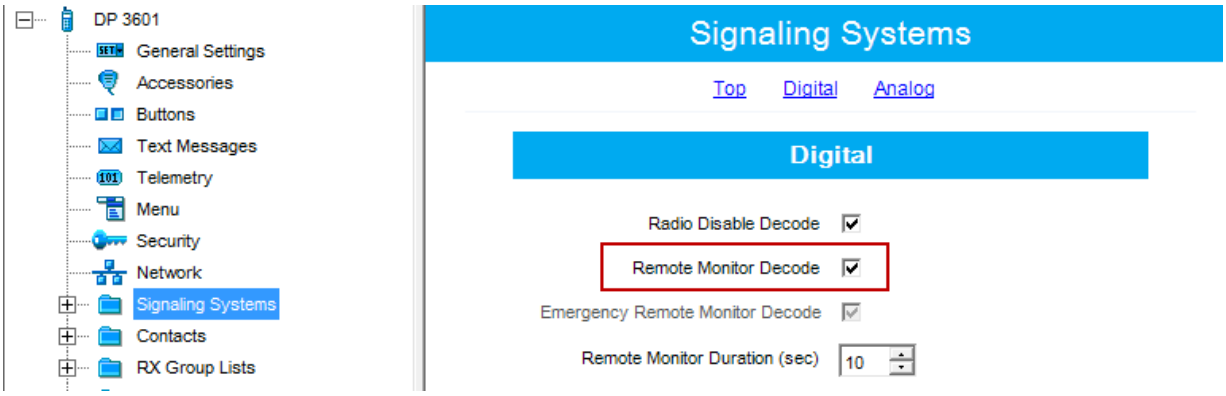
5. Make sure that the radios and repeaters or base stations are programmed correctly.

6. Test the cable connecting the control stations and the computer for correct pinouts.

7. Disable Windows Firewall.

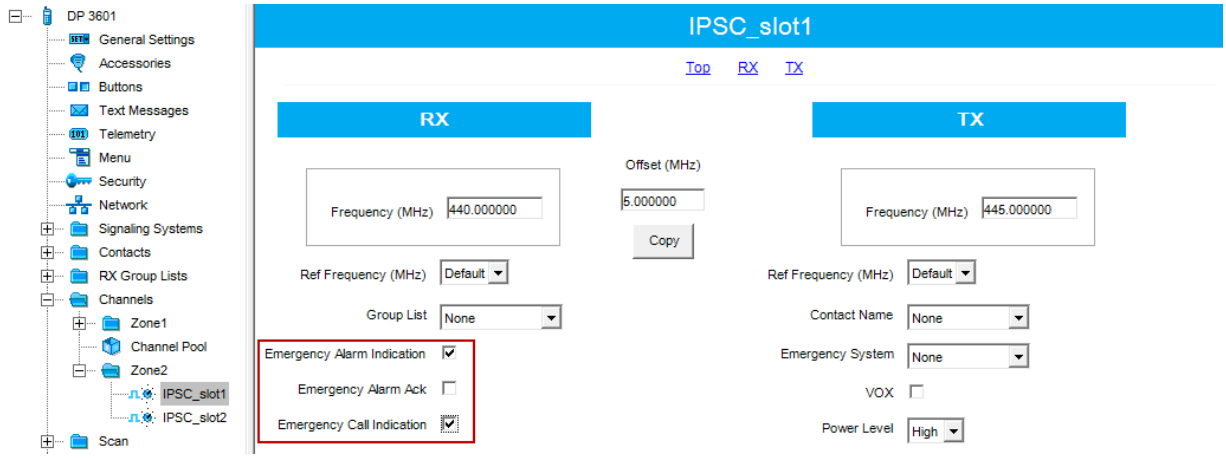
Remote monitoring does not work

To enable remote monitoring, clear the **Remote Monitor Decode** checkbox in in the **Signaling Systems** section of the radio configuration settings in MOTOTRBO CPS.

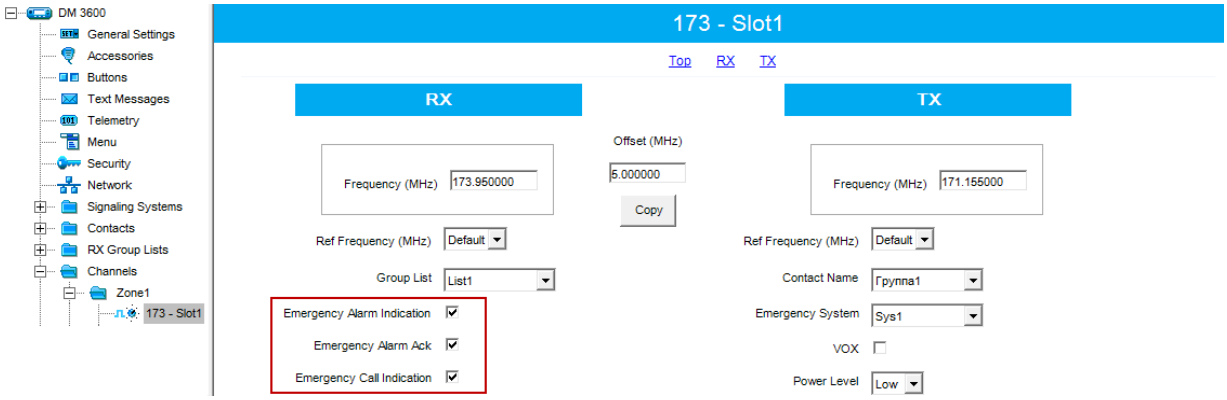


Orange button does not work, emergency alarm signal does not get through

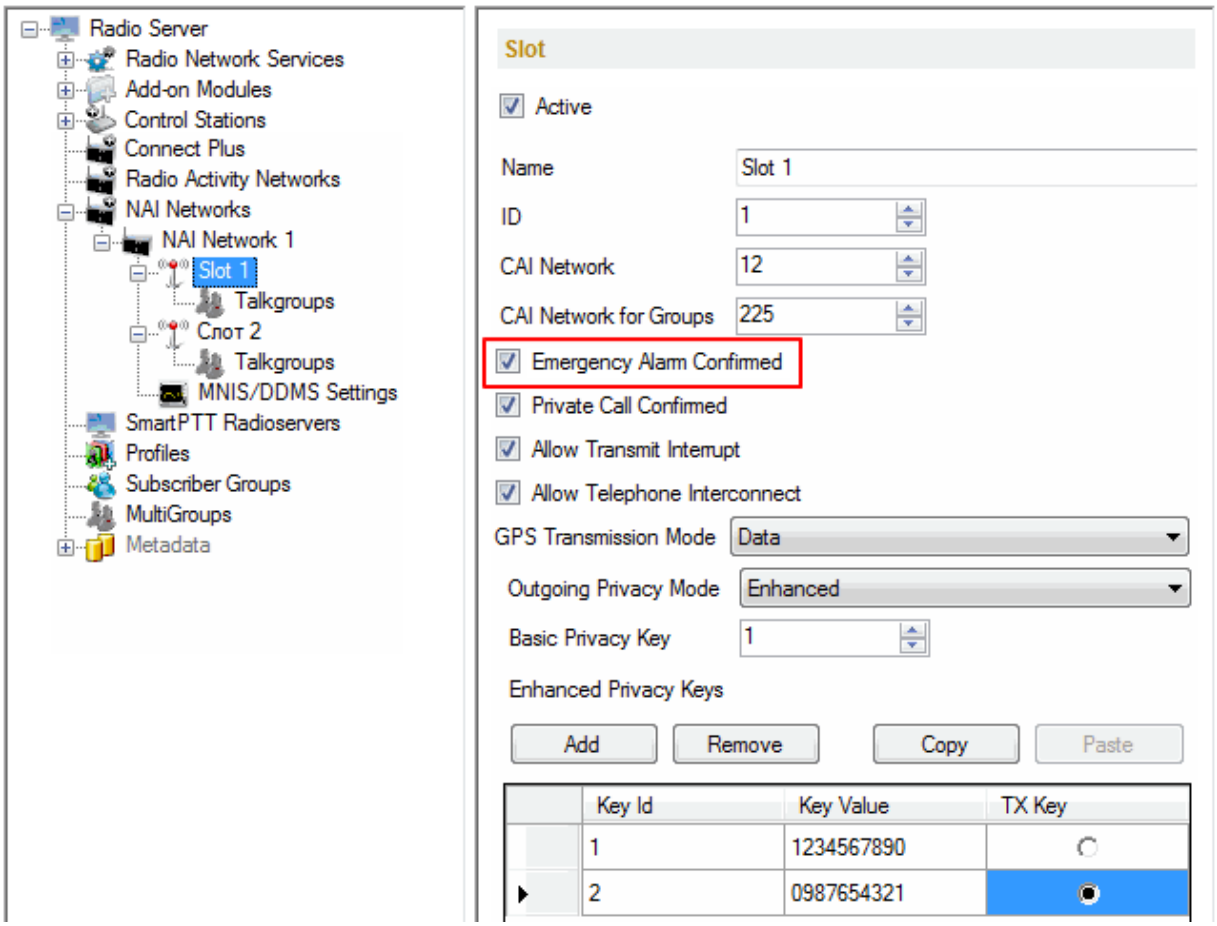
1. Clear the **Emergency Alarm Indication** and **Emergency Call Indication** checkboxes in the channel settings of the subscriber radio in MOTOTRBO CPS.



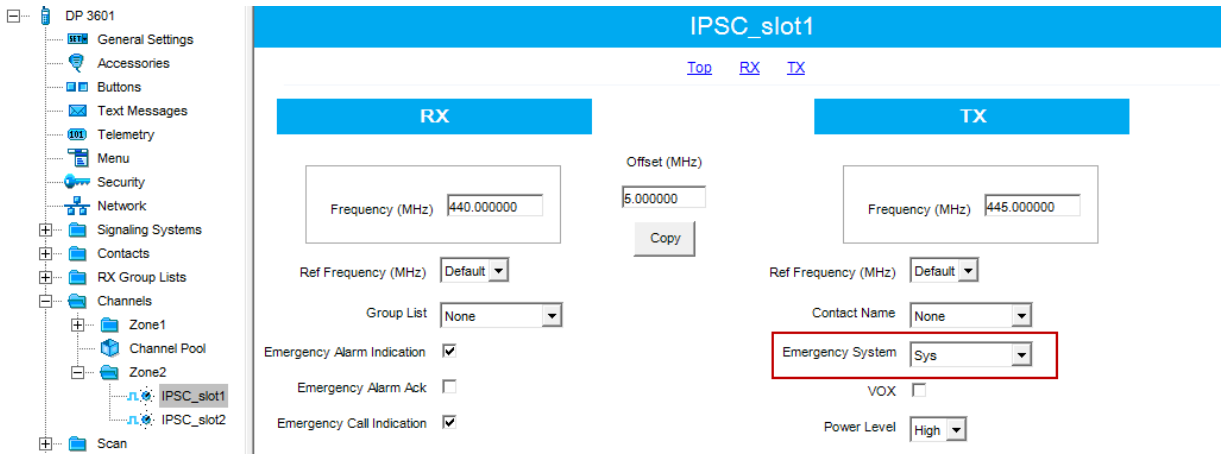
2. *(for control stations)* Clear the **Emergency Alarm Indication**, **Emergency Alarm Ack** and **Emergency Call Indication** checkboxes in the channel settings of the subscriber radio in MOTOTRBO CPS.



3. *(for system configuration)* Clear the **Emergency Alarm Confirmation** checkbox for both slots 1 and 2 in SmartPTT Radioserver Configurator. Save the changes and restart the service.

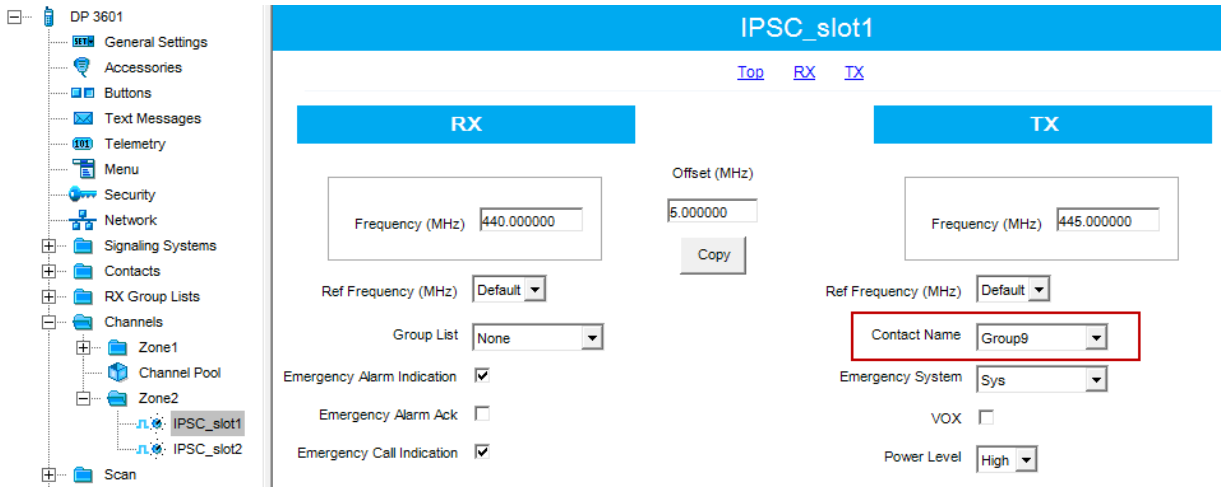


4. Make sure that the **Emergency Signaling System** in the channel settings of a subscriber radio in MOTOTRBO CPS is configured properly (**Signaling Systems > Digital Emergency**).



5. Select *Group Call* in the **Contact Name** field in the channel settings of a subscriber radio.

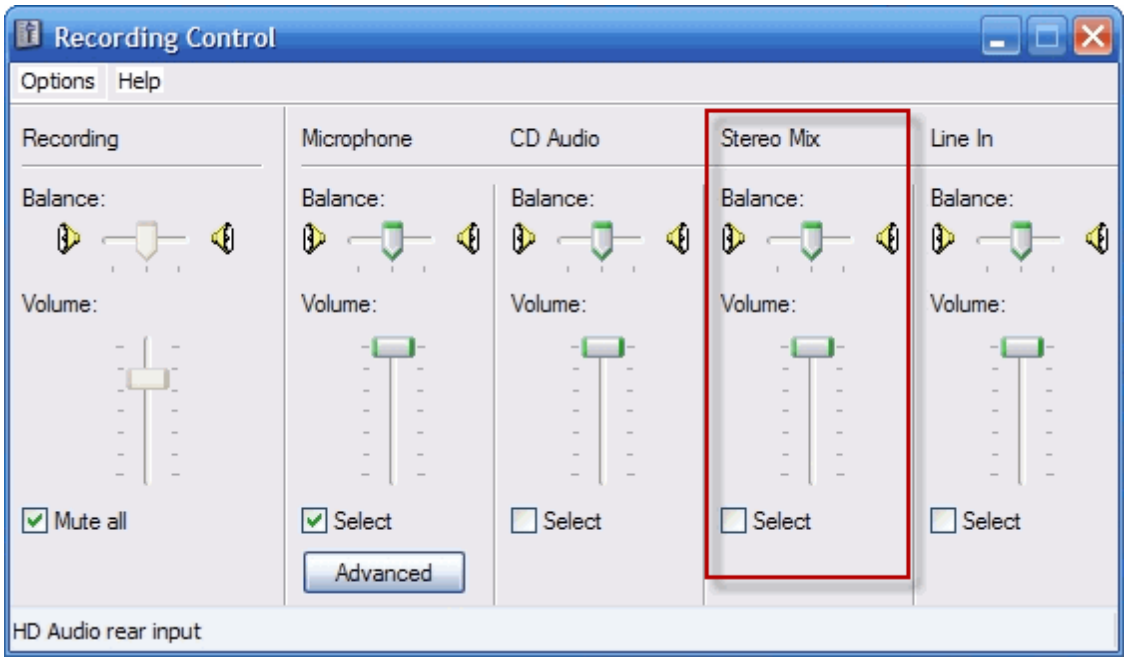
Add **Group Call** in the **Contacts** section in advance and then select the newly added group call in the **Channels** settings.



6. *(for control stations)* Make sure that its model is one of the following with a display DM3600/3601/4600/4601 . Otherwise, the emergency call will be displayed as a usual group call. In order to receive emergency alarm signal, the control stations must confirm it. For this purpose the **Emergency Alarm Confirmation** checkbox should be selected in MOTOTRBO CPS. Control stations without screen do not have the ability to confirm emergency alarm.

Telephone subscribers can hear themselves through interlocutor

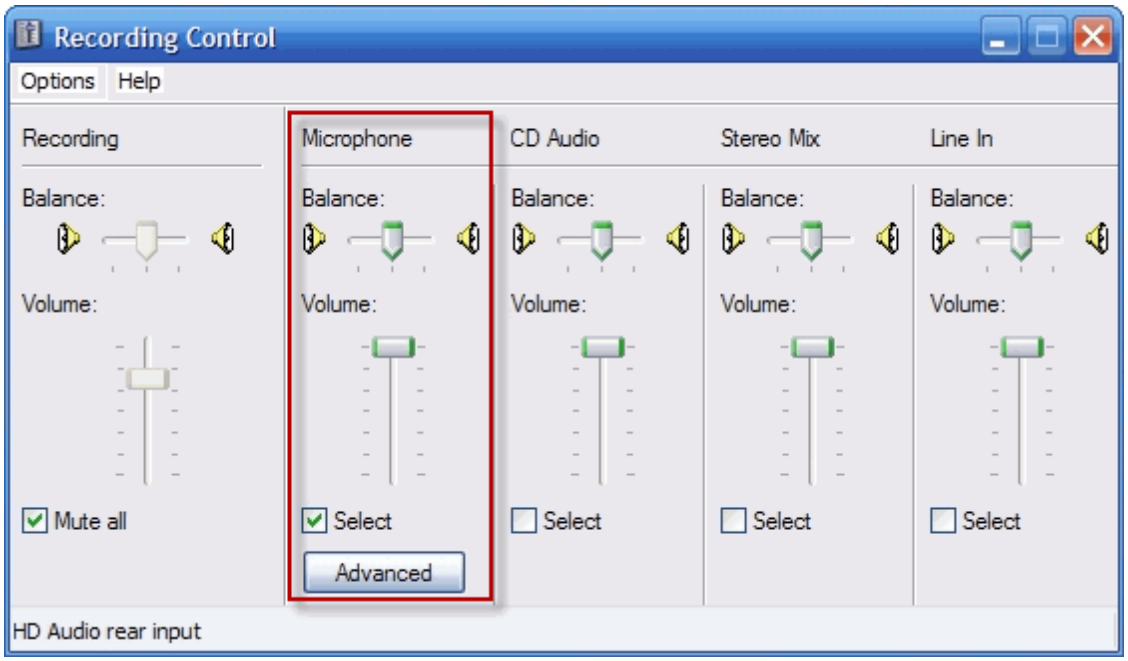
Switch off **Stereo Mix** in the sound card settings.



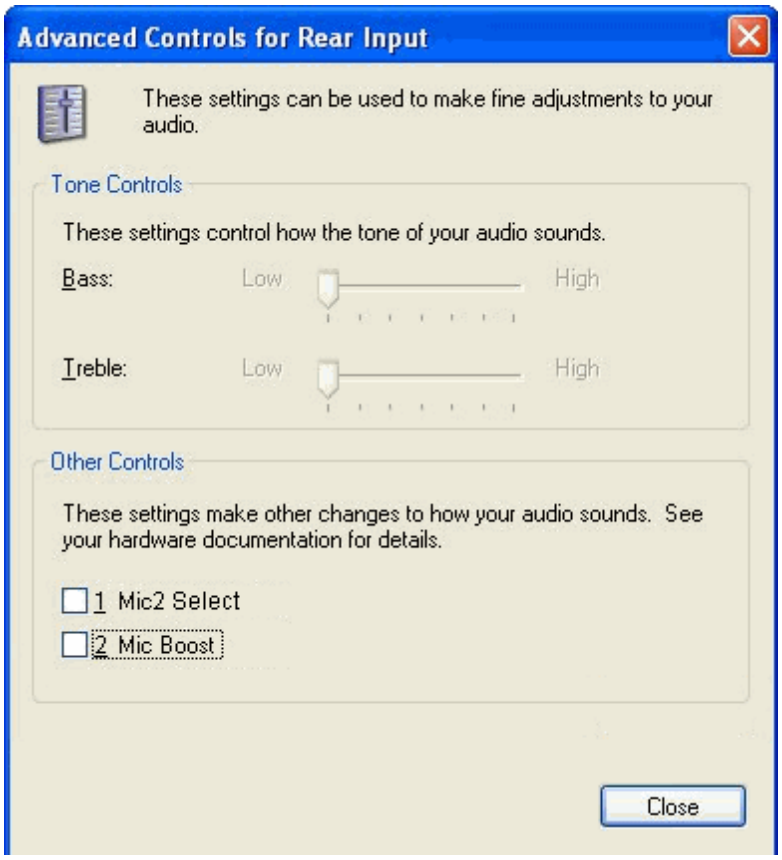
Unacceptable sound quality

1. *(for control stations)* Test the cable which connects the control stations and the computer for correct pinouts.

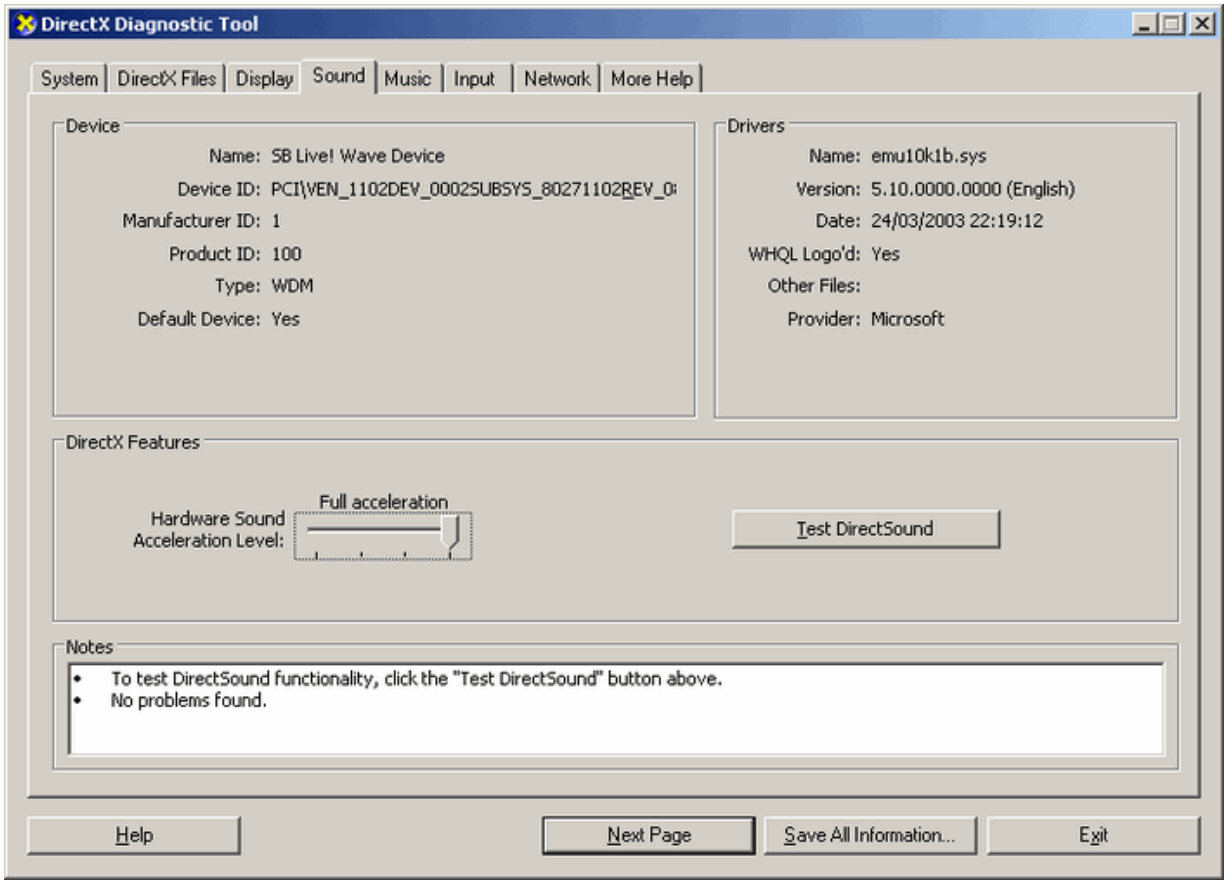
2. Reduce microphone sound level.



3. Clear **MIC Boost**.



4. Configure basic hardware acceleration of the sound card. Basic hardware acceleration is configured in the **DirectX Diagnostic Tool** window (go to **Start** menu, click the **Run** button, type **dxdiag**) in the **Sound** tab, with the help of **Hardware Sound Acceleration Level**.



5. Check if the microphone is working. Record an audio file by the **Sound Recorder** application (**Start Menu > All Programs > Entertainment > Sound Recorder**) and play it back. Make sure the sound is recorded and you can play it back.

6. Disable Windows Firewall.

No sound

1. *(for control stations)* Test the cable connecting the control stations and the computer for correct pinouts.

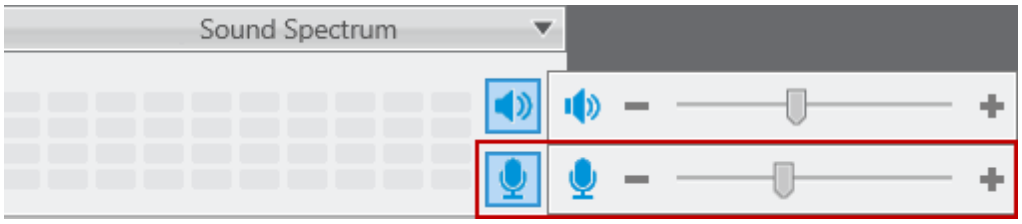
2. Check if the microphone is working. Record an audio file by the **Sound Recorder** application (**Start Menu > All Programs > Entertainment > Sound Recorder**) and play it back.

3. Make sure that the audio input and output are selected correctly in the sound settings of SmartPTT system.

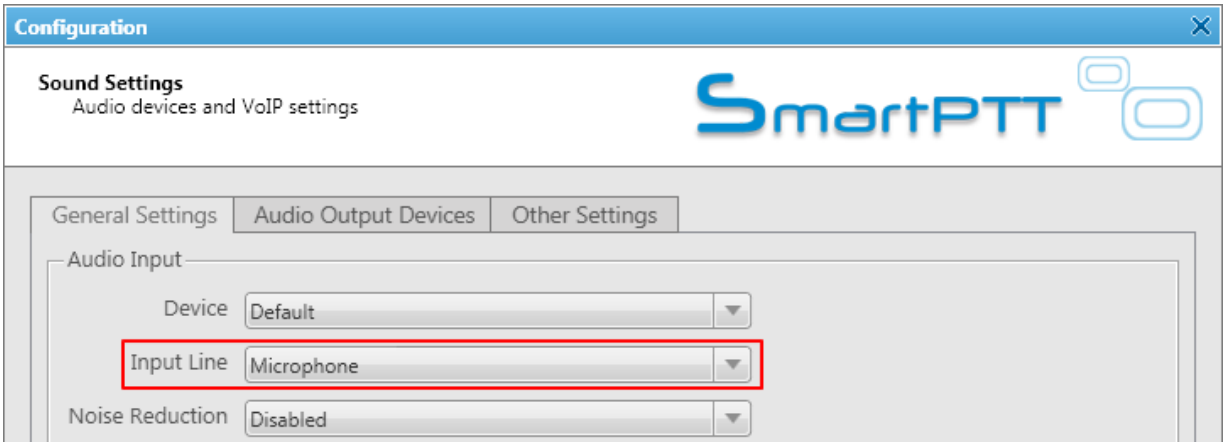
4. *(for control stations)* Make sure you have a sound card on your computer. If SmartPTT Dispatcher and

radioserver are installed on one PC, there must be two sound cards (this is true if there is only one control station connected to the radioserver). Each additional control station connected to the radioserver requires additional sound card (if the control station is used for transmitting both data and voice).

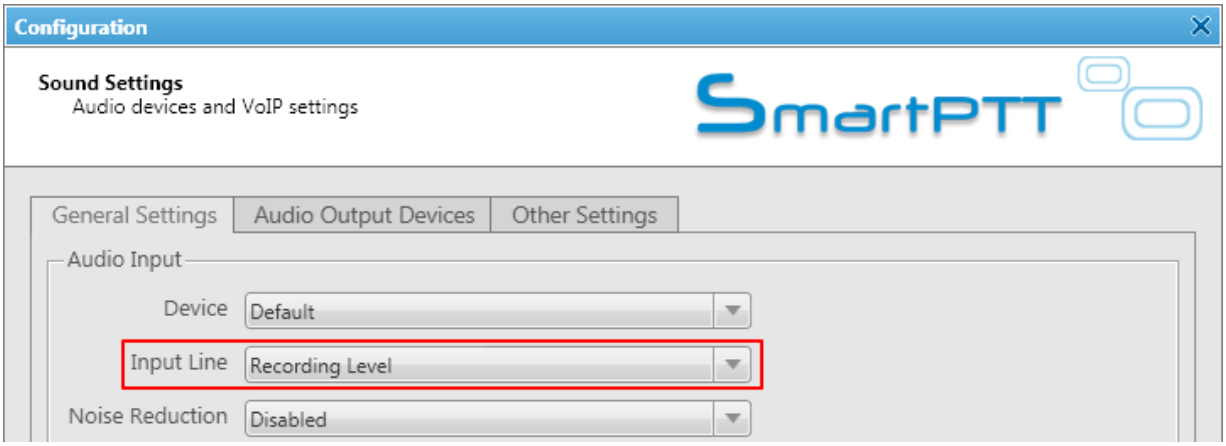
5. Check if **Microphone Audio Setting** is available in SmartPTT Dispatcher.



6. If **Microphone Audio Setting** is not available, open the **Sound** settings window in SmartPTT Dispatcher (**Settings > Sound**). In the **Audio Input** section, select *Microphone* in the **Input Line** field and then click **Finish**.



7. If **Microphone Audio Settings** is still unavailable or *Microphone* was already selected in the **Input Line** field, select *Recording Level* and click **Finish**.

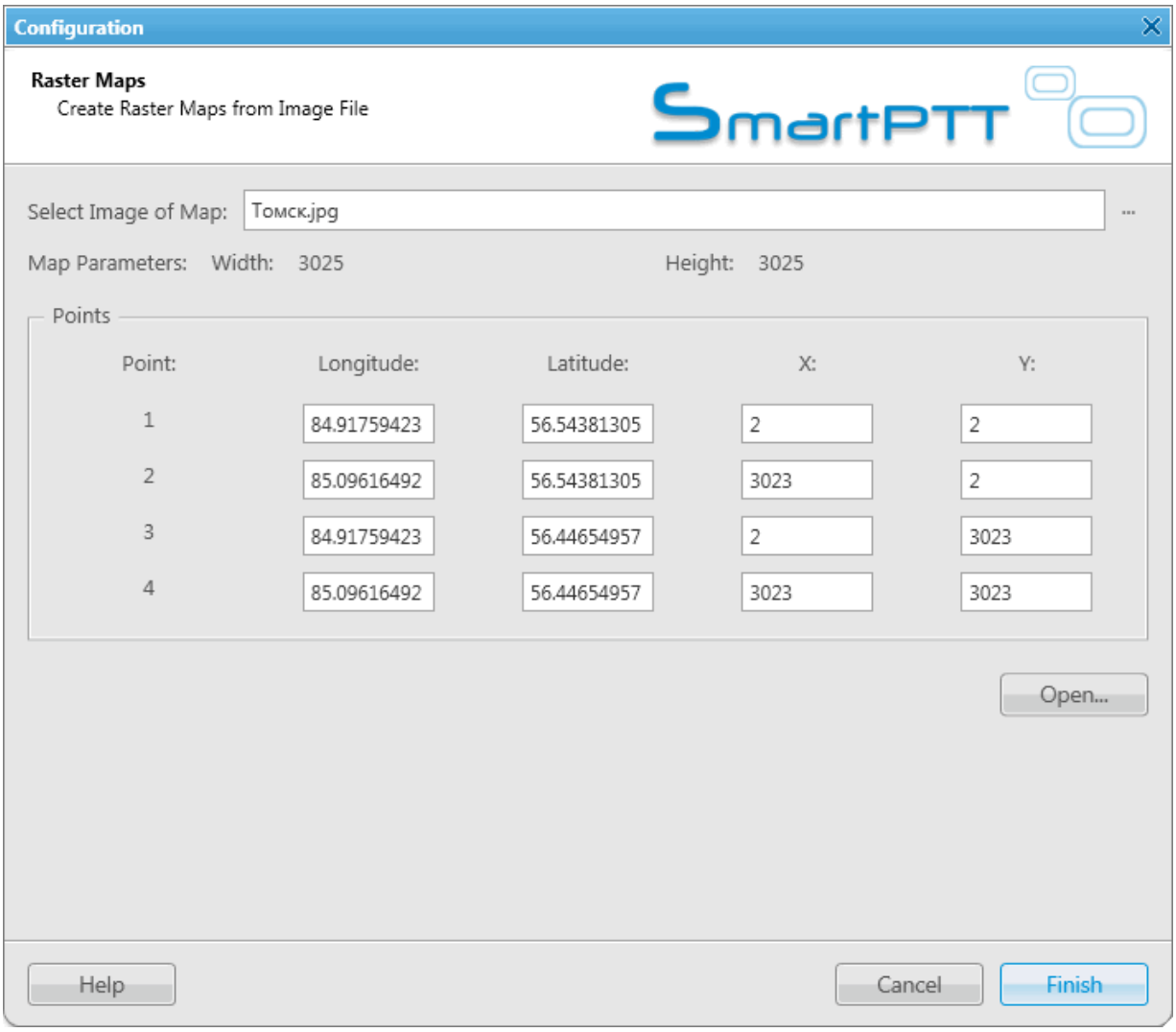


8. Disable Windows Firewall.

Radio coordinates are displayed in the corner or outside the raster map

Latitude, longitude, X or Y values are mixed up when assigning coordinates to points in the **Raster Maps Settings** window.

Note: If you took the coordinates from the polish format of the map, note that the first coordinate on the left is latitude and the second - longitude.



Channel name of the control station is displayed in the dispatch console as “1:0”, “1:1”, “1:2”. etc.

Use SmartPTT Radioserver Configurator to make sure that the channels specified for the control station correspond to the channels programmed by MOTOTRBO CPS.