Version 9.2

SmartPTT PLUS

Dispatcher

December 2017

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1 SmartPTT Dispatcher Interface

SmartPTT Dispatcher interface can be divided into the following sections:

- **Main Menu** which also contains Quick Launch Buttons
- **Main Area**
- **Information Bar**

Main Menu

The **Main Menu** bar contains options and commands which allow you to carry out the majority of the functions available in the application.

Quick Launch Buttons provide you a quick access to some functionality of the application:

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

The **Telephone Subscribers** button opens the **Telephone Subscribers** window which allows you to make calls to telephone subscribers from SmartPTT Dispatcher.

The **Dispatchers** button opens the **Dispatchers** window which allows you to make calls to external dispatchers from SmartPTT Dispatcher.

There are also other menu items represented by an icon:

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

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

The **UI Layout Settings** button is very useful as it allows the dispatcher to remember the layout of the **Main Area** (the position of opened windows and panels). 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 button and select the layout he or she used earlier. For more information, see User Interface Layout.

The **Change Operator** button allows you to change the operator. At clicking this button the dispatch console is restarted, and you can select another operator in the **Authorization** window.

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
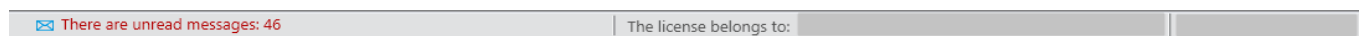
The **Information Bar** was designed to give the information about the number of unread messages, the selected object, the owner of the license and the application version. Here you can also see a special icon which notifies about the approaching license expiration date.

1.1 Change Layout

You can adjust a layout of opened panels in the **Main Area**. In order to do that, click on the opened panel tab, drag it to the needed area, and release. As soon as you start dragging the panel, new icons appear on the screen. The icons represent a new location of the panel on the screen.
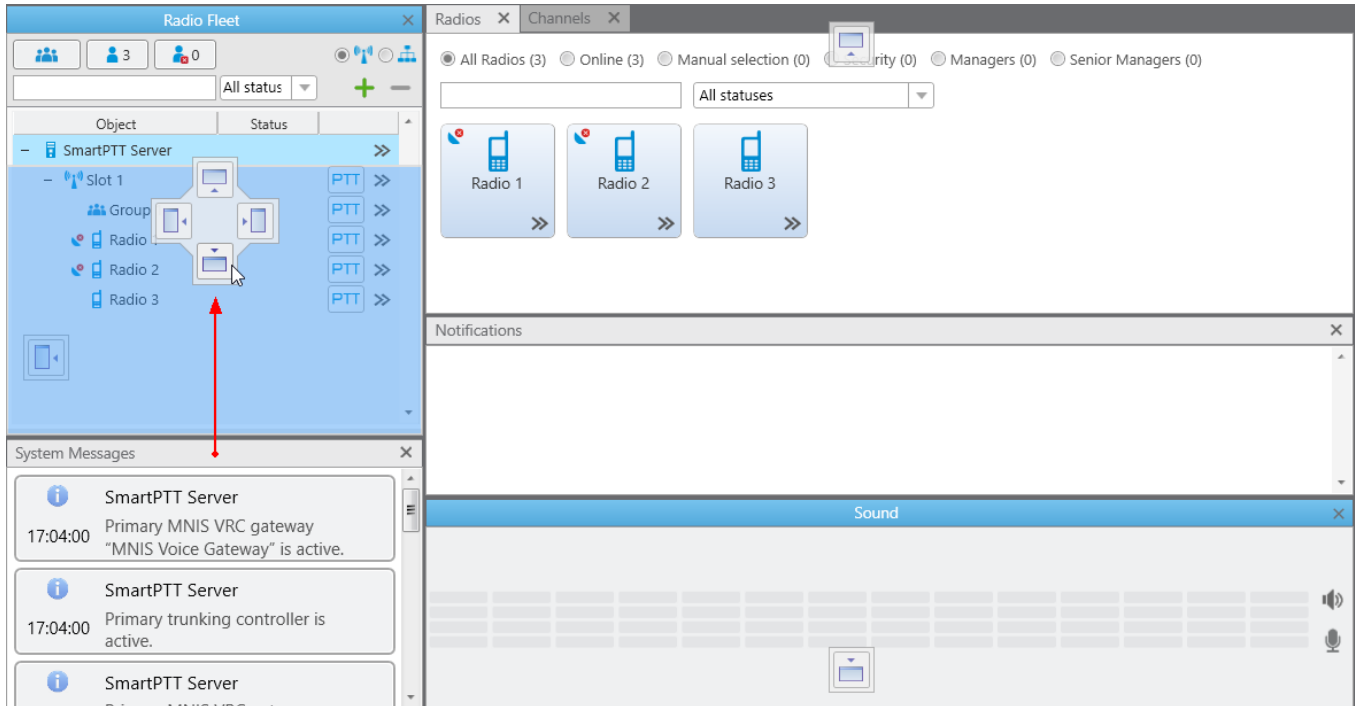
You can use the following icons for the panels adjustment:

 Appears inside a panel, which means that you can either place the panel in any of the four positions beside the panel 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 Settings

The **Settings** ⚙ menu allows you to configure system parameters:

- General Settings allows you to tune the dispatch console, e.g., define the PTT button behavior, enable automatic system updates, select language, etc.

- Custom Consoles allows you to create custom consoles with necessary elements.

- Call Windows allows you to configure Call Window parameters, e.g., specify the type of event that triggers the window opening.

- Control Devices allows you to select and configure control devices to be used in SmartPTT Dispatcher, like the mouse, touchscreen and other devices.

- Sound Settings allows you to configure sound settings and set up multichannel sound.

- Hot Keys allows you to customize keyboard shortcuts for making calls.

- Tipro Console allows you to configure Tipro settings.

- Telephone Interconnect allows you to configure telephone settings and Telephone Subscribers allows you to create a list of telephone subscribers.

- Operators allows you to add operators and manage their rights.

- Records allows you to enable call recording and set up recording parameters.

- Database Auto Backup allows you to set the SmartPTT Dispatcher database auto backup.

- List of Radios allows you to add, edit and delete radios, edit and delete WAVE users.

- Categories allows you to create categories.

- Statuses allows you to add statuses for radios and WAVE users displayed in the Radio Fleet panel.

- Telemetry allows you to configure telemetry commands to be available.

- Job Ticket Statuses allows you to add statuses for job tickets.

- Lone Worker Rules allows you to create and set up rules for lone workers.

- Radio Custom Properties allows you to add additional properties to be displayed in a radio or WAVE user **Properties** window.

- Positioning Systems allows you to configure GPS and Indoor settings.
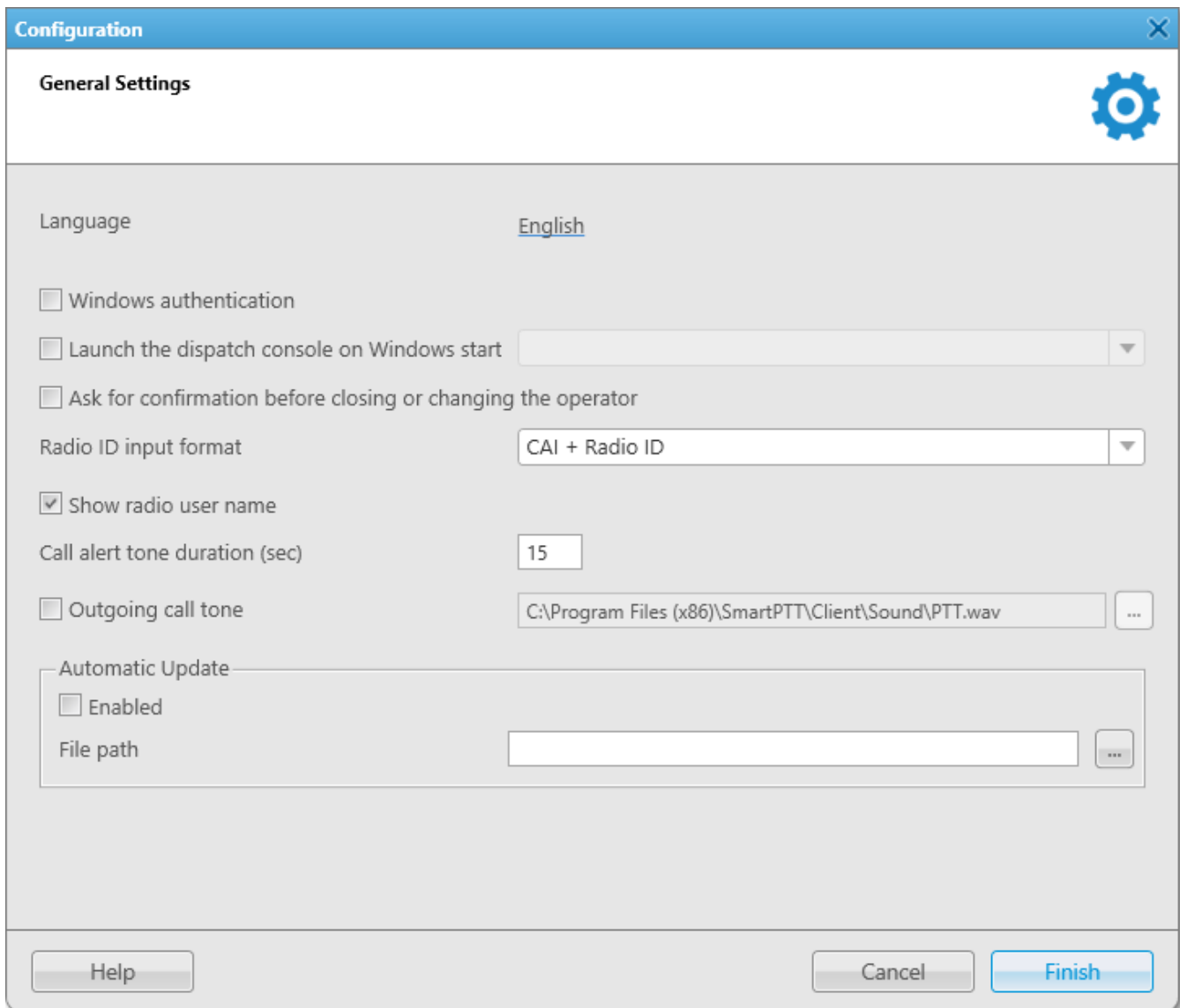
- Dispatchers allows you to add other dispatchers and configure parameters of your own dispatcher console.

- Rules and Alerts allows you to set up rules based on general events.

- Positioning Rules allows you to set up rules based on GPS and Indoor data.

- Licenses allows you to install licenses.

- Database allows you to manage the system database, i.e., create new database or connect to the existing database.

- 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.

2.1 Interface

2.1.1 General Settings

In the **General Settings** window you can configure the global settings of the SmartPTT Dispatcher application (e.g., user interface language, automatic update, etc).

To set the settings, in the **Main Menu** bar of the SmartPTT Dispatcher window, expand the **Settings** ⚙ menu and select **Interface** → **General Settings**. The following window appears:

Language: Allows you to change the language used in the dispatch console. After selecting a new language, restart SmartPTT Dispatcher to apply the change.

Windows authentication: It enables Windows authentication within the dispatch console. For that, create the operator with the name of the Windows user, or the Windows group to which the Windows user is assigned.

> **NOTE**
>
> In Windows 7, for the domain Windows user only domain Windows groups will be checked. Starting from Windows 8, for the domain Windows user all Windows groups will be checked (whether domain or local).

If **Windows authentication** is selected, the dispatch console is opened under the operator's account, whose name matches the name of the logged in Windows user, or Windows group to which this logged in Windows user is assigned. The **Authorization** window will be skipped and the operator's password ignored. In the dispatch console, the button **Change Operator** will be unavailable and the user will not be able to change operator.

If **Windows authentication** is not selected or the operator's name does not match the name of the logged in Windows user, or the Windows group, the **Authorization** window will open, and the user will need to select the operator and type the password.

Launch the dispatch console on Windows start: Enables automatic launch of SmartPTT Dispatcher on Windows start with the selected operator. This feature does not work if Windows authentication is selected.

Radio ID input format: Sets the input and display methods used for showing radio ID in the radio Properties window: *IP address* or *CAI + Radio ID*.

IP Address: IP address is entered and displayed in the radio Properties window: IP `12.0.0.15`.

CAI + Radio ID (CAI network ID and a unique radio ID): Are entered and displayed in the radio **Properties** window: CAI `12` Radio ID `15`.

Show radio user name: Displays a radio user name next to a radio name.

Call alert tone duration (sec): Sets the duration of the call alert sound in SmartPTT Dispatcher.

Outgoing call tone: This alert tone plays after the PTT button is pressed and the operator is able to transmit on the channel. This is to prompt the operator to begin speaking.

Ask for confirmation before closing or changing the operator: If selected, you will need to confirm before closing SmartPTT Dispatcher, or before changing the operator.

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

In the **File path** field specify the path to the **ClientSetup.exe** file, which you download together with SmartPTT Software Installation Package. If a new SmartPTT version is available, the notification appears when you launch SmartPTT Dispatcher (or when you choose **Check for Updates** from the **Help** menu).

> **NOTE**
>
> After downloading the new version of the system, it is not necessary to uninstall the previous version.

2.1.2 Custom Consoles

Custom Console is a tool that provides the dispatcher with custom workplace. Custom consoles are visual panels containing various elements, e.g. radios,WAVE users, 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.

> **NOTE**
>
> If in the **General Settings** window the Show radio user name check box is selected, and on SmartPTT Radioserver the user authorization service is activated and users are added, thenon the corresponding elements of custom console the name of the user authorized on the radio is displayed next to the radio name in brackets.

To create and set up a custom console, in the **Main Menu** bar of the SmartPTT Dispatcher window, expand the **Settings** ⚙ menu and select **Interface** → **Custom Consoles**. The **Custom Consoles** window appears:

Configuration ✕

Custom Consoles ⚙

+ Add   ✏ Edit   ─ Delete

Name	Active
Console Group 1	☑
Console 2	☑

Help   Finish
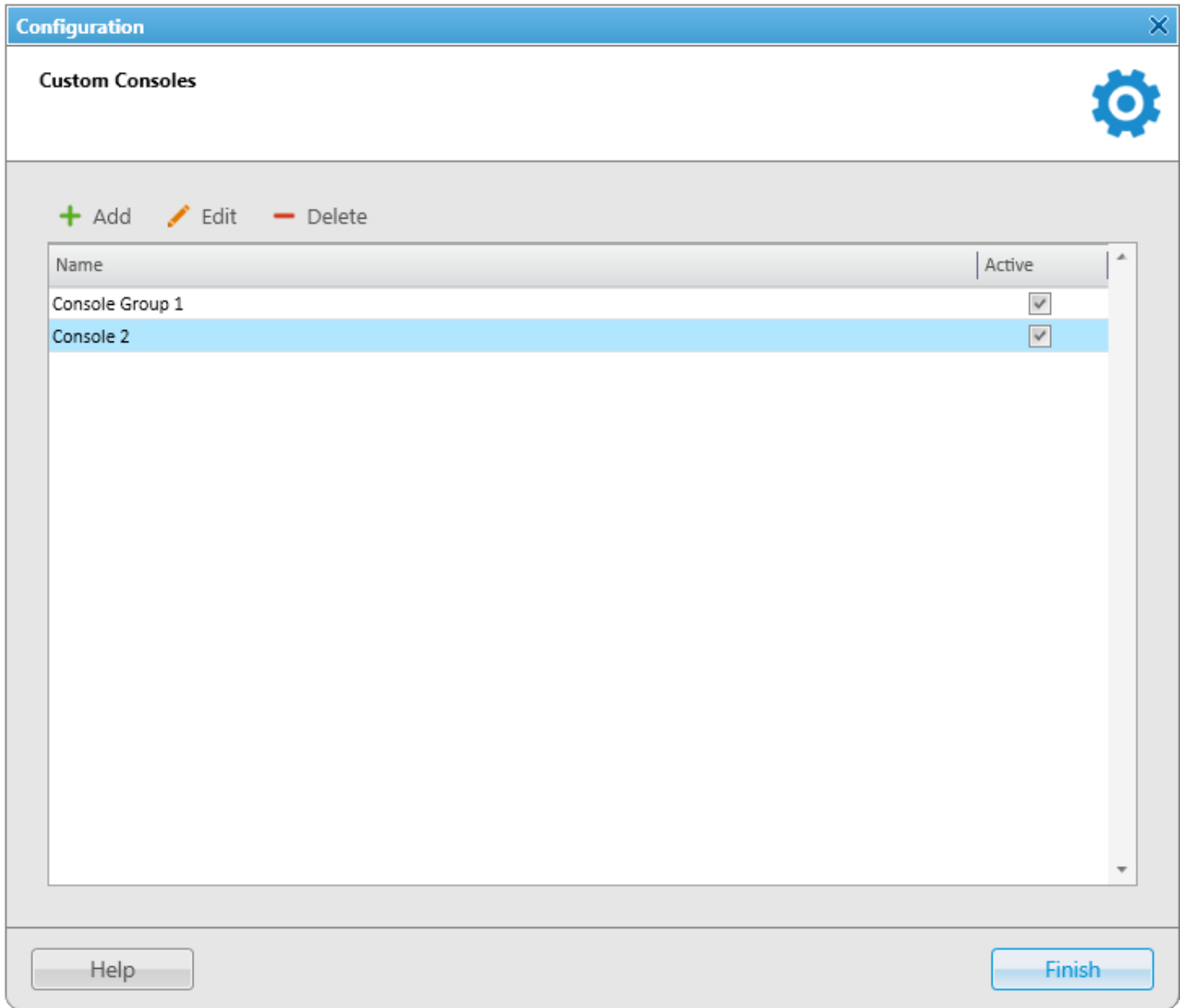
To add a new console, click **Add**. The console editor appears.
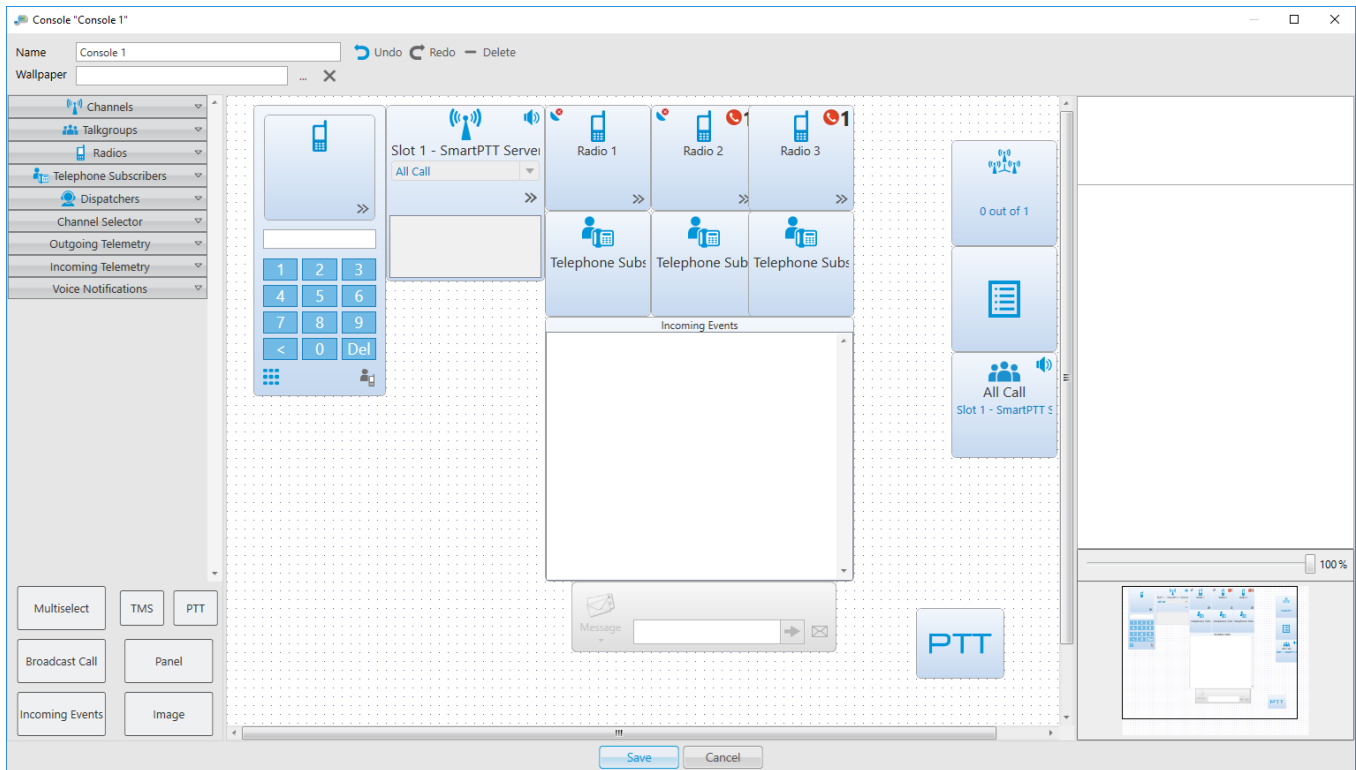
Name: A name of a custom console which will be displayed in the **Tools** menu.

Wallpaper: Allows you to select an image for the background of the console. The supported formats are BMP, JPG, PNG.

There are more than a dozen types of visual elements available in **Custom Consoles**. Description of each element is given further in this article.

To add an element 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 the element up, down, left, or right, press the arrow keys. To move the element diagonally, press the Up or Down Arrow key and the Left or Right Arrow key. For example, to move the 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 . Check the Mute Mode settings before applying this function.

To open the Actions list which can be applied to an element, click .

To display the channel name as *Radioserver name – Channel name*, select the **Radioserver Name** check box in the **Misc** section. Otherwise, only the channel name will be displayed.

To view the number of missed incoming calls, select the **Missed Calls** check box 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, or the WAVE user, 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, radios and WAVE users, and their call statistics.

Clear All: Sets all counters to zero.

Talkgroup
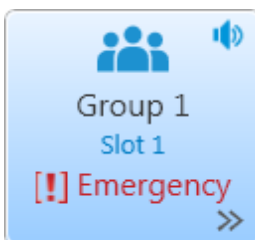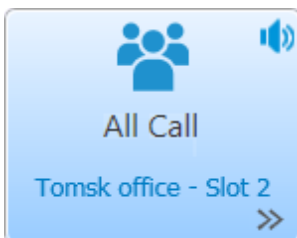
The **Talkgroup** element stands for a talkgroup on the channel. You can make a call to the selected talkgroup by clicking on the element.

To open the [Actions list](#) which can be applied to an element, click ≫.

Also, the element displays that the radio enters emergency mode (the **Emergency** icon appears), when the Emergency button is pressed on the radio. 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** check box in the **Misc** section. Otherwise, only the channel name will be displayed.

Radios

The **Radio** element is used for making private voice calls. There are two types of the **Radio** element:
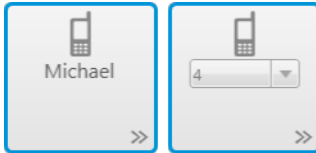
The Radio element for a certain radio

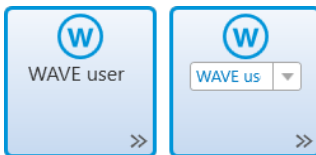- The **Radio** element for a certain radio or a <u>WAVE user</u> – is used to call the radio or the WAVE user selected in advance, when adding the element to the console.

You can also assign this type of element to different radios and WAVE users from the drop-down list. To enable this option, select the **Allow Changes** check box in the **Properties** section, when adding the element to the console.

The Radio element for a certain WAVE radio

- The **Radio** element for an optional radio or WAVE user – is used to call the radio or the WAVE user that can be selected using dial pad or list of radios and WAVE users on the element.

To open the dial pad, click the button ▦ in the bottom left corner of the element. To select the necessary radio or WAVE user, enter its **Radio ID** in the search field using the dial pad or keyboard.

To open the list of radios and WAVE users, click the button in the bottom right corner of the element.

The **Radio** element shows the radio or the WAVE user name or its **Radio ID**, if name is not specified.
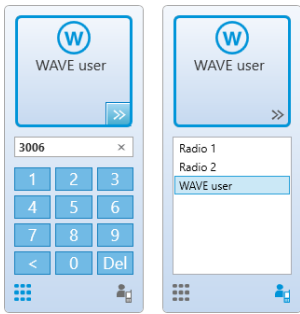
The icon on the radio or WAVE user button shows that the dispatcher did not answer the call from a radio or a WAVE user. The figure next to it shows the number of missed calls.

Also, the element displays that:

The Radio element for an optional radio

- The radio enters emergency mode (the **Emergency** label), when the Emergency button of the radio is pressed.

The Radio element for an optional WAVE user

• The radio enters the Man Down state (the **Man Down** label), when the radio tilt changes. For proper operation of this functionality configure a rule in SmartPTT Dispatcher with **Man Down** selected and **On** clicked in the **Initiator Alert** area. For example, a rule of the **Rules and Alerts** type with the following parameters:

NOTE

Make sure that the radio unit has the built-in option board which is configured properly for Man Down mode. To set up the Man Down feature for Motorola generic option board (GOB) or Connect Plus option boards using SmartPTT Man Down Configurator, please, refer to SmartPTT Man Down Configuration Guide. To set up Man Down feature for other option boards including Tallysman option boards, please, refer to the corresponding manufacturer's documentation. You may always contact SmartPTT Technical Support Center for detailed information on configuring Man Down feature.

> **NOTE**
>
> To disable the rule without SmartPTT Dispatcher restart, click **Off** for the **Man Down** option. If the rule is disabled by clicking to clear the **Active** check box, SmartPTT Dispatcher restart is required.

Also, the element displays that the radio 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.

> **NOTE**
>
> Emergency and Man Down modes are unavailable to WAVE users.

To open the **Actions List** of a radio or a WAVE user which can be applied to an element, click ».

To open the **Call Window** of a radio or a WAVE user, right click the element.

Telephone Subscriber

The **Telephone Subscriber** element is used for making calls to telephone subscribers. Double-clicking the element opens the **Call Window** and initiates the call.

> **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** check box in the **Properties** section.

> **NOTE**
> To set the list of telephone subscribers, go to the Telephone Subscribers window.

Dispatcher
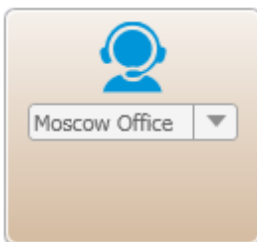
The **Dispatcher** element is used for making connection to other dispatchers. Double-clicking on the element opens the dispatcher's **Call Window** and initiates the call.

> **NOTE**
> For proper operation of the element make sure that the operator has the permission **Connect with external dispatchers** (**Settings** → Operators)

You can assign the element to different dispatchers from the drop-down list. To enable this option, select the **Allow Changes** check box in the **Properties** section.

> **NOTE**
> The list of dispatchers contains dispatchers added in the Dispatchers 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
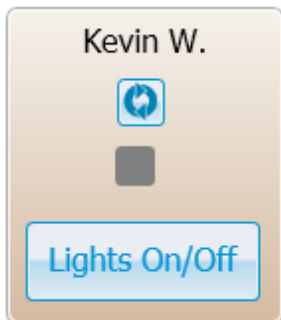
The **Outgoing Telemetry** element is used for sending telemetry commands to the radio. You can assign only one telemetry command per element. Before assigning the telemetry command to the element, add it to the telemetry list of commands and to the radio. Apart from sending commands, you can also check the current status and the time of the last status update.

Incoming Telemetry
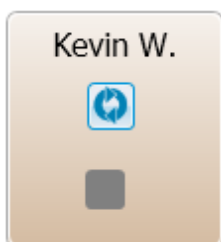
The **Incoming Telemetry** element is used for receiving the current status of the selected pin. You can also see the time of the last status update.

Voice Notification
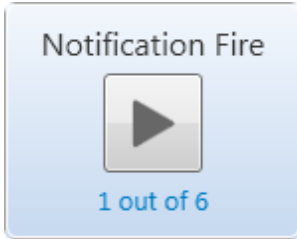
The **Voice Notifications** element starts or stops the voice notification and displays how many times the voice notification is reproduced. To configure voice notifications see the **Voice Notification** section in SmartPTT Radioserver Configurator.

> **NOTE**
> To monitor the current status of the voice notification playing, open the Voice Notifications window (**Service → Voice Notifications**).

To display the element name as *Radioserver name – Voice Notification name*, select the **Radioserver Name** check box in the **Misc** section. Otherwise, only the voice notification name will be displayed.

Multiselect
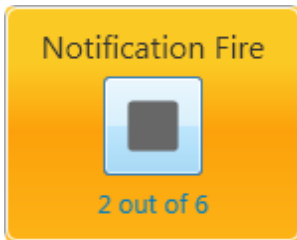
The **Multiselect** element is used to make a simultaneous call to several radio objects (talkgroups and radios and WAVE users) which were added in advance by dispatcher to the **Multiselect** list.

To initiate a simultaneous call to the participants of the **Multiselect** list, click the **Multiselect** element in the opened custom console. All participants will hear the dispatcher, but only the dispatcher will hear the participant who answers the call.
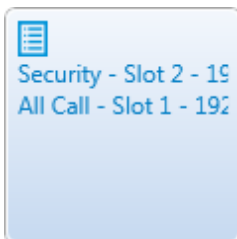
To add radio objects to the **Multiselect** list, add the **Multiselect** element to the custom console in the console editing mode, open the custom console from the **Tools** menu and click the **Edit list** button on ▤. In the **Multiselect** window, that opened, add the required radio objects from the **Radio Fleet** list to the **Multiselect objects** list, and click **OK**.

> **NOTE**
>
> You can create more than one **Multiselect objects** list, by adding
> the corresponding number of the **Multiselect** elements to the
> custom console.

To edit the **Multiselect** list, click the **Edit list** button 📄 in the opened
custom console.

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 participants with the given identifier.

Panel
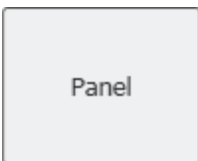
The **Panel** element is used for uniting several elements. The panel
can have its own color, size and placement. All inside elements of
one panel are moved together with the panel.

Image
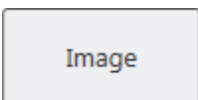
The **Image** element is used for adding logos and other images to the
custom console. You can select the image file under the **Properties**
section on the right. The supported formats are .bmp, .jpg, .png.

Incoming Events
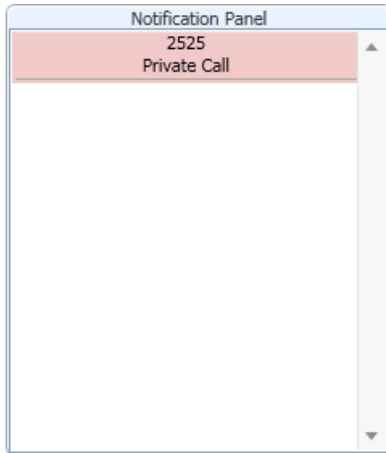
The **Incoming Events** informs about incoming messages, call alerts and missed private calls to SmartPTT Dispatcher from radios or WAVE users. Double-click the record in the panel to open the radio or WAVE user **Call Window**.

TMS
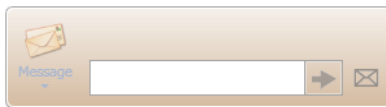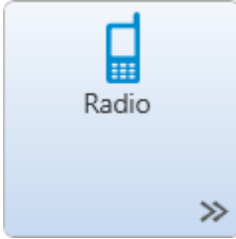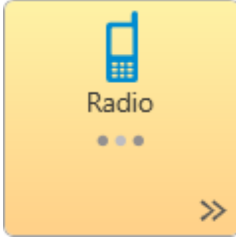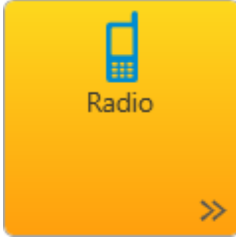
The **TMS** element is used for sending short text messages to all radios or talkgroups situated in one panel with the **TMS** element. To do this, just enter the text of the message or select a template and send it. If the **TMS** element is placed outside a panel, it will send private messages. To do this, just select the radio, enter the text of the message and send the message.

PTT

The **PTT** element is used for a multiple-user call. If it is located inside the panel, clicking the **PTT** element makes a call to all the radios, WAVE users and talkgroups 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 radios and [WAVE users](#) differs depending on the status.
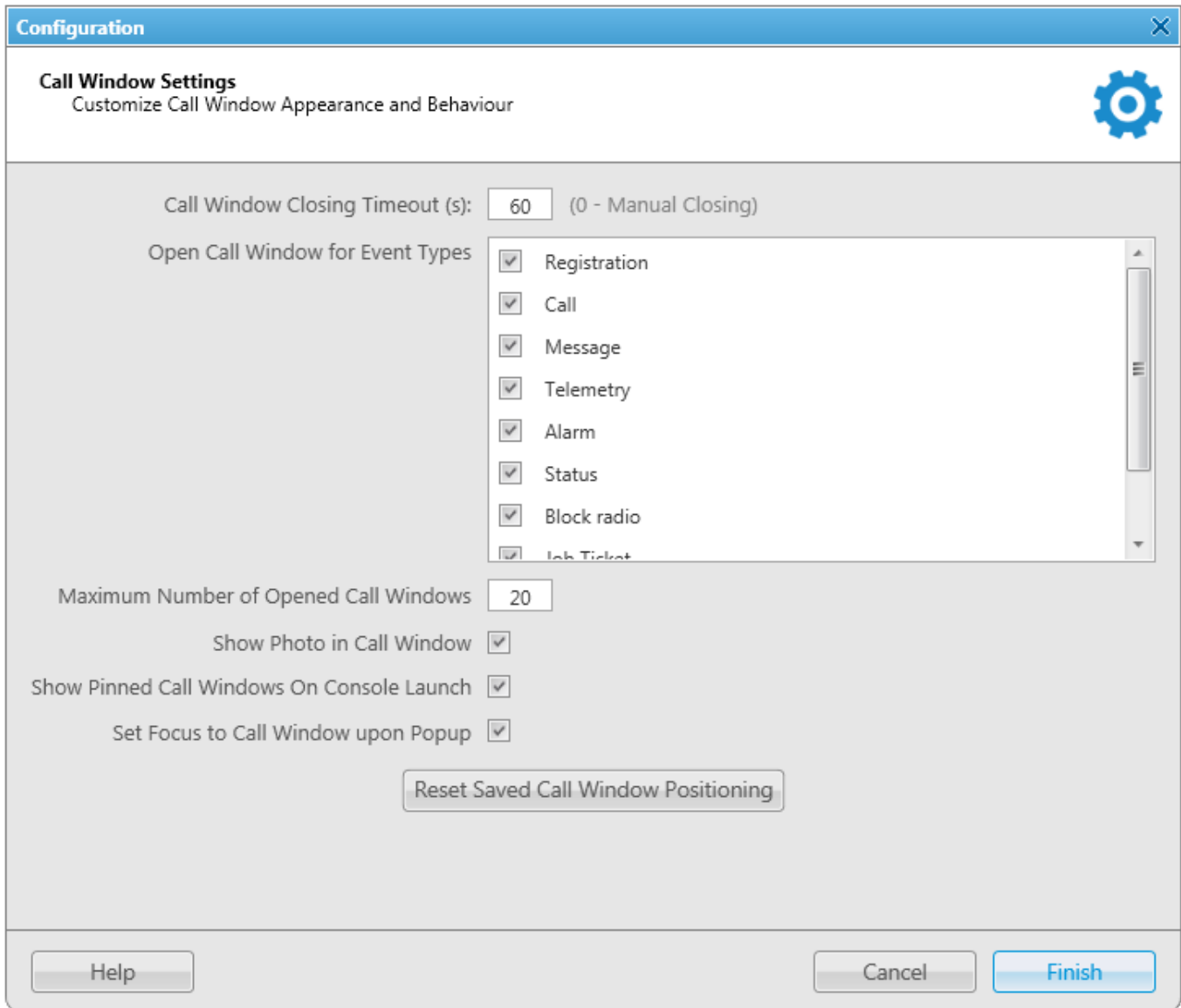
Element	Description
Radio ≫	**Grey:** A radio or a WAVE user is offline or outside the network coverage
Radio ≫	**Light-blue:** A default color displaying that a radio is online. You can change the color using the preset colors A default color displays that a radio or a WAVE user is online. You can change the color
Radio ● ● ● ≫	**Light-orange:** An outgoing call attempts or a radio or a WAVE user is in queue
Radio ≫	**Orange:** All outgoing radio or WAVE user calls
Radio ≫	**Green:** All incoming radio or WAVE user calls or a radio or a WAVE user is being monitored Light green: Exists in the Capacity Max systems only and determines the incoming call attempt to SmartPTT Dispatcher

Element	Description
Radio	**Blue:** None of the parties transmit or receive voice. The person can answer the call by pressing the PTT button within hang time. In the Capacity Max systems the dispatcher can end the call during the hang time by right clicking the console element After the hang time expires, the person initiates a new call by pressing the PTT button. The calling radio or WAVE user is the radio or the WAVE user linked with the PTT button by default

You can open the created custom consoles from the **Tools** menu. SmartPTT Dispatcher allows opening multiple custom consoles simultaneously.

2.1.3 Call Windows

To configure the parameters of **Call Window**, in the **Main Menu** bar of the SmartPTT Dispatcher window, expand the **Settings** ⚙ menu and select **Interface → Call Windows**. The configuration window opens where you can configure the appearance and functions of the **Call Window**.

Call Window Closing Timeout (s): 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** will not 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**, **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 radio image 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.

Set Focus to Call Window upon Popup: Select the check box to focus on the **Call Window** when it is opened or have a new activity.

Reset Saved Call Window Positioning: Click the button to reset the current position of the call windows.

2.1.4 Notification Panels

The **Notification Panels** window provides the following settings:

- Settings for the [Emergencies](#) panel
- [System message](#) settings
- [Recent Incoming Calls](#) settings

To open the **Notification Panels** window, in the **Main Menu** bar of the SmartPTT Dispatcher window, expand the **Settings** ⚙ menu and select **Interface** → **Notification Panels**. You can switch between tabs here to configure the event processing in the system.
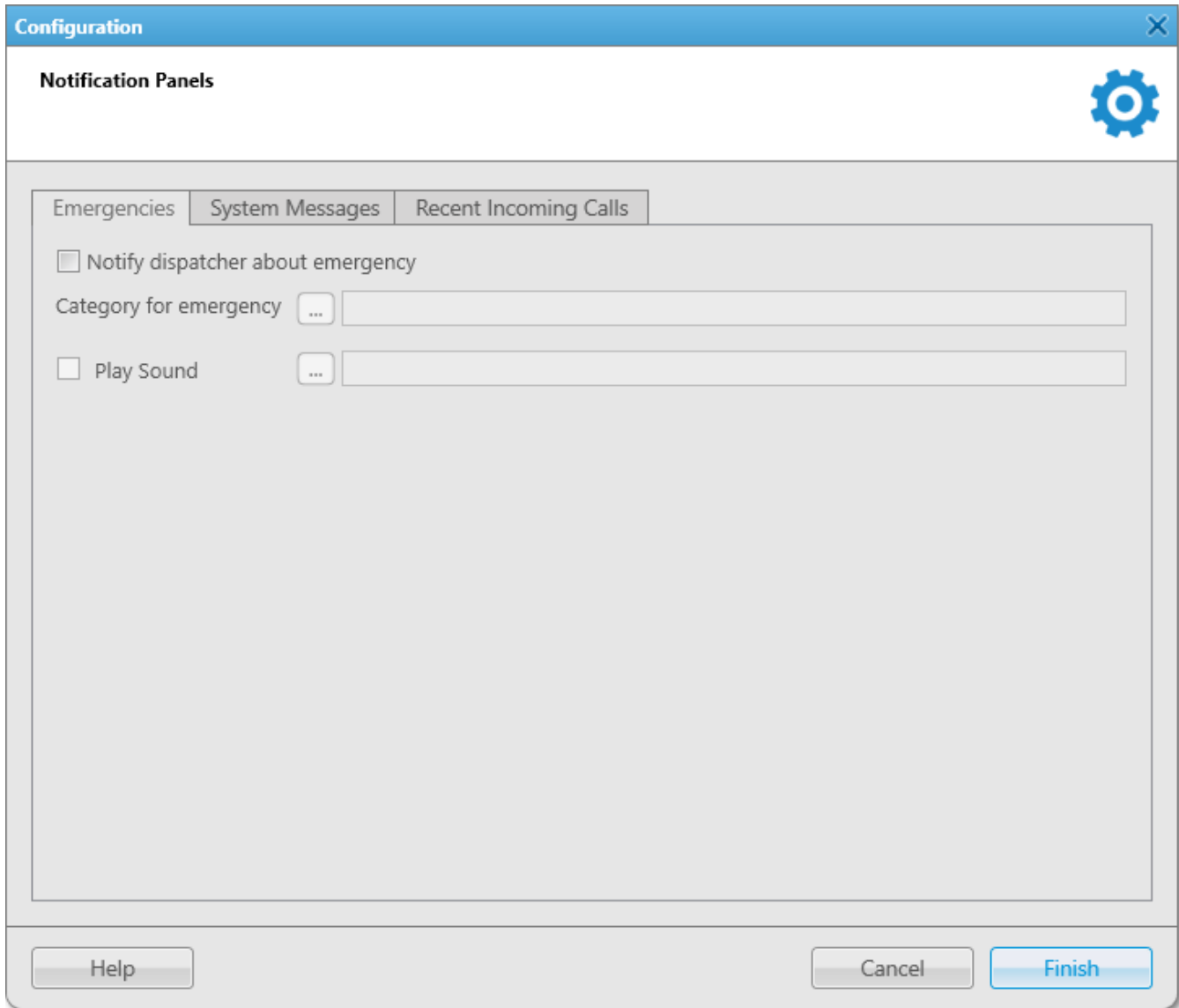
Emeregencies
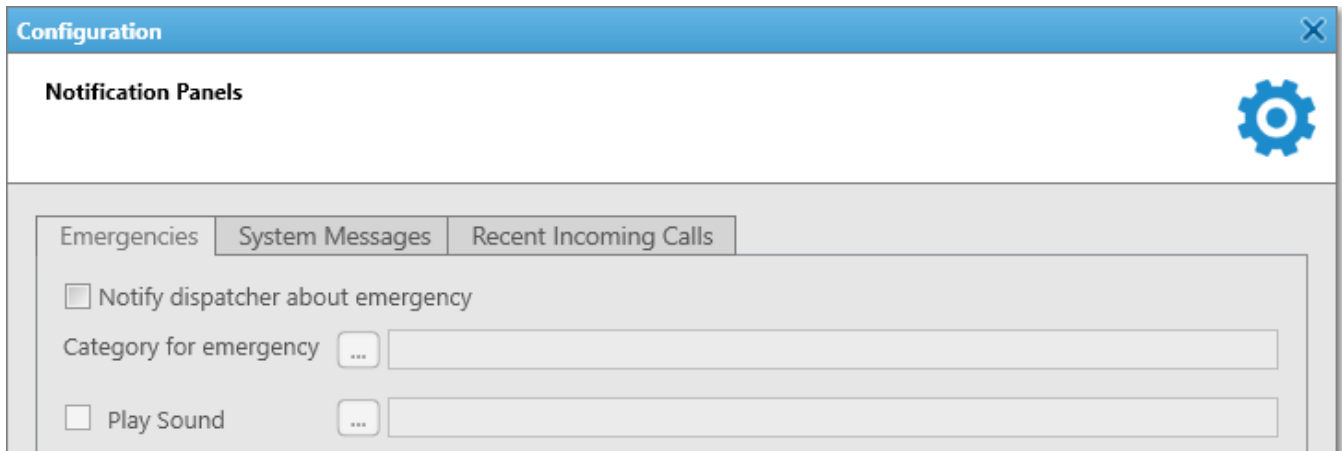
In this tab you can configure the emergency situation processing:

Notify dispatcher about emergency: Select to open the Emergencies panel automatically and/or show the radio on the map if Maps are opened.

Category for Emergencies: Click **Browse** ⊡ to select the category (only one) of emergency situations (see Categories).

Play Sound File: Click **Browse** ⊡ to select the audio file, which should be played at the emergency situation.

> **NOTE**
> The **Emergencies** panel appears only when emergency signal is registered. You cannot open it manually.

System Messages

You can configure the opening of the System messages panel where all system messages appear.

If you select the check boxes in the **Network or Hardware events** area when the **System messages** panel is closed, it opens automatically with the appeared corresponding message.

If you do not select some of the check boxes in the **Network or Hardware events** area, system messages appear in the **System messages** panel in any case. But if the panel is closed, it does not open automatically with the appeared corresponding message.

> **NOTE**
>
> If the **System messages** panel is opened but inactive, all event messages appear in the background without notifications.
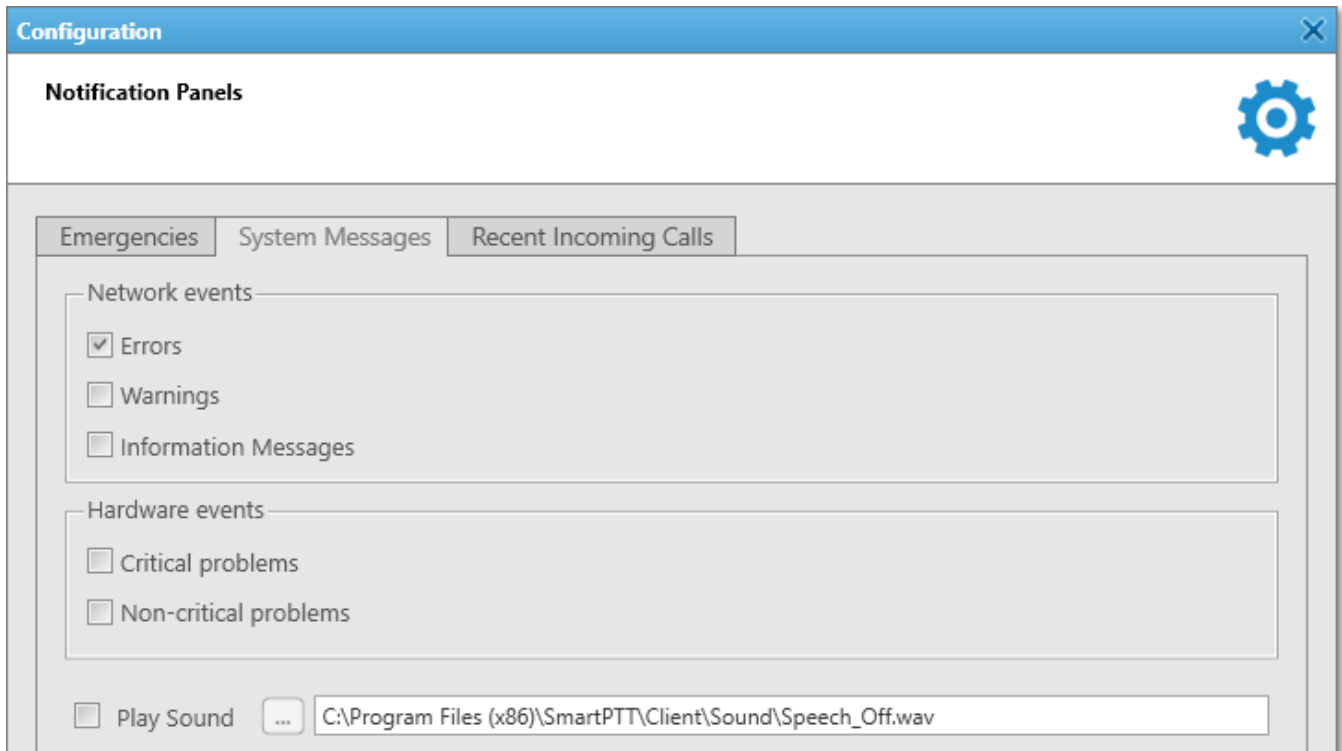
Network events area

Errors:

- Select to show error messages in the System messages panel.

- Clear to get error messages in separate windows instead of the **System messages** panel.
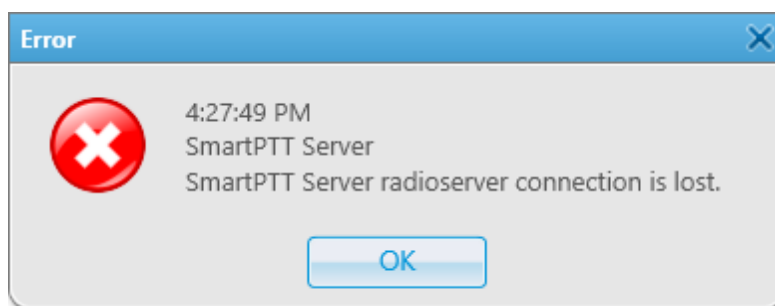
Warnings: Select to show warning messages in the **System messages** panel.

Information Messages: Select to show information messages in the **System messages** panel.

Hardware events area

NOTE

Hardware events processing works only if Monitoring is active.

Critical problems: Select to show errors in the System messages panel.

Non-critical problems: Select to show warnings in the **System messages** panel.

Play Sound File: Click **Browse** ⬚ to select the audio file, which should be played when system messages appears.

To save changes and close the window, click **Finish**. To cancel changes and close the window, click **Cancel**.

Recent Incoming Calls

You can configure recent calls processing.
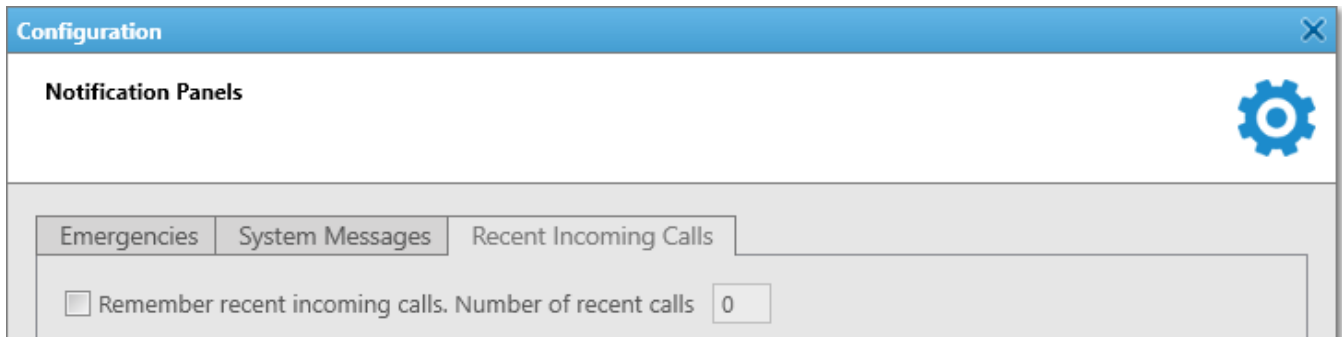
Remember recent incoming calls: Select to log recent incoming calls (see Recent Incoming Calls).

Number of recent calls: Enter the maximum number of recent incoming calls records.

2.2 Equipment

2.2.1 Control Devices

In the **Control Devices** window you can select and configure the control device to be used in SmartPTT Dispatcher. This can be a mouse, touchscreen, keyboard or other external input device.

To define the control device, in the **Main Menu** bar of the SmartPTT Dispatcher window, expand the **Settings** ⚙ menu and select **Equipment** → **Control Devices**. The following window appears:
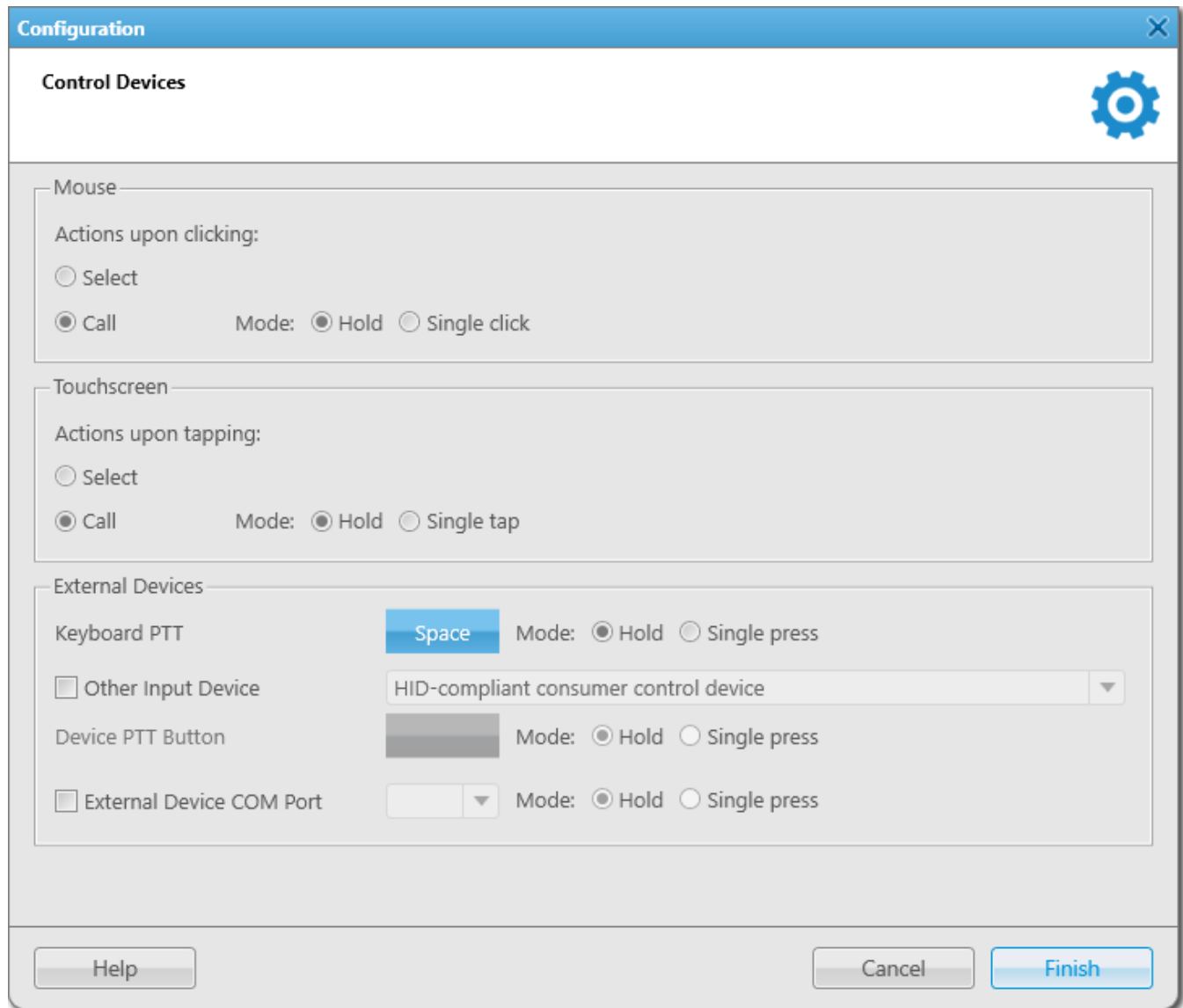
The window is divided into three group boxes, devoted to a mouse, a touchscreen, and to external devices.

Under **Mouse** and **Touchsreen** you can select the action that will be performed at clicking or tapping, and PTT mode. These settings will be applied to several panels: Radio Fleet, Radios, Call Windows, Custom Consoles, Emergencies. The Calls panel does not support these settings – single click is applied there.

The **External Devices** group box allows you to set up the following devices:

- Keyboard

- External input USB device

- External input device connected via COM port

To assign PTT to a keyboard button, click on the button `Space` next to **Keyboard PTT**, and press a keyboard button. The pressed button will appear. To define the PTT mode (i.e., pressing and release), select **Hold**, or **Single press**.

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 Device COM Port: COM port used to connect to the external PTT device.

There are two modes available for the PTT button on external devices: **Hold** and **Single press**.

To save changes, click **Finish**.

2.2.2 Sound

> **WARNING**
> For proper operation, make sure that you have a working microphone. If not, you will not be able to make or answer calls.
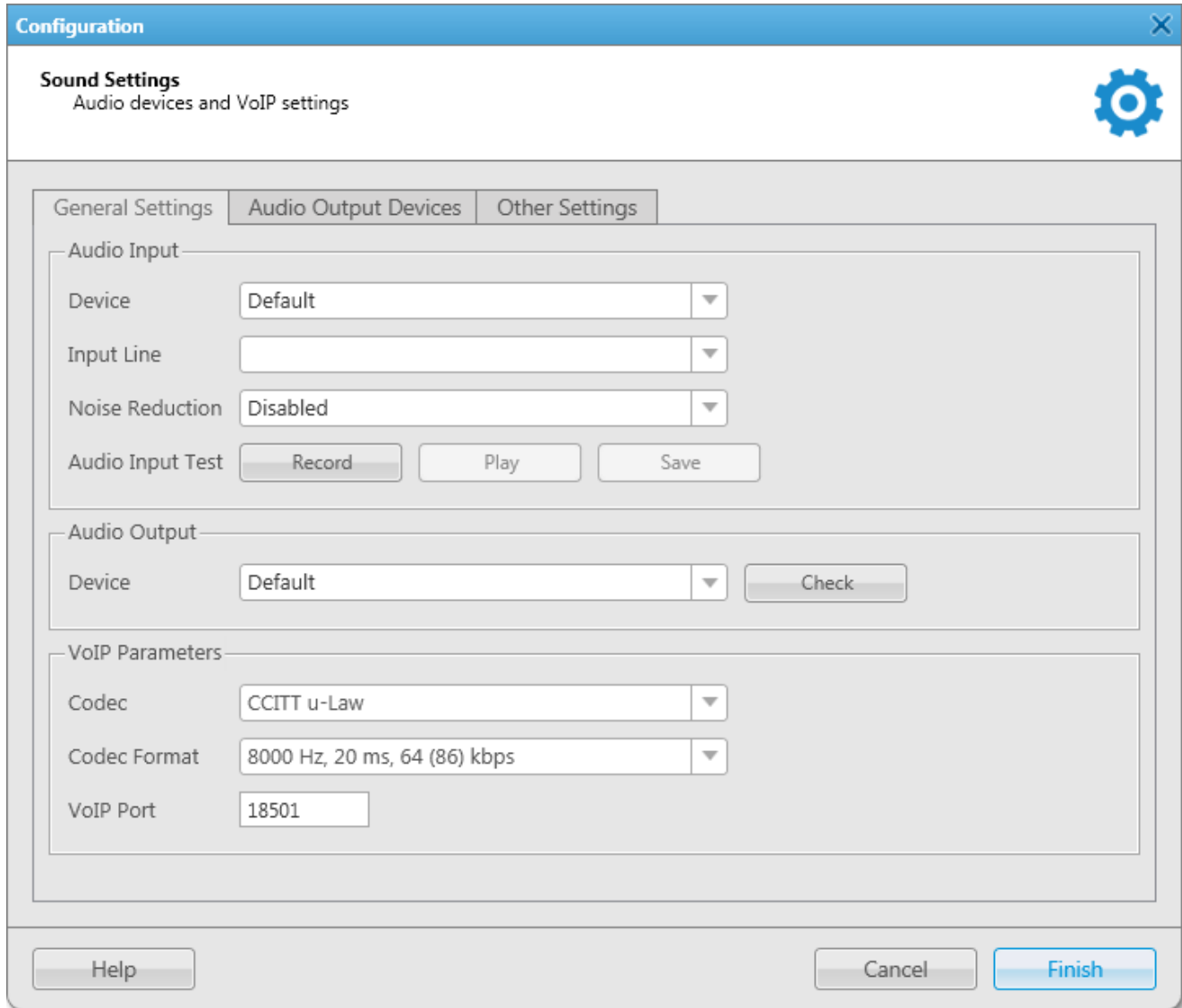
To set audio device settings and VoIP parameters, in the **Main Menu** bar of the SmartPTT Dispatcher window, expand the **Settings** ⚙ menu and select **Equipment** → **Sound Settings**. The configuration window opens.

The **Sound Settings** window includes:

- General Settings tab

- Audio Output Devices tab

- Other Settings tab

The **General Settings** tab:

Audio Input area:

Device: Audio device to which the microphone is connected. It is recommended to select the audio input device explicitly.

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 3 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 **Play**. You can also save the recording in MP3 format by clicking **Save**.

Audio Output area:

Device: Audio device to which headsets or speakers are connected. To check quality of the audio output device performance, click **Check**. You will hear a sound. To stop the sound, click **Stop**.

VoIP Parameters area:

Codec: Audio stream compression method.

Codec Format: Audio stream sampling frequency.

VoIP Port: Audio stream receive port.

Specifications of the codec format **8000 Hz, 20 ms, 64 (86) kbps**:

- **8000 Hz:** The sampling rate
- **20 ms:** The frame size
- **64 kbps:** The voice data bit rate
- **86 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 radios, talkgroups, slots, and other. For example, you can listen to radios on the headset, and the external dispatcher on the speakers. To do that, follow these steps:

1. Open the **Audio Output Devices** tab.
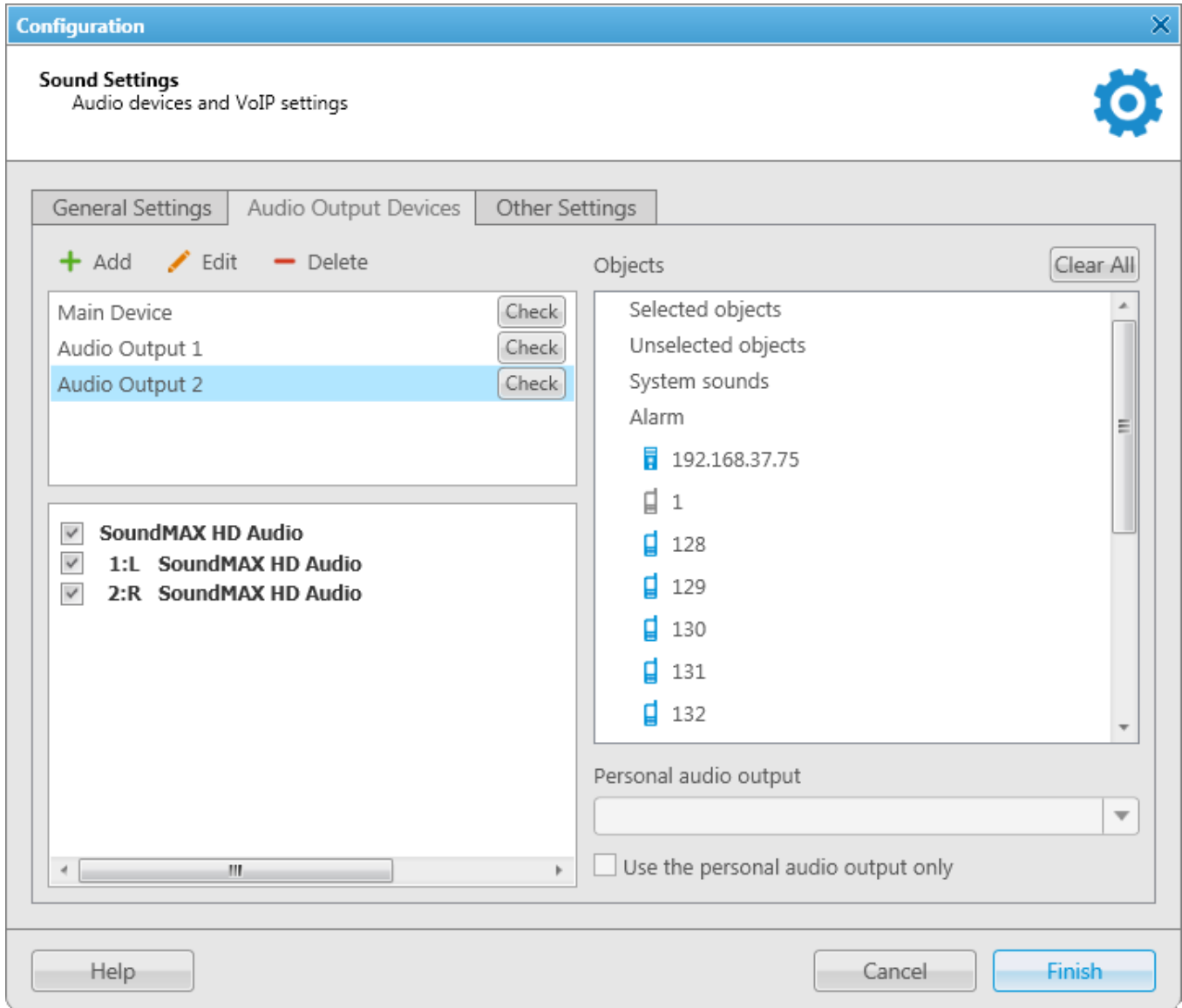
2. Add audio output devices in the first box on the left. These are not real output devices and are used only in dispatch console. To do that click **Add**. A new record will appear on the list. Change its name, if necessary, by clicking **Edit**, and then select it.
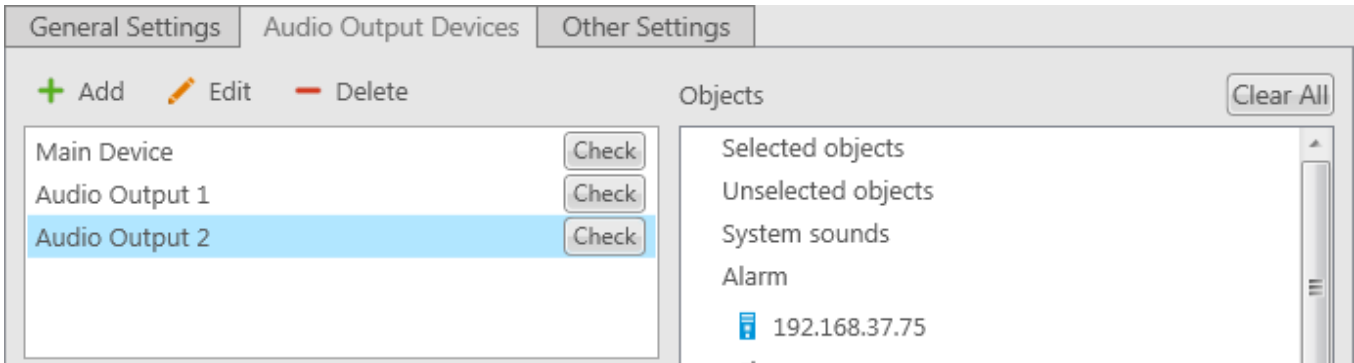
3. In the list below, select the real devices or device channels which will correspond to the added output device.
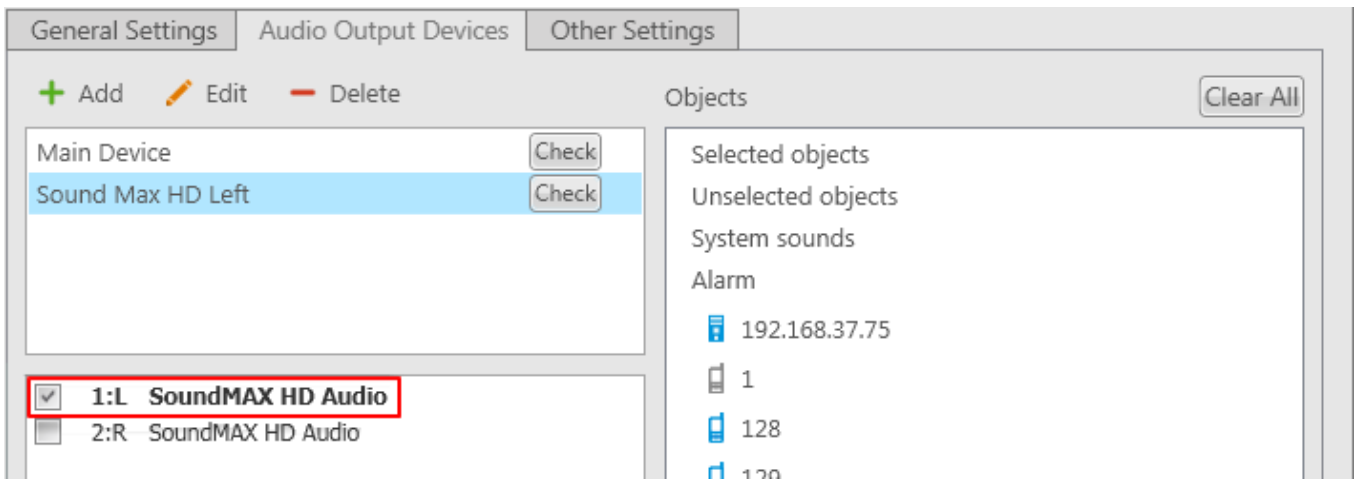
4. In the **Objects** list select the network object, for which you want to set up the new audio device or channel. And in the **Select Audio Output Device** list select the created output device. Thus, you assign the audio output device or channel to a network object.
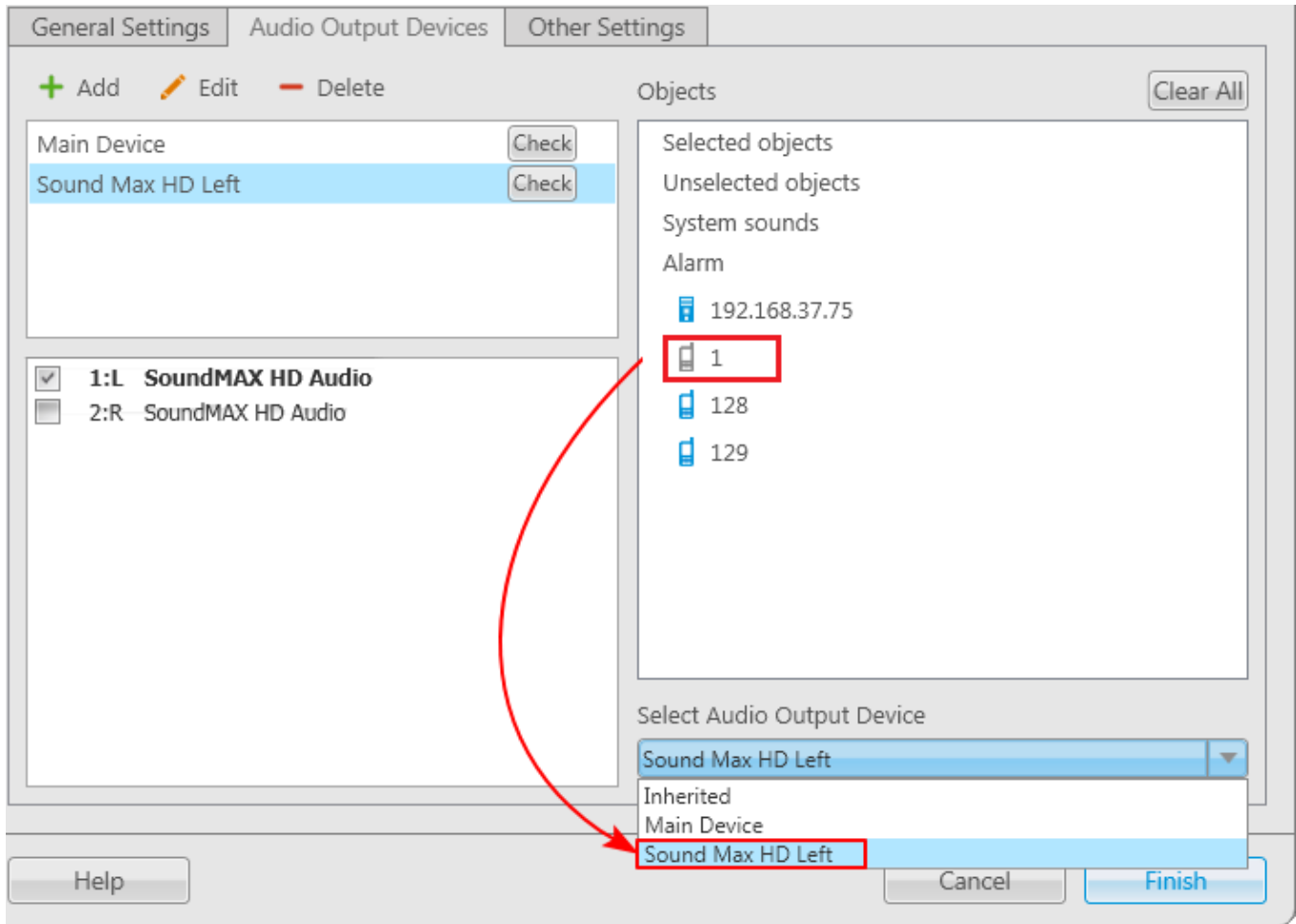
You can assign another device to an object in its **Action List** in the **Radio Fleet** panel.
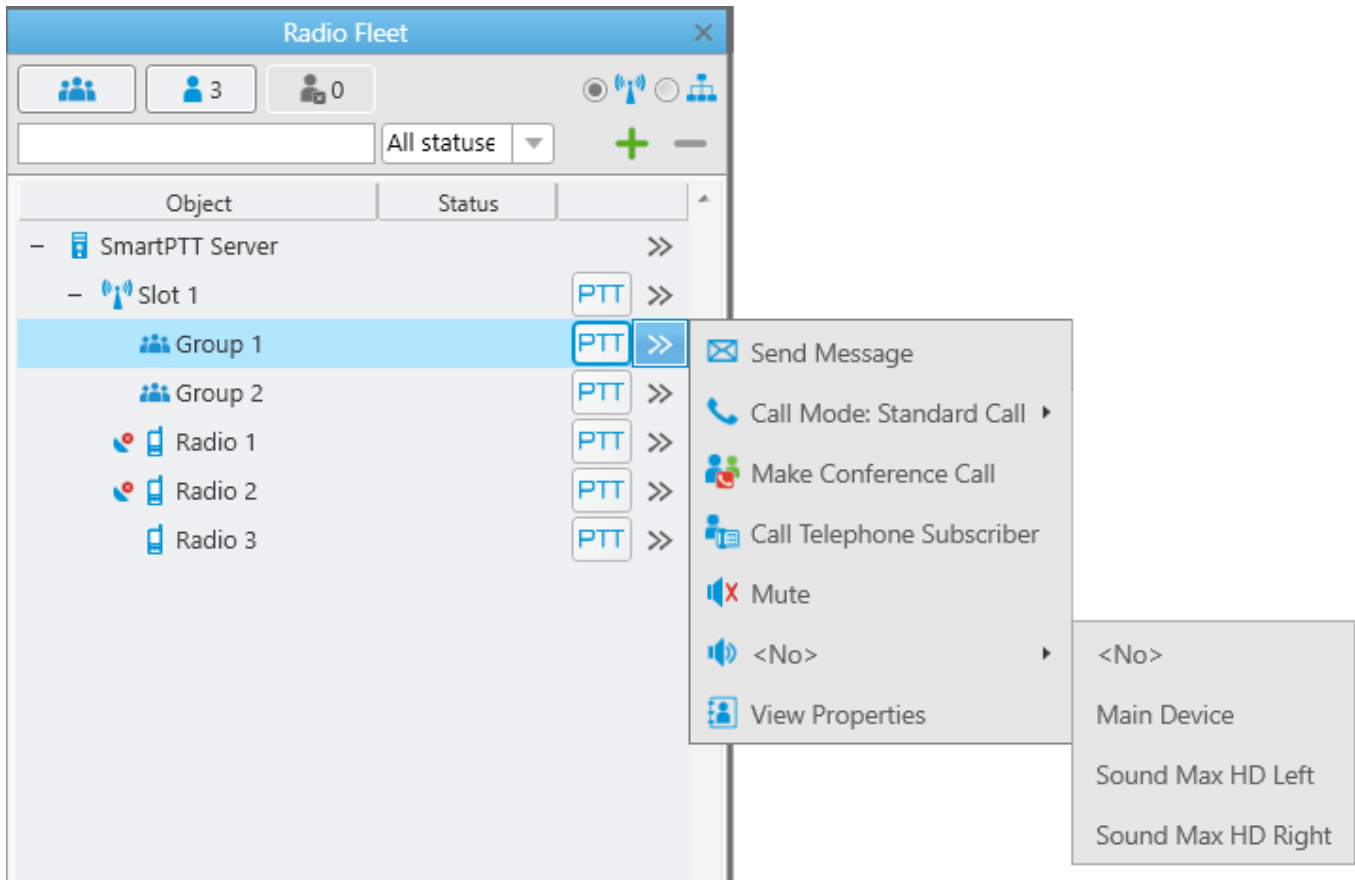
The **Objects** column also contains the following categories of objects that may use personal audio output:

Selected objects: Selected radio objects or radio objects with opened call window, including call windows of telephone calls, dispatchers calls and conferences. The volume of the selected objects is adjusted on the Sound panel.

Unselected objects: Unselected radio objects with inactive call windows. The volume of the selected objects is adjusted on the Sound panel.

System sounds: Outgoing call tone, play sounds alerts for incoming calls from dispatchers and telephone subscribers, play sounds when the rule is triggered, record from the event log, sound of the system message, call alert. The volume of the system sounds is adjusted on the Sound panel.

Alarm: Emergency sound and voice of emergency call. The volume of emergency sound cannot be adjusted and muted. The volume of voice of emergency call can be adjusted in the Properties

window of a slot in the **Common** tab (it is also possible to mute the volume of a slot and/or talkgroup).

Selected objects, **Unselected objects** and **System sounds** always have the Main Device audio output assigned by default. The **Alarm** object does not have any audio output device assigned by default.

> **NOTE**
>
> If the **Alarm** object does not have any assigned audio output device, in a case of alarm situation sound of the **Alarm** object will be played back on the audio device of either the selected objects or unselected objects (it depends on whether the object which sends the alarm signal is selected or not).

Thus, sound of the radio fleet object can be played back on the following audio devices:

- Audio device assigned to **Selected objects**, if the object is selected

- Audio device assigned to **Unselected objects**, if the object is unselected

- Personal audio device assigned to the particular radio fleet object

- Parent audio device, i.e. the audio device assigned to a parent object

- Audio device assigned to the **Alarm** object, if there is an alarm signal (emergency sound, voice of emergency call)

If the **Use the personal audio output only** check box is selected, the assigned audio output will be used only by this object independently of any conditions. The **Use the personal audio output only** option disables audio playback of the given object on the audio devices assigned to parent object and **Selected objects/Unselected objects**.
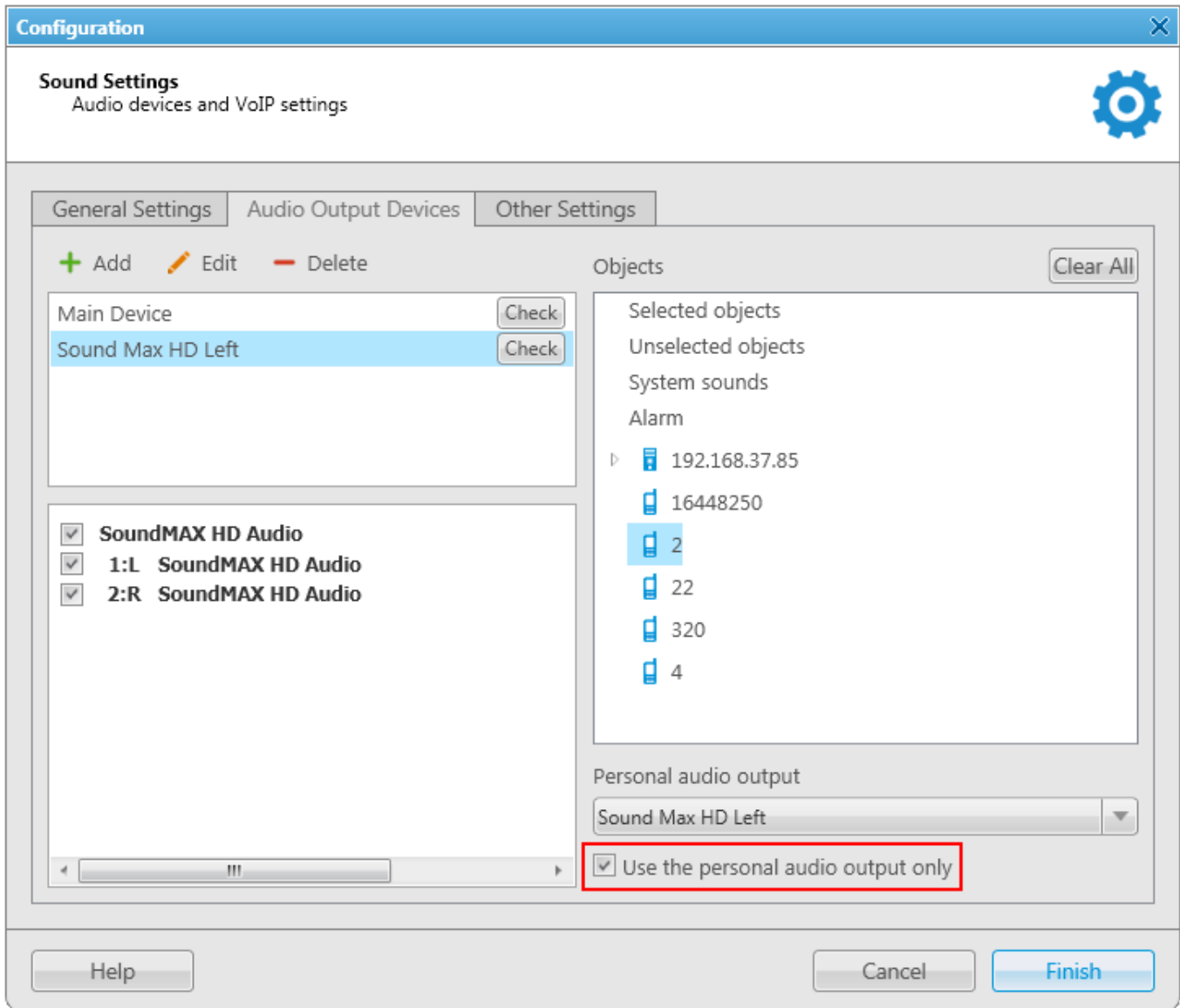
To reset all settings of audio output devices, click **Clear All**.

The **Other Settings** tab allows the operator to improve receiving and transmitting the sound:
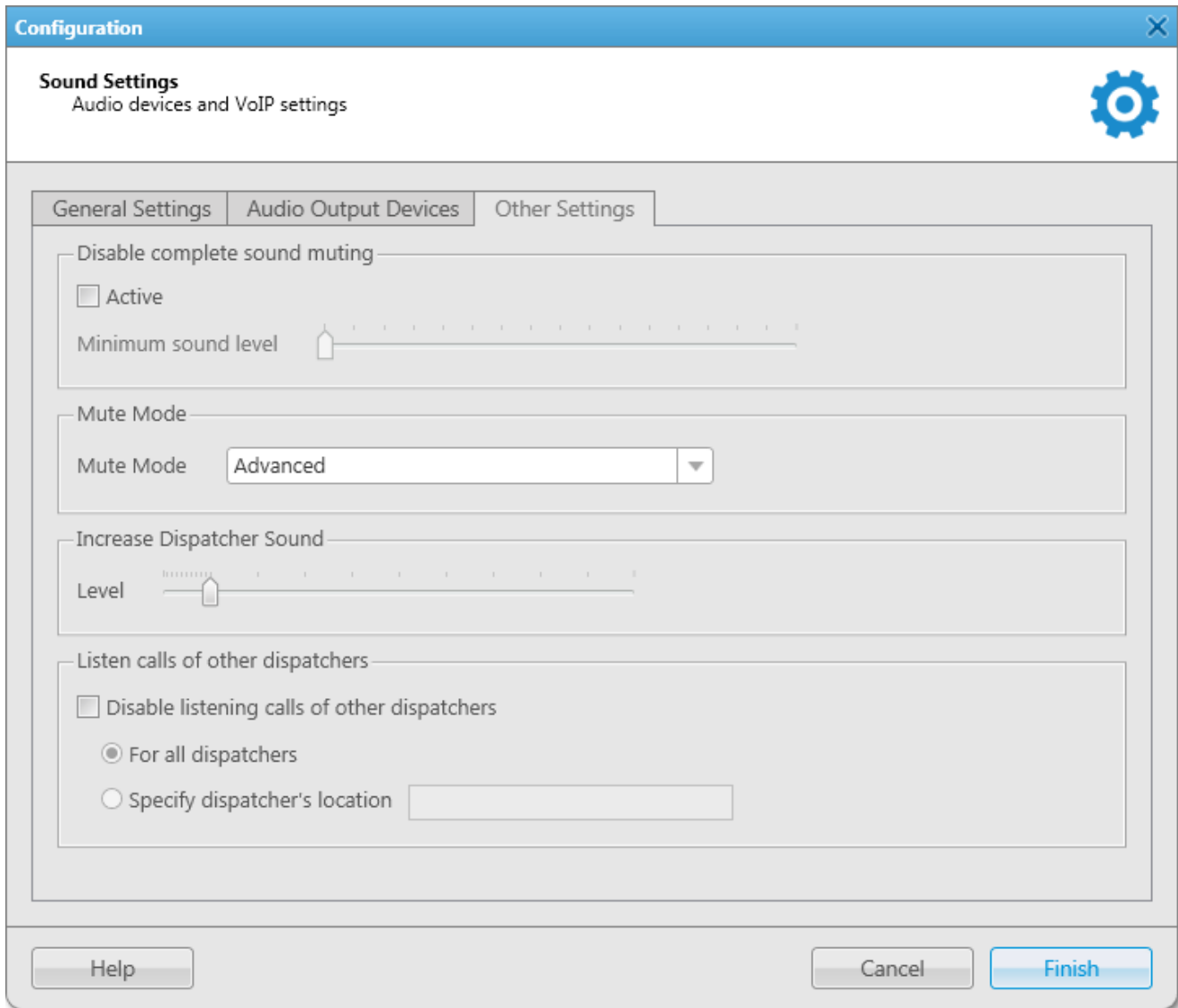
Disable complete sound muting: Allows/denies muting in SmartPTT Dispatcher. The minimal sound level is 10% (left position of the slider control) and the maximum is 90%. This setting effects only on SmartPTT Dispatcher and depends on the sound level in your operating system

Mute Mode: Provides options for the muted station (setting **Mute** 🔇 is active in the action list for the control station):

- In Basic mode all sounds from this control station will be muted.

- In Advanced mode muting will not be applied for incoming private calls, dispatcher-initiated calls and dispatcher-answered calls.

Increase Dispatcher Sound: Allows/denies amplifying the voice of the dispatcher on a radio. It can be adjusted by the slider control.

Listen calls of other dispatchers: Allows muting other dispatchers:

- Disable listening calls of other dispatchers activates/deactivates muting other dispatchers

- For all dispatchers mutes voices of all dispatchers connected to radioserver

- Specify dispatcher's location mutes dispatchers who entered the same location name into the text field. Location is to be one-line text containing up to 50 symbols including unprintable signs

2.2.3 Hot Keys

SmartPTT Dispatcher implements the ability to make a call to radios, WAVE users, 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 the Capacity Max systems dispatcher can also decline the incoming call or end the call during the hang time by pressing the corresponding hot key.

In order to set up hot keys for radio objects, in the **Main Menu** bar of the SmartPTT Dispatcher window, expand the **Settings** ⚙ menu and select **Equipment** → **Hot Keys**.
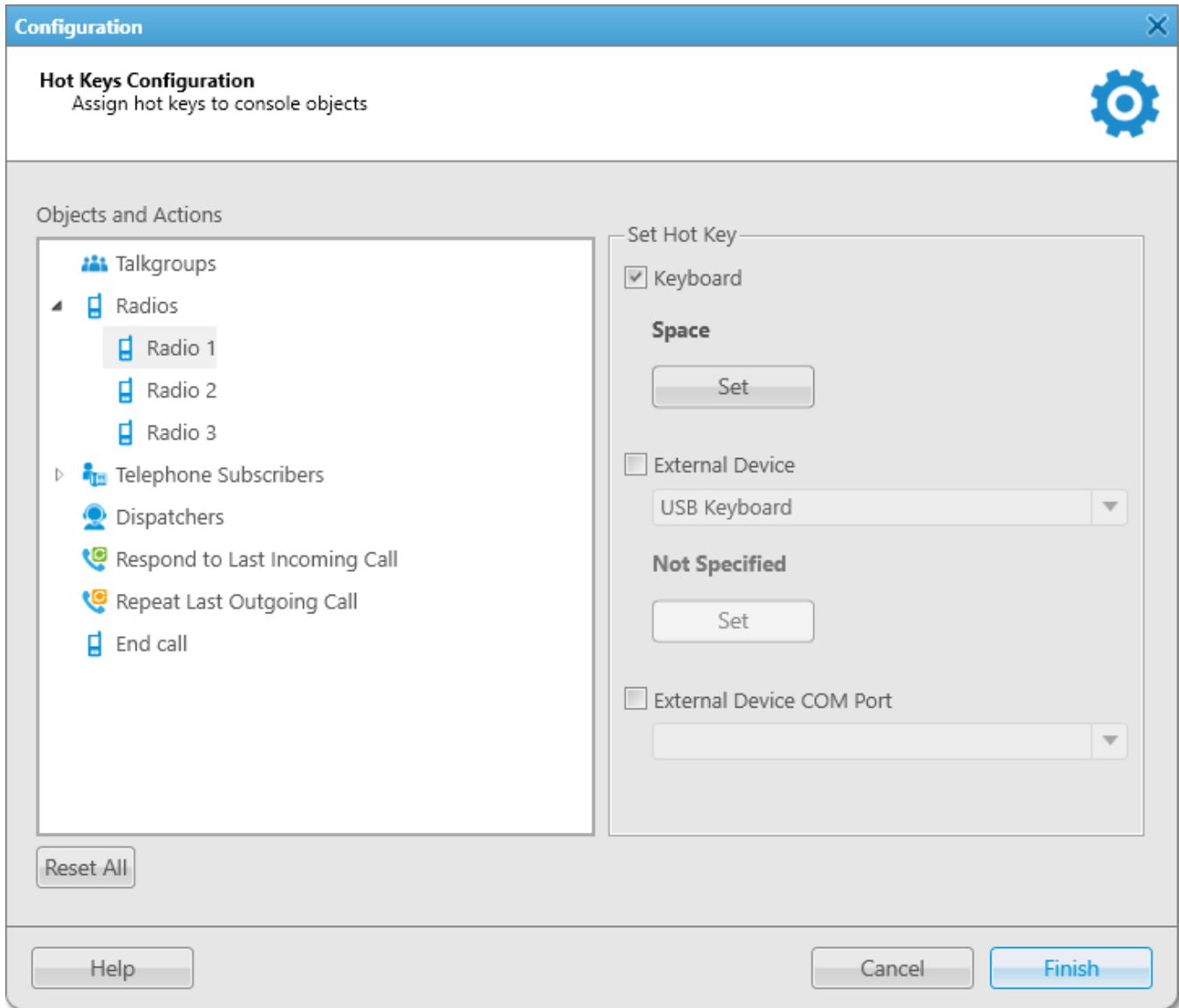
The window contains a list of radio objects available for the hot key assignment – radios, [WAVE users](#), talkgroups, telephone subscribers, external dispatchers, last called and last active objects. To assign a hot key to the object, select it from the list, then select the hot key type.

Keyboard: Select the field to assign to the object 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.
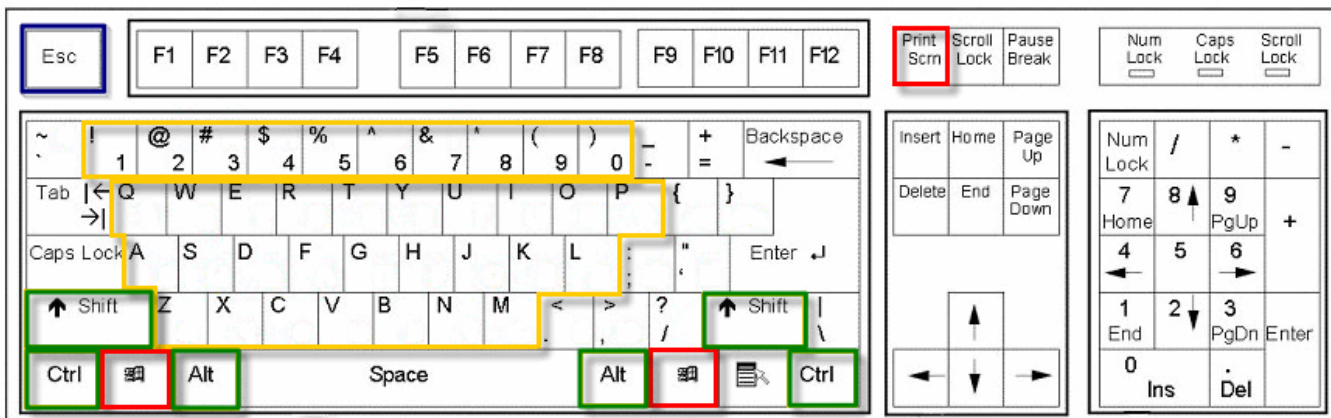
- The keyboard keys marked red cannot be used as hot keys separately or in combination.

- 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.

- The Esc key can be used only in combination with Shift (Shift+Esc).

- 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 two work modes: holding and single press. The active mode is defined in Control Devices.

External Device: Select the field to assign to the object 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 object 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 object, disable the appropriate check box. To reset the assigned hot keys for all objects, 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:
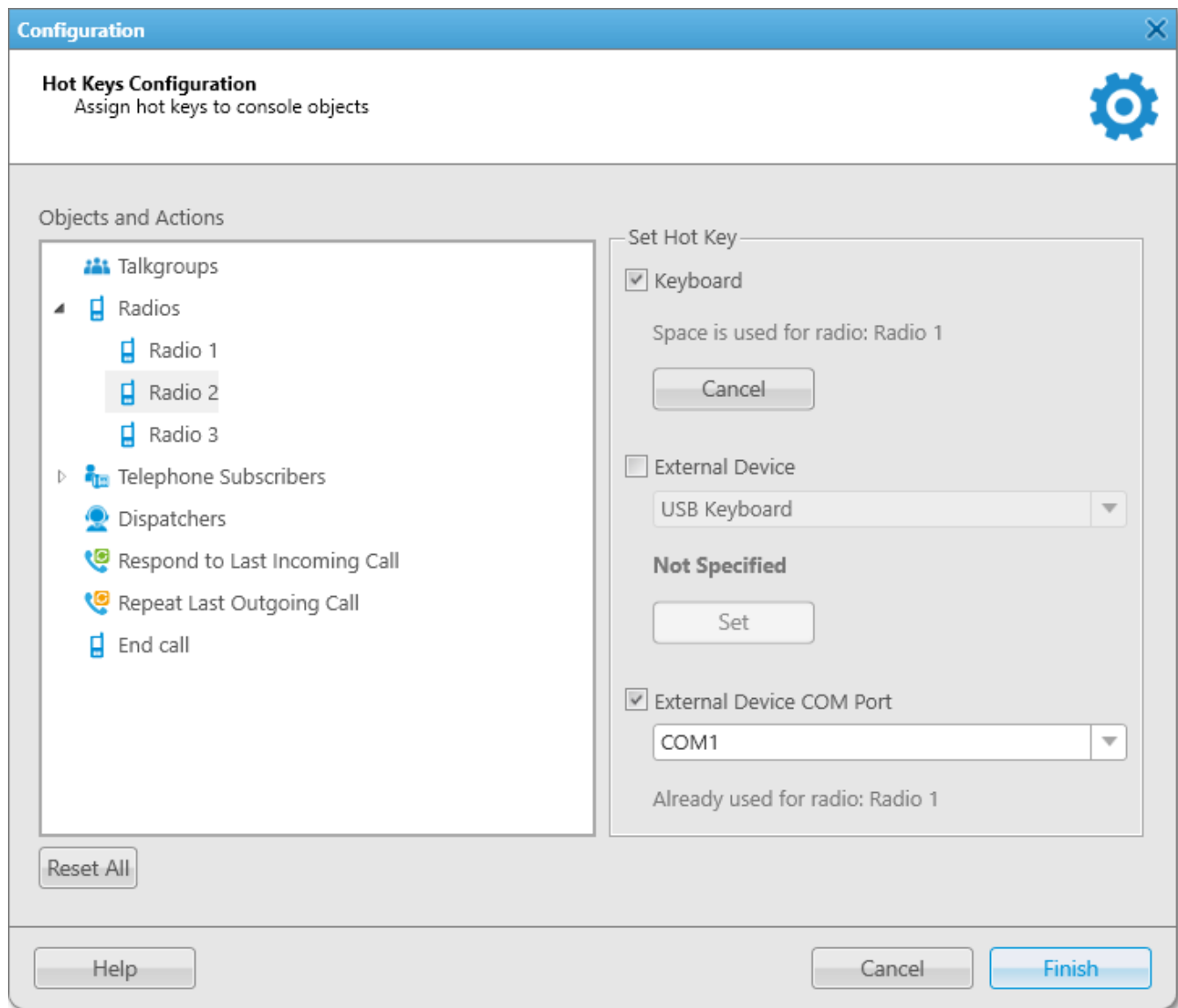
A keyboard key or a key of the external input device which is already in use as the **PTT** button for a current object cannot be used as a PTT button for the selected object.

> **NOTE**
>
> The **PTT** button used for a call to a current object means that you use this button to call any object of SmartPTT Dispatcher.
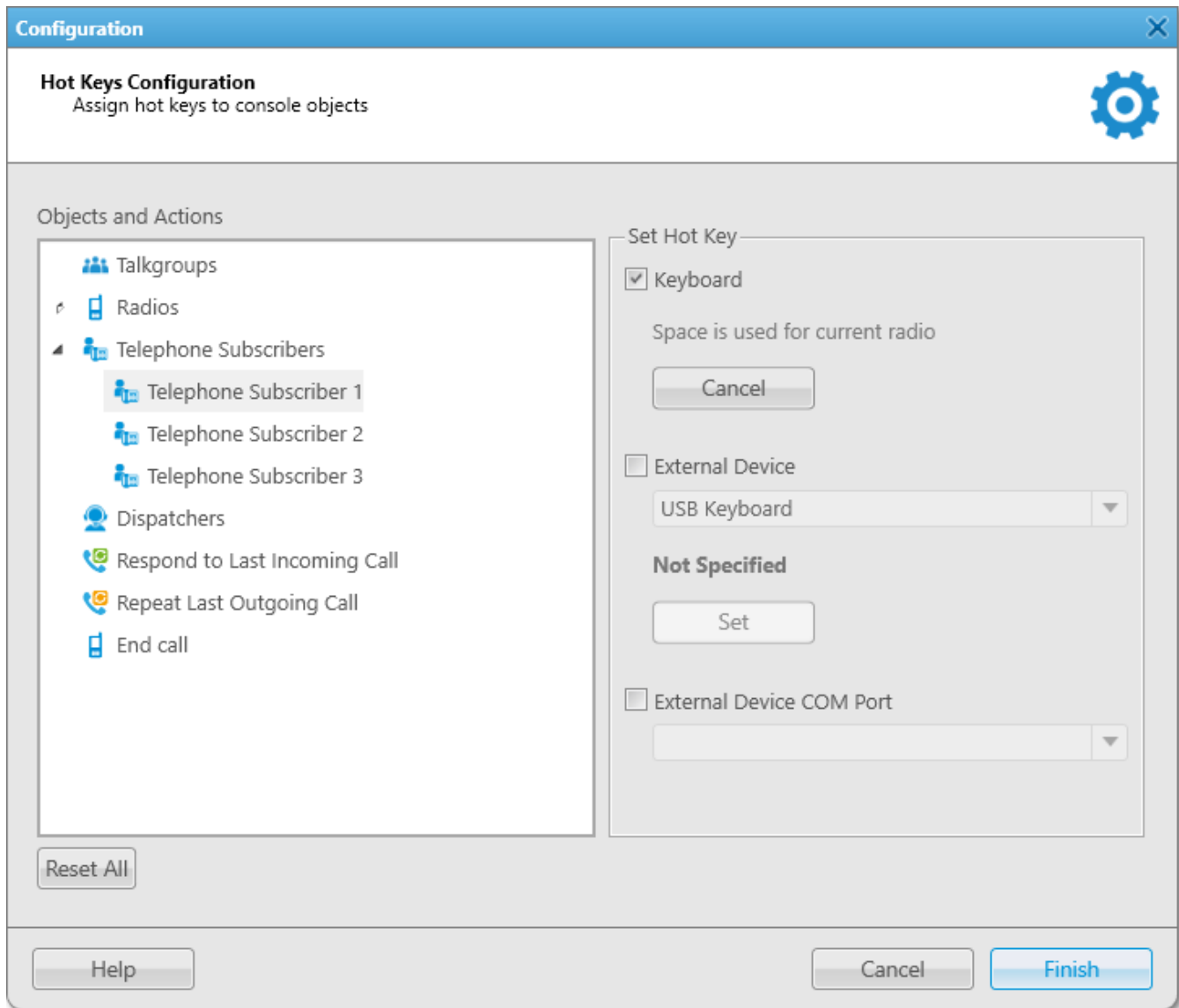
> **NOTE**
>
> If the hot key that you set matches the **PTT** button for the current object, the hot key settings will be discarded.

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

2.2.4 Tipro Console

SmartPTT system supports third-party equipment, for example, Tipro modular console with BeFREE touchcomputer or without it.

To make the console work with SmartPTT system, follow these steps:

1. For Tipro modular console with BeFREE touchcomputer, install additional applications: 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. In the **Main Menu** bar of the SmartPTT Dispatcher window, expand the **Settings** ⚙ menu and select **Equipment** → **Tipro Console**. In the opened window, select **Enable**.
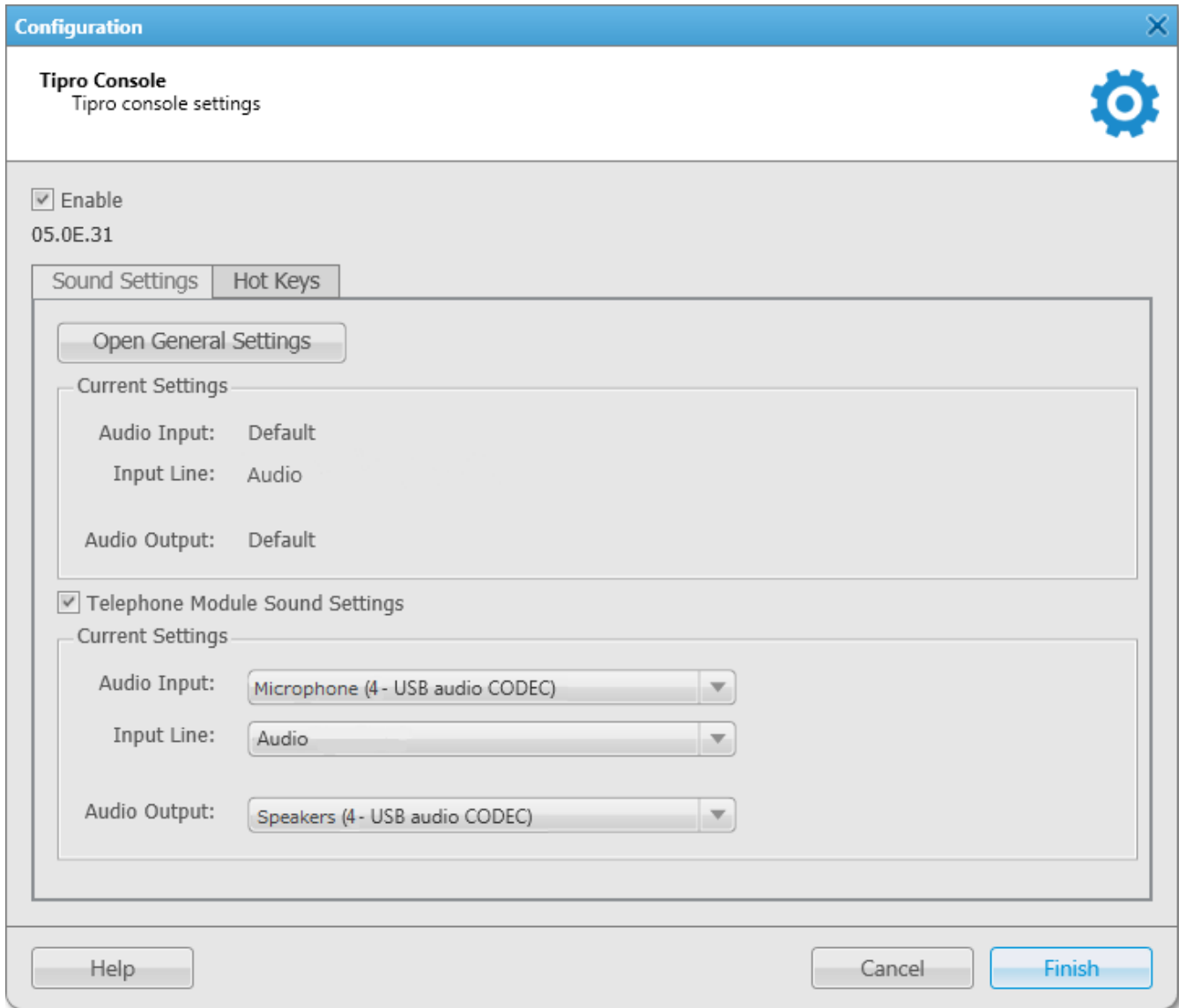
The version of the main Tipro module appears, and the settings become enabled. If device can't be found, the settings are disabled.

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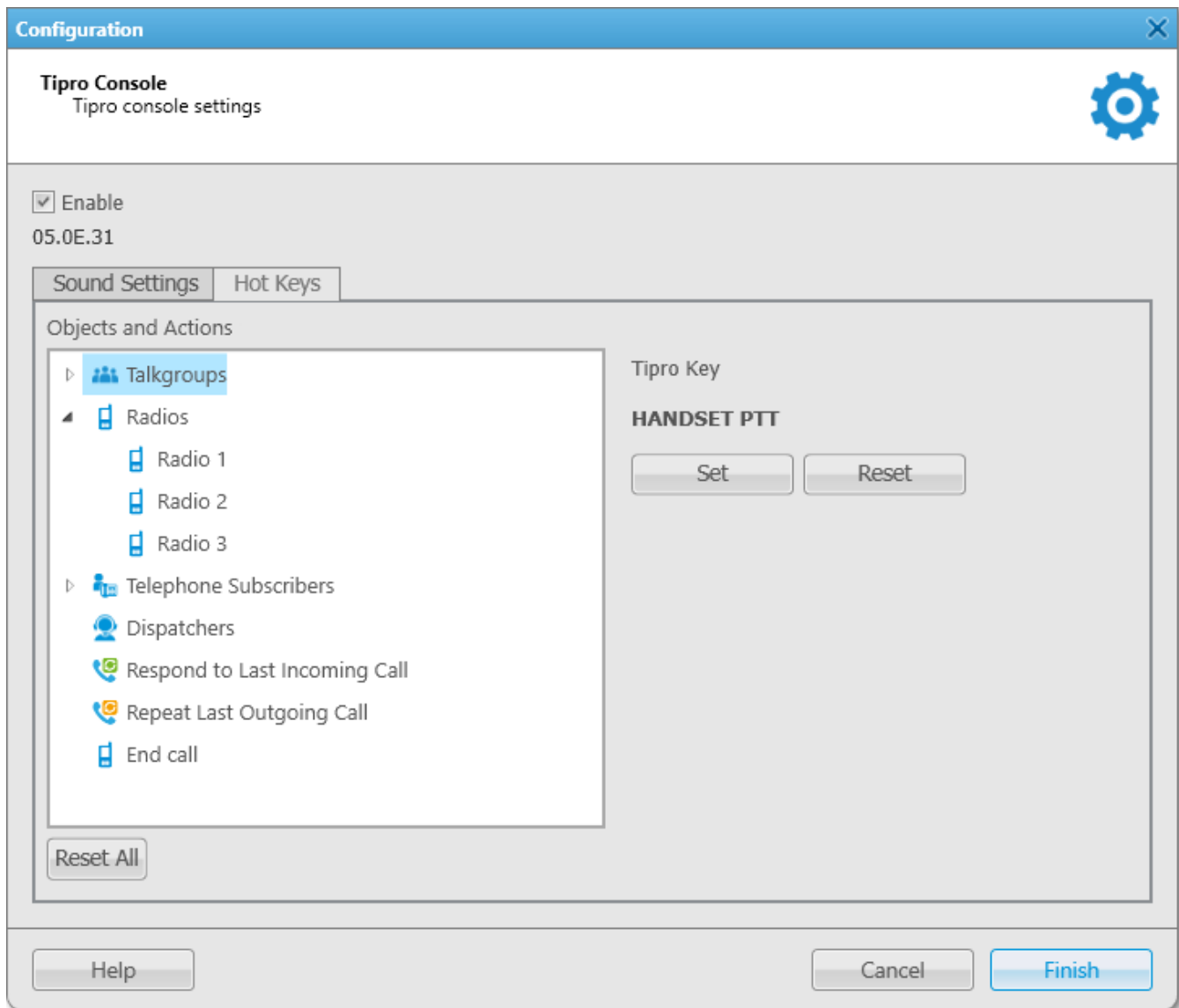
5. In the **Subscribers and Actions** box select the radio, talkgroup, dispatcher or action, to which you want to assign a Tipro key. Then click on **Set** and press the required Tipro key. To save changes, click on **Finish**. To get back to previous settings, click **Cancel**.

Reset All: Removes all assigned hot keys.

2.3 Telephone Interconnect

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 radios.

NOTE

The SmartPTT Dispatcher is able not only to hear the conversation between a telephone and a radio but also participate in it.

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

The connection scheme:
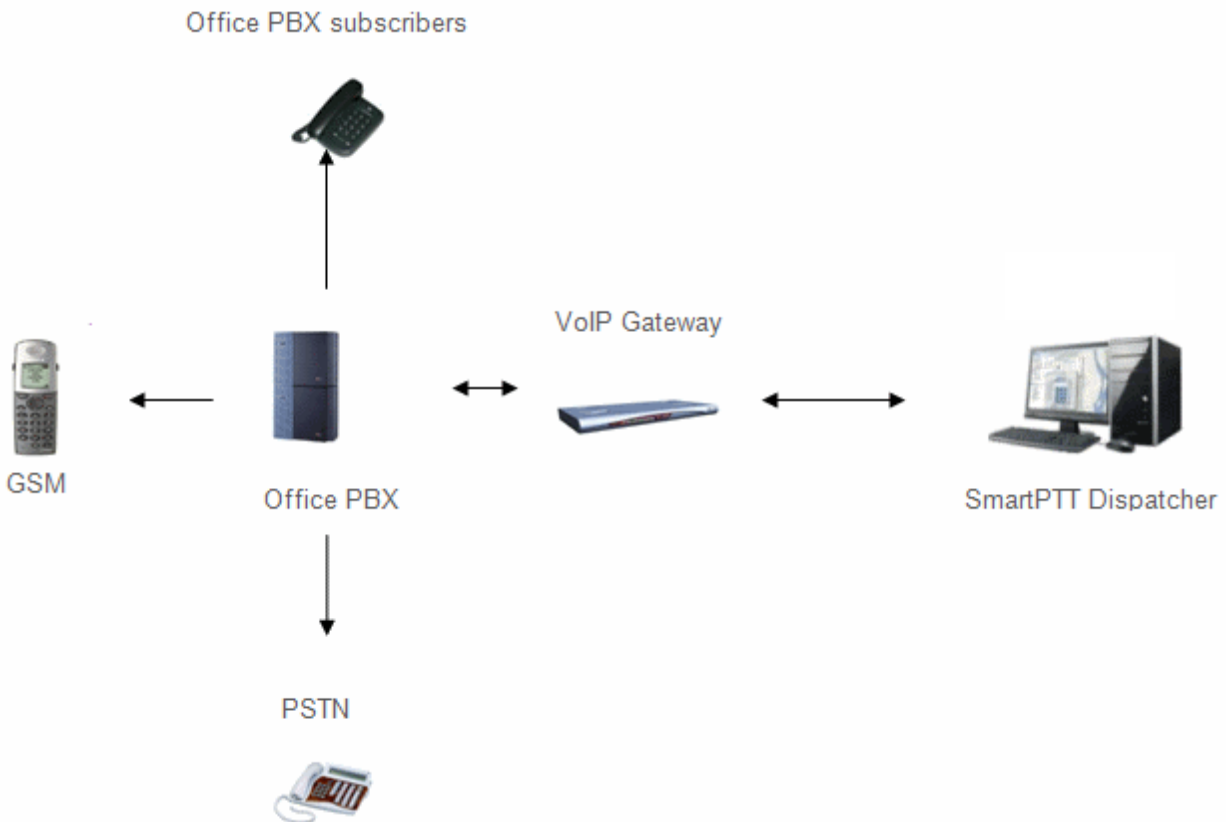
A VoIP gateway is a device which bridge conventional telephone networks and equipment to VoIP telephone networks.

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.

- 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.

- 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.

- 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.

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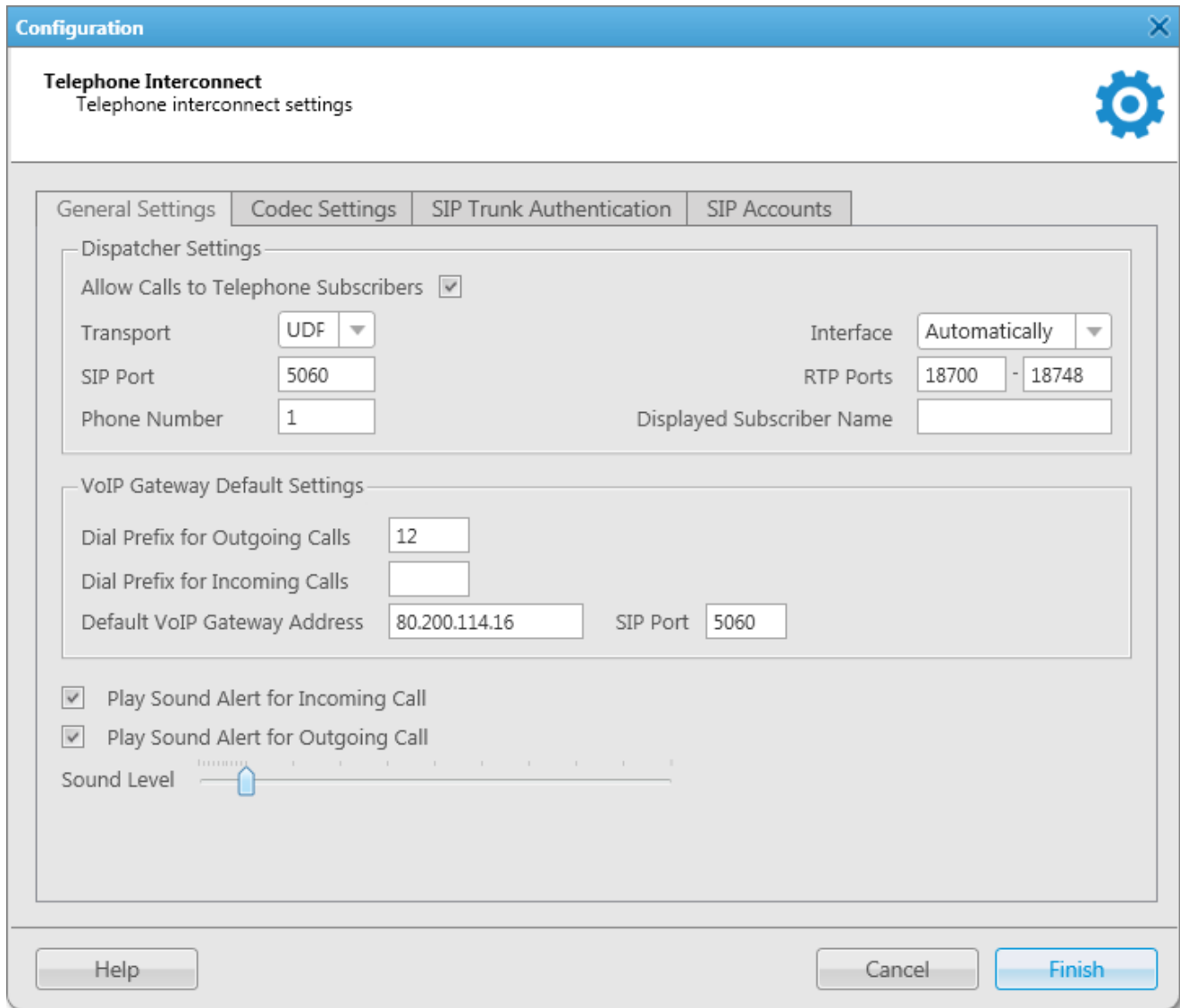
There are two SIP connection types – SIP trunking and using a SIP account.

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.

2.3.1 Telephone Interconnect

To configure connection parameters with telephone subscribers, in the **Main Menu** bar of the SmartPTT Dispatcher window, expand the **Settings** ⚙ menu and select **Telephone Interconnect** → **Telephone Interconnect**.

The **Telephone Interconnect** window includes:

- General settings

- Codec settings

- SIP Trunk Authentication
- SIP accounts

General Settings Tab

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

Dispatcher Settings Area

Allow Calls to Telephone Subscribers: Select the check box to be able to make and receive calls between SmartPTT Dispatcher and telephone subscribers.

> **NOTE**
>
> If the check box 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 from 18700 to 18748.

> **WARNING**
>
> If both SmartPTT Dispatcher and SmartPTT Radioserver are installed on one computer, the port range set in the **RTP Ports** field in SmartPTT Dispatcher 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).

VoIP Gateway Default Settings Area

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 check box to enable ringing at the SmartPTT Dispatcher application when a telephone subscriber calls.

Play Sound Alert for Outgoing Call: Select the check box to enable ringing at the SmartPTT Dispatcher application when making a call to a telephone subscriber.

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

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
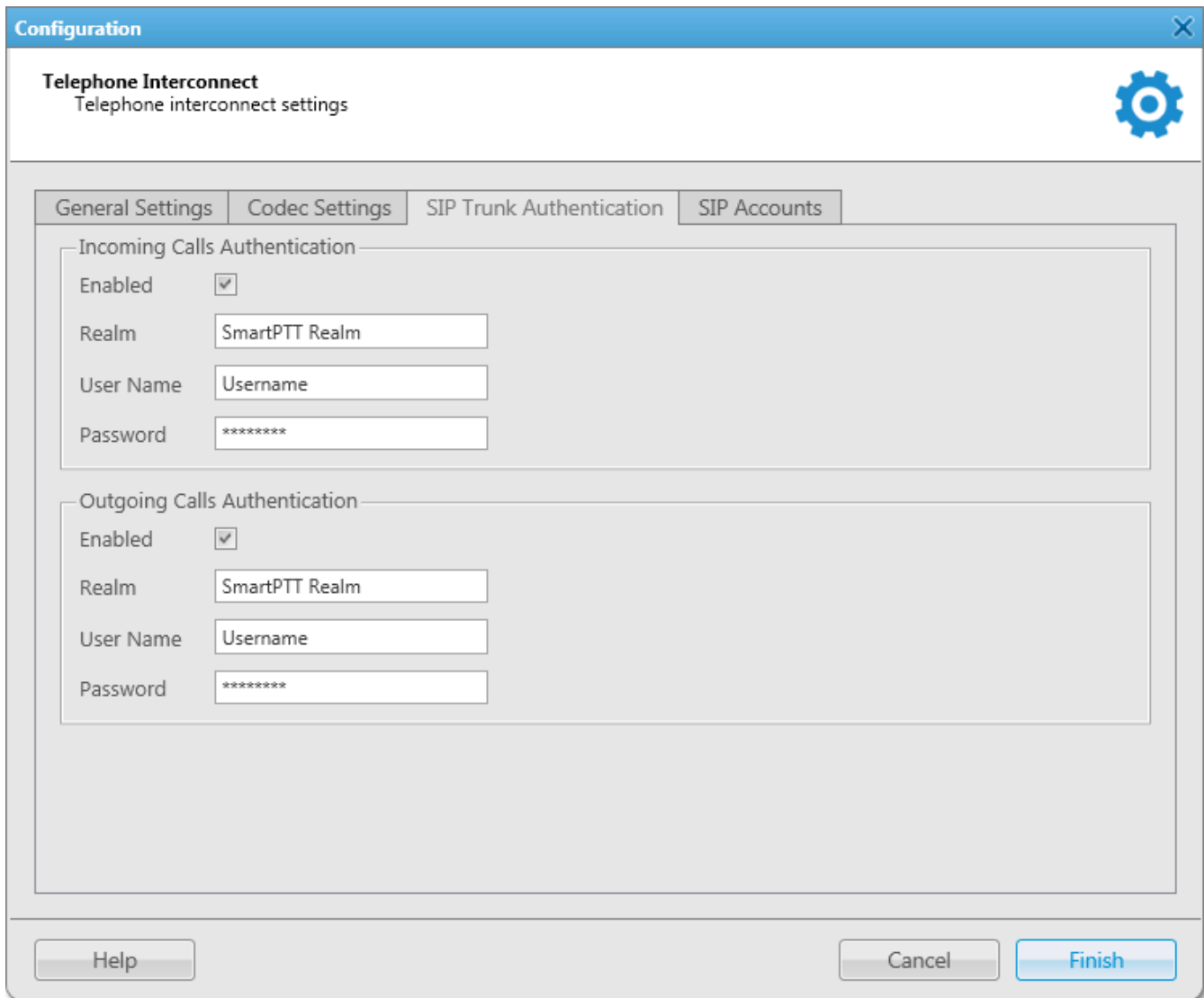
on the VoIP gateway must generate the correct destination address *sip:1@192.168.0.105:5060* (the **Displayed Telephone Number** value must be set as the SmartPTT Dispatcher identifier) and the sender's correct address *sip:1140@192.168.0.243:5060* (a dial prefix for incoming addresses is not set so the name in the sender's address is the same as the phone number).

Codec Settings

In the **Codec Settings** tab you can enable or disable supported audio codecs, as well as change their priorities. Currently, there are 4 audio codecs: G711A, G711Q, SPEEX and G729.

SIP Trunking Authentication

The **Telephone Interconnect** 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** check box.

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 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.

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.
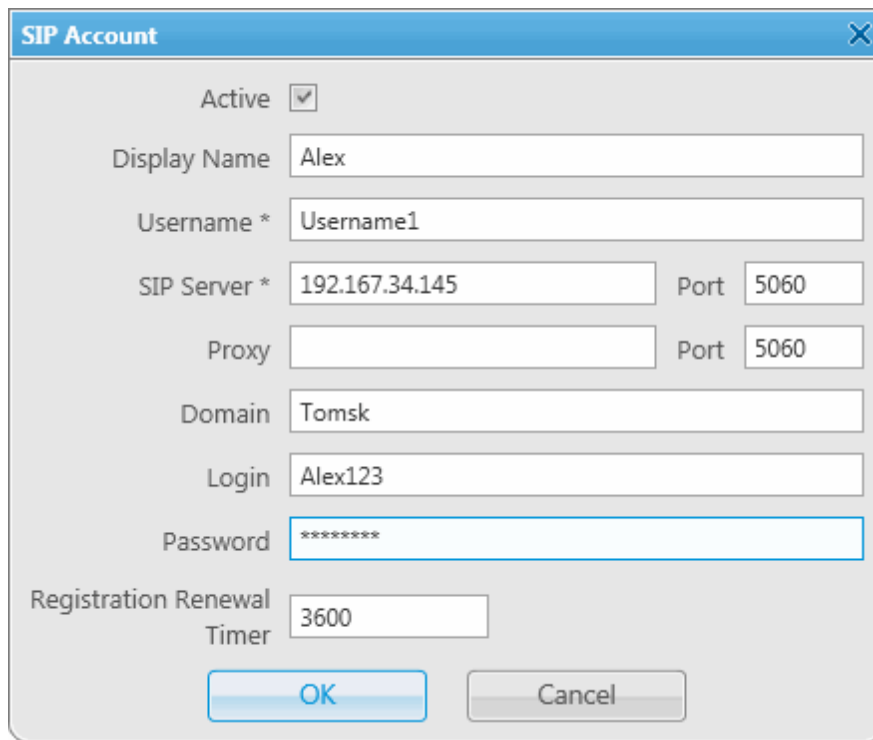
SIP server stores current IP addresses relevant to the SIP accounts of *Client 1* and *Client 2*. Therefore, *Client 1* is not required to know current IP address of *Client 2* to make a call. *Client 1* refers to the SIP server under its account and requests connection with *Client 2* pointing out its 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**. The following window appears:

Active: Select this check box 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 the SIP server account authentication.

Login: Login for the 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.

Example

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, follow these steps:

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*.

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.

Add the new subscribers in the **Telephone Subscriber** window. Fill in the **Subscriber** field.
Click **Full Address** (**Automatic** can also be selected 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.

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).

5.   To apply settings, click **Finish** in the **Telephone Settings** and in the **Telephone
     Interconnect** windows.

2.3.2 Telephone Subscribers

To view the list of registered telephone subscribers, in the **Main Menu** bar of the SmartPTT Dispatcher window, expand the **Settings** ⚙ menu and select **Telephone Interconnect** → **Telephone Subscribers**. The list includes all telephone subscribers that support SIP connection. You can modify and delete existing subscribers, or add new subscribers.
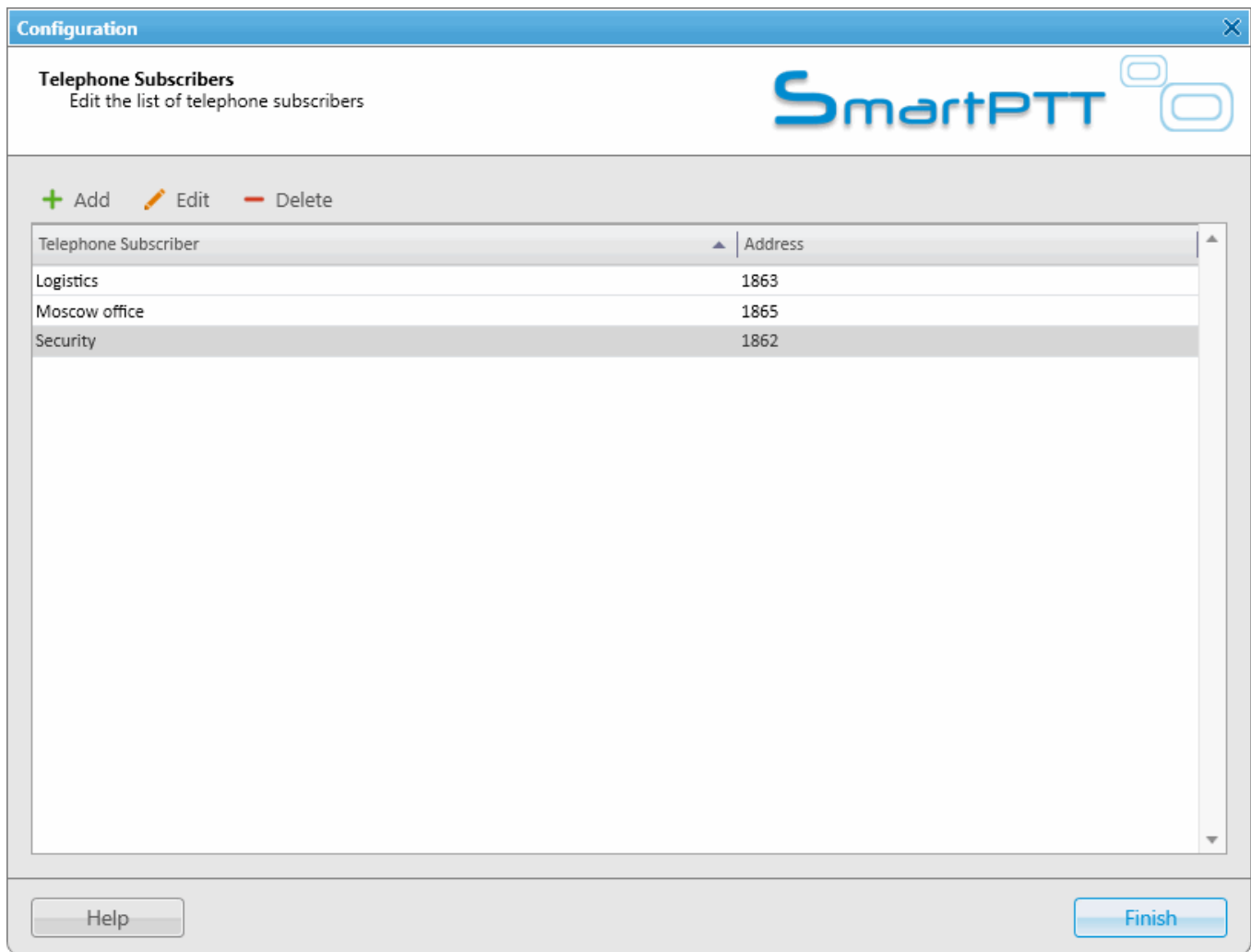
NOTE

SIP connection can be established also with telephone subscribers not added to the list. To make an outgoing call, you can use a dial pad.

To add a telephone subscriber to the list of subscribers, click **Add**. The following window appears:

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** check box 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.

Sound for Incoming Call Alert: The path to the sound file which will play in the dispatch console when this telephone subscriber calls.

Click **OK** to save the changes.

As soon as you have added a new telephone subscriber, it appears in the **Telephone Subscribers** window. Please remember that the **Allow Calls to Telephone Subscribers** check box in the Telephone Interconnect window must be selected.

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

How to Call a Telephone Subscriber

To call the telephone subscriber from the dispatch console, in the SmartPTT Dispatcher click the **Telephone subscribers** button.
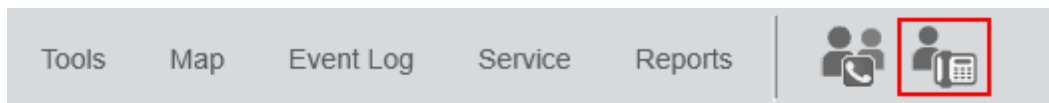
The following window appears:
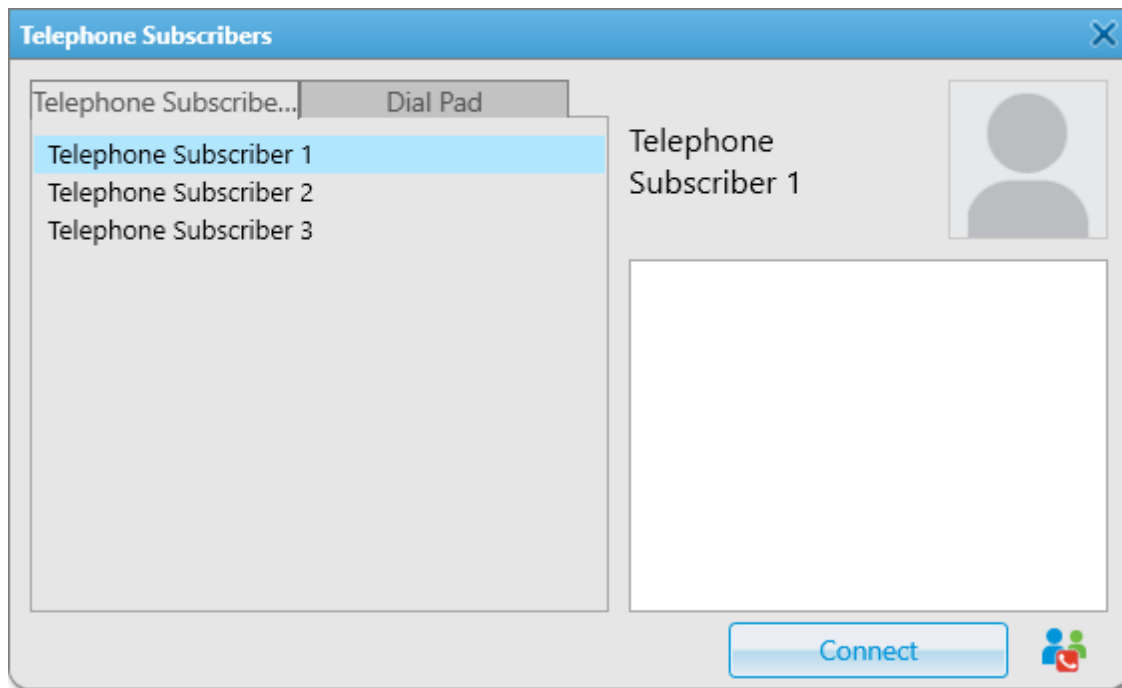
To call the telephone subscriber, select it from the list and click **Connect**. In the **Telephone subscribers** tab you can see not only added telephone subscribers, but also unregistered telephone subscribers (their numbers are in *italics*), and three latest calls (at the top of the list).

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

To make a call to a telephone subscriber which is not on the list, go to the **Dial Pad** tab. You can dial the telephone number or enter it in the input field above the dial pad.
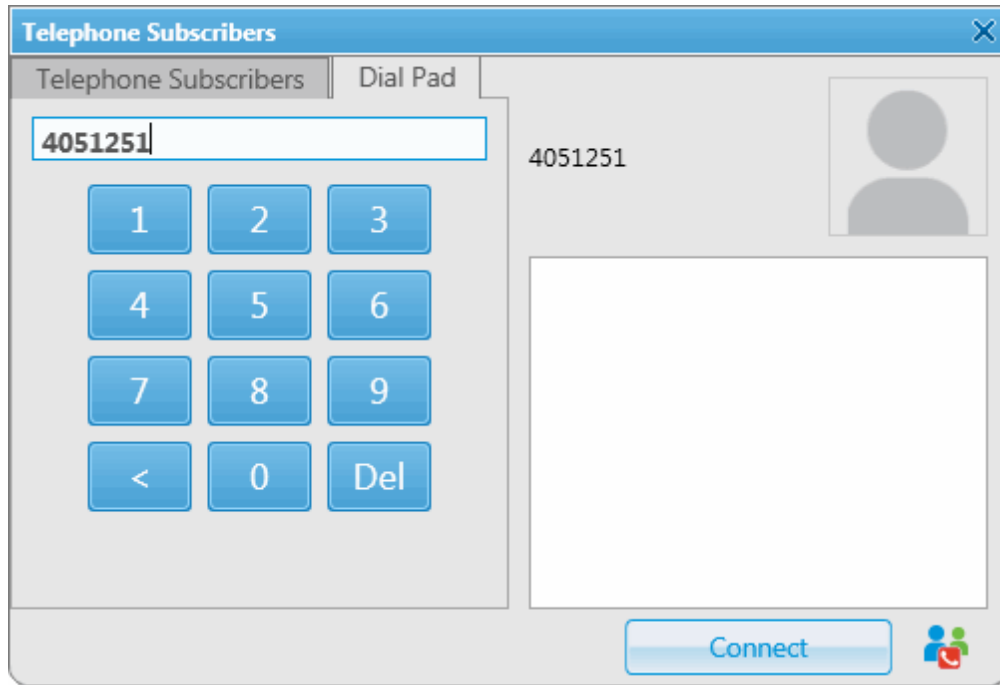
If you need to dial an extension to reach a telephone subscriber, do the following:

1. Dial the phone number after which you will need to add the extension. Then, you will see a new tab **Extension Dialing**.
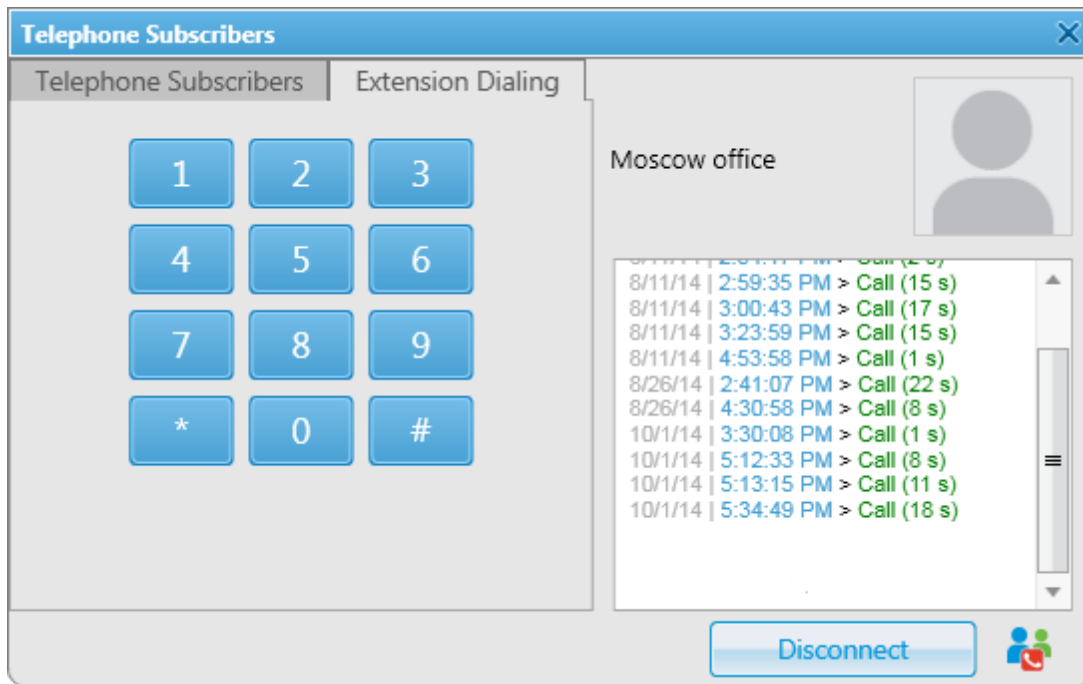
2.   In this tab, dial * to turn on DTMF mode (not obligatory, depends on the telephone parameters).

3.   Dial the extension number and then #.

If the incoming call is made by a telephone subscriber, who is not on the list, you can add the subscriber by clicking on the **Add** button, which will appear.

To connect a radio or a talkgroup to a telephone subscriber, open the **Call Window** of the radio or the talkgroup and click the **Call Telephone Subscriber** button.
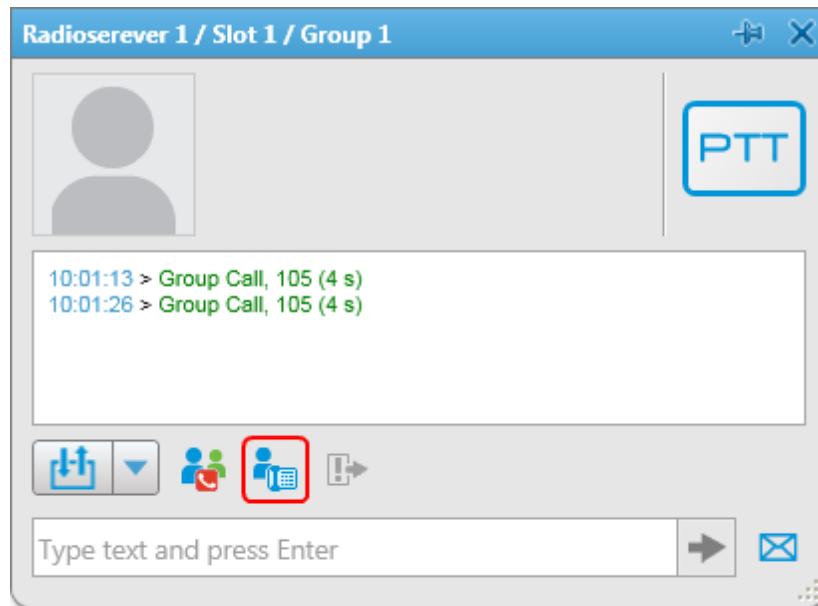
You can also use **Action List**, where you can select **Call Telephone Subscriber**. The following window appears:
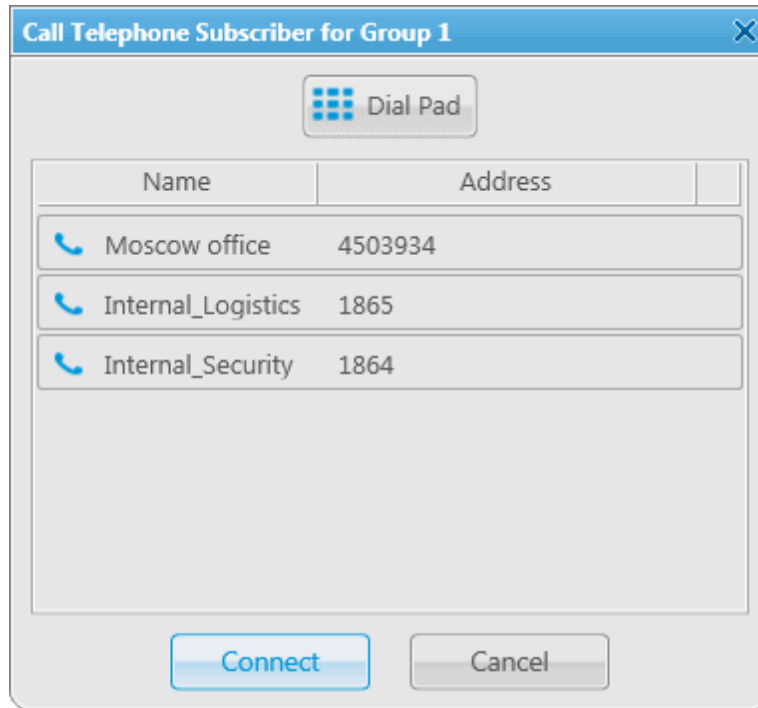
Select the telephone subscriber from the list and click **Connect** or double-click on the list item. This list is taken from the list of telephone subscribers created in the Telephone Subscribers window. If the subscriber is not on the list, click **Dial Pad** to enter the telephone number manually.

At clicking **Connect**, a new window with the call status opens.
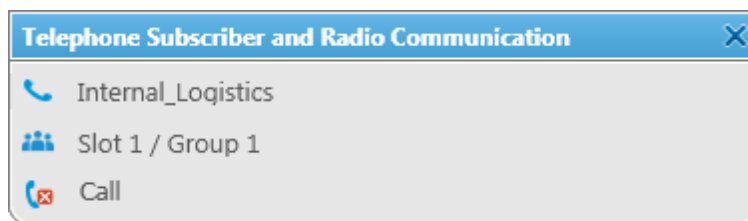
There are three statuses:

- 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. If the person should make a radio call right after the telephone call, it is necessary for him or her to wait for a special tone notifying about the end of the call. If the person presses the PTT button on the radio before this tone, an incorrect phone call will be initiated.

Initiates reconnection to the telephone subscriber.

2.4 Operators

By default, an operator with the name **Administrator** and no password is created in SmartPTT Dispatcher. The Administrator has full access to SmartPTT management functions.

The Administrator can add new system operators and customize their access to specific functionality.

To add a new operator, click **Settings → Operators** in the **Main Menu** bar. The **Operators** window will be displayed.
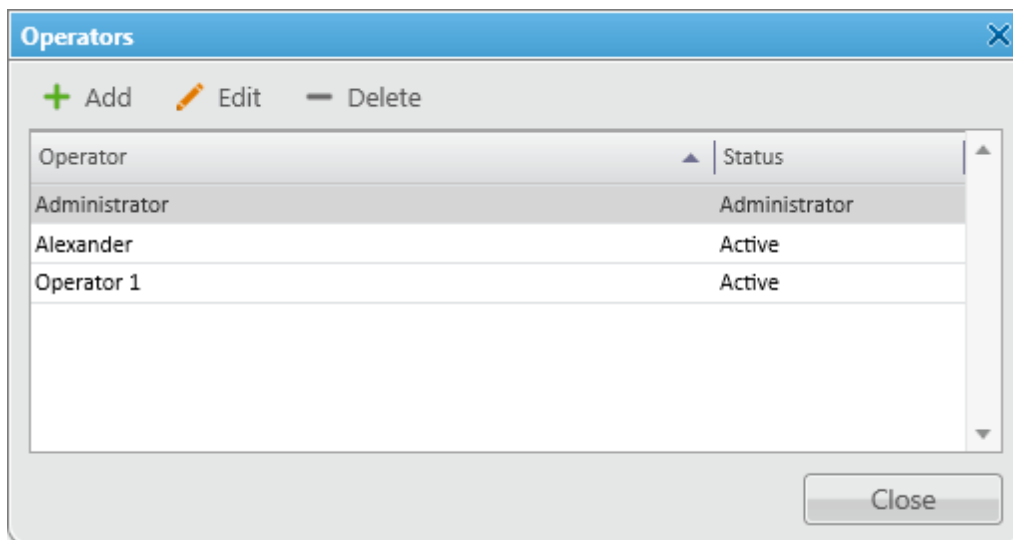
To add a new operator, click **Add.** A new window for adding operators opens up.
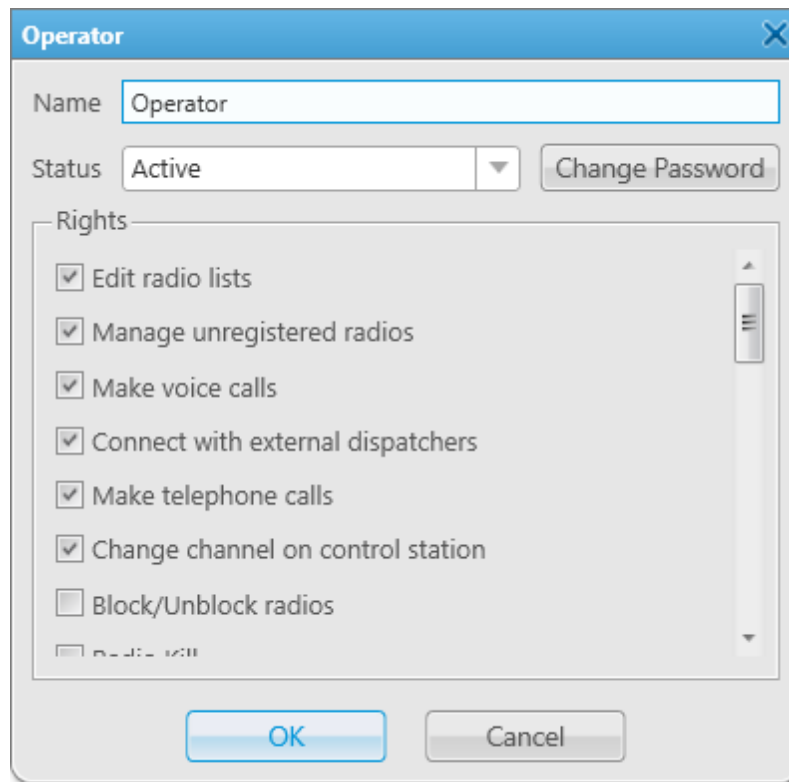
Name: The operator's name. If **Windows authentication** is selected (**Settings → General Settings**), make sure that the new operator's name matches the name of a Windows user or Windows group.

Status: The operator's status (**Active** or **Archived**). 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. The following rights can be assigned to the operator:

Right	Description
Edit radio lists	allows/denies adding, changing properties and deleting radios in the Radio Fleet window and in the Radios panel
Manage unregistered radios	shows/hides radios which were not added in the Radio Fleet window or in the Radios panel

Right	Description
Make voice calls	allows/denies making calls to a radio except conference calls **NOTE** This option does not have visual effect in SmartPTT Dispatcher
Connect with external dispatchers	allows/denies the connection of the dispatchers to each other Note: Requires preliminary configuration in the each dispatch program
Make telephone calls	allows/denies making call to the telephone subscriber
Change channel on control station	allows/denies changing the channel of control station
Block/Unblock radios	allows blocking/unblocking radios listed in the Radio Fleet window
Radio Kill	allows to block a radio irreversibly by means of the Radio Kill command
Remote monitor	allows/denies the remote monitoring of a radio (remote turning on the microphone of the radio) **NOTE** Permission must be configured on the radio
Reboot control station	allows/denies rebooting the control station
Manage radio location settings	enables/disables configuring regular requests for radio location in the Location tab
Request radio location	allows/denies requesting and deleting current location of the radio: • **Set Location** ⊕ → **Find on Map** 🌎 • **Show Address** 🏠 → **Remove from Map** 🌎

Right	Description
Send text messages	allows/denies sending text messages on a radio
Send telemetry commands	allows/denies sending telemetry commands
Manage bridging settings	enables/disables configuring call bridging table
Manage routes	enables/disables managing routes
Manage geofences	enables/disables managing geofences
Manage points of interest	enables/disables managing points of interest
Manage tracks	enables/disables showing, animating, and clearing tracks
View coverage map	enables/disables showing and configuring coverage map
Build reports	allows/denies managing reports
Edit custom radio properties	enables/disables configuring additional properties of a radio
Attach radios to selected channel	enables/disables displaying radios as attached to the particular slot in Radio Fleet window. This option is recommended to be set for Capacity Plus systems
Make conference calls	enables/disables making conference calls
View radioserver event log	enables/disables showing radioserver event log
Create deferred action	enables/disables creating deferred actions for a radio
Manage statuses	enables/disables creating, editing and deleting statuses;
Manage rules and alerts	allows/denies creating, editing and deleting rules and alerts
Manage positioning rules	allows/denies managing positioning rules positioning rules
Manage lone worker rules	allows/denies managing lone worker rules

Set/Change Password: Sets new operator's password or changes 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, click ⯗ in the **Main Menu** and after the dispatch console has restarted, select a new operator.

2.5 Information Storage

2.5.1 Records

To set audio record settings, in the **Main Menu** bar of the SmartPTT Dispatcher window, expand the **Settings** ⚙ menu and select **Information Storage** → **Records**. The **Audio Record Settings** window appears:
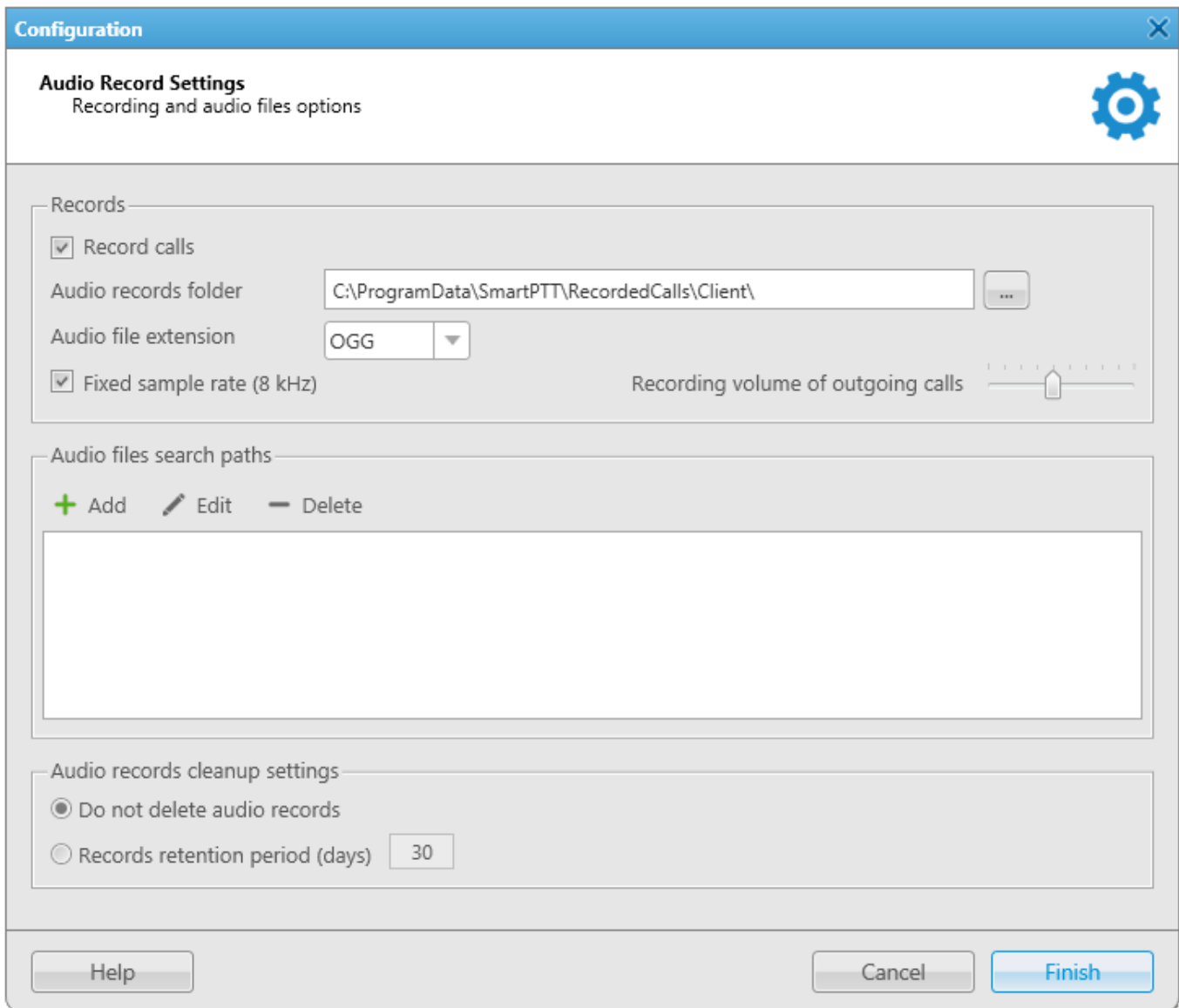
Records: Set the parameters of call recording.

Record calls: Select this option to record all the incoming and outgoing calls.

Audio records folder: Set the path to the folder with recorded audio files.

Audio file extension: Select the proper extension of the file. Choose between the *.mp3*, *.ogg* and *.wav* extensions

Fixed sample rate (8 kHz): Select this option to set the record quality of the audio file with a sampling rate of 8 kHz. This setting allows you to reduce the size of the saved audio file due to no major loss in sound quality.

Recording volume of outgoing calls: Increase or decrease the sound volume for recording outgoing calls.

Audio files search paths: Set paths to additional folders for recorded audio files.

> **NOTE**
> After changing the path to the stored audio files, the previous path is automatically added to the audio files search path field.

Audio records cleanup settings: Set audio record cleaning parameters.

Do not delete audio records: Select to keep as much of events in the log as possible in the hard drive.

Records retention period (days): Select to enter the maximum number of the last days to be logged.
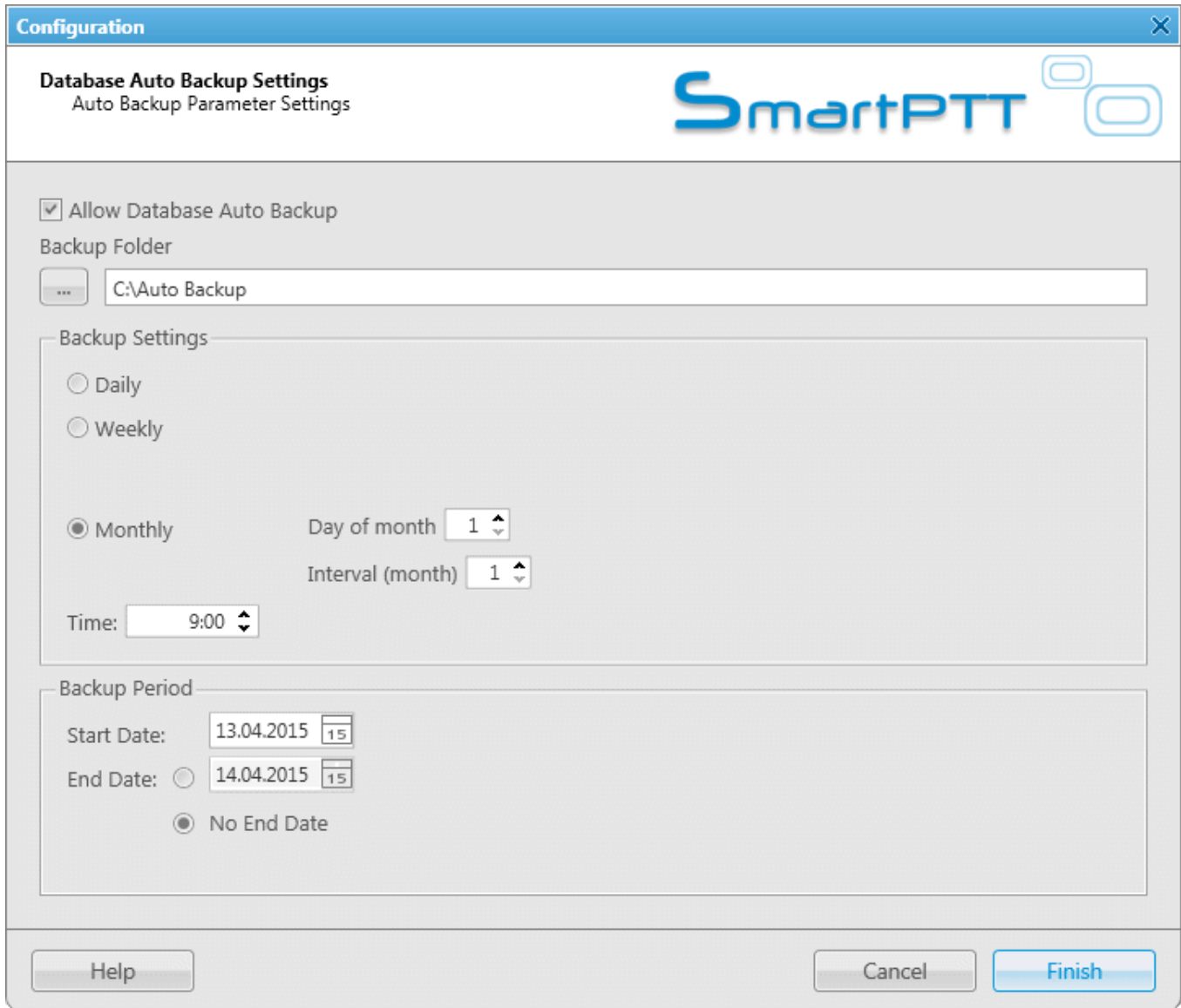
2.5.2 Database Auto Backup

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.

> **NOTE**
> If SmartPTT Dispatcher is connected to a remote database, you can use backup but you cannot restore the database from a backup file located on a remote database computer.

In order to set up automatic backup parameters, in the **Main Menu** bar of the SmartPTT Dispatcher window, expand the **Settings** ⚙ menu and select **Information Storage → Database Auto Backup**.

Allow Database Auto Backup: Select to activate SmartPTT Dispatcher automatic database backup and creating database backup file.

Backup Folder: Specify the path to save database backup file.

> **NOTE**
> Make sure you have the rights to create files in this folder automatically.

Daily: Database backup will be started after specific interval of days at the predefined time (for example, every third day at 9:00 AM).

Weekly: Database backup will be started every specific day of week at the predefined time (for example, every Monday and Wednesday at 11:00 PM and Friday at 11:00 AM).

Monthly: Database backup will be started in the specific day of month with predefined interval.

Backup Period: Set the time period when automatic database backup should to be made according to the 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.
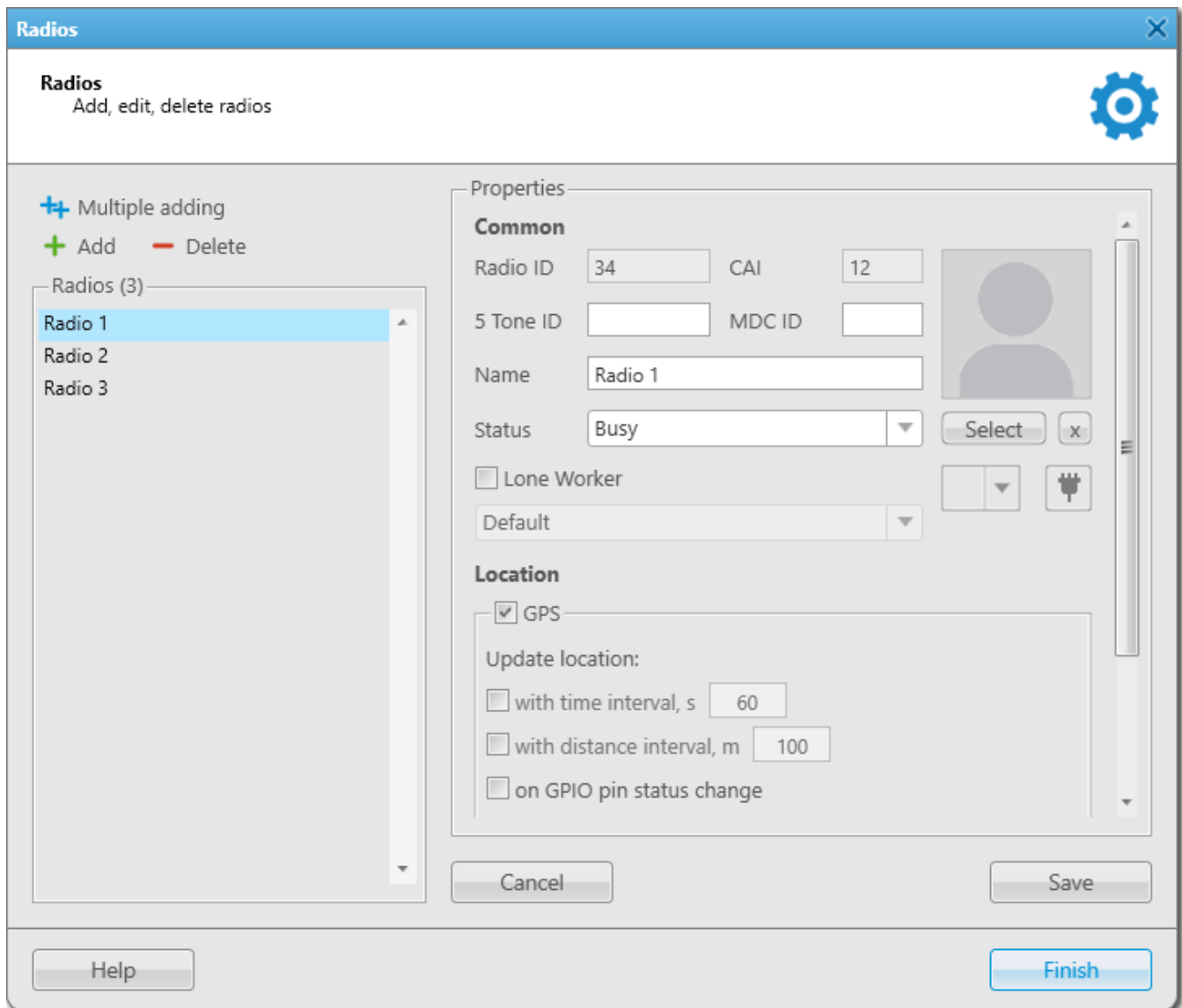
> **NOTE**
> To restore the database from the automatically created backup, see Database.

2.6 Radios

2.6.1 List of Radios

In the **Radios** window, you can add, edit and delete radios, edit and delete WAVE users. The **Radios** window allows you to perform these actions with one object or with several ones simultaneously.

To open the **Radios** window, click **Settings → Radios**.

To add one radio, click **Add**, specify its properties in the **Properties** section on the right and click **Save**.
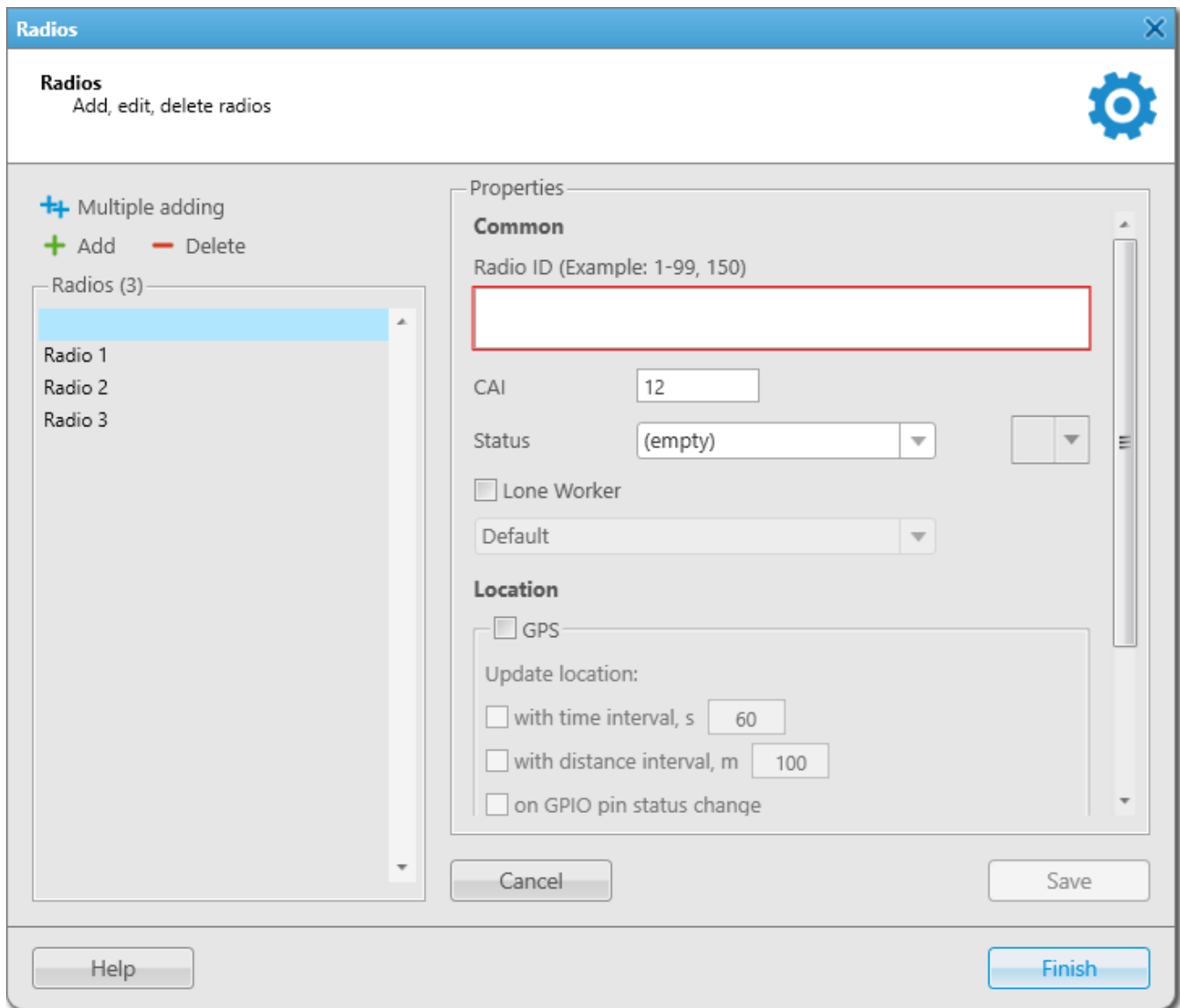
> **NOTE**
>
> If in the **General Settings** window the Show radio user name check box is selected, and on SmartPTT Radioserver the user authorization service is activated and users are added, then the name of the user authorized on the radio is displayed next to the radio name in brackets.

To edit one radio or one WAVE user, select it in the **Radios** list, change the required data in the **Properties** tab on the right and click **Save**.

To delete one radio or one WAVE user, select it in the **Radios** list, click **Delete** and click **OK** in the **Confirmation** window that will open.

To add several radios, click **Multiple adding**.

In the **Radio ID** field of the **Properties** section, input the range of the radio identifiers that are added or specify them separated by comma. Specify other properties, common for all radios, that are added, and click **Save**.

To change the properties of several radios, select the required radios in the **Radios** list, change theirs properties and click **Save**.

To delete several objects, press and hold the **Ctrl** button and select the required objects in the **Radios** list, then click **Delete** and click **OK** in the **Confirmation** window that will open.

2.6.2 Categories

The category is used for configuring parameters applied to all object included to it.

Categories can be added in the **Settings** → **Radios** → **Categories** window and include:

- Radios

- WAVE-users

- Talgroups

Actions assigned to category objects are applied only to radios and WAVE-users.

You can assign a status for a category. Ensure you preconfigured the status in the **Settings** → **Radios** → **Statuses** window.

If you want to assign GPS parameters for all radios included in the category, ensure in their properties in the **Location** tab, the **GPS** check box is selected.

In the **Categories** menu you can perform the following actions:
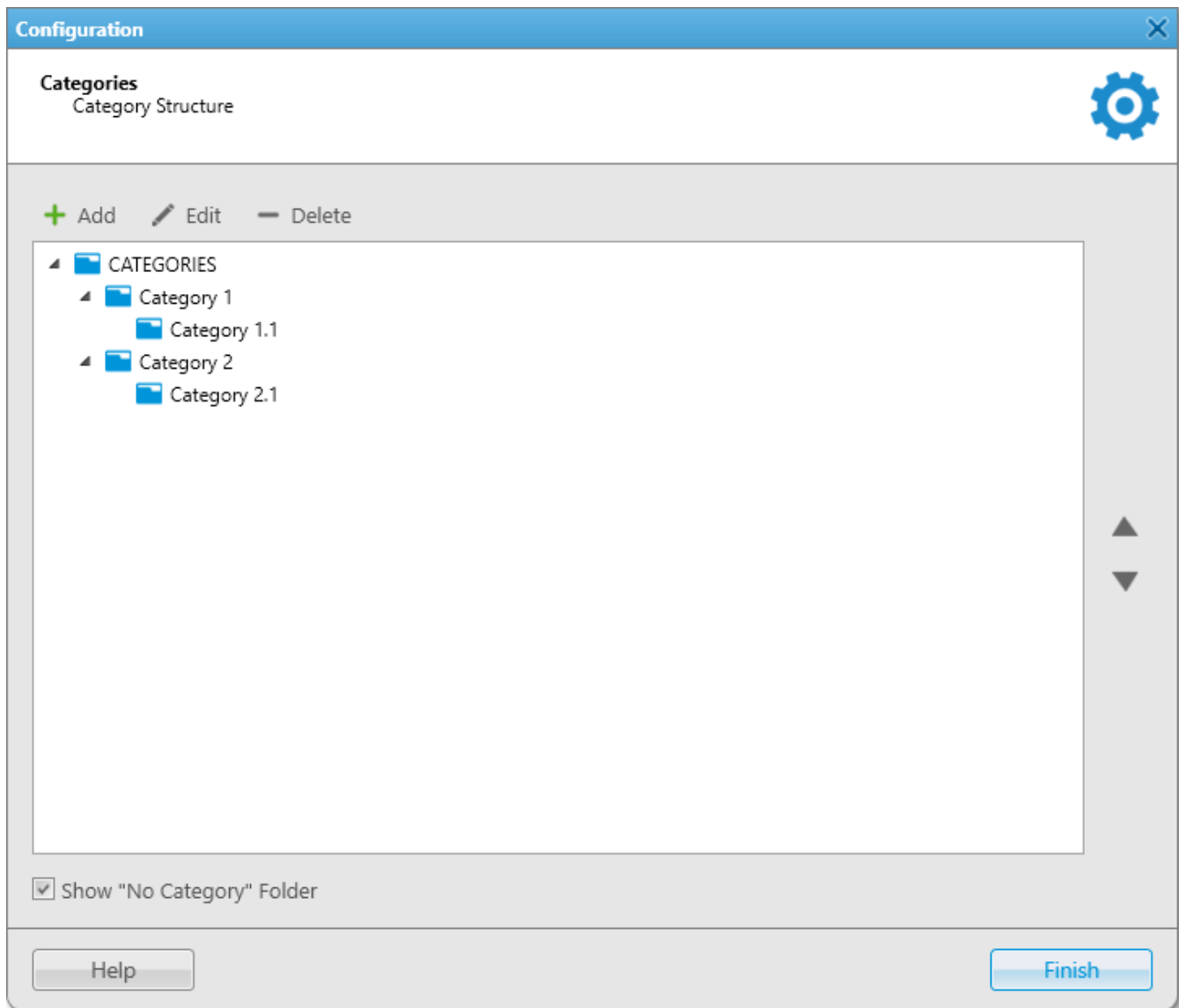
- Add, edit, and delete categories

- Change the sequence of categories in the category structure with triangle-shaped buttons

- Change the nesting of categories by moving the needed category into another one

- Show or hide **No Category** folder in the Radio Fleet panel. It contains all radios, WAVE users, and talkgroups without categories

NOTE
If no category is added you can only add the new one and also permit or prohibit the **No Category** folder displaying in the **Radio Fleet** panel.
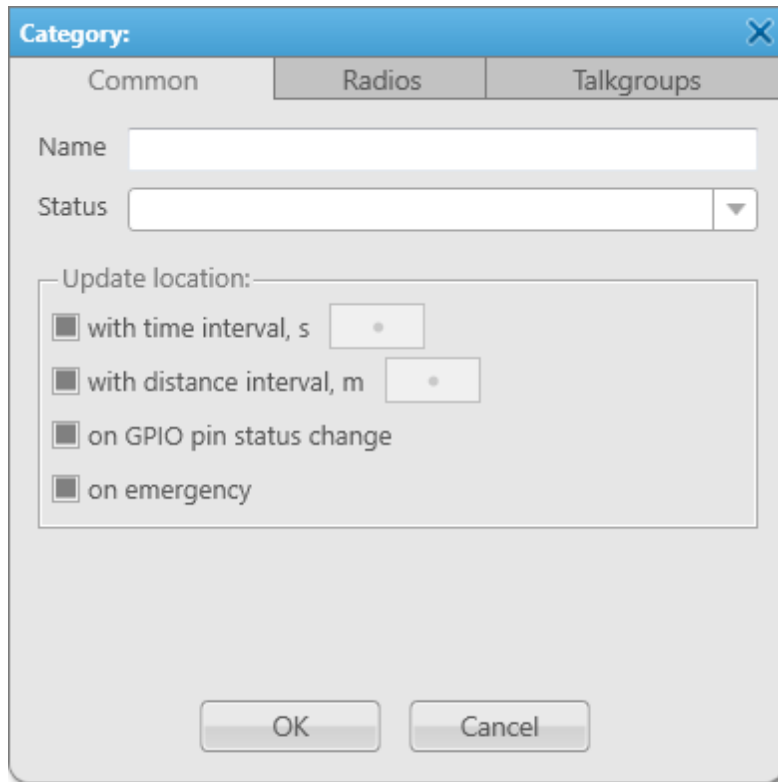
2.6.2.1 Adding Category

To add a new category, follow these steps:

1.   In the **Configuration** window, click **Add**.
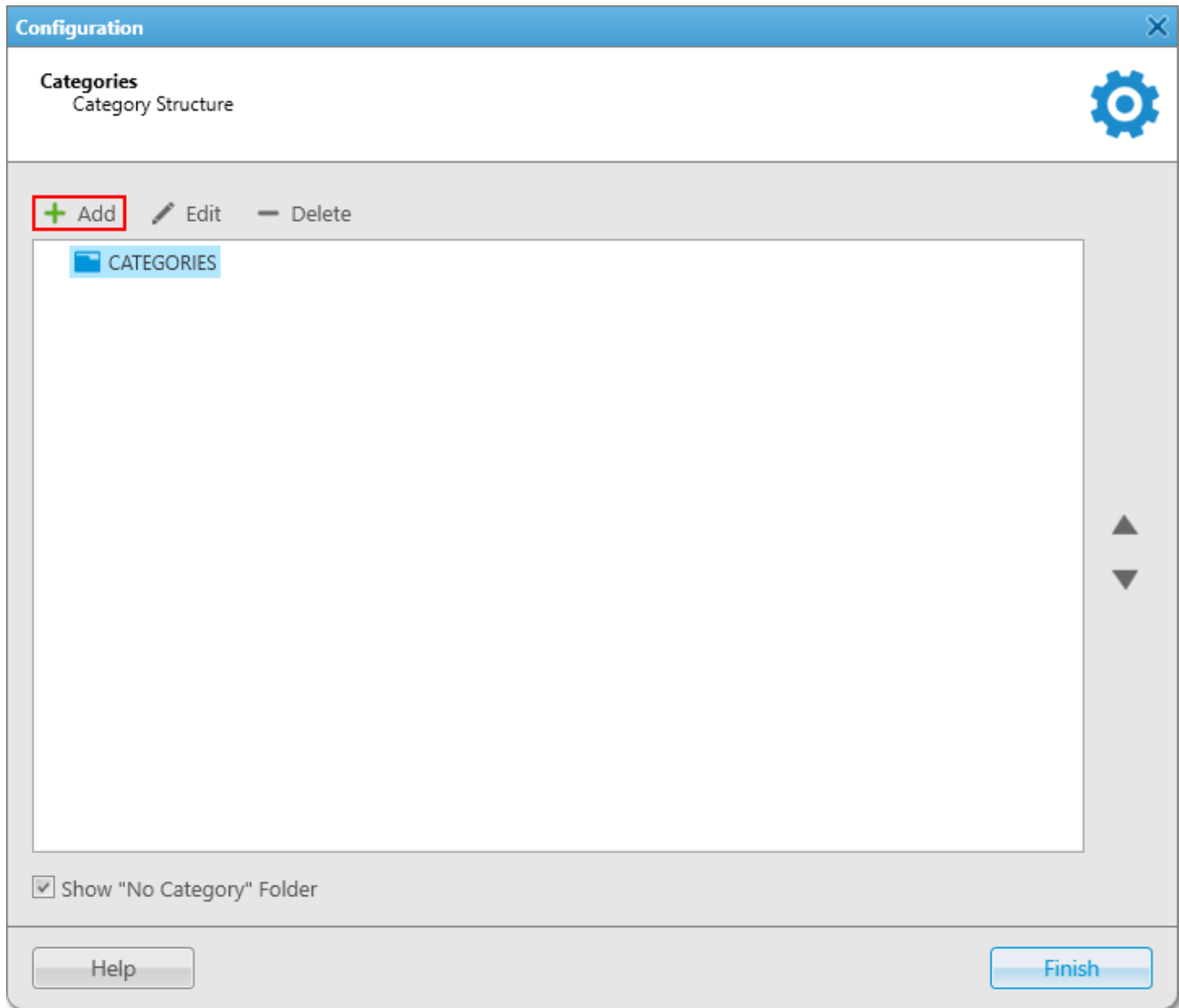
2. In the **Common** tab of the **Category** window, perform the following actions:

a. In the **Name** field, enter the name of a new category.

b. *Optional:* From the **Status** list, select previously added status which is applied to all objects included in the category.

NOTE

You can change parameters in the **Update locations** area only while editing the category.

3. In the **Radio** and **Talkgroups** tabs select radios and talkgroups for including.

NOTE

For additional information about radios and talkgroups adding, see **Adding Radios to Category** and **Adding Talkgroups to Category**.

4. Click **OK** to apply changes and close the window.

2.6.2.1.1 Adding Radios to Category

To add one or more radios to a category, in the **Radios** tab select the needed radios and click **OK**
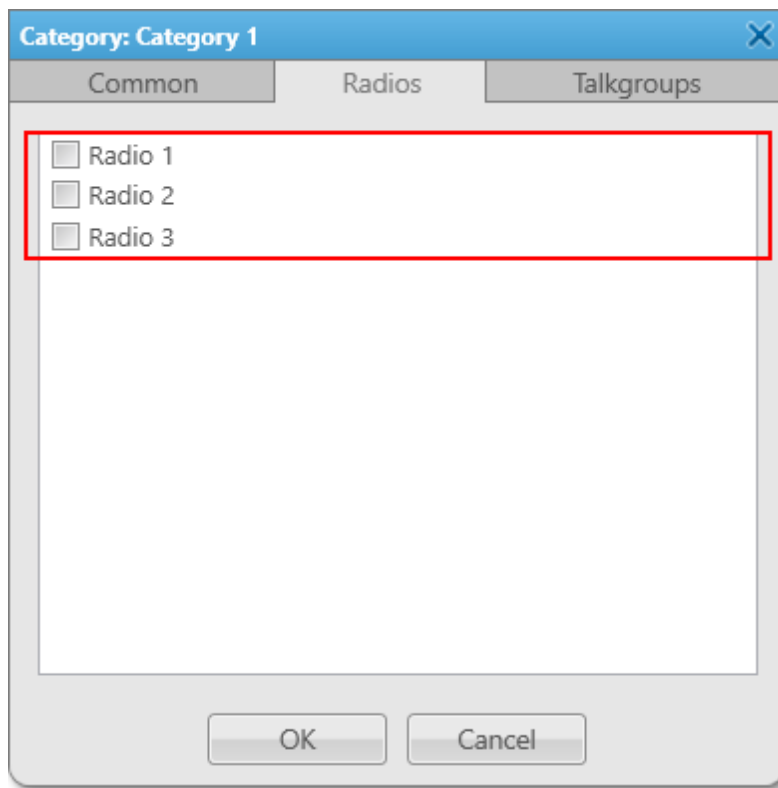
Radios multiple adding

To add to the category all or several radios simultaneously, follow these steps:

1.   In the **Radios** tab, highlight the needed radios using one of the following methods:

   •   Shift+left click

   •   Shift+Up Arrow or Down Arrow

- Ctrl+A
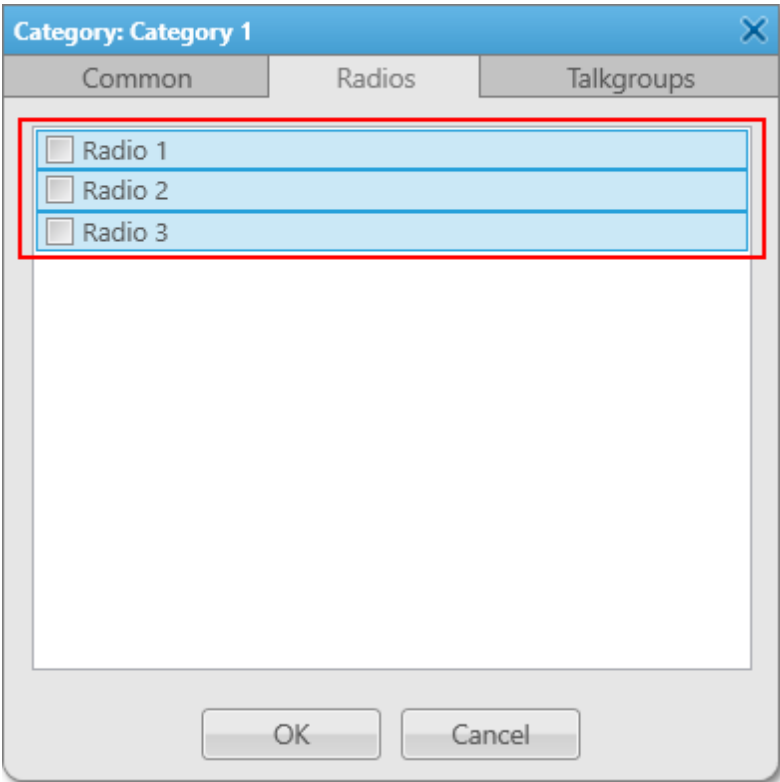
2. Press Space to select all check boxes and then click **OK**.
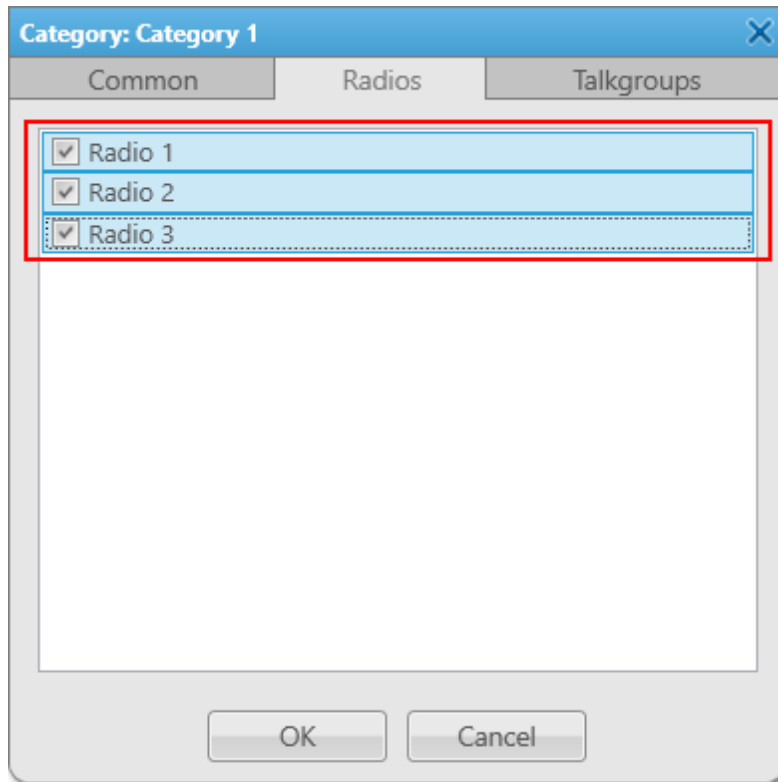
3. Click **OK** to apply changes and close the window.

2.6.2.1.2 Adding Talkgroups to Category

To add talkgroups to a category, follow these steps:

1. In the **Talkgroups** tab select the desired radios for including.

NOTE
Multiple adding is unavailable for talkgroups.
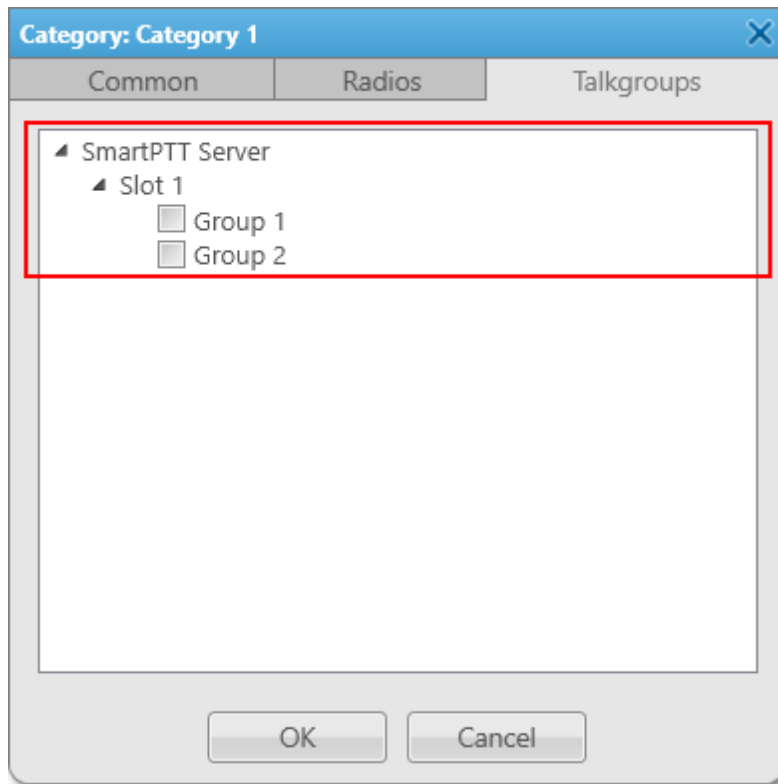
2. Click **OK** to apply changes and close the window.

2.6.2.2 Editing Category

To edit a category, follow these steps:

1.	In the **Configuration** window, select the needed category and click **Edit**.
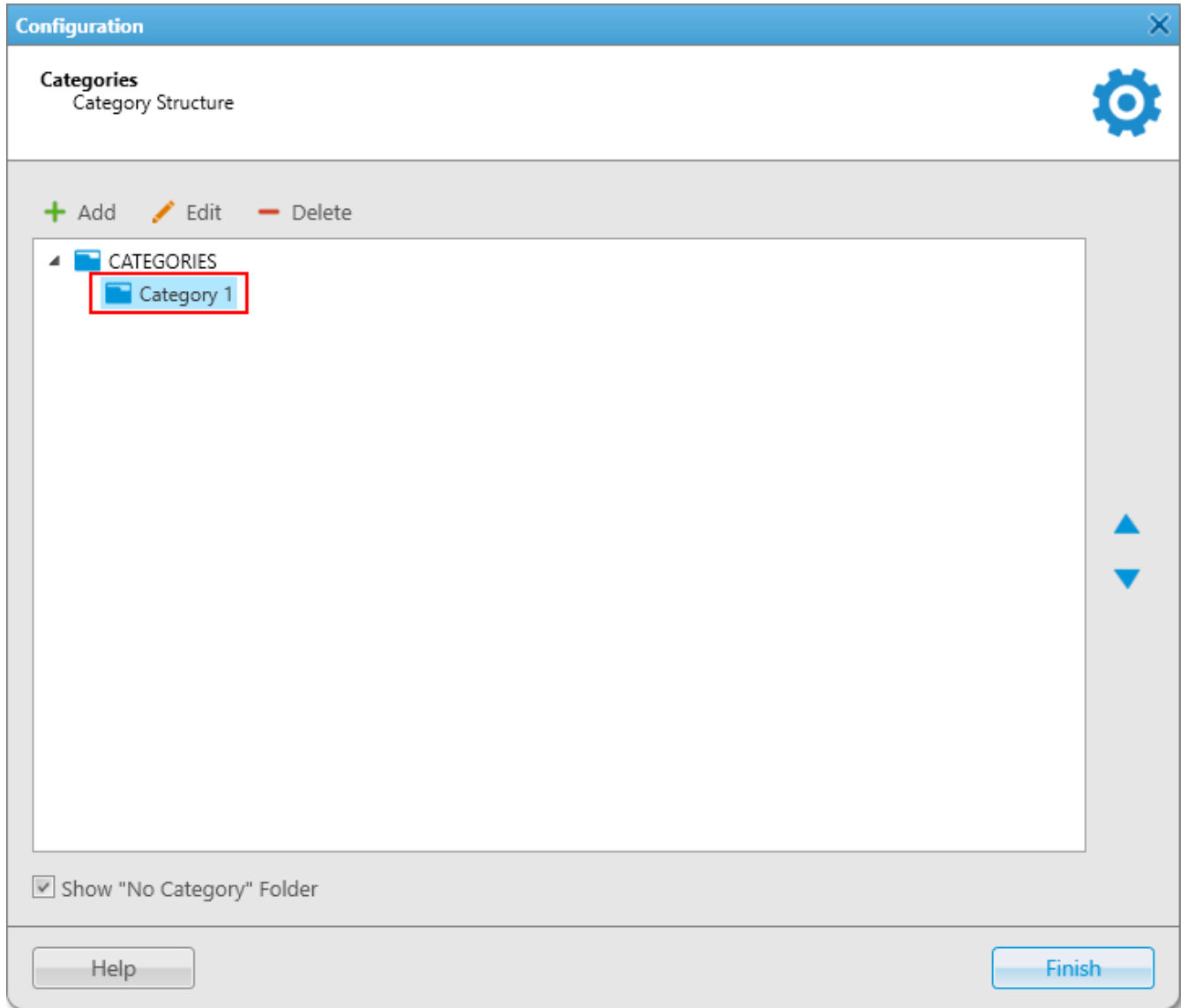
1. In the **Common** tab of the **Category** window, perform the following actions:
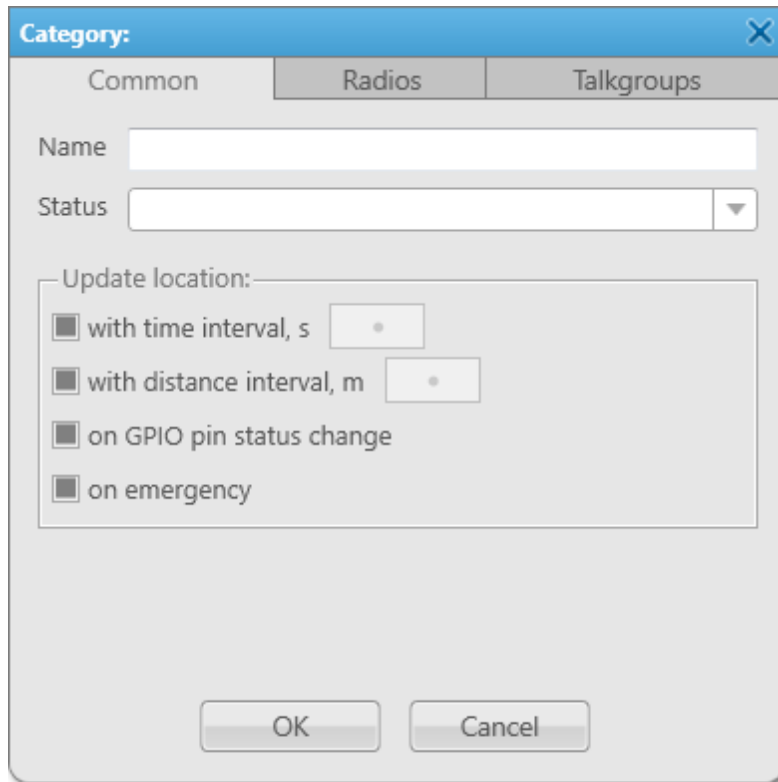
- Change the category name

- Change the category status

- Under **Update location**, change the GPS-monitoring settings which applied to every object in the category.

☑ parameter is set for all objects in the category.

☐ parameter is not set for all objects in the category.

▣ parameter is set for some radio objects in the category.

2. *Optional:* In the **Radios** and **Talkgroups** tabs add or remove radios and talkgroups to/from the category.

3. Click **OK** to apply changes and close the window.

2.6.2.3 Deleting Category

To delete a category, follow these steps:

1.   In the **Configuration** window, select the needed category and click **Delete**.
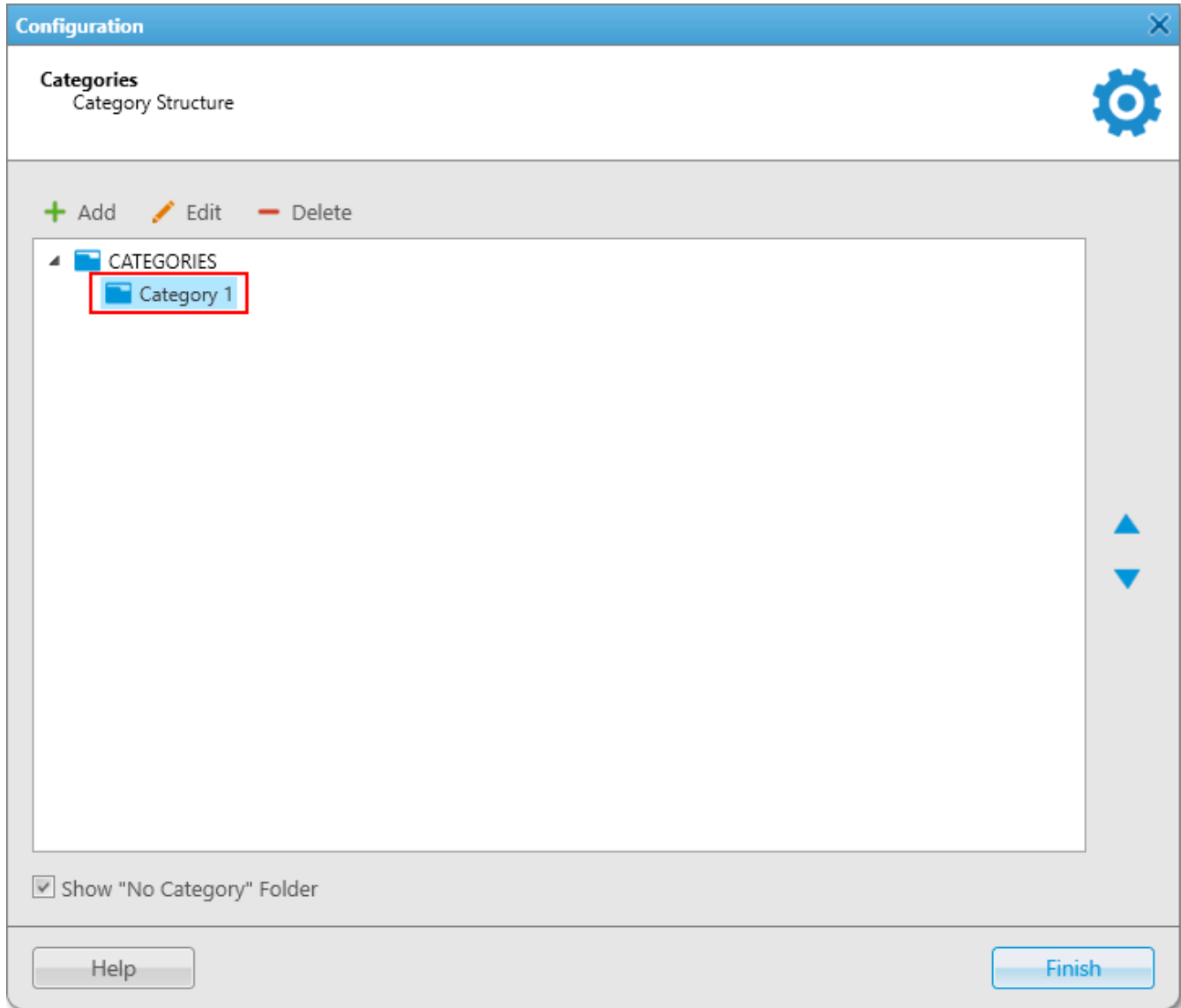
2.   In the open window, click **OK**.
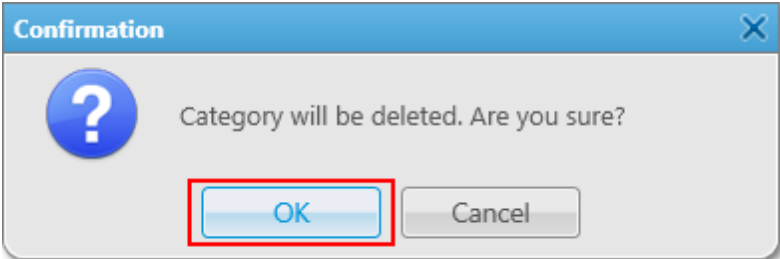
2.6.3 Statuses

Statuses allow you to specify the current condition of radios or WAVE users.

Before managing statuses, ensure you have all the necessary rights selected in the Operators menu.

To open statuses management window, in the **Main Menu** bar of the SmartPTT Dispatcher window, expand the **Settings** ⚙ menu and select **Radios → Statuses**. The **Statuses** window appears:
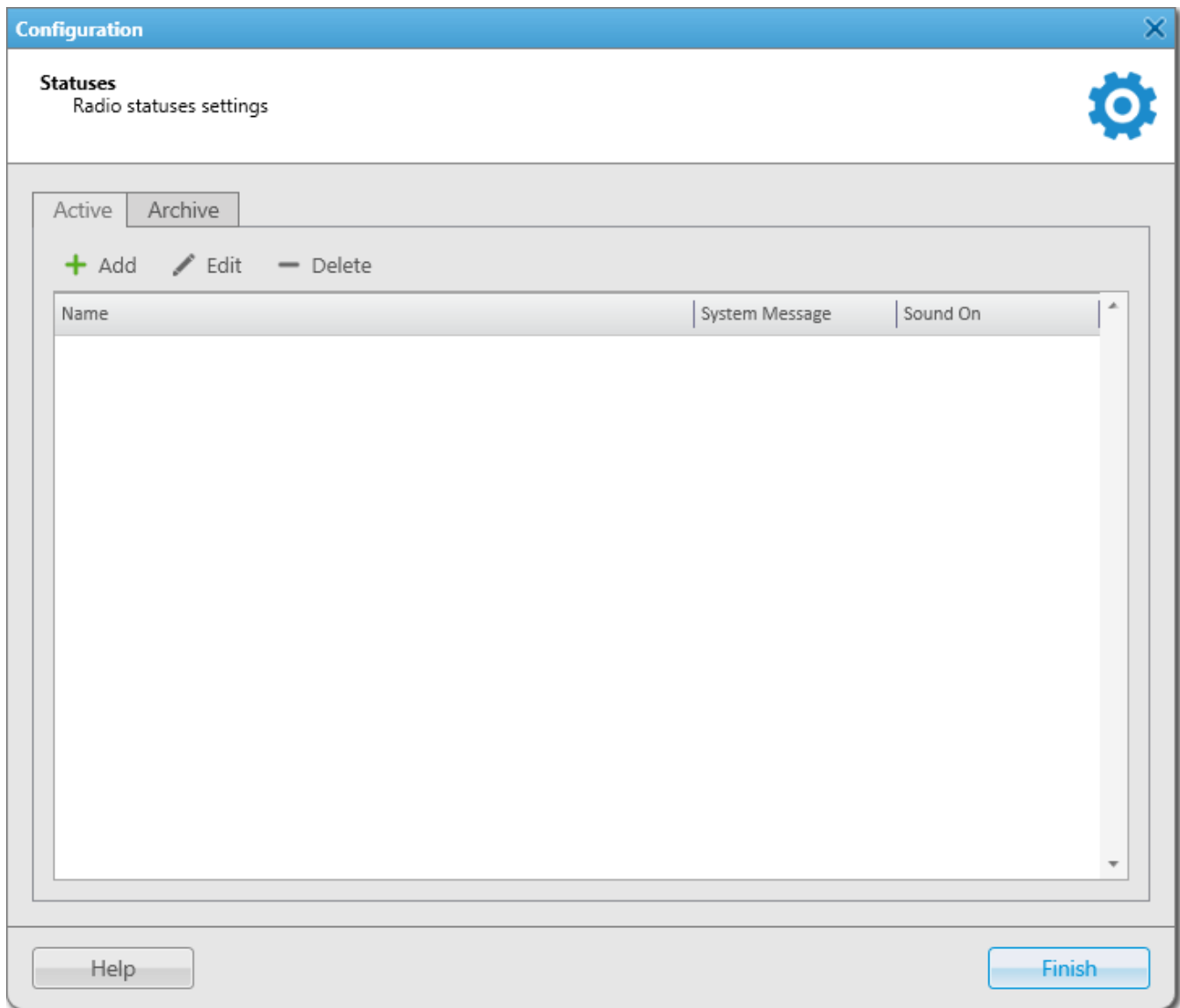
Statuses Window Tabs
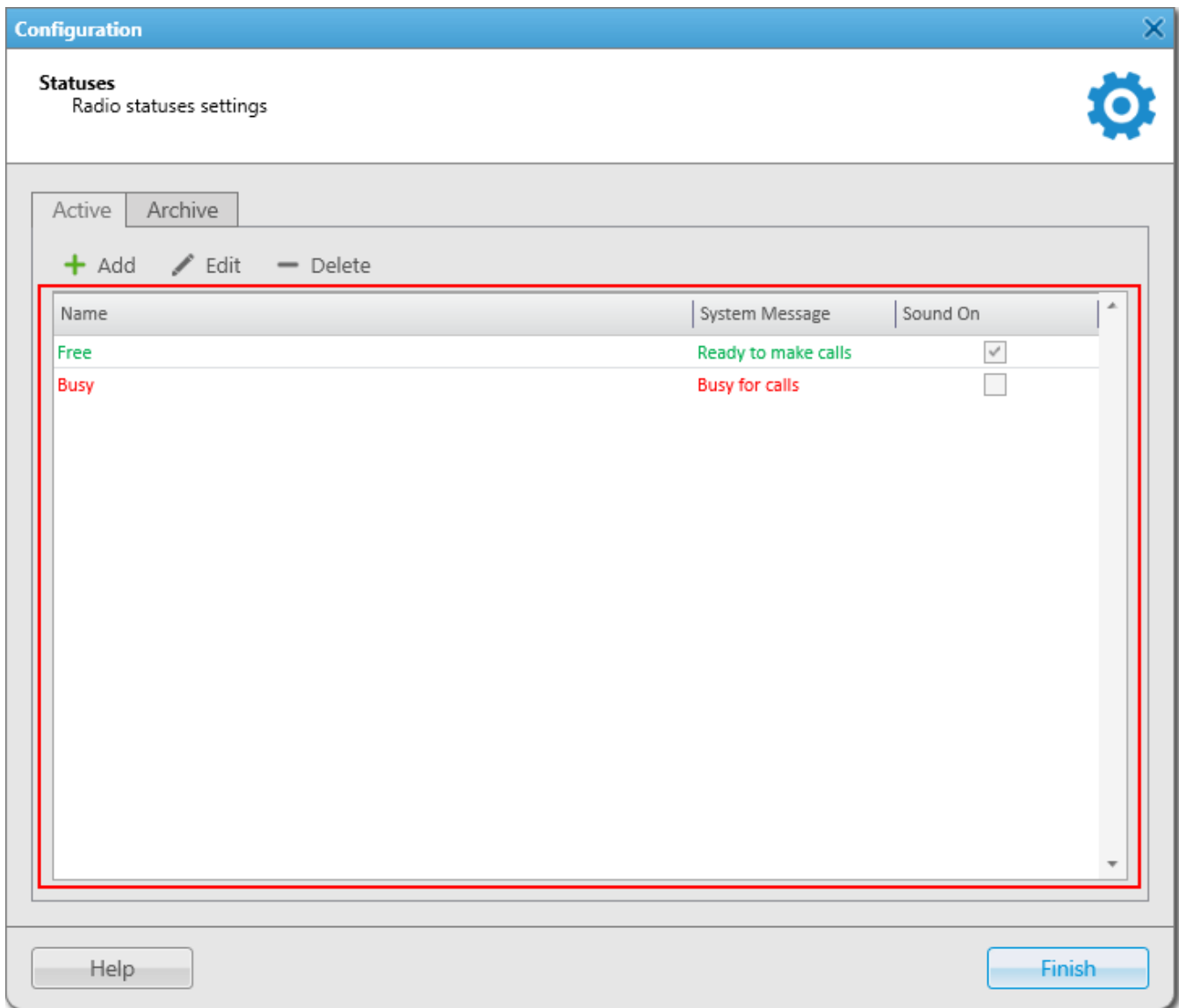
Active: Displays all active statuses. On this tab you can add, edit or delete radio statuses.

Archive: Displays archived statuses. On this tab you can restore archived statuses.
Archive statuses cannot be used in the alert rule definitions. However, statuses which were assigned to radios or WAVE users and then moved to the archive, remain valid. Archive statuses are displayed in the event log entries.

Statuses Window Table

Statuses table displays active or archived statuses.

The table consists of the following columns:

Name: Displays status name.

System Message: Displays text message for automatic status change which is set at status adding.

Sound On: Displays if a sound notification of status activation is turned on or off.

2.6.3.1 Adding Statuses

To add a new status, follow these steps:

1.   On the **Active** tab, click **Add**.

2.   In the open **Radio Status** window, perform the following actions:
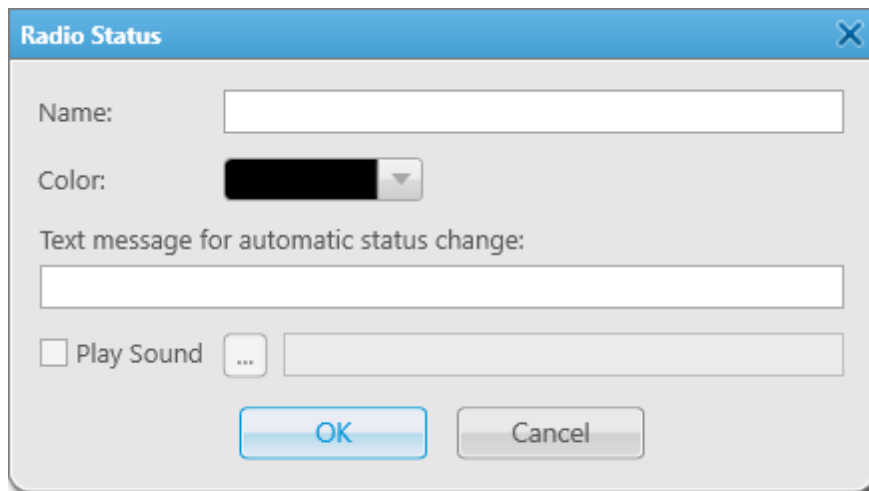
a.   In the **Name** field, type the status name to be displayed in SmartPTT Dispatcher.

b.   *Optional:* From the **Color** list, select the desired status color.

c.   *Optional:* In the **Text message for automatic status change** field, enter the message that initiates the status changing. If a radio sends the message to the dispatcher or to any other addressee, the radio receives the status.

NOTE
Text messages cannot be the same for different statuses. If the entered text message is already specified for another status, the corresponding warning window appears:

d.   *Optional:* Activate and configure the sound notification at the status activating:

i.   Select the **Play Sound** check box.

ii.   Click ⬚ to specify the path to the desired audio file.

3.   Click **OK**.

2.6.3.2 Editing Statuses

To edit the existing status, follow these steps:

1.   On the **Active** tab, select the desired status in the table of active statuses and click **Edit**.

2.   In the open **Radio Status** window, change the desired parameters and click **OK**.
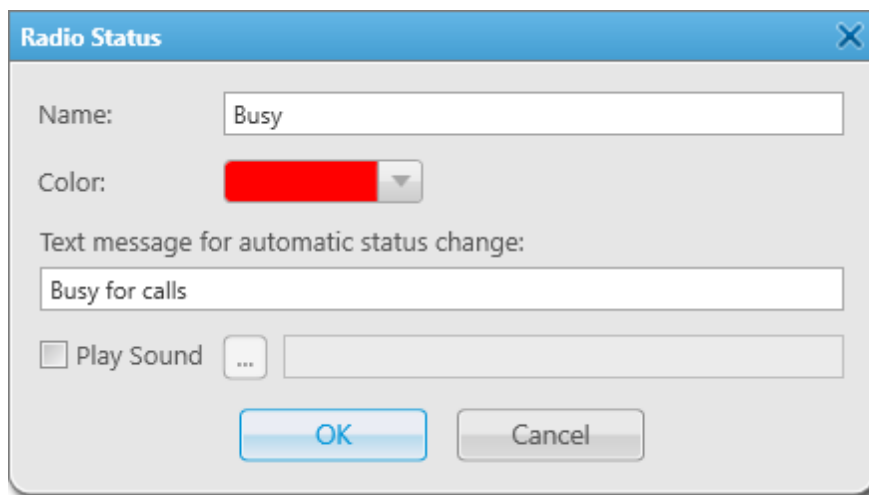
2.6.3.3 Deleting Statuses

To delete a status, follow these steps:

1.   On the **Active** tab, select the desired status in the table of active statuses and click **Delete**.

2.   In the open **Confirmation** window, click **OK**:
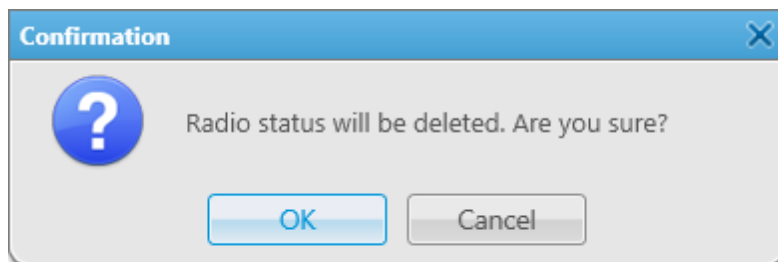
If the status is currently assigned or was assigned to a radio or a WAVE user, it can't be deleted. If you try to delete such status, the following **Confirmation** window appears:
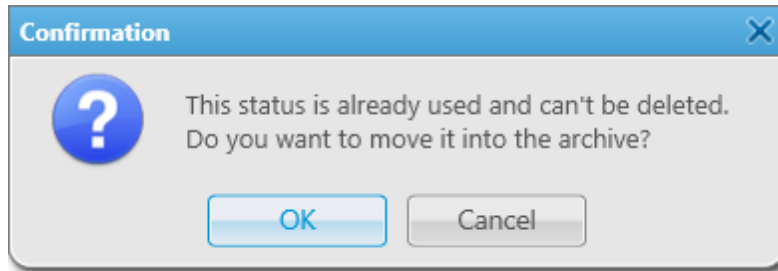
You can restore archived statuses later. Restored statuses become active.

2.6.3.4 Restoring Statuses

To restore an archived status, follow these steps:

1.   On the **Archive** tab, select the desired status in the table of archived statuses and click **Restore**.

2.   In the open window, click **OK**:
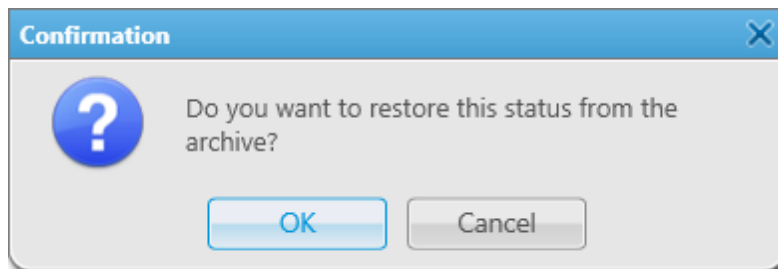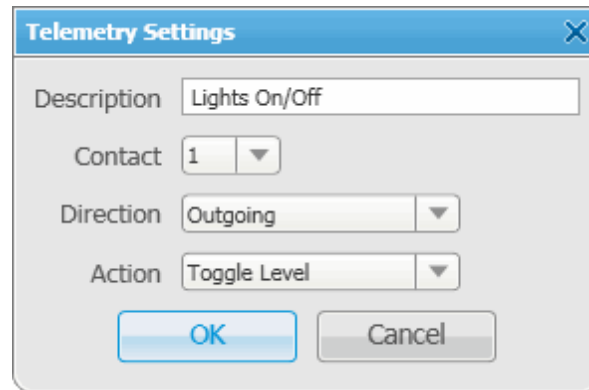
The restored status appear in the active statuses table of the **Active** tab.

2.6.4 Telemetry

To set up actions based on incoming/outgoing telemetry commands, in the **Main Menu** bar of the SmartPTT Dispatcher window, expand the **Settings** ⚙ menu and select **Radios** → **Telemetry**. The **Telemetry Settings** window appears.
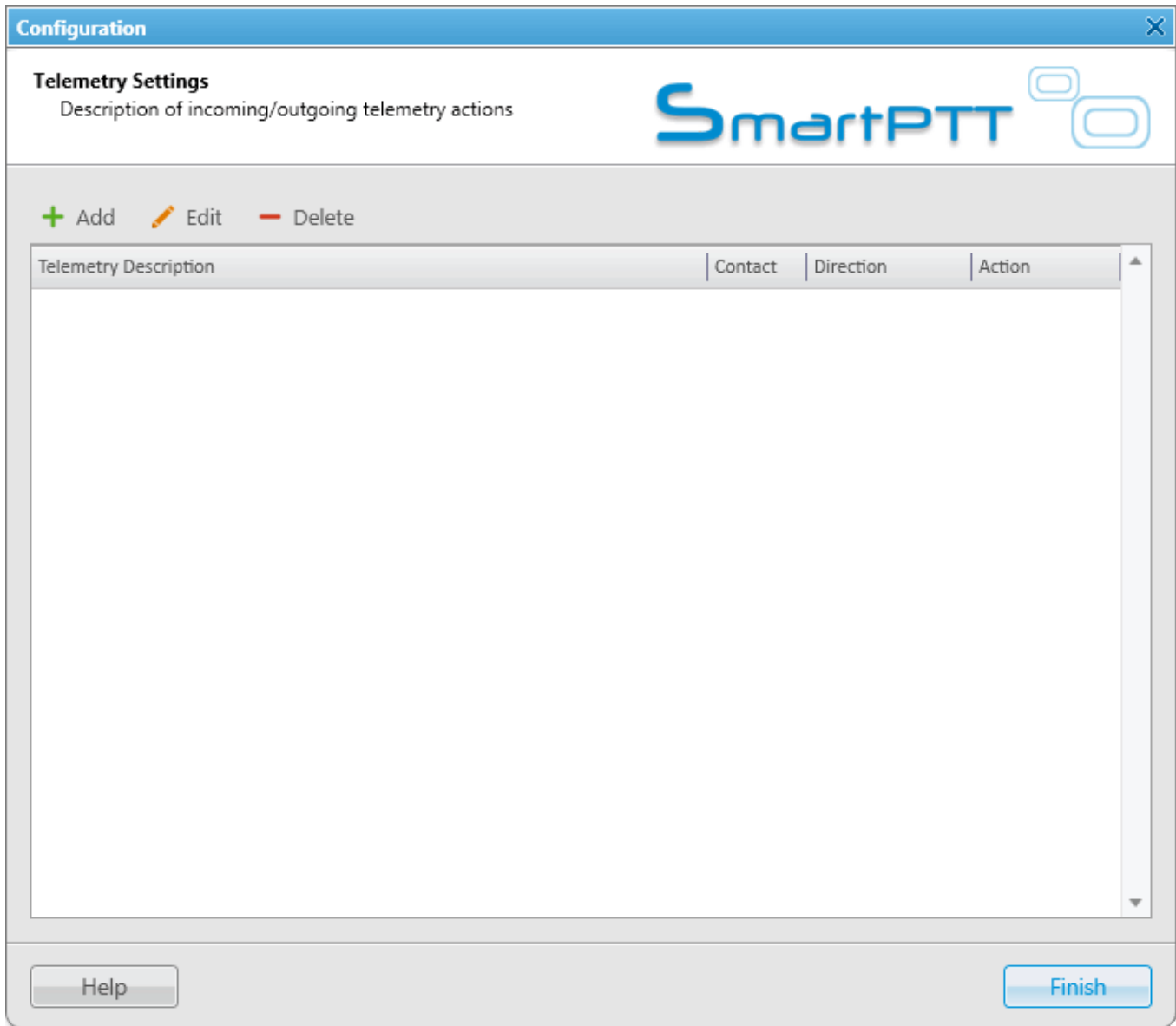
To add a new telemetry command, click **Add**. The **Telemetry Settings** window is displayed.

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 Radio

You can select telemetry settings in the radio **Properties** window.

> **NOTE**
>
> Only registered radios can be assigned to a telemetry command. For not registered radios the **Telemetry** button will be unavailable.
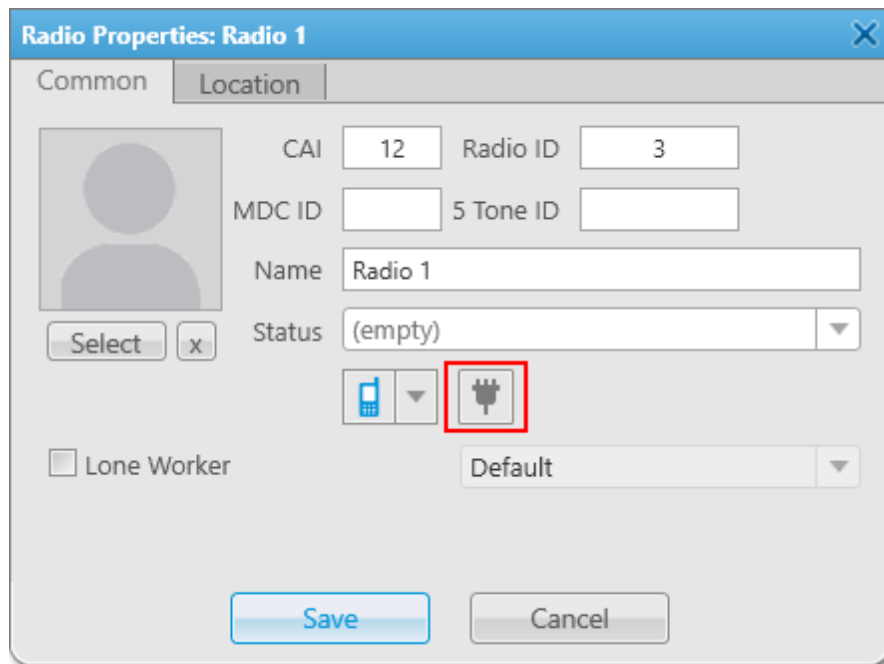
Click the **Telemetry** button to open the window for selecting available telemetry commands for the radio.
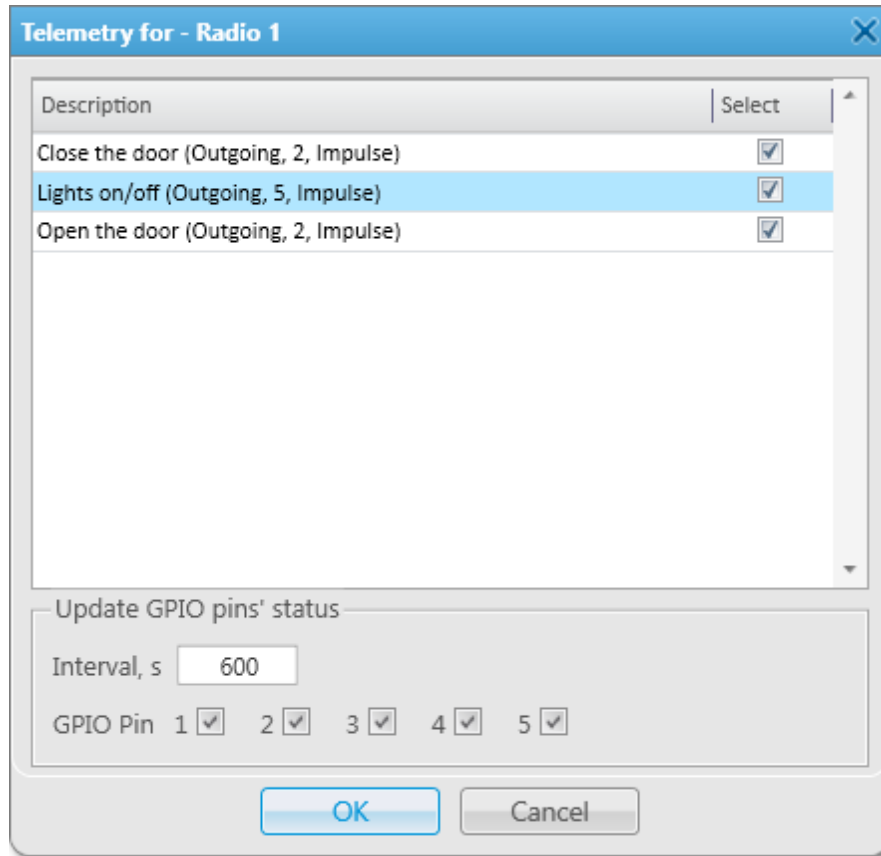
Select the required command to make it available in the **Call Window** of the radio and in the custom consoles. Also, it allows you to set automatic status updates of the GPIO pins. To receive status updates of the GPIO pins automatically, select the required GPIO pins in the **Update GPIO pins' status** area and set the update interval in seconds.

NOTE
Automatic GPIO pins' status update is applied only for incoming telemetry commands.

Then you can run the telemetry command from the radio **Call Window**.
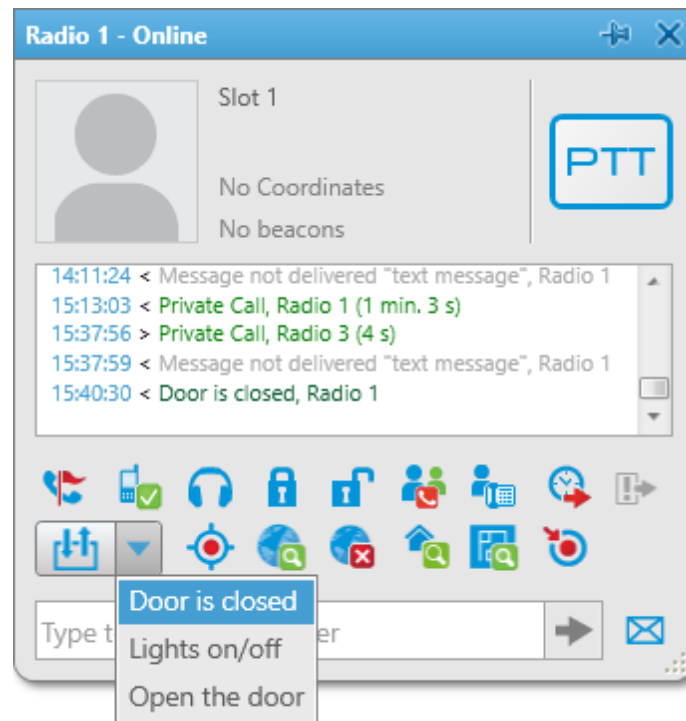
To receive the current telemetry status, click . The updated status will be displayed in **Call Window** of the radio.
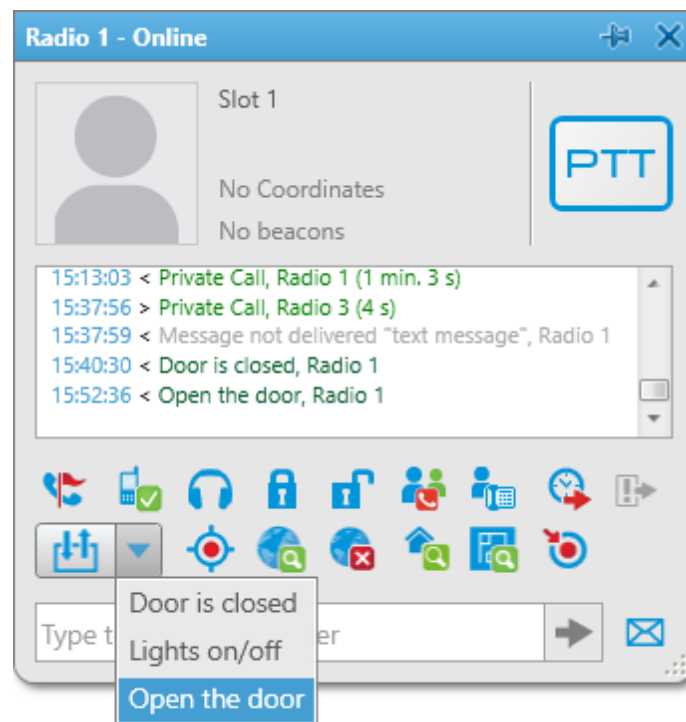
How to Assign Telemetry to Talkgroup

You can select telemetry settings in the **Properties** window of the talkgroup.
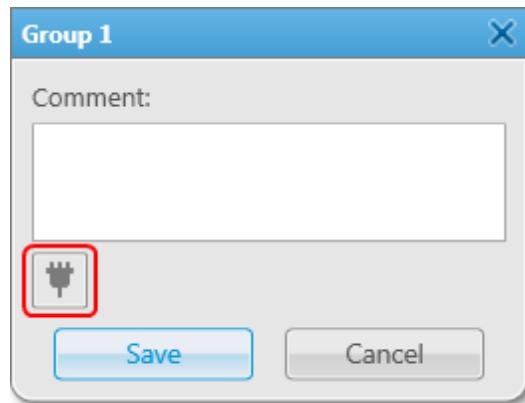
Click the **Telemetry** button and select available telemetry commands for the talkgroup.
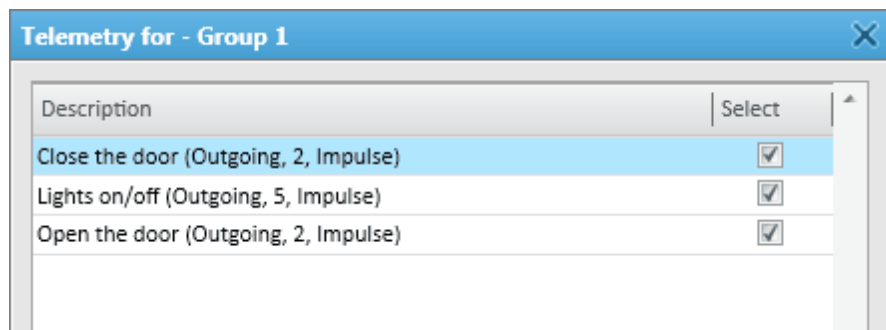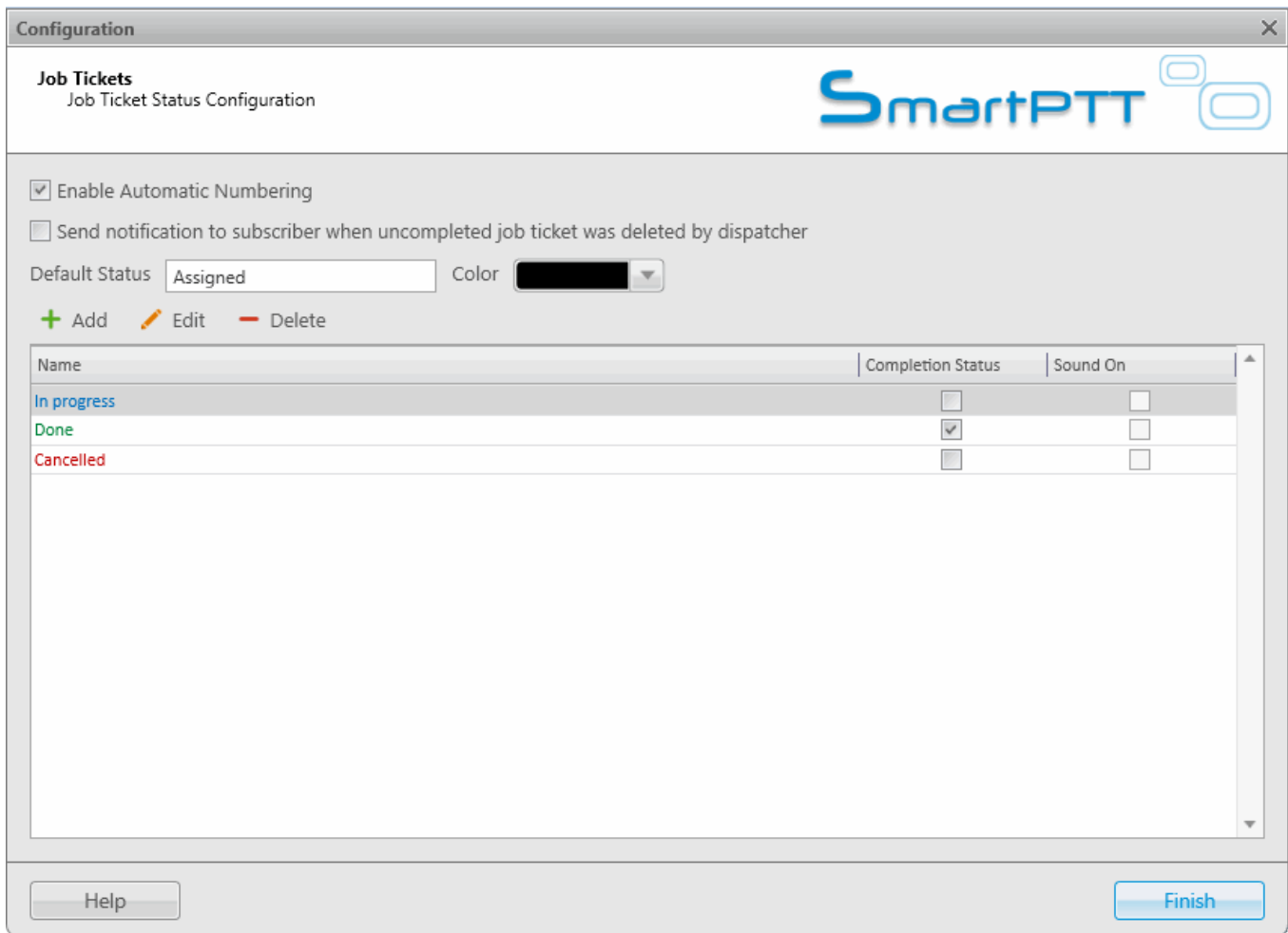
Then you can run the telemetry command from the talkgroup **Call Window**.
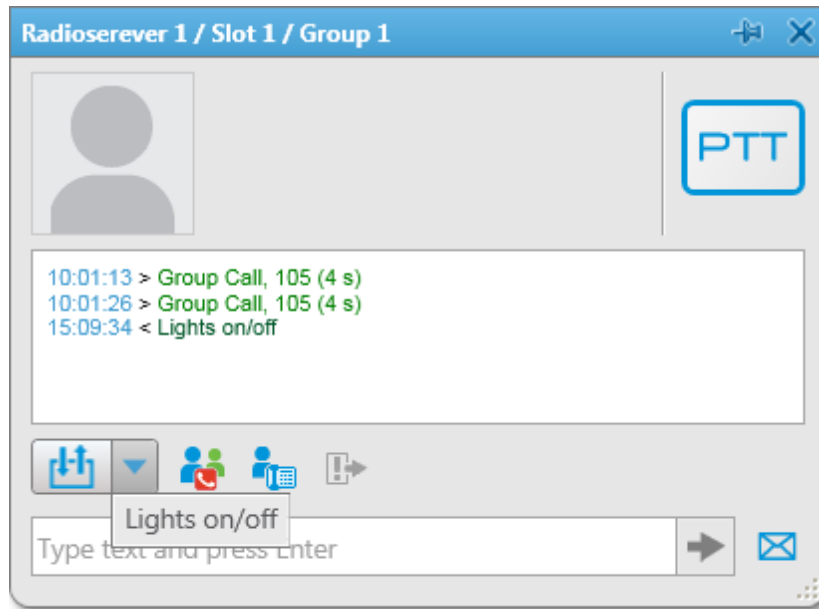
2.6.5 Job Ticket Statuses

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, in the **Main Menu** bar of the SmartPTT Dispatcher window, expand the **Settings** ⚙ menu and select **Radios → Job Ticket Statuses**. The following window appears:

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.
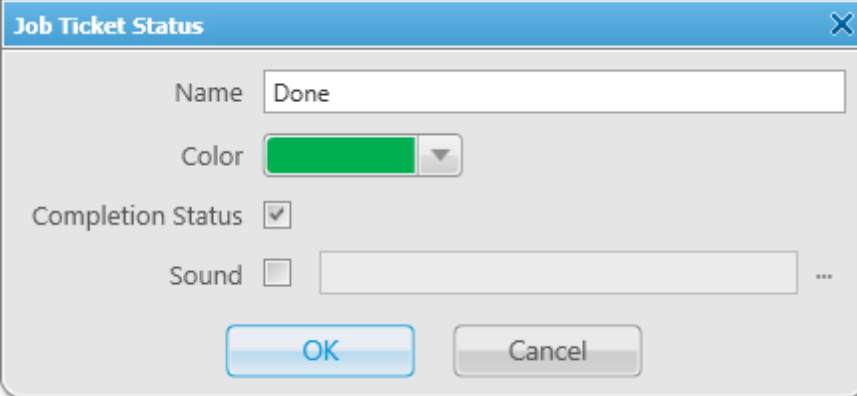
Send notification to subscriber when uncompleted job ticket was deleted by dispatcher: If this option is enabled, a radio receives a message, if an incomplete job ticket was canceled.

Default Status: The job ticket status which is displayed when the operator creates a new job ticket. The status does not change, until the person 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.
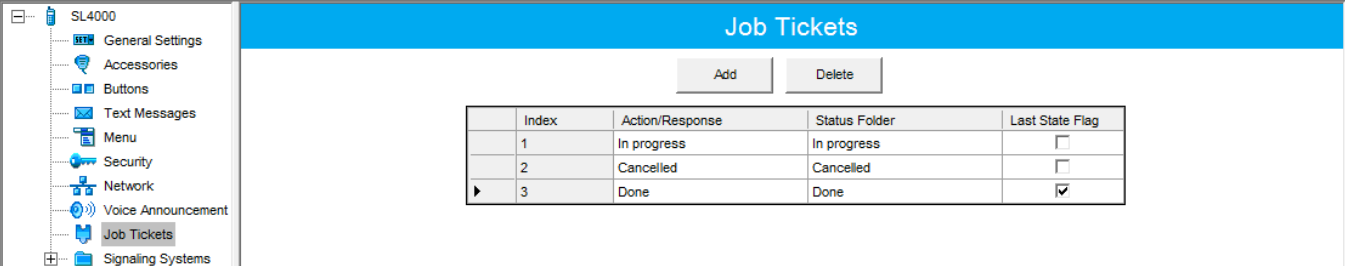
> **NOTE**
> You can also select the **Completion status** later in the **Job Tickets** cconfiguration window.

Sound: This setting enables the sound signal which will notify the operator that a job ticket changed its status.

> **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.

2.6.6 Lone Worker Rules

SmartPTT Dispatcher supports the Lone Worker mode for radios and WAVE users.

When a radio or a WAVE user is set to the Lone Worker mode, SmartPTT automatically tracks the following conditions:

- Absence of calls from a radio or a WAVE user during specified period of time

- Absence of GPS coordinates from a radio or a WAVE user during specified period of time

- Immobility of a radio or a WAVE user during specified period of time

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

To define special rules or profiles for lone workers, in the **Main Menu** bar of the SmartPTT Dispatcher window, expand the **Settings** ⚙ menu and select **Radios** → **Lone Worker Rules**. The window for creation and/or editing the rules for lone workers opens.
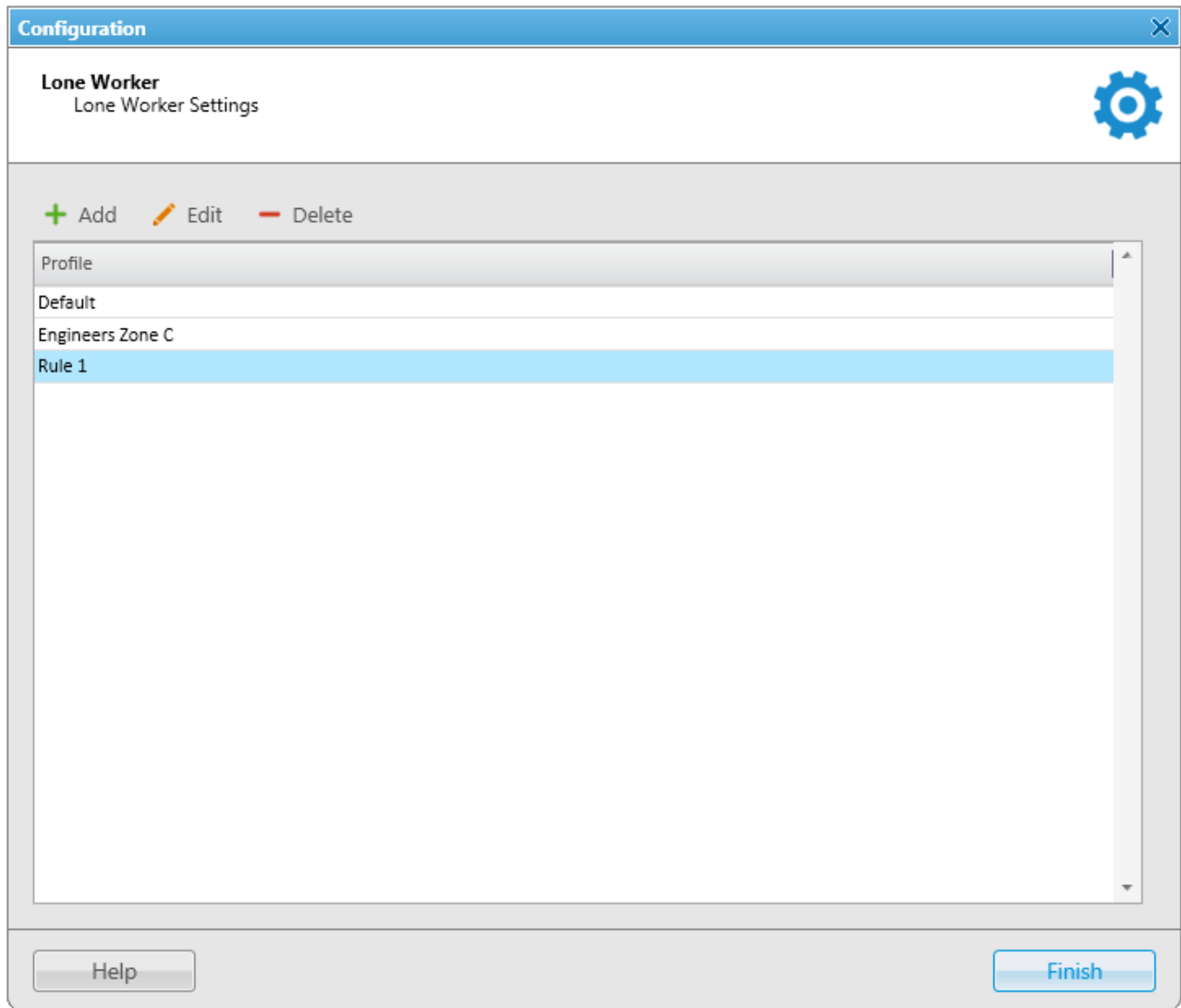
Here you can see the list of rules which get executed if the specified conditions are fulfilled. SmartPTT supports multiple rules, so it is possible to create a lone worker rule for each radio or WAVE user.

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

> **NOTE**
> The default profile cannot be deleted.

At clicking **Add** or **Edit**, the **Profile Settings** window appears:

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: Specifies the period of time for a radio or a WAVE user to make a voice call. If the radio or the WAVE user does not make a call during the specified time period, the corresponding actions are executed.

No location data received: Specifies the period of time for a radio or a WAVE user to send GPS or Indoor data. If the radio or the WAVE user does not send its GPS or Indoor data during the specified time period, the corresponding actions are executed.

No change in location data: Specifies the period of time to check if a radio or a WAVE user is moving. If the radio GPS data (GPS data accuracy is 5 meters) or Indoor data do not change during the specified time period, the corresponding actions are executed.

> **NOTE**
> The **No change in location data** rule condition triggers only if the dispatcher receives radio or WAVE user GPS or Indoor data. So the **No change in location data** rule condition must be used together with the **No location data received** rule condition.

> **NOTE**
> A WAVE user can send only GPS data.

The **Radio Alert** area:

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

> **NOTE**
> This action is unavailable to WAVE users.

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 **Record** 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.

> **NOTE**
> This action is unavailable to WAVE users.

The **Actions delay** timer defines the time interval after which **Actions** will be executed after **Radio Alert**.

If the rule meets selected criteria, the system can execute the following actions:

- Actions addressed to the initiator

- Alerts addressed to the dispatcher
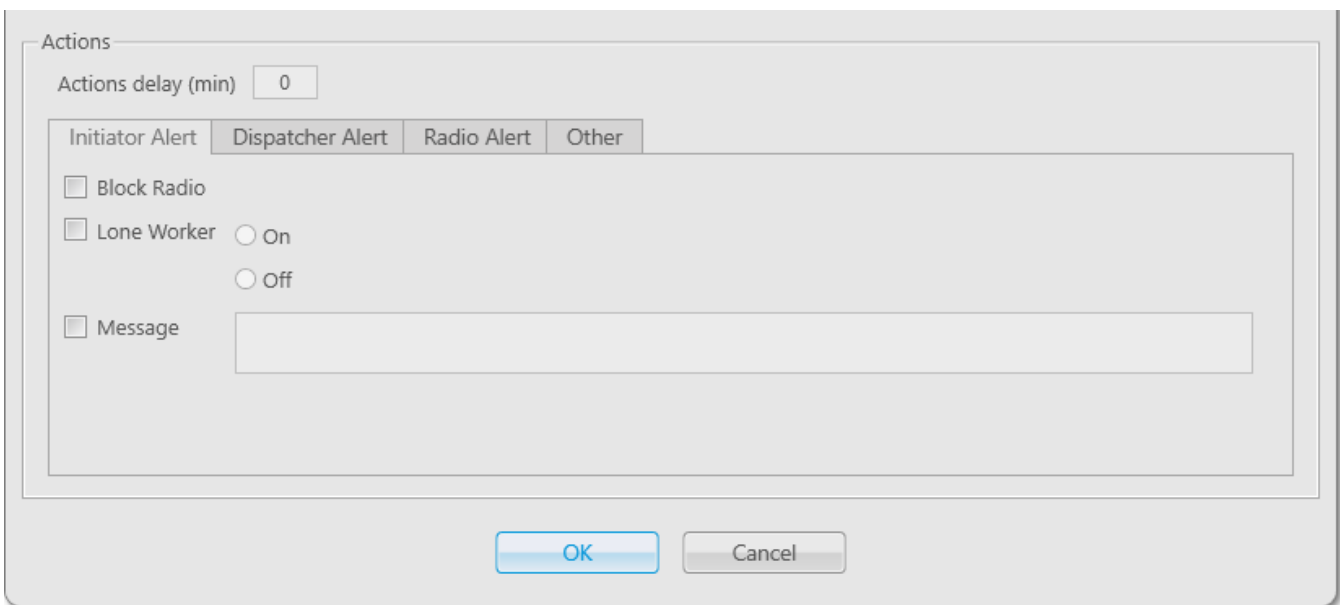
- Alerts addressed to the radio

- Other

To save the rule, click **OK**. 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.

> **NOTE**
> This action is unavailable to WAVE users.

Lone Worker: If selected and **On** is clicked, the lone worker profile will be set to the radio or the WAVE user that triggered the rule. If **Off** is clicked, the lone worker mode of the radio or the WAVE user 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 initiator that triggered the rule.

> **NOTE**
> This action is unavailable to WAVE users.

Dispatcher Alert

Open the **Dispatcher Alert** tab.

Play Sound: Select the audio file to play in SmartPTT Dispatcher. The supported audio formats: MP3, OGG, WAV.
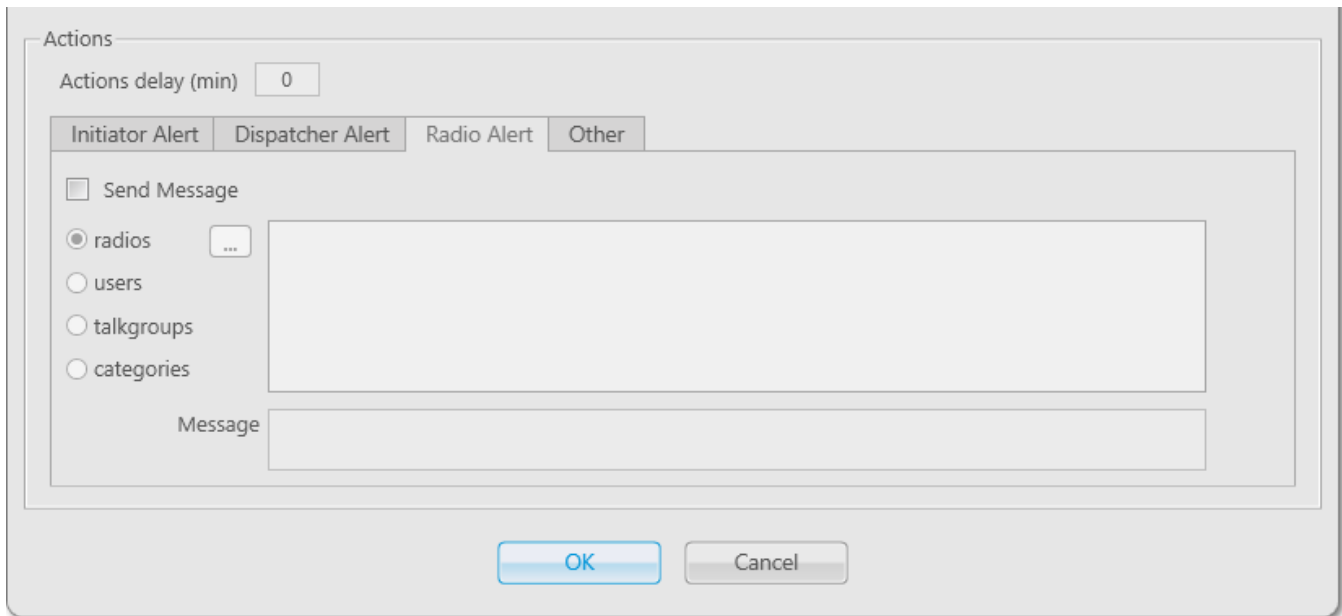
Show on Map: The radio or the WAVE user specified in the rule is shown on the map (with an icon).

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 Radio Status: The radio or the WAVE user is assigned the specified status. It is selected from the list of statuses.

Radio Alert

Open the **Radio Alert** tab.

Send Message: A text message is sent to the selected radios, users, talkgroups or categories.

> **NOTE**
> This action is unavailable to WAVE users.

Other

Open the **Other** tab.

`

HTTP Request: Is used for notification of the third party server of the changes occurred in 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** 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.

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 a radio or WAVE user

To assign the created lone worker profile to a radio or a WAVE user, open its **Properties** window.

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

To remove the profile from a radio or a WAVE user, clear the **Lone Worker** check box.

2.6.7 Custom Radio Properties

SmartPTT Dispatcher provides the ability to add custom properties of a radio and a WAVE user, which can be used for giving additional information. Custom radio and WAVE user properties have the following four types:

- Text

- Numeric

- Date

- List

To create custom properties, in the **Main Menu** bar of the SmartPTT Dispatcher window, expand the **Settings** ⚙ menu and select **Radios** → **Custom Radio Properties**. The **Custom Radio Properties** window appears:
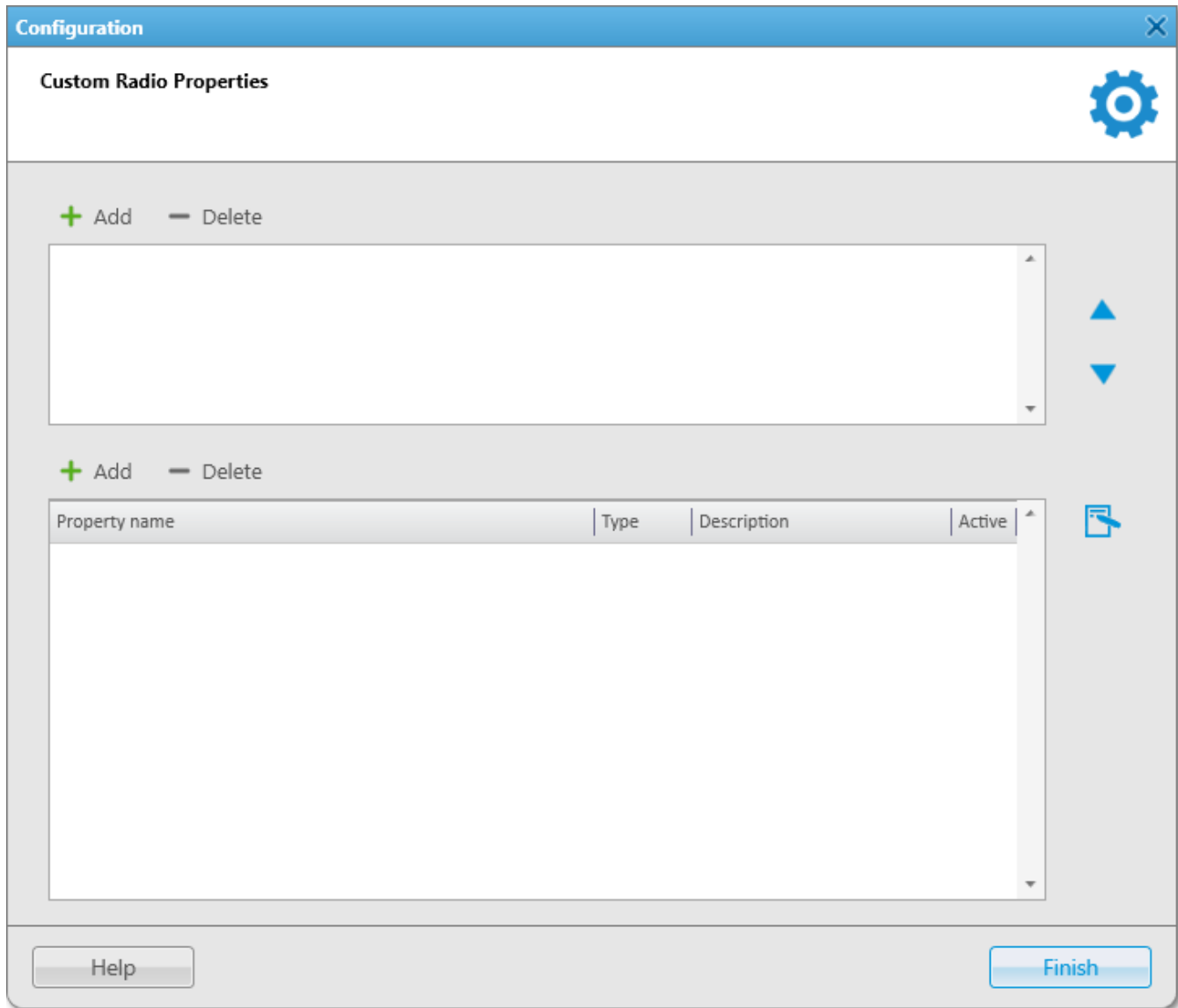
The top list contains custom property groups.

To add a 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.
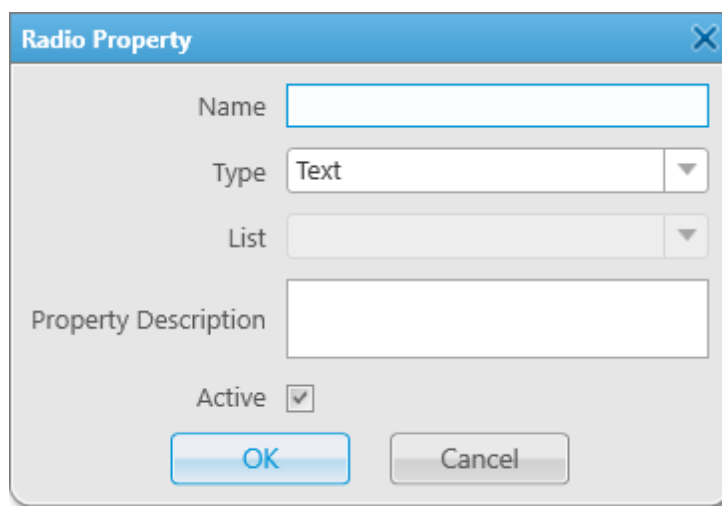
Type: Property type (Text, Numeric, Data or List).

Description: Text description added when creating a property.

Active: Select the check box, 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.

The **Radio Property** window appears:

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 ⬛. The window appears:
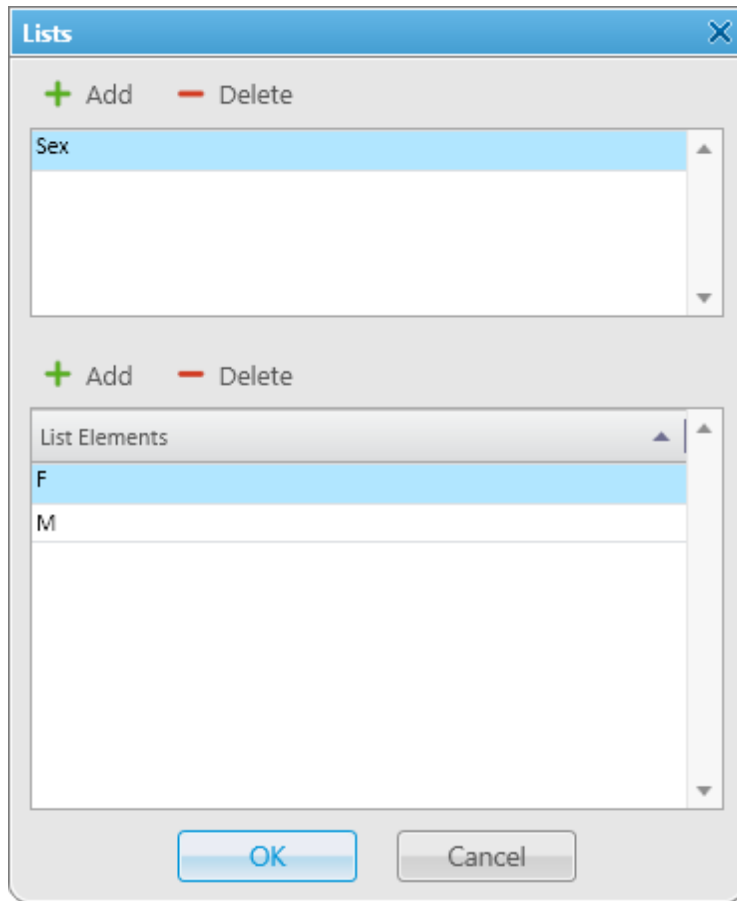
In the top box add list names by clicking **Add**.

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 radio or WAVE user **Properties** window, **Custom** tab.
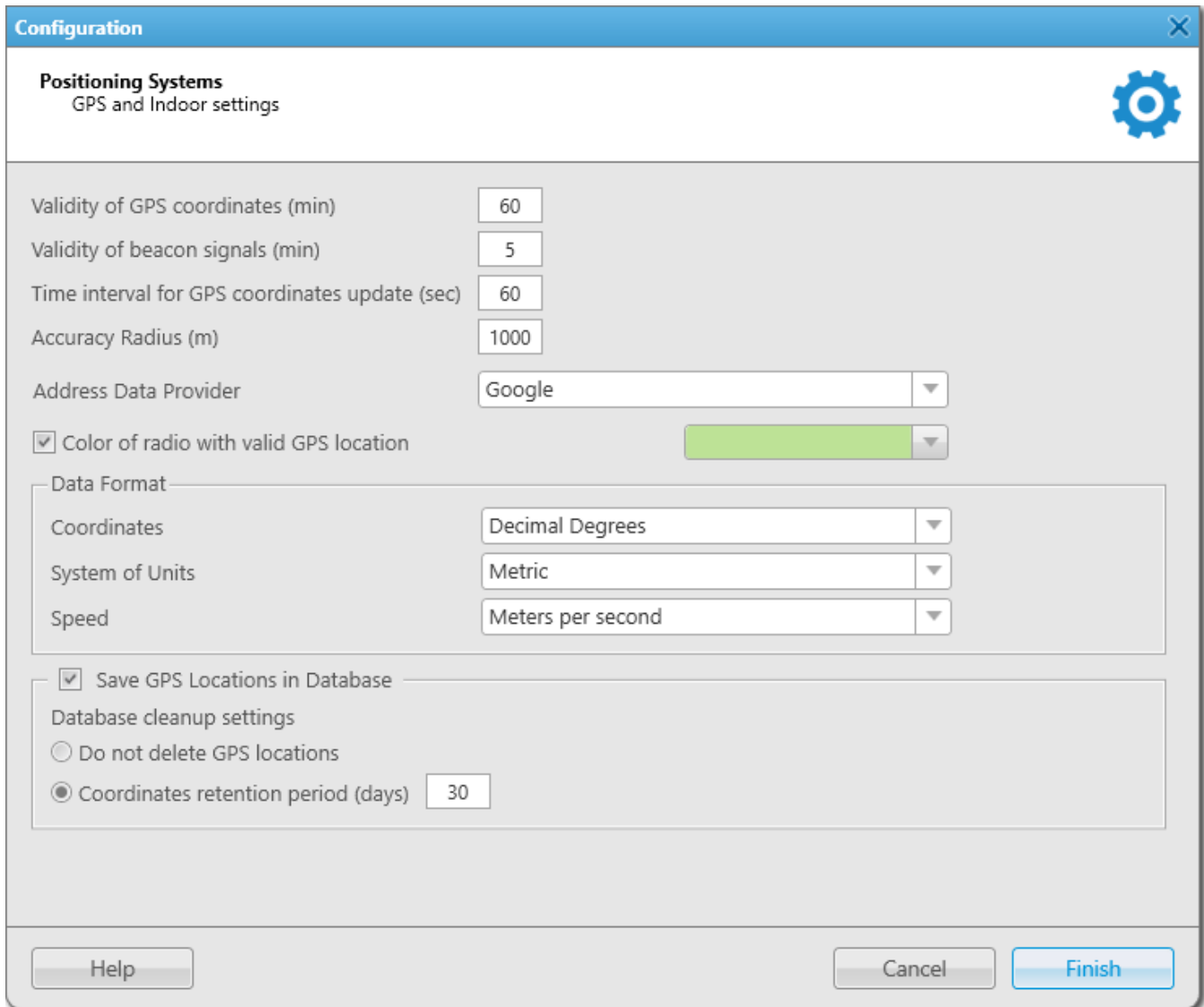
2.7 Positioning Systems

To define GPS or Indoor settings, in the **Main Menu** bar of the SmartPTT Dispatcher window, expand the **Settings** ⚙ menu and select **Positioning Systems**. The **GPS and Indoor settings** window appears:

The **GPS and Indoor settings** window contains the following parameters:

Validity of GPS coordinates: The parameter sets GPS data validity period in minutes. If new GPS coordinates were not received during this period, the radio or WAVE user label is removed from the map.

Validity of beacon signals: The parameter defines the time period during which the received beacon signal is relevant. If new beacon signals were not received during this period, the radio label is removed from the building plan.

Time interval for GPS coordinates update: It sets the default time interval for updating radio and WAVE user location data. The value set in this parameter will be applied to all unregistered radios, and will be displayed in the **Properties** window of a radio in the **Location** tab.

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

Color of radio with valid GPS location: It sets the color which will be used for a radio label with valid GPS locations.

Address Data Provider: It defines the map service (Google or OpenStreetMap), which will determine the object address on the map corresponding to the radio or WAVE user current GPS-coordinates.

Data Format area

It defines the format of location data to display in the radio and WAVE user **Call window**:

Coordinates: It allows you to select the format of GPS coordinates:

- Decimal degrees. GPS coordinates are displayed as: lat: 56,47568, long:84,98779

- Degrees, Minutes, Seconds. GPS coordinates are displayed as: lat: 56°28'32", long:84°59'16"

- Universal Transverse Mercator Coordinate System. GPS coordinates are displayed as: 45V 376108 B 6260913 C

System of Units: It allows you to select the measurement system (*Metric* or *Imperial*).

> **NOTE**
> When changing measurement system, the data previously logged won't be recalculated according to the new measurement system.

Speed: It allows you to select the format of a radio and WAVE user speed.

Save GPS Locations in Database: It defines if GPS coordinates received from radios and WAVE users are stored in the database.

Database cleanup settings

It defines the scheme of deleting coordinates from the database.

Do not delete GPS locations: If selected, the coordinates are not deleted from the database.

Coordinates retention period (days): It defines coordinates retention period in database.

2.8 Dispatchers

SmartPTT Dispatcher allows you to connect to other dispatchers who use the SmartPTT system. But before connecting to other dispatchers you must check or follow these steps:

1. Make sure that the operator has the permission **Connect with external dispatchers** (**Settings** → **Operators**). If not, the **Dispatchers** button 👤 will be unavailable in the **Main Menu**, and calls to other dispatchers will be impossible.

2. Make sure that at least one dispatcher is added to the dispatchers list in **Settings** → **Dispatchers**. If the list is empty, the **Dispatchers** button 👤 will be unavailable in the **Main Menu** even if the permission **Connect with external dispatchers** is selected.

To set up connection to other dispatchers, expand the **Settings** menu in the **Main Menu** bar and click **Dispatchers**.

VoIP Port: UDP port of this dispatcher's PC for voice transmission. The default value is *18501*.

Session Port: TCP port of this dispatcher's PC for transmission of commands and text messages. The default value is *18501*.

Play Sound Alert for Incoming Call: Select this check box to play a tone for an incoming call.

Play Sound Alert for Outgoing Call: Select this check box to play a tone for an outgoing call.

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

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

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

VoIP Port: UDP port for voice transmission.

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

Select: The path to the file of the dispatcher's photo.

Sound for Incoming Call Alert: The path to the sound file which will play in the dispatch console when this dispatcher calls.

To save the changes, click **OK**. A 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**.

To call the dispatcher, open the **Dispatchers** window by clicking the button 🔵. The following window appears:
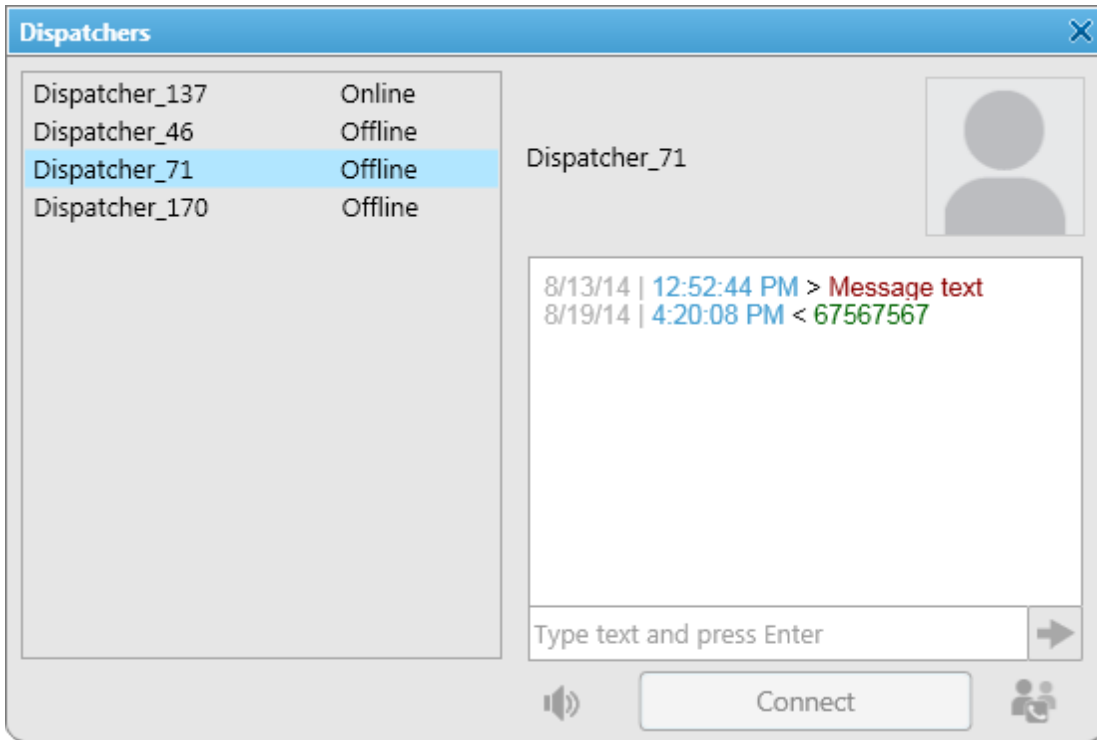
On the left you can see available dispatchers with different statuses. These can be:

- *Offline:* The dispatcher is not available for communication. This means that the dispatcher has not launched SmartPTT Dispatcher, or does not have the permission (**Connect with external dispatchers**)

- *Online:* The dispatcher is available for communication

- *Ringing:* Calling to the dispatcher to establish voice communication

- *Call:* Voice communication is established

To call a dispatcher, select it from the list, and click **Connect**. To end the call, click **Disconnect** (this button appears as soon as you have started communication).

To add online dispatchers to a conference call, click 📇.

To mute your voice transmission, click 🔊. You will still hear the other dispatcher. This button becomes available when the call is started.

To send a message to the selected dispatcher, enter the text of the message and click ➡.
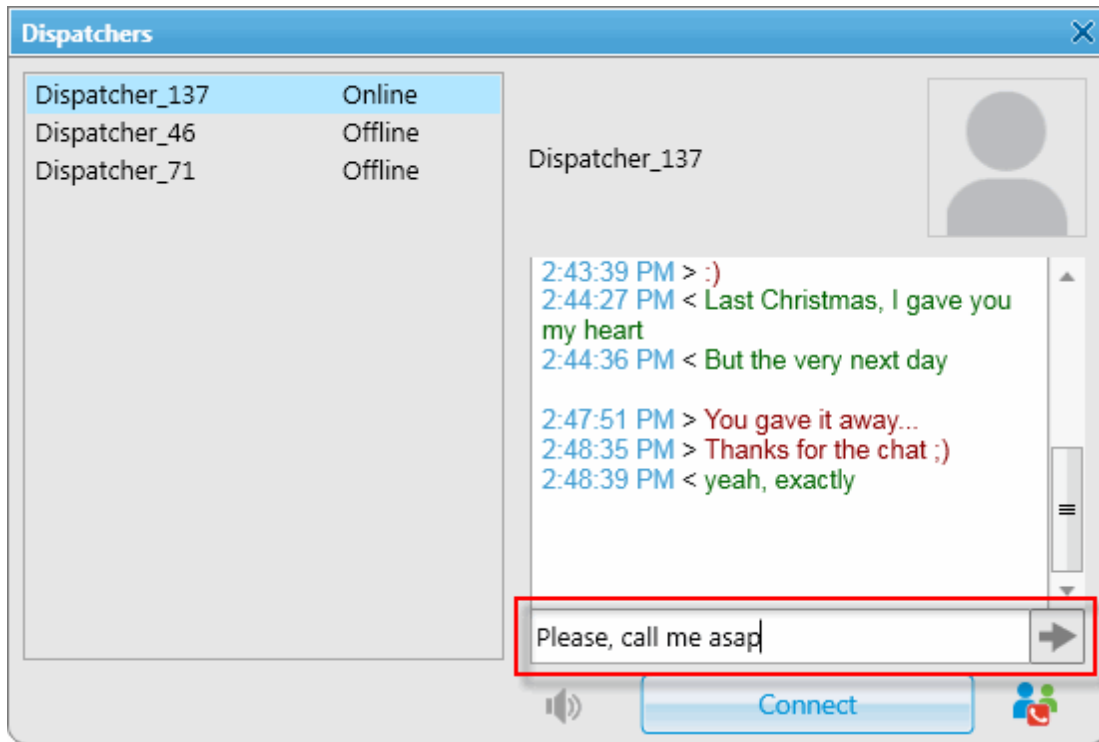
To answer or decline the incoming call from a dispatcher, click **Accept** or **Decline** in the opened window:
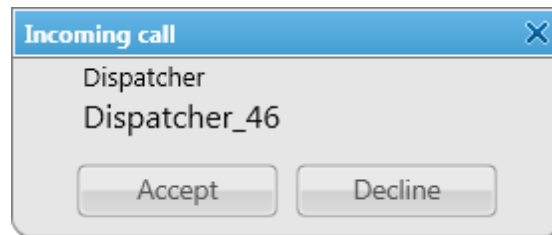
If the incoming call is made by the dispatcher not on the list you will see its IP address in the **Incoming call** window. You can add the unregistered dispatcher in the **Dispatcher** window by clicking on the **Add** button.
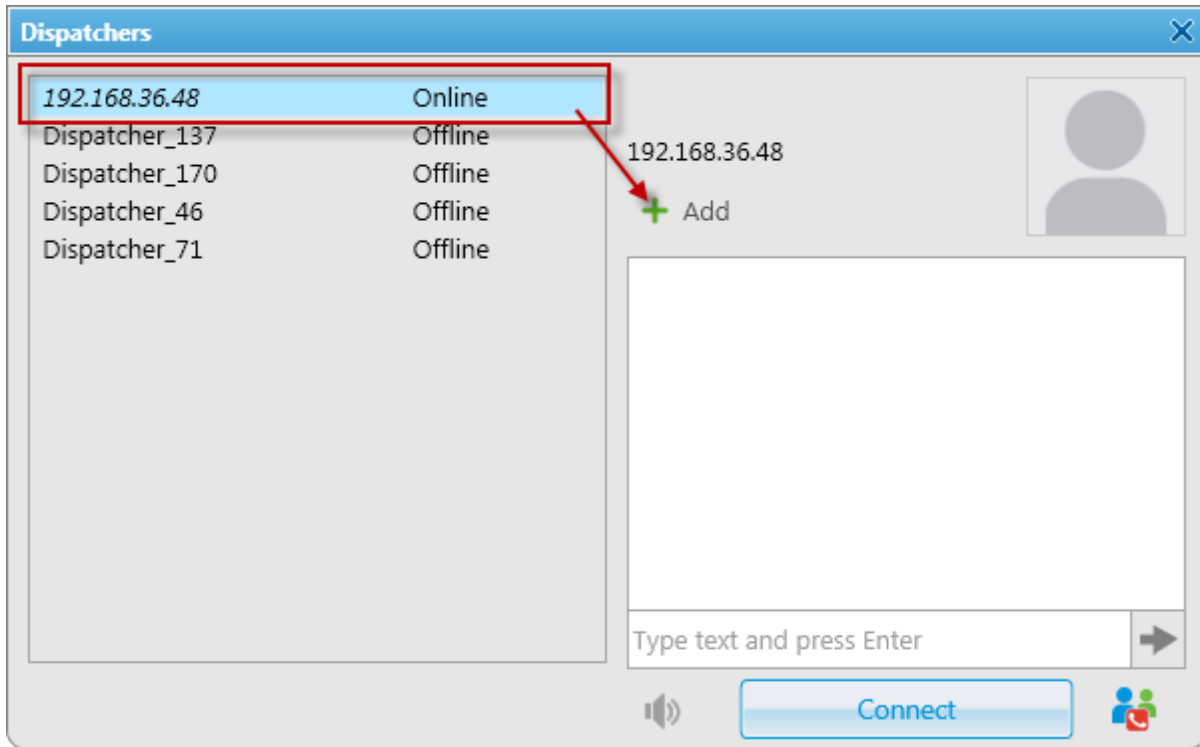
2.9 Rules

2.9.1 Custom Rules

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

To set rules, in the **Main Menu** bar of the SmartPTT Dispatcher window, expand the **Settings** ⚙ menu and select **Rules** → **Custom Rules**. The **Custom Rules** window appears:
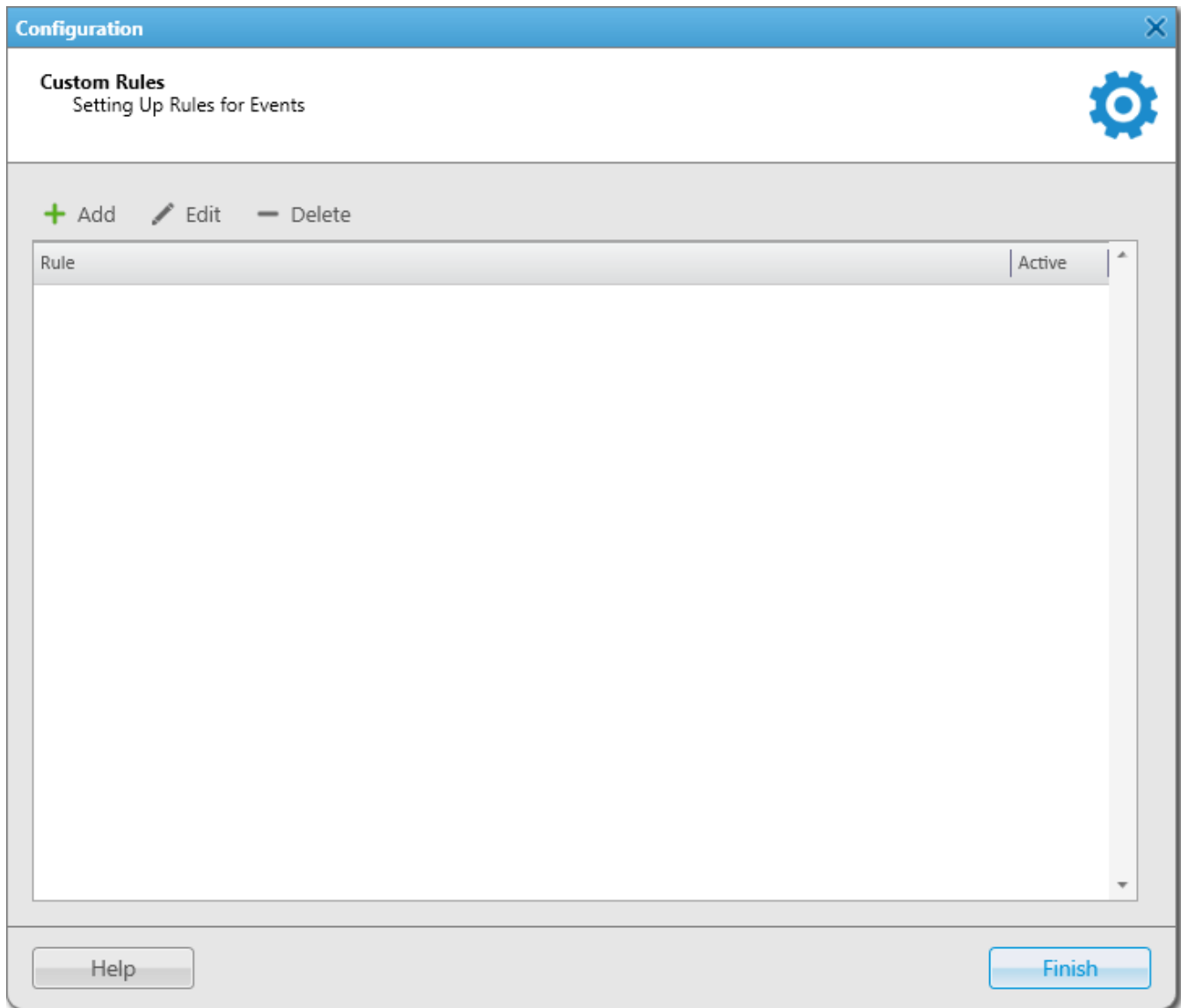
To add a new rule, click **Add**. The **Rule Settings** window appears:

Name: The name of the rule.

Active: Select this check box to make the rule enabled.

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

Attribute	Operation	Value
Direction	No, Equals	Incoming, Outgoing

Attribute	Operation	Value
Event Type	No, Equals, Not Equals	Registration, Call, Message, Telemetry, Alarm, Status, Block Radio, Job Ticket, Lone Worker, Radio Kill , User Authorization
Date/Time	No, Between	Time interval
Additional Information	No, Equal to, Contains	Type event additional information, e. g. text messages, titles and description of tasks, talkers from a group call.
Not Read	No, Equal to	Read, Not read
Operator	No, Equal to, Not equal to	Operator from list of operators
Radioserver	No, Equal to, Not equal to	Radioserver name
Channel	No, Equal to, Not equal to	Channel name
Radio	No, Equal to, Not equal to	A radio or a WAVE user from the list
Talkgroup	No, Equal to, Not equal to	Talkgroup name
Status	No, Equal to, Not equal to	Status from the list of statuses
Duration	No, Equal to, Not equal to, Greater than, Greater than or equal to, Less than, Less than or equal to, Between	Duration in seconds
Connection Type	No, Equal to, Not equal to	Connection types used in SmartPTT: • **DMR:** Over-the-air connection made via repeaters and control stations; • **PBX:** Telephone connection

Attribute	Operation	Value
		• **IP:** Dispatcher-Dispatcher connection
Repeater IP	No, Equal to, Not equal to	Available repeaters IP addresses
Destination	No, Equal to, Not equal to	Recipient from the list
Record	No, Equal to	Available audio records
User	No, Equal to, Not equal to	Radio user from the list

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:

- Alerts addressed to the initiator

- Alerts addressed to the dispatcher

- Alerts addressed to the radios

- Other actions

NOTE
If the conditions of the rule include *Incoming* (**Direction**), *Telemetry* (**Type**) and a selected talkgroup (**Talkgroup**), the rule will be triggered regardless of the talkgroup ID where the telemetry command was sent.
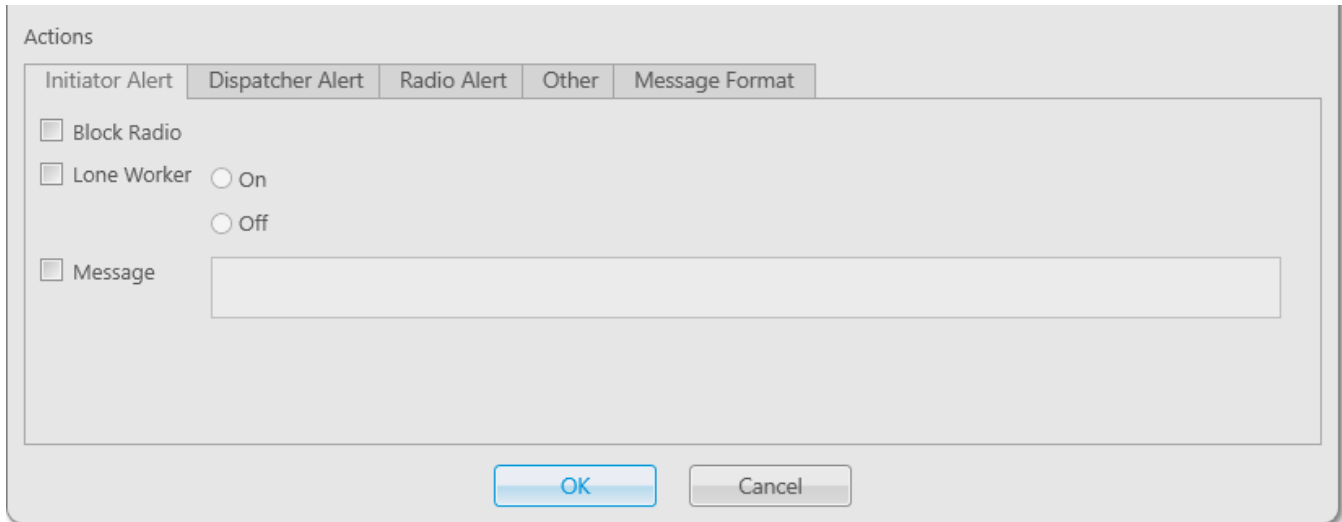
The **Message Format** tab allows you to set the format of the alert massages.

To save the rule, click **OK**. 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.

> **NOTE**
> This action is unavailable to WAVE users.

Lone Worker: If selected and **On** is clicked, the lone worker profile will be set to the radio or the WAVE user that triggered the rule. If **Off** is clicked, the lone worker mode of the radio or the WAVE user 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 initiator of triggering of the rule. You can specify message format settings in the Message Format tab.

> **NOTE**
> This action is unavailable to WAVE users.

Dispatcher Alert

Open the **Dispatcher Alert** tab.

Play Sound: Select .wav audio file to play.

Show on Map: If selected, the radio or the WAVE user that triggered the rule will be shown on the map.

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 Radio Status: The radio or WAVE user is assigned the predefined status. It is selected from the **Statuses** list (see Statuses).

Radio Alert

Open the **Radio Alert** tab.

Send Message: A text message is sent to the selected radios, users, talkgroups or categories. You can specify format settings of text messages in the Message Format tab of the **Actions** area.

> **NOTE**
> This action is unavailable to WAVE users.

Other

Open the **Other** tab.

HTTP Request: Is used for notification of the third party server of the changes occurred in 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" 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 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 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 to. 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 recipients, defined in the message recipient list in the **Radio Alert** or **Other** tab.

> **NOTE**
>
> The format settings for text messages are valid for specific messages, only if **Send Message** is selected in the **Radio 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 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 time in UTC.

Coordinates: If selected, the radio coordinates are displayed in the message. These are the latest coordinates stored in the database.

Radio ID: If selected, the radio ID, which has triggered the rule, will be added to the text message.

Radio Name: If selected, the name of the radio, which has triggered the rule, will be added to the text message.

2.9.2 Positioning Rules

You can set response rules for GPS and Indoor events registered in SmartPTT system. GPS events include receiving or not receiving radio or WAVE user GPS coordinates, and Indoor events include receiving or not receiving positioning data from special beacons. Response rules may include automatic sending of messages, playing alerts in SmartPTT Dispatcher and on the radio, changing radio or WAVE user statuses, and other.

To set up a positioning rule, in the **Main Menu** bar of the SmartPTT Dispatcher window, expand the **Settings** ⚙ menu and select **Rules → Positioning Rules**.
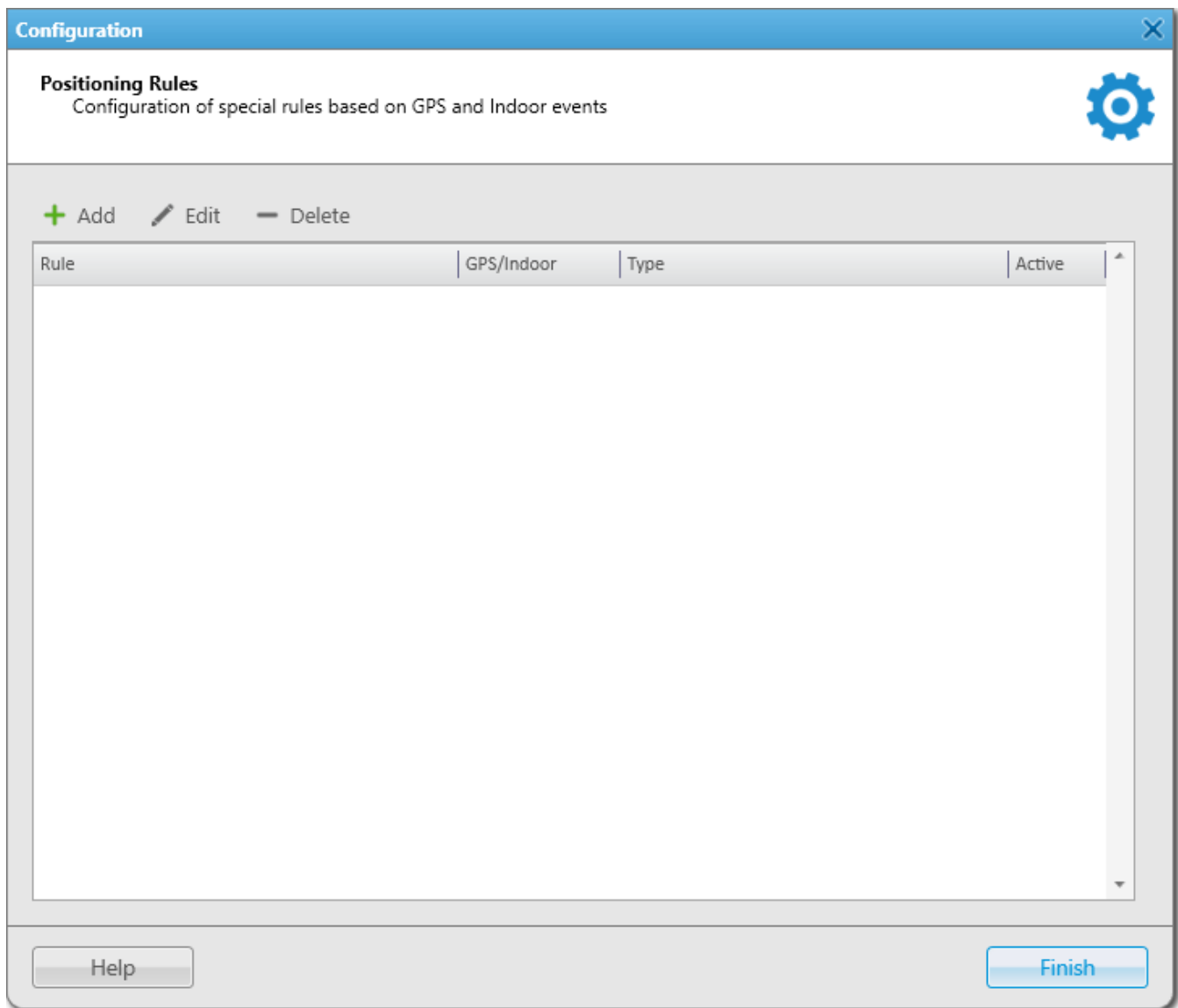
To add a new rule, click **Add**. In the window that opened specify parameters of the future rule.

Positioning Rule   ✕

☑ Active

Name _____

◉ GPS   ◯ Indoor

Type   No location data   ▾

Conditions

◉ All radios
◯ Select Radios
◯ Select Users
◯ Select Categories

Time period with no motion detected (min)   5
☐ Notify constantly
☐ Notify about new location

Actions

| Initiator Alert | Dispatcher Alert | Radio Alert | Other |

☐ Block Radio
☐ Lone Worker   ◯ On
                   ◯ Off
☐ Message   _____

OK   Cancel

Active: If the check box is selected, processing of events starts in accordance with the selected criteria. If the check box is not selected, the rule is unavailable.

Name: Name of the rule.

There can be two kinds of positioning rules: Indoor and GPS.

> **NOTE**
> You can assign only GPS positioning rules to WAVE users.

Type: Rule types:

- **Stop control:** This rule type checks if a radio or a WAVE user is moving, i.e. the radio coordinates or Indoor positioning data constantly change with time

- **Location data received:** This rule type checks the appearance of the radio or WAVE user coordinates after a predefined period of time when there were no coordinates

- **No location data:** This rule type checks if there are no radio or WAVE user coordinates for a period longer than the specified period of time. Coordinates like "...Lat: 0 Long: 0" are not regarded as valid coordinates, and they won't be taken into account when applying positioning rules

- **Zone/route entry:** This rule type checks if the radio or the WAVE user has entered the zone or the route, i.e. the previous radio coordinates were outside the defined zone or route, and the current coordinates are within this zone or the route

- **Zone/route exit:** This rule type checks if the radio or the WAVE user has left the zone or the route

- **Speeding:** This rule type checks if there was any speeding based on the received GPS data

- **Number of radios in geofences/on routes:** This rule type checks the number of radios and WAVE users in the selected geofences or on selected routes

The table lists the criteria used in positioning rules:

Attribute	Value
All Radios **Select Radios / Select Users / Select Categories**	Select all radios including WAVE users, or some radios, or some WAVE users, or radio users, or categories, to whom the rule will be applied.
Time period with no motion detected	Time interval during which a radio or a WAVE user can stay at one place (min)
Time period before receiving location data	Period of time after which a radio or WAVE user coordinates are received again (min)
Time period with no location data received	Period of time during which there are no radio or WAVE user coordinates (min)
Geofences and Routes	Select geofences or routes to follow in the rule.

Attribute	Value
Speeding	If speeding is registered, the rule is executed. **NOTE** The rule triggers only when over-speed occurs in the area of the selected geofence or on the selected route. Otherwise, the rule is not triggered.
Number of radios in geofences/on routes	The number of radios and WAVE users in selected geofences or on selected routes.
Select Area (Geofences/ Routes)	Select geofences or routes to follow in the rule.
Notify constantly	Select this check box to notify the dispatcher about violation of one of the criteria every time it happens. If the check box is not selected, the actions which follow the violation of the specified criteria will occur only once.
Notify about new location	If a radio or a WAVE user starts moving, and before that the radio or the WAVE user stopped for a time period longer than the specified one, the notification window will be displayed

If the rule meets selected criteria, the system can perform the following actions:
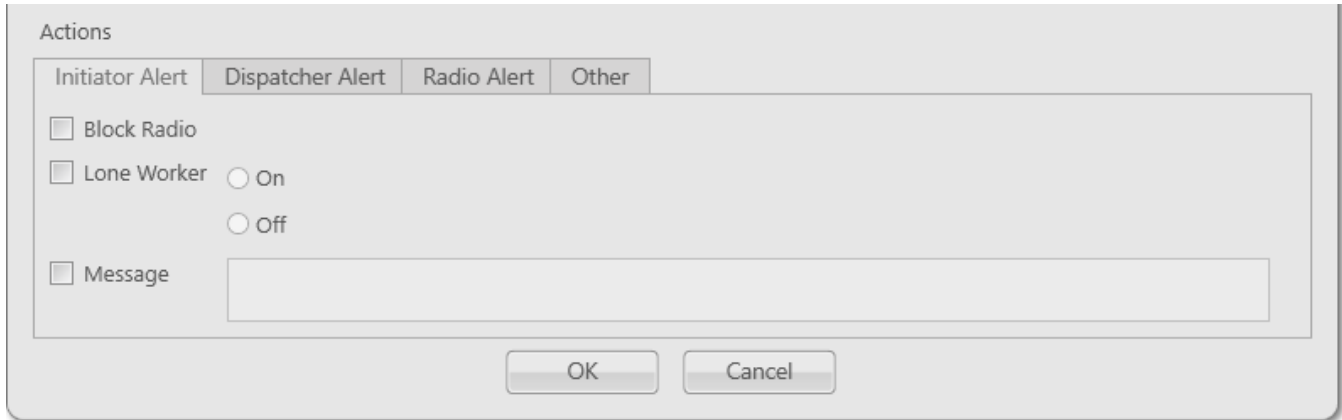
- Actions addressed to the initiator

- Alerts addressed to the dispatcher

- Alerts addressed to the radios

- Other actions

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.

> **NOTE**
> This action is unavailable to [WAVE users](#).

Lone Worker: If selected and **On** is clicked, the lone worker profile will be set to the radio or the WAVE user that triggered the rule. If **Off** is clicked, the lone worker mode of the radio or the WAVE user 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 initiator of triggering of the rule.

> **NOTE**
> This action is unavailable to WAVE users.

Dispatcher Alert

Open the **Dispatcher Alert** tab.

Play Sound: Select .wav audio file to play back.

Show on Map: Location of a radio or a [WAVE user](#) 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 **Stop control** and **No location data** the alert text cannot be set – it is generated by the system automatically.

Set Radio Status: The radio or the WAVE user is assigned the specified status. It is selected from the list of statuses.

Radio Alert

Open the **Radio Alert** tab.

Send Message: A text message is sent to the selected radios, users, talkgroups or categories.

> **NOTE**
> This action is unavailable to [WAVE users](#).

Other

Open the **Other** tab.

HTTP Request: Is used for notification of the third party server of the changes occurred in 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" 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**.

2.10 Licenses

To use SmartPTT Dispatcher a license is needed. 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 the license, in the **Main Menu** bar of the SmartPTT Dispatcher window, expand the **Settings** ⚙ menu and select **Licenses**.

In the opened **Licenses** window you can install the license that defines functions available in the system:
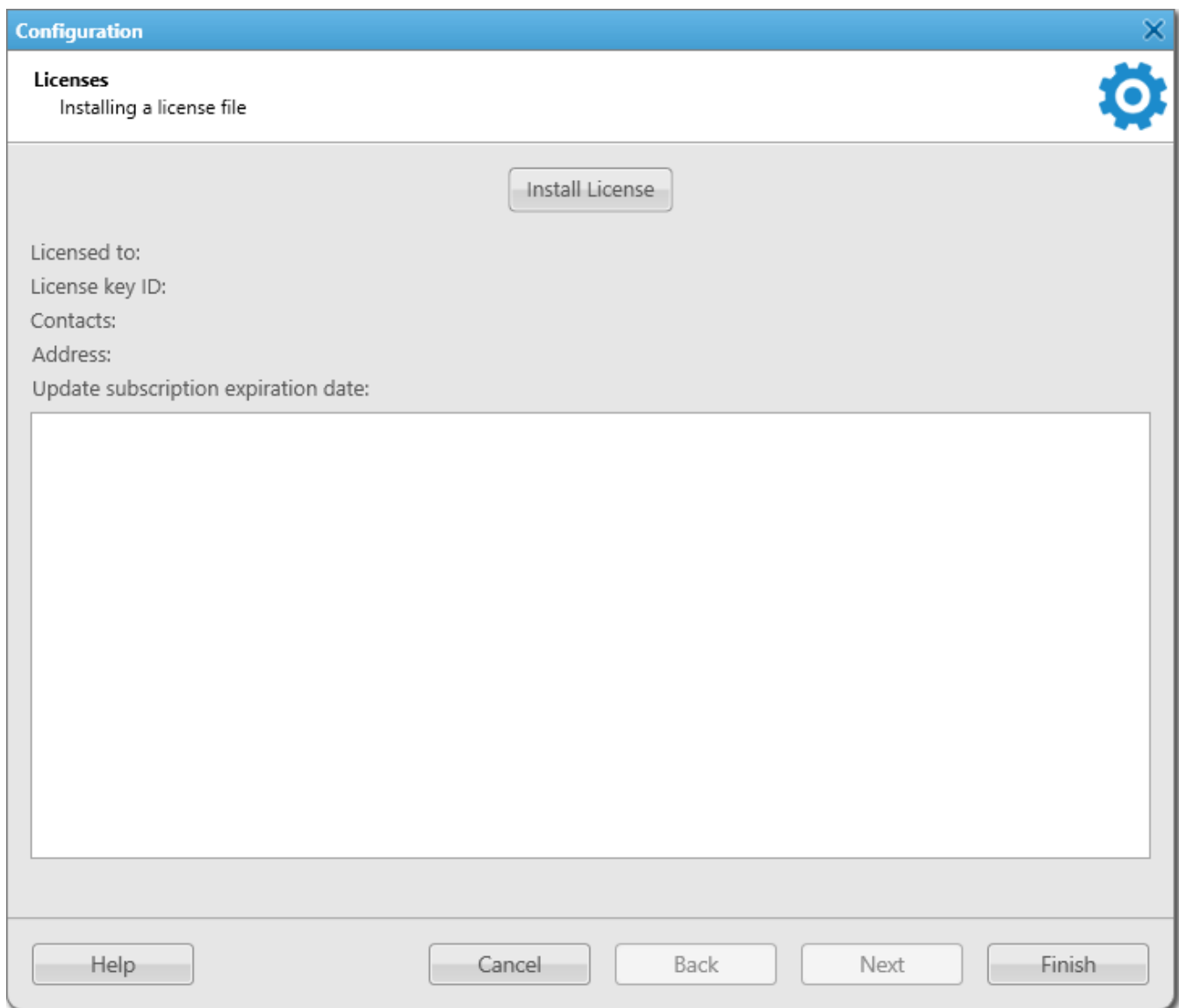
Click **Install License** and specify the license file location.

After the license installing, the **Install License** button changes to the **Restore License** button. The system licensing window displays information on the license type and scope of functions.

By clicking the **Restore License** button, you return to the previous license. After closing the **License** window, the latest displayed license is applied.

Configuration	✕
Licenses Installing a license file	⚙

<div>

Restore License

Licensed to: SmartPTT PLUS
License key ID: 224BBC63
Contacts:
Address:
Support expiration date: 1/10/2018

Functionality: Additional Radioservers License Type:	Number of Licenses: 5 Expiration Date: 12/31/2017
Functionality: Radios License Type:	Number of Licenses: 100 Expiration Date: 12/31/2017
Functionality: Voice Recording License Type:	Number of Licenses: 1 Expiration Date: 12/31/2017
Functionality: SmartPTT PLUS License Type:	Number of Licenses: 1 Expiration Date: 12/31/2017
Functionality: Coverage Map License Type:	Number of Licenses: 1 Expiration Date: 12/31/2017
Functionality: Redundant radioserver License Type:	Number of Licenses: 1 Expiration Date: 12/31/2017

Help   Cancel   Back   Next   Finish

</div>

NOTE

If the radioserver and the dispatch console are installed on the same machine, you can install licenses either for SmartPTT Radioserver Configurator or for SmartPTT Dispatcher. If the radioserver and the dispatcher console are installed on different computers, you should install licenses for both applications.

2.11 Database

To connect to the database, expand the **Settings** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Database**. The following window appears:

Before creating a new database, connect to the database server. For this, fill in the **Database server name** field, and click **Connect**. In case of a successful connection, you will see the following message in the **Database** section: *"Connection is established successfully!"*. If connection was not established, you will see a message with the error description 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*).

Authorization Mode: Allows you to select authorization mode with the database.

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.

To create a new database, click **Create Database**. In the opened window, enter the name of the new database and click **Save**.

Current database: Allows you to connect to one of the created databases.

Restore Database: Allows you to restore the current database using automatic backups. You can set up auto backups of the database in **Settings** → Database Auto Backup.

> **NOTE**
>
> If SmartPTT Dispatcher is connected to a remote database, on default you cannot restore it from a backup file located on a remote database computer.

To save the changes, click **Finish**. To apply the changes with the database, restart the dispatch console.

2.12 Radioservers

To connect the existing radioserver to the dispatcher console, in the **Main Menu** bar of the SmartPTT Dispatcher window, expand the **Settings** ⚙ menu and select **Radioservers**. The configuration window for setting up and configuring radioservers opens up.
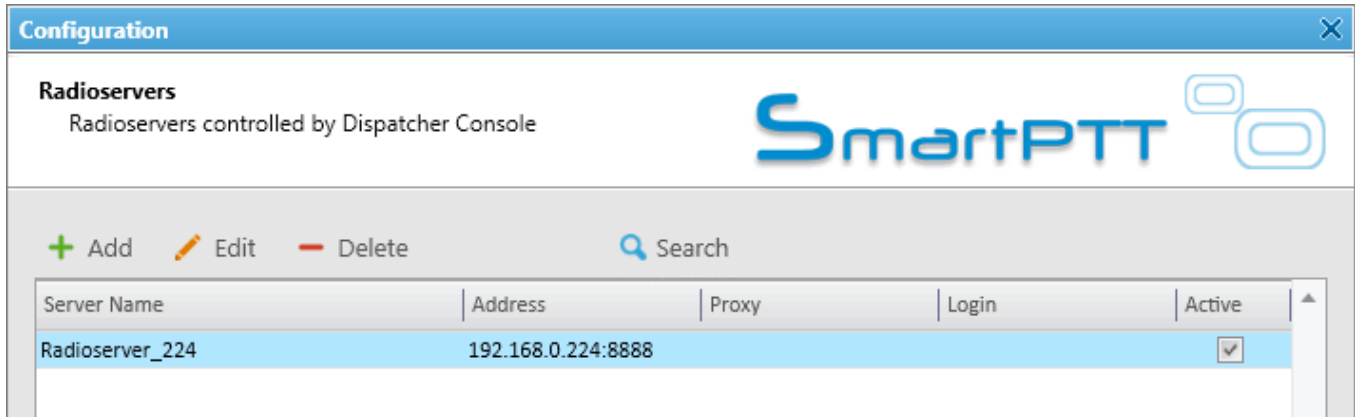
By default, the list of radioservers is empty. Click **Add** to open the window for adding radioservers.

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.

Example

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 check box.

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.
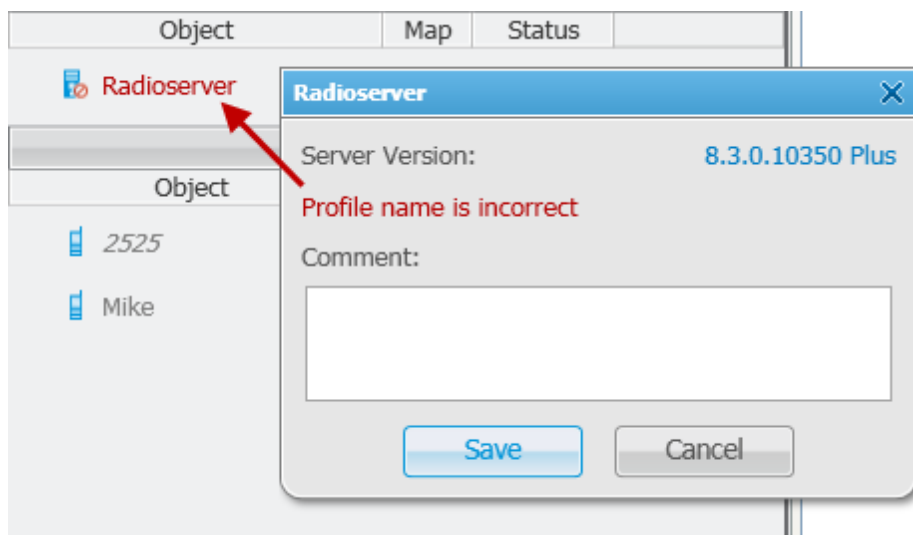
NOTE

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

After all the fields are completed, click **OK**. The new radioserver appears in the list of radioservers.
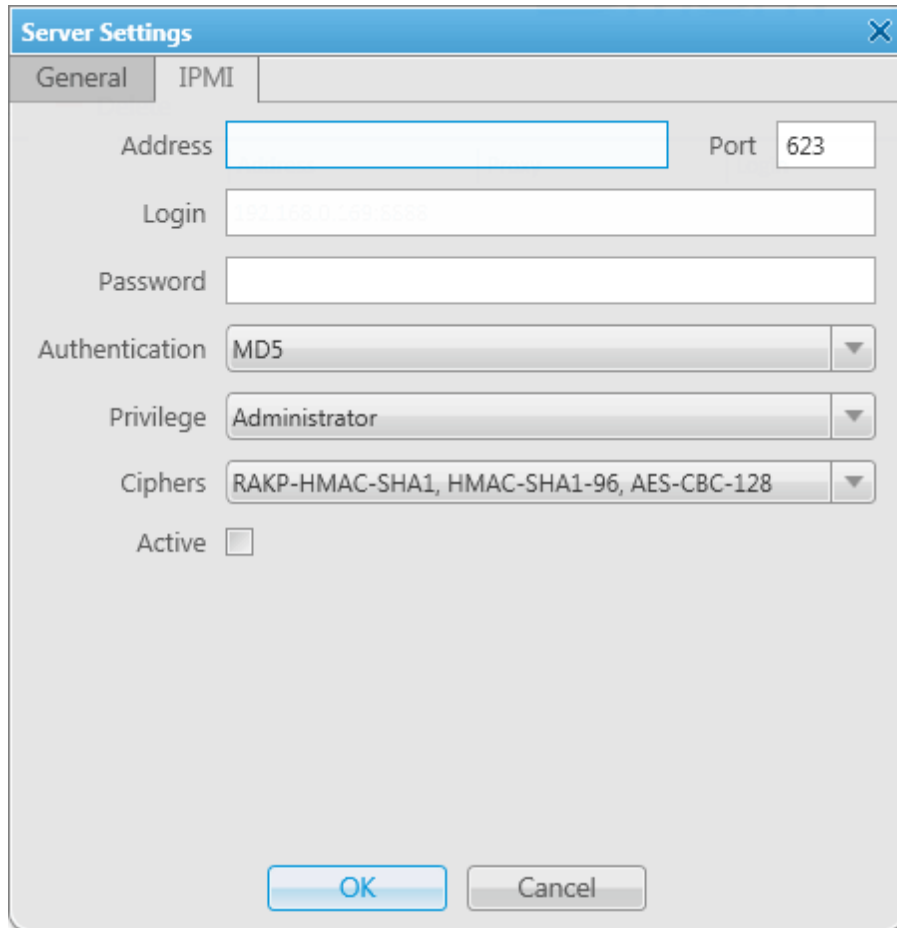
To edit the radioserver settings, select it in the list of radioservers and click **Edit**. To delete the radioserver, select it in the list of radioservers and click **Delete**. To find all the running radioservers in the network, click **Search**.

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: IP address and port number of the radioserver PC that are used to establish IPMI connection.

Login and **Password** are obligatory fields. They must match the login and password set in IPMI configuration settings on the radioserver PC.

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

Privilege: Depending on the privilege used, the dispatcher has different permissions. Use *Administrator* 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 check box to activate IPMI functionality for the radioserver.

> **NOTE**
>
> For more information about managing the radioserver with the help of IPMI, see [Monitoring](#).

3 Tools

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

These are the following panels:

- Calls panel displays the ongoing call activity and call history in the radio network.

- Sound panel allows you to monitor and adjust the signal volume.

- Cross Patches panel allows you to connect talkgroups from different frequency bands or from different network types dynamically.

- Radio Fleet panel displays a list of radio system objects.

- Radios panel for quick access to radios and WAVE users.

- Job Tickets panel from where you can create and supervise job tickets.

- Lone Workers panel to show lone workers' status, for example, that a lone worker did not call for a longer period than expected, etc.

- Latest Incoming Calls panel, which gives you information of the recent voice calls made.

- Notifications panel to get information about the alarms configured by the dispatcher.

- System Messages panel, which displays errors, disconnection of the radioserver, etc.

- Server Tasks panel to display server tasks in the background.

- Map Tools contains all the available map tools of the dispatch console: Points of Interest, Routes, Geofences, Radio and WAVE user Location panels.

- Custom Console panel created by the SmartPTT Dispatcher to manage radios, talkgroups, WAVE users or control stations.

3.1 Calls

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

> **NOTE**
> If in the **General Settings** window the Show radio user name check box is selected, and on SmartPTT Radioserver the user authorization service is activated and users are added, then the name of the user authorized on the radio is displayed next to the radio name in brackets.

The first time you install SmartPTT, the **Calls** panel opens automatically. The panel can also be opened or closed manually. To do this, expand the **Tools** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Calls**.
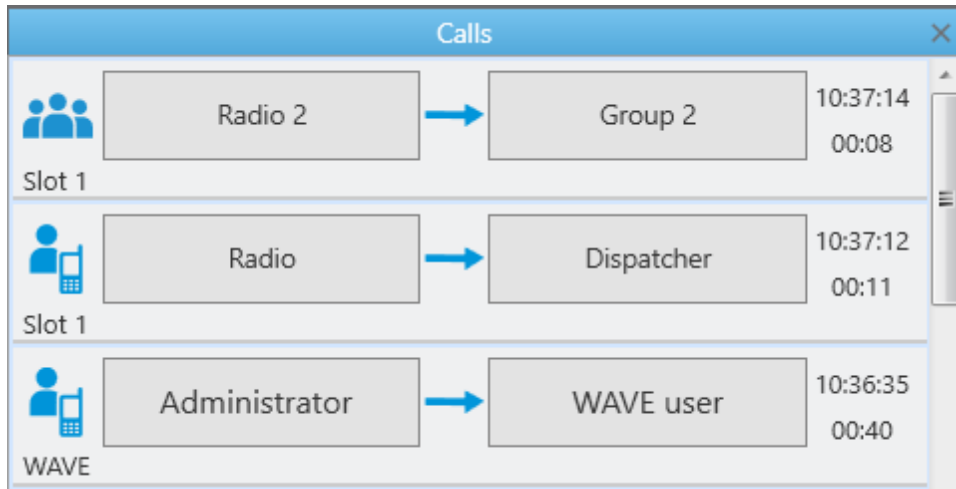
If the **Calls** panel is empty, select a radio or a WAVE user in the **Radio Fleet** panel and click the **PTT** button to make a call. The corresponding call record will appear on the **Calls** panel and the call will be initiated.

A call record on the **Calls** panel contains several elements.
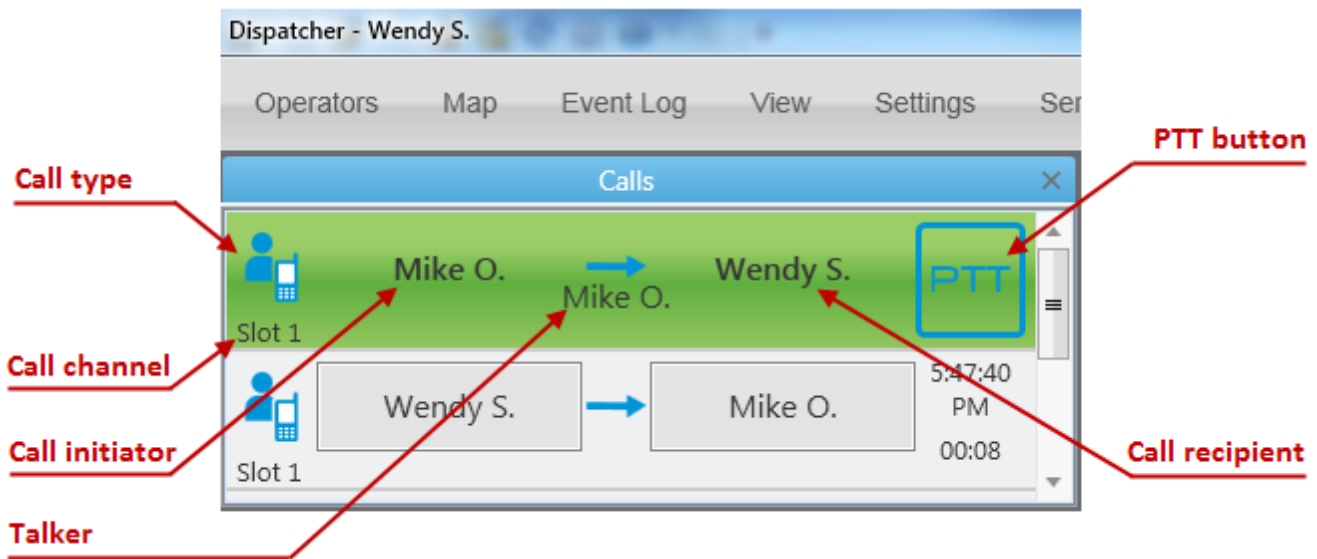
In the Capacity Max systems, a call record on the **Calls** panel also contains the **Cross** button that is used to end the call during the hang time or to decline the call.
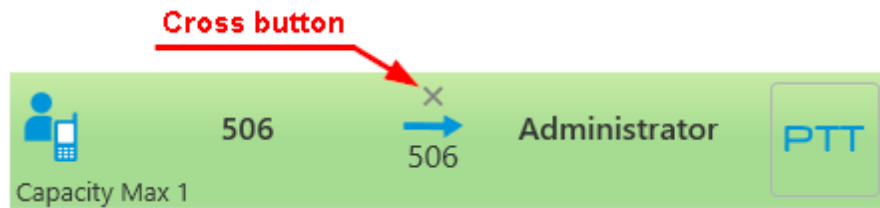
In the SmartPTT systems, six types of calls exist. Each type has its own indicating icon:

 Private call

 Telephone call

 Group call

 Group telephone call

 Emergency call

 Remote monitoring

From the **Calls** panel the dispatcher can perform the following actions:

- Answer the ongoing call by clicking anywhere on the call record

- See the ongoing call activity. The call status can be determined by the color of the call record

- See history of all registered calls, time of call and its duration

- Make all types of call by clicking the button with the subscriber name

- Decline the incoming call by clicking the Cross button or right-clicking the call record (in the Capacity Max systems only)

- End the call during the hang time by clicking the Cross button or right clicking the call record (in the Capacity Max systems only)

Call status is determined by the color of the call record:

- **Light-orange:** An outgoing call attempt, or a call is in the queue (in conventional systems):
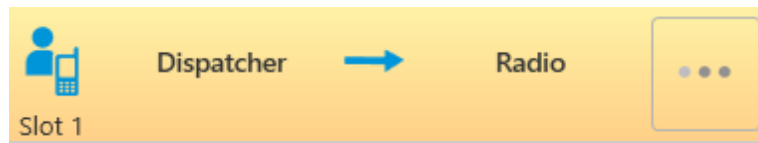
- **Orange:** All outgoing radio calls:

- **Green:** All incoming radio calls or radio monitoring:
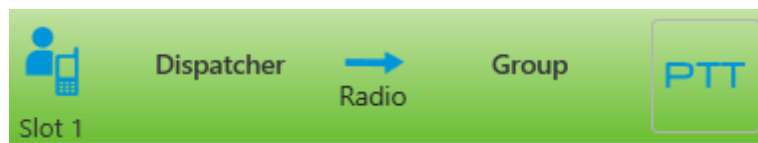
- **Light-green:** Incoming call to SmartPTT Dispatcher in the Capacity Max systems only:
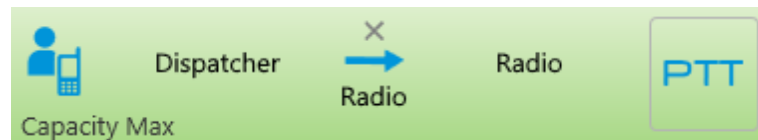
- **Blue:** None of the parties transmit or receive voice (hang time). The radio or the dispatcher can continue the call by pressing the PTT button within hang time. After the hang time expires, pressing the PTT button will initiate a new call. In the Capacity Max systems the dispatcher can end the call during the hang time by clicking the **Cross** button or right clicking the call record:

When you make a secured call, in the call record the corresponding indication appears. This indication is implemented in the following systems:

- Capacity Max:

- NAI IP Site Connect:

When an outgoing call is queued in Capacity Max systems, the console displays the cause of a holding in the following areas:

- On the **Calls** panel on the call record:
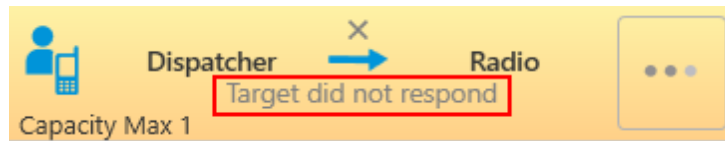
- On the **Radios** or **Custom Console** panel at pointing to the **Radio** element:
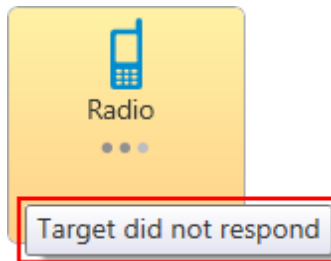
- On the **Channels** or **Custom Console** on the **Channel** element:
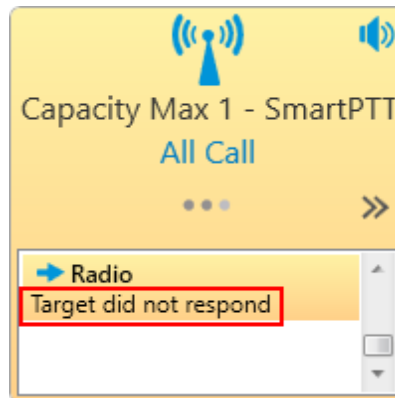
- In other systems, the console keeps calling without any notifications:
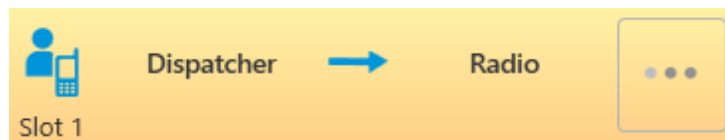
When an outgoing call is denied in Capacity Max systems, the console displays the cause in the following areas:

- On the **Calls** panel on the finished call record:

- In the **Additional Information** column of the Event Log:

3.2 Sound

The **Sound** panel allows you to monitor and adjust the signal volume.

To open **Sound** panel, expand the **Tools** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Sound**.
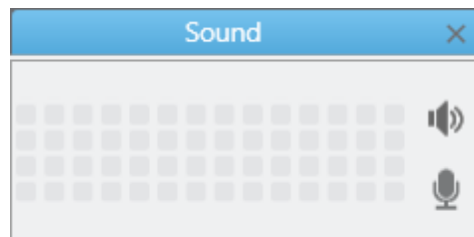
The [icon] button allows you to adjust the speaker volume.
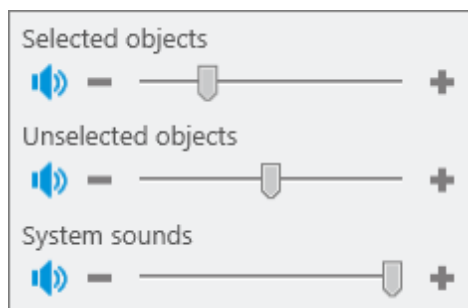
Selected objects: Allows you to adjust the volume for selected objects.

Unselected objects: Allows you to adjust the volume for unselected objects.

System sounds: Allows you to adjust the volume for system sounds

The 🎤 button allows you to adjust the microphone volume.

3.3 Cross Patches

Cross Patches allow you to connect talkgroups from different frequency bands or from different network types very quickly. A call made to a cross patch will be heard by all participants of the cross patch.

A call made to a talkgroup included in the cross patch will be heard by all participants of the cross patch. It is also true for a call made by a dispatcher or a telephone subscriber.

A cross patch is created in the dispatch console and controlled by the dispatcher. When the dispatch console gets closed, all the cross patches created in this dispatch console will be saved.

To create a cross patch, follow these steps:

1. Open the **Cross Patches** panel from the **Tools** menu (if it's not open).

2. Add a cross patch. To do this, in the **Cross Patch** panel click the **Add Cross Patch** button:
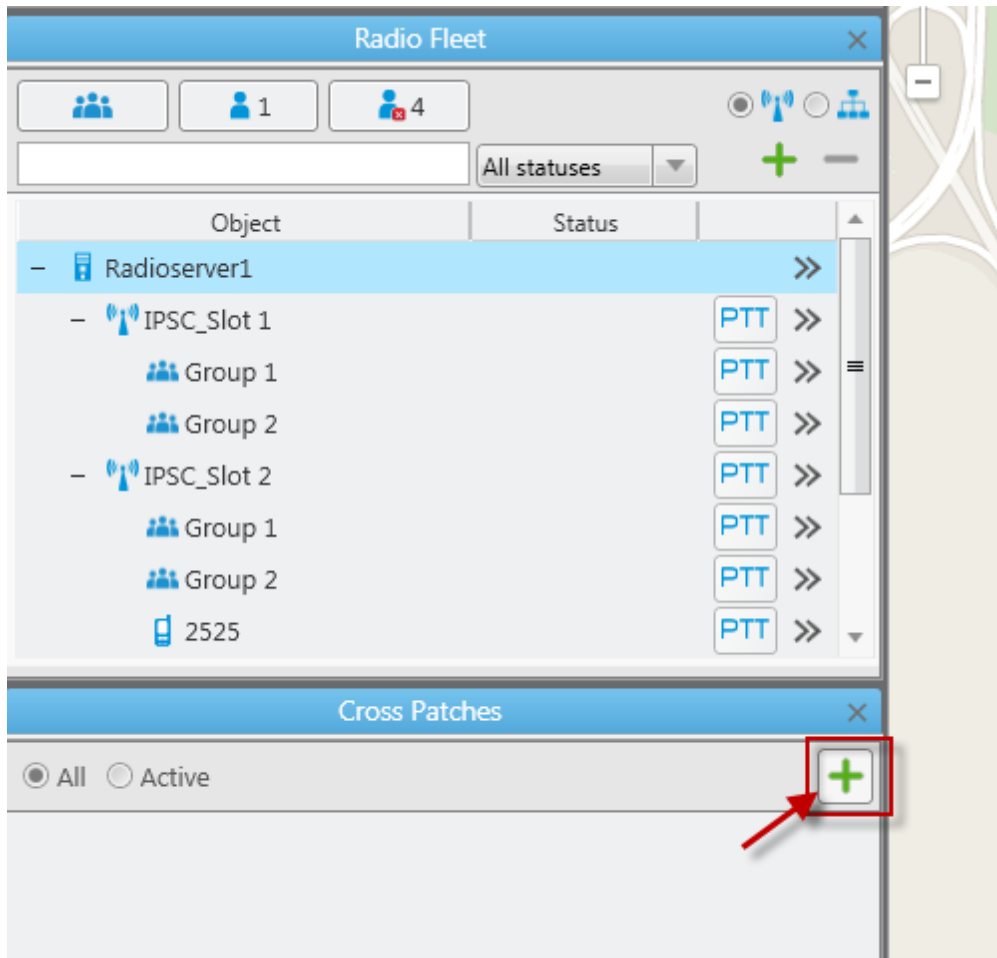
3. In the new **Cross Patch** window select objects of the future cross patch. To add the selected object to the cross patch or to remove it from the cross patch, click the corresponding arrows or double-click the mouse button. Then click **Enable**.
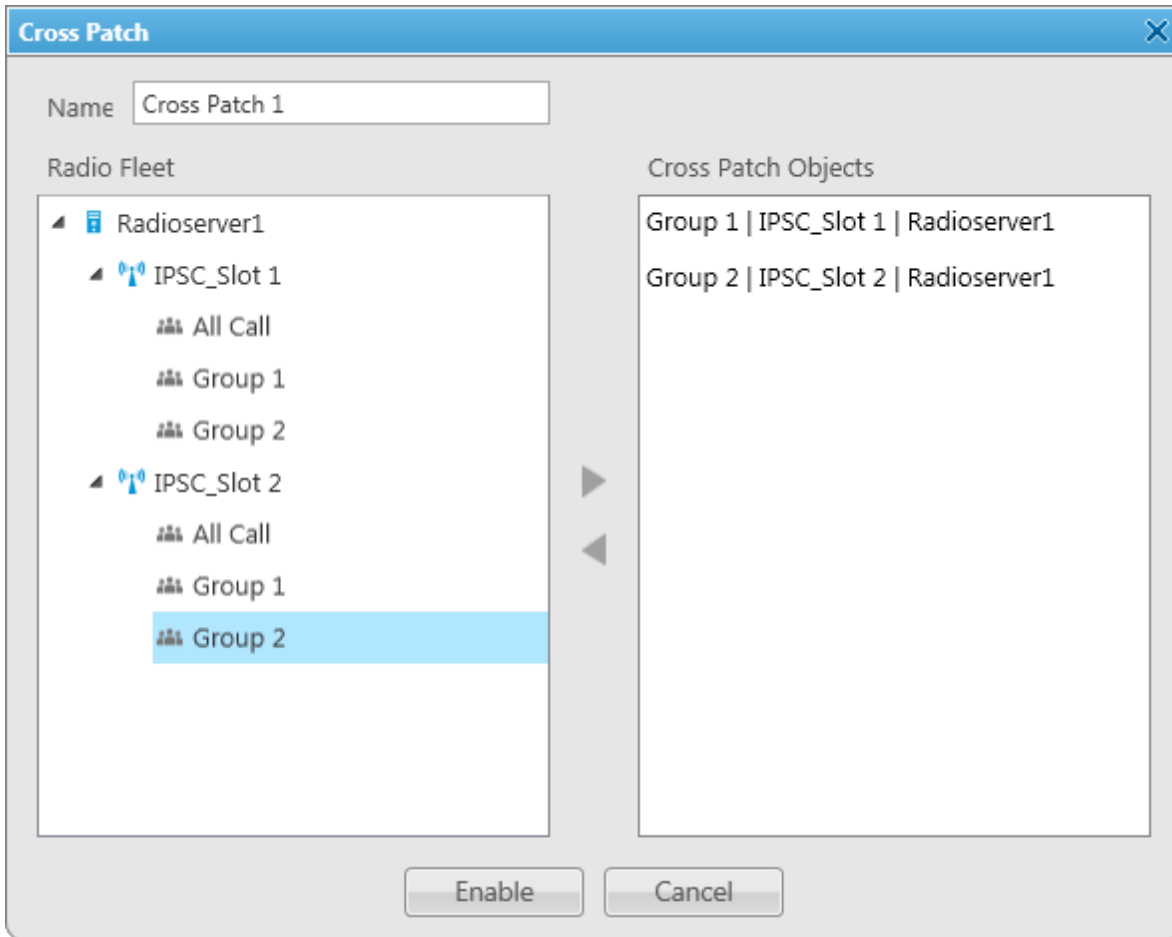
The new cross patch will appear in the **Cross Patches** panel.
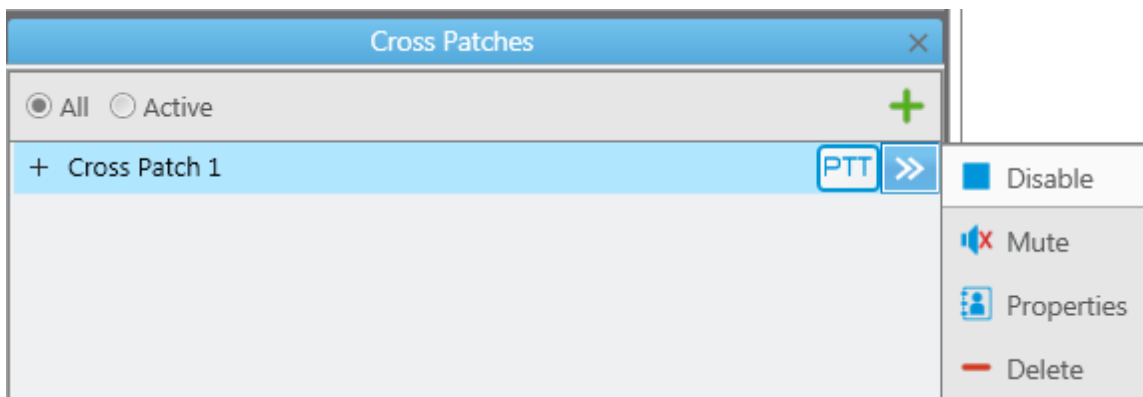
In the **Cross Patches** panel you can do the following:

- Filter the list of cross patches to see active cross patches or all cross patches (the Active and All options)

- Make a call to all the parties of the cross patch by clicking on the PTT button

- Perform actions from the Action List of the cross patch: enable or disable the cross patch, edit its properties, mute or unmute it, and delete it from the list

To open the **Action List**, click ≫.

Enable/Disable: Turns on/off the cross patch.

Mute/Unmute: Turns on/off the sound for all parties of the cross patch. If the cross patch is muted, the dispatcher won't hear any party, but all the cross patch participants will hear the dispatcher. If the cross patch is unmuted, but one of the participant talkgroups is muted, the dispatcher will hear all the others, but not this talkgroup.

> **NOTE**
> If the cross patch contains groups from network topologies based on control stations and direct connection, and you can hear hoarse voice, select *DMR Vocoder* as a codec in the sound settings in the dispatch console (**Settings → Sound**) and in the audio settings of the control station (SmartPTT Radioserver Configurator → **Control stations → Audio**).
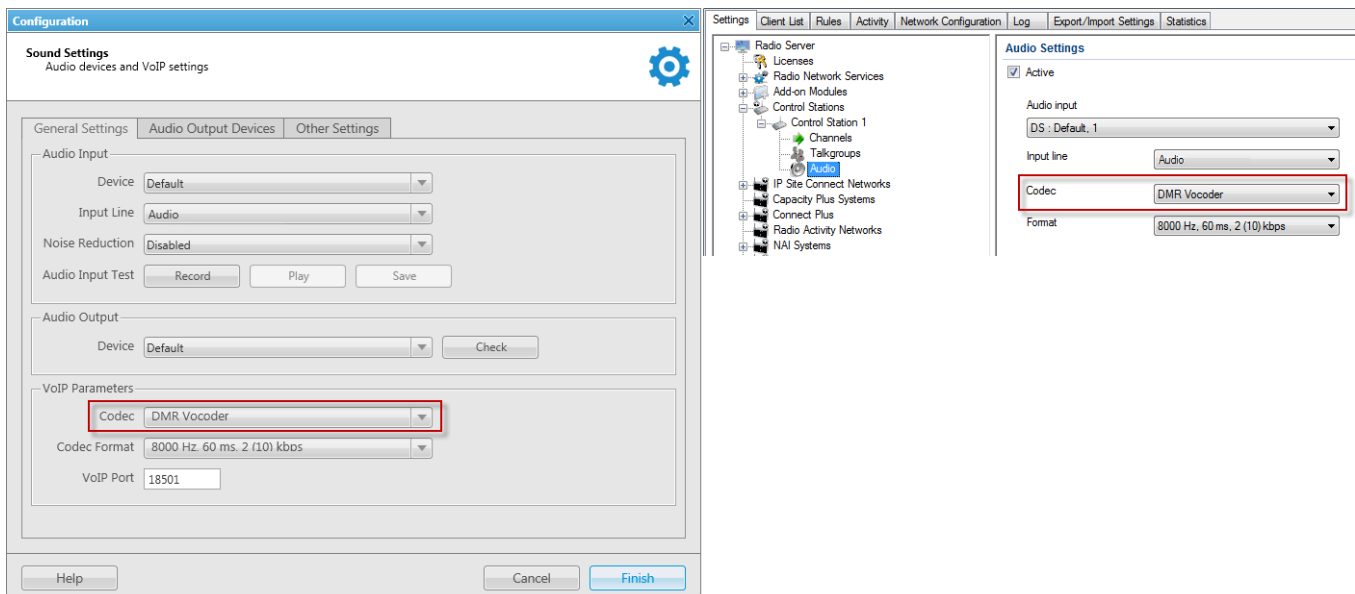
3.4 Radio Fleet

The **Radio Fleet** panel displays the following objects:

- Radioserver to which the dispatch console is connected

- Control stations

- Virtual control stations (slots)

- Talkgroups

- Radios registered in the system

- WAVE users registered in the system

> **NOTE**
>
> WAVE users are users connected to a WAVE server. SmartPTT Radioserver gets information on WAVE users by means of WAVE Connector program. In SmartPTT Dispatcher the icon ⓦ indicates WAVE users. For more information on configuring the WAVE users and the WAVE Connector program, see *WAVE Connector Installation and Configuration Guide*.

The first time you install SmartPTT the **Radio Fleet** panel opens automatically. To open or close the **Radio Fleet** panel manually, expand the **Tools** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Radio Fleet**.
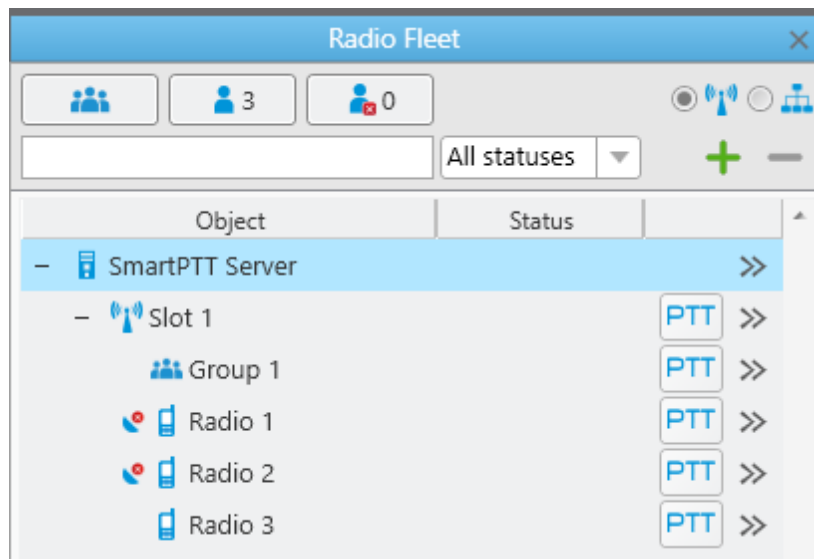
The list consists of the following columns – object, status and the **PTT** button. The **Object** field shows the name of the object. The **Status** field displays the current status of a radio or a WAVE user. The PTT button initiates a call.

> **NOTE**
>
> If in the **General Settings** window the Show radio user name check box is selected, and on SmartPTT Radioserver the user authorization service is activated and users are added, then the name of the user authorized on the radio is displayed next to the radio name in brackets.

To edit the list of objects, use the 👥 👤1 👤2 buttons. You can show or hide talkgroups, show or hide online or offline radios and WAVE users.

To filter radios and WAVE users by the channels, click **Filter by channel** ⦾.

The entry field under the 👥 👤1 👤2 buttons allows you to search an object by name or ID.
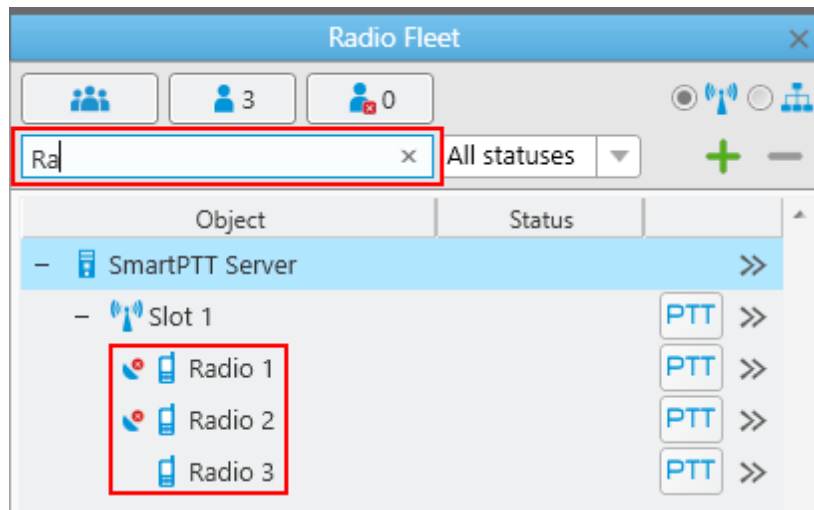
To filter radios and WAVE users by a status, select the required status from the list.
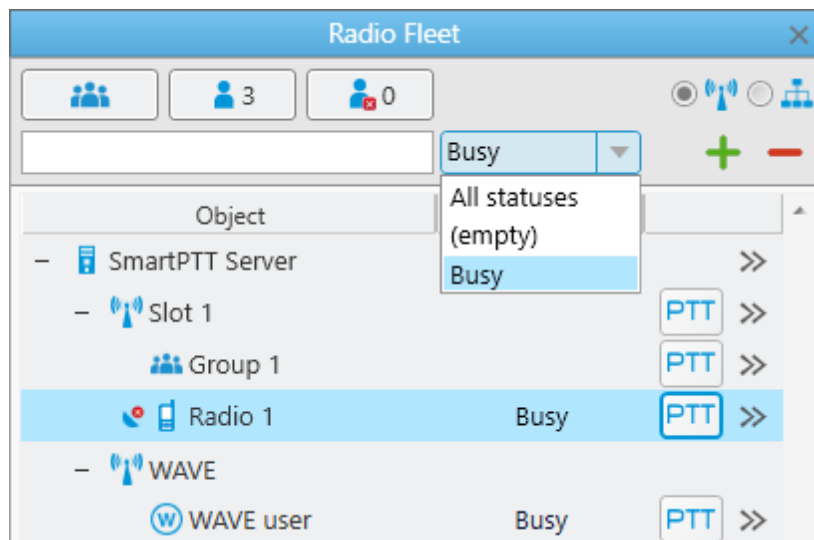
The + and − allows the dispatcher to add a new radio or delete the existing one.

Radios and WAVE users not added in SmartPTT Dispatcher are considered unregistered and displayed in italic in the **Radio Fleet** panel. Unregistered radios and WAVE users are displayed in the list of objects after a radio or a WAVE user is turned on and registration on the radioserver is successfully completed.

GPS coordinates of a radio are outdated or missing.

GPS coordinates of a radio are valid. Validity period of GPS coordinates is defined by the **Validity of GPS coordinates** parameter in **Settings** → Positioning Systems.

NOTE

The icons and are displayed if GPS support is enabled in the **Properties** window of a radio and at least one location update criterion is selected.
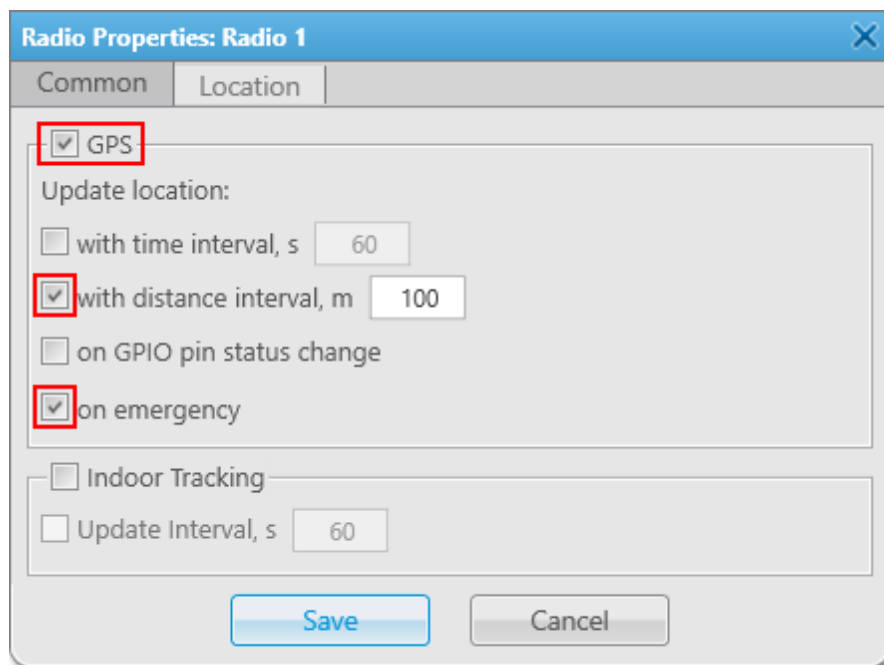
NOTE

The location settings are unavailable to WAVE users.

Filter by category

You can also filter radios and WAVE users by categories. To do that, click **Filter by category** ⊙⛴.
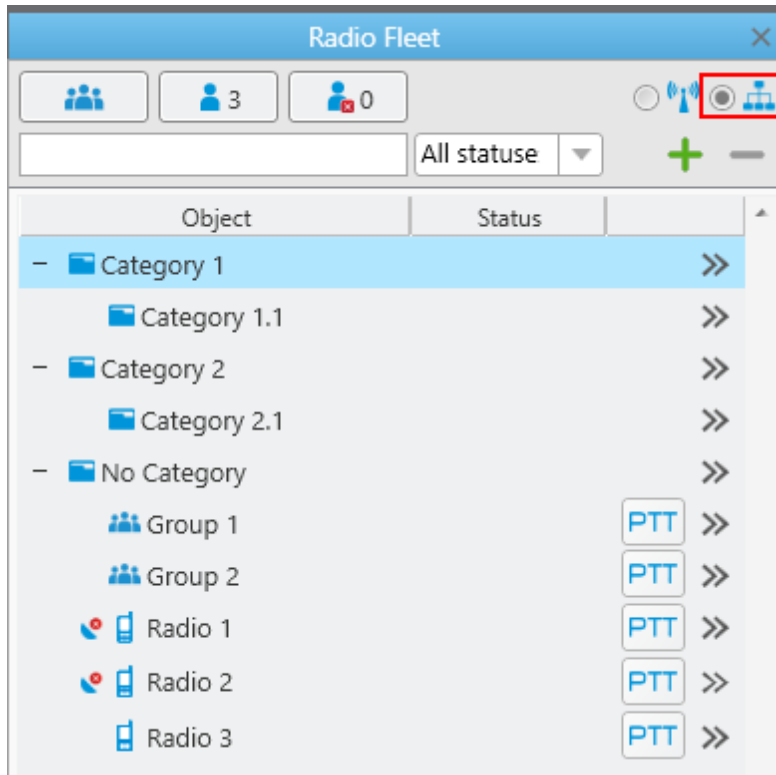
> **NOTE**
>
> If in the **Radio Fleet** panel no categories exist, add them in the Categories menu if needed.
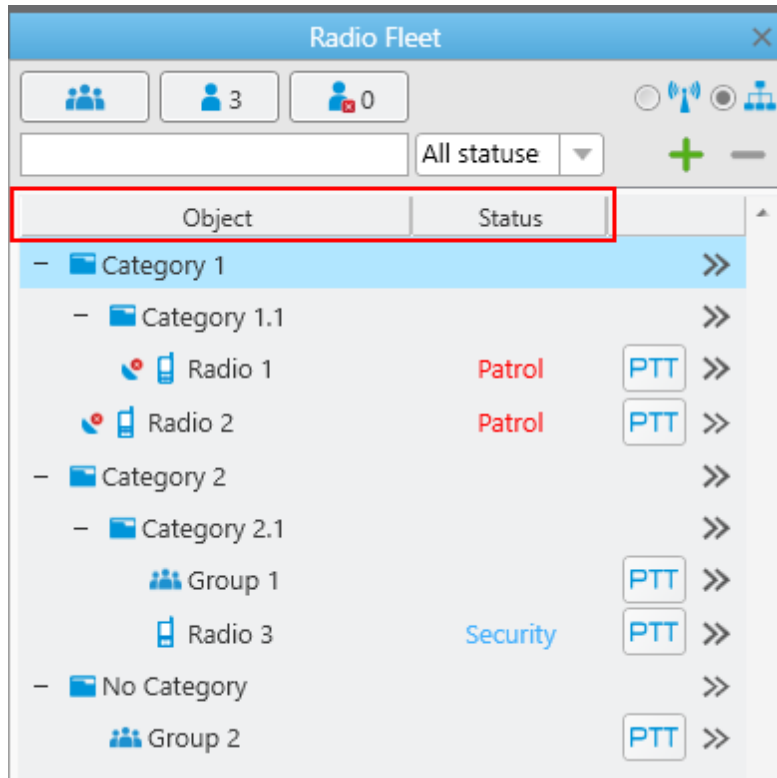
Object: A column containing category folders and objects added in the **Settings** → Categories menu. **No Category** folder and included objects are shown if the correspondent check box was selected.

Status: A column displaying statuses defined in the radio properties.

The » button opens list of actions applied to all radios and WAVE users of a category.
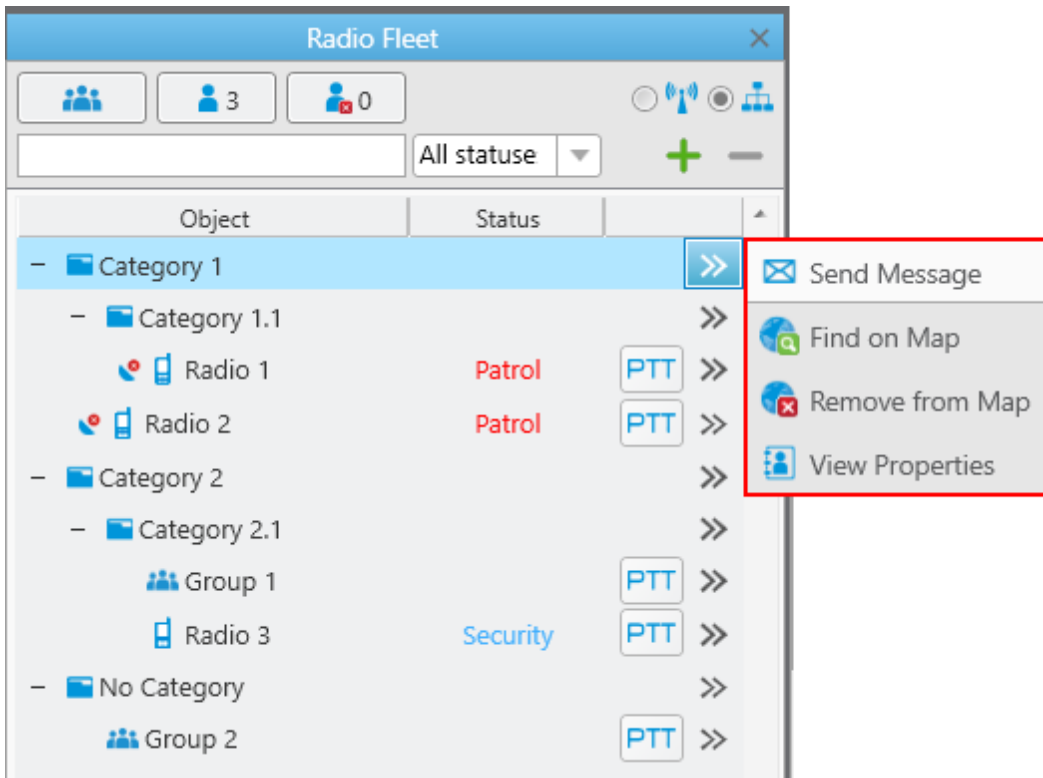
Send Message: Opens a window for message sending.

> **NOTE**
> This action is unavailable for WAVE users.

Find on Map: Shows all objects related to the category on the map.

Remove from Map: Hides all objects related to the category on the map.

View Properties: Opens category properties window. You also can open the window by left-clicking the needed category. For additional information, see Editing Category.

Action List

The » button opens the **Action List** including a list of actions which can be applied to a radio, a [WAVE user](#), a radioserver, a control station or a talkgroup.

The Action List of Radioserver

- 🔋 Radioserver_Tomsk	»	📋 Show Radioserver Event Log
		⚙️ Configure Call Bridging Table
		🔊 Main Device ▶

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.

View Properties: Opens the [radioserver Properties window](#).

The Action List of Hardware Control Station
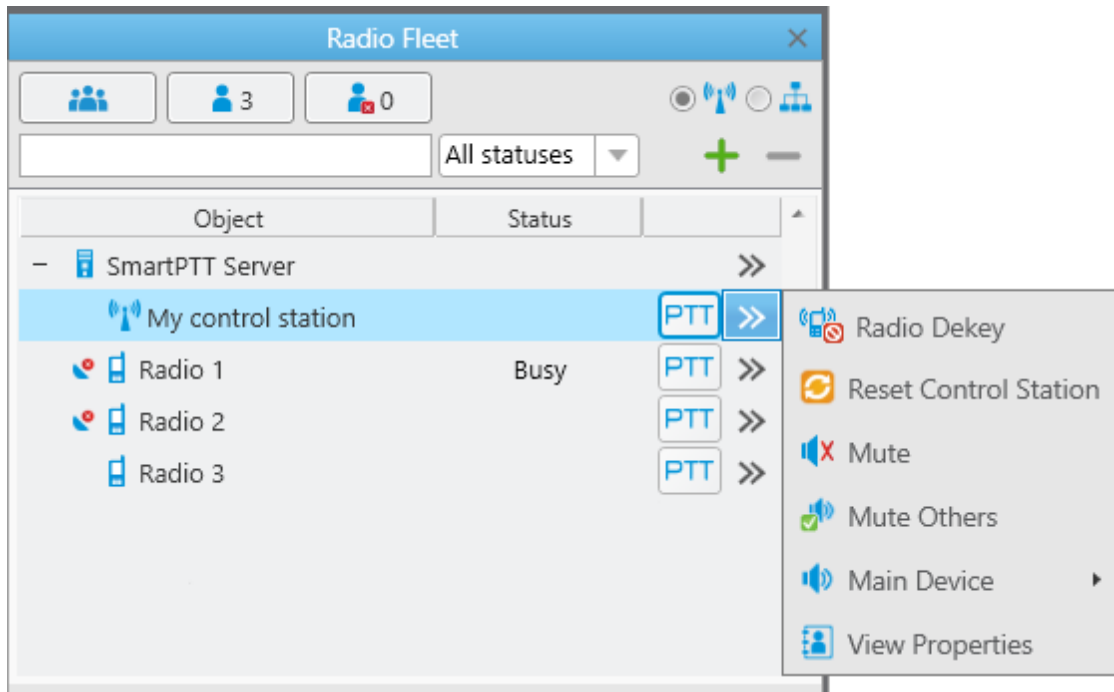
Exit Emergency Mode: Disables emergency mode.

> **NOTE**
> The **Exit Emergency Mode** action becomes available after a radio 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/Unmute: Turns off/on the control station mute mode.

Mute Others: 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.

View Properties: Opens the [control station Properties window](#).

The Action List of Virtual Control Station
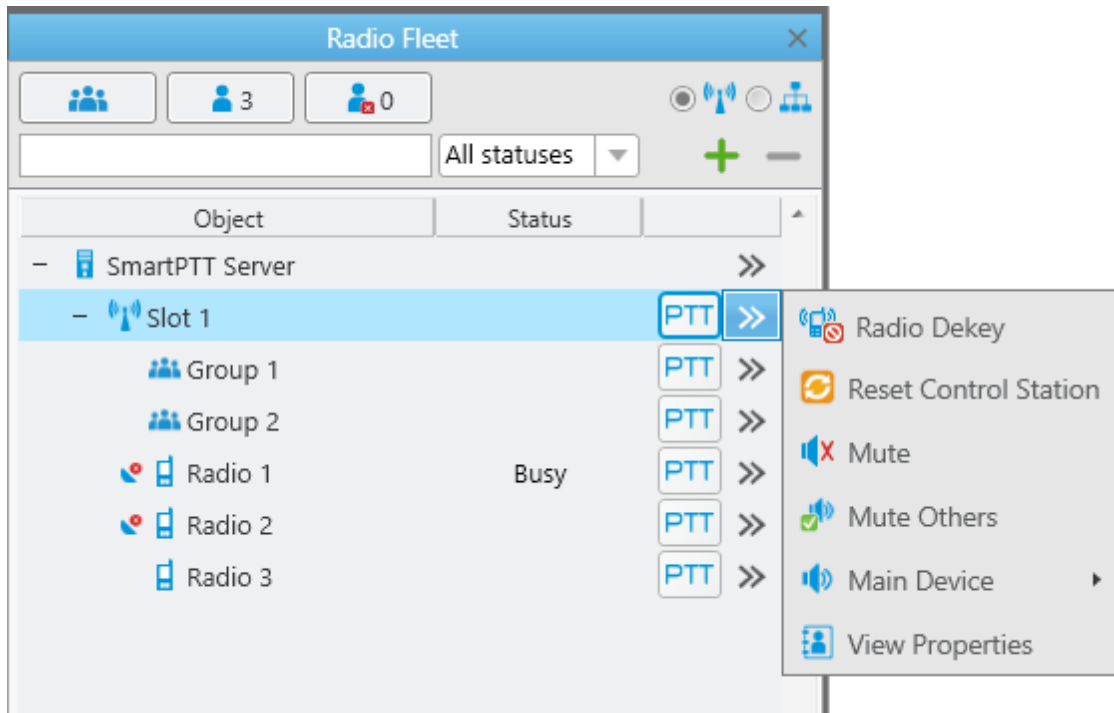
Radio Dekey: Forced interruption of calls on the channel. This option is available only for hardware control stations and in IP Site Connect network.

Reset Control Station: Resets the control station. Only hardware control stations can be reset.

Mute/Unmute: Turns off/on the control station mute mode.

Mute Others: 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.

View Properties: Opens the virtual control station **Properties** window.

The Action List of Talkgroup
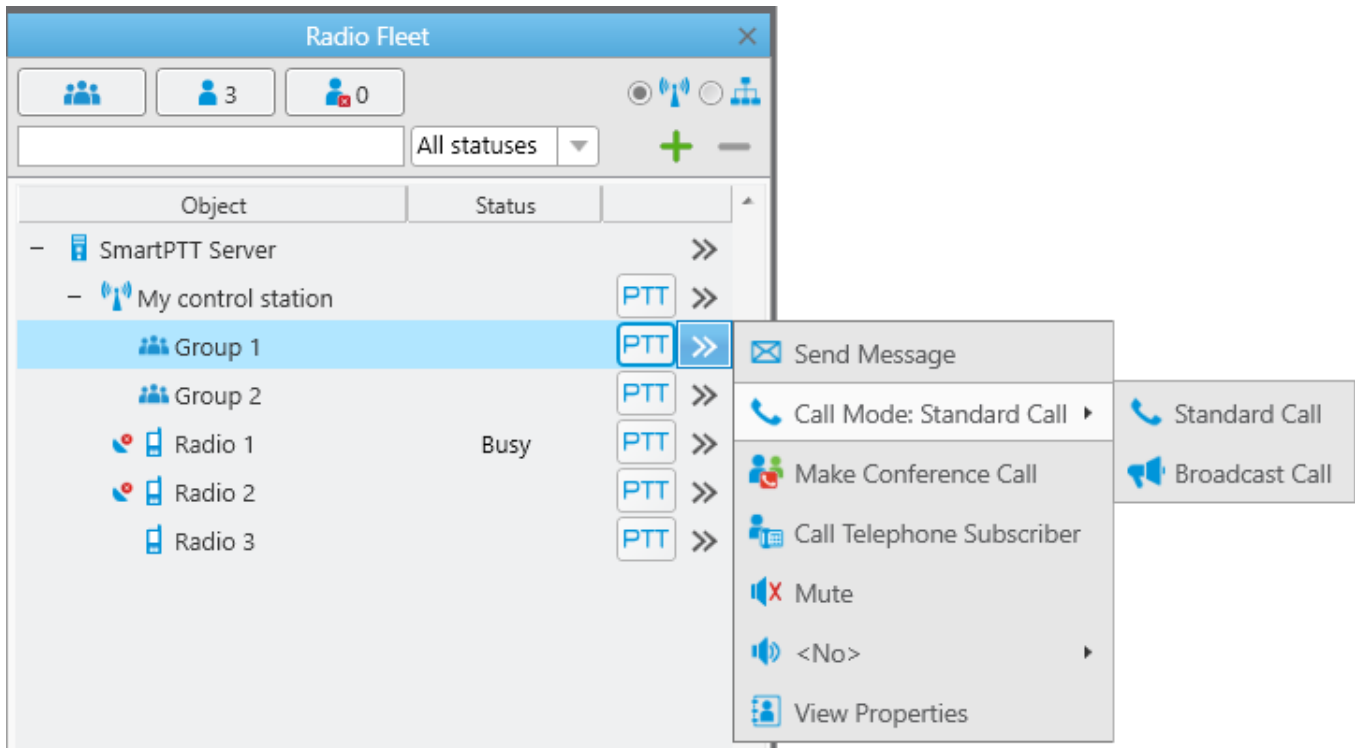
Exit Emergency Mode: Disables emergency mode. The Exit Emergency Mode action becomes available only after a radio has sent the emergency signal.

Send Message: Opens a window for creating and sending messages.

Call Mode: Available only in the Capacity Max systems and shows the current call mode for the talkgroup.

Standard Call: Stands for the two-way Group Call

Broadcast Call: Stands for the one-way Group Call.

> **NOTE**
>
> All talkgroups in the Capacity Max systems are broadband groups. So, the Group Call for these talkgroups in any call mode is broadcast over all the sites associated with the talkgroups.

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/Unmute: 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.

The **Call Window** of a talkgroup contains some of the actions available to the talkgroup. 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.

View Properties – opens the <u>Properties window</u> of the talkgroup.

The Action List of All Call Limited to Site
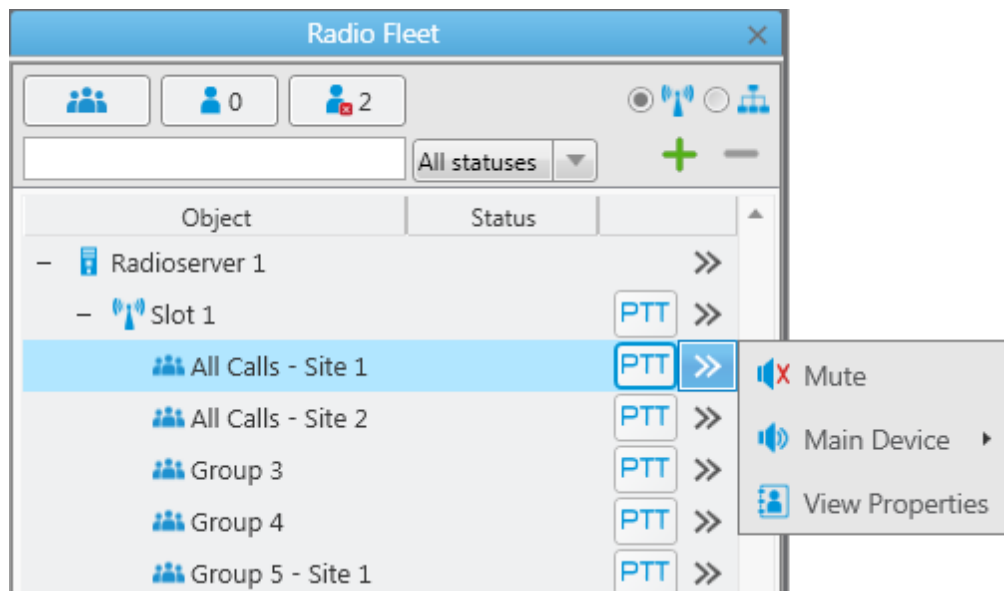
Mute/Unmute: Turns on/off mute mode for the All Call. This can be useful if you don't want to hear the All Call initiated by another dispatcher.

Main Device: Shows what audio output device is currently used for the All Call. To change to another device, select a specific output device.

View Properties: Opens a window where you can add a comment about the All Call.

The Action Menu of Radio
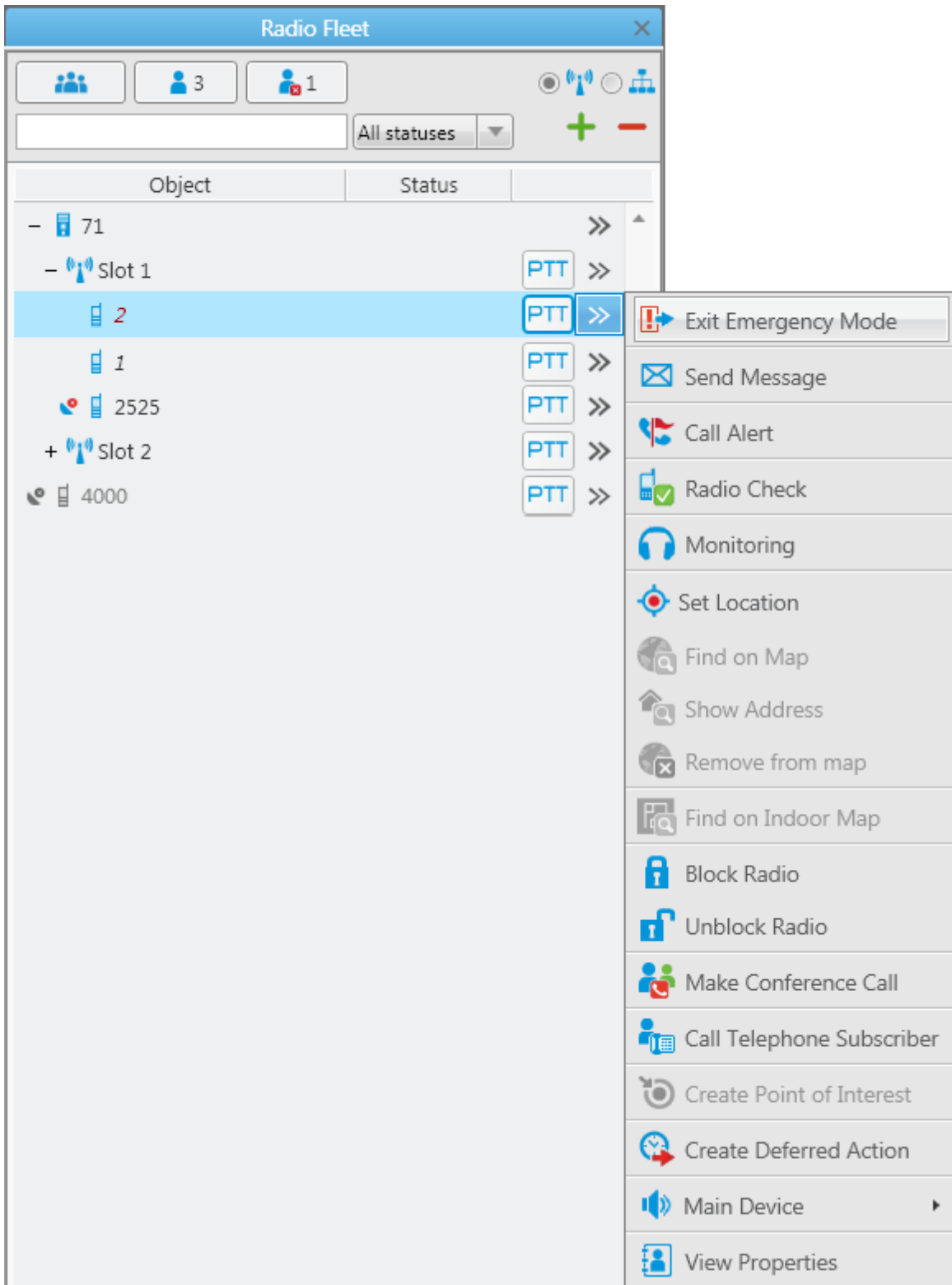
Exit Emergency Mode: Disables emergency mode. The **Exit Emergency Mode** action becomes available after a radio sends the emergency signal.

Send Message: Opens a window for creating and sending messages.

Send Call Alert: Sends a call alert to the radio.

Radio Check: Sends the radio check command to the radio.

> **NOTE**
> If the connection to the Capacity Max system is performed via control station, the **Radio Check** command will be unavailable.

Monitoring: Allows you to listen to the radios without their awareness.

Set Location: Allows you to define location of a radio on the map manually, without GPS data. If GPS support is enabled in the radio [Properties](#) window (in the **Location** tab), the location set manually has a validity period which is defined in the **Positioning Systems** settings in the **Validity of GPS coordinates** field. If GPS support is not enabled in the radio [Properties](#) window, the location set manually is always valid.

Find on Map: Shows the radio on the map. If there are more than one radio on the same position on the map, the radio label will be placed above all other labels.

Show Address: Displays the radio address based on the current GPS coordinates. If it is impossible to define the address, the notification **No Coordinates** appears. When you reopen **Call Window** (after it was closed), previously received information on the address is not displayed.
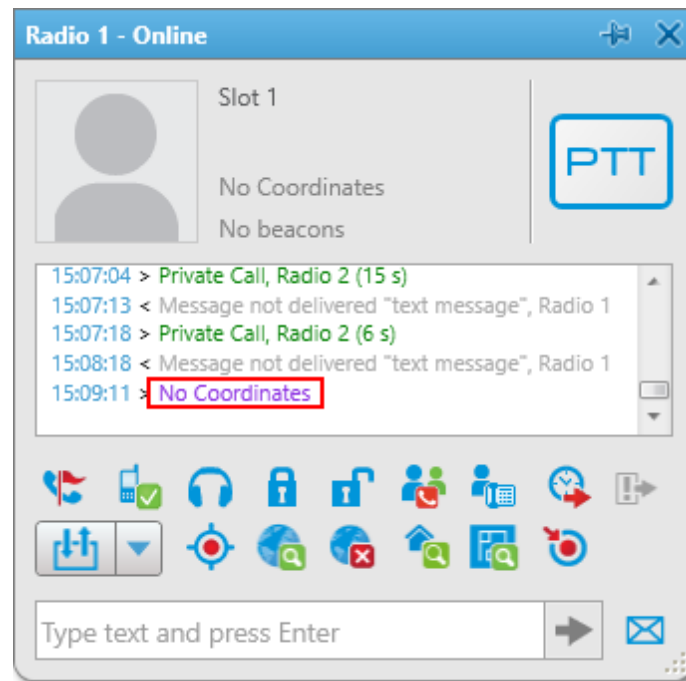
Remove from Map: Removes the radio from the map.

Find on Indoor Map: Shows the radio on the building map. The **Find on Indoor Map** action is available for a radio if the **Indoor Tracking** check box is selected in the [Properties](#) window of the radio.

Block Radio: Sends the Block Radio command to the radio.

Unblock Radio: Sends the Unblock Radio command to the 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 radio. 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 a deferred action.

Main Device: Shows what audio output device is currently used for this radio. To change to another device, select a specific output device.

View Properties: Opens the radio [Properties window](#).

The Action Menu of WAVE User
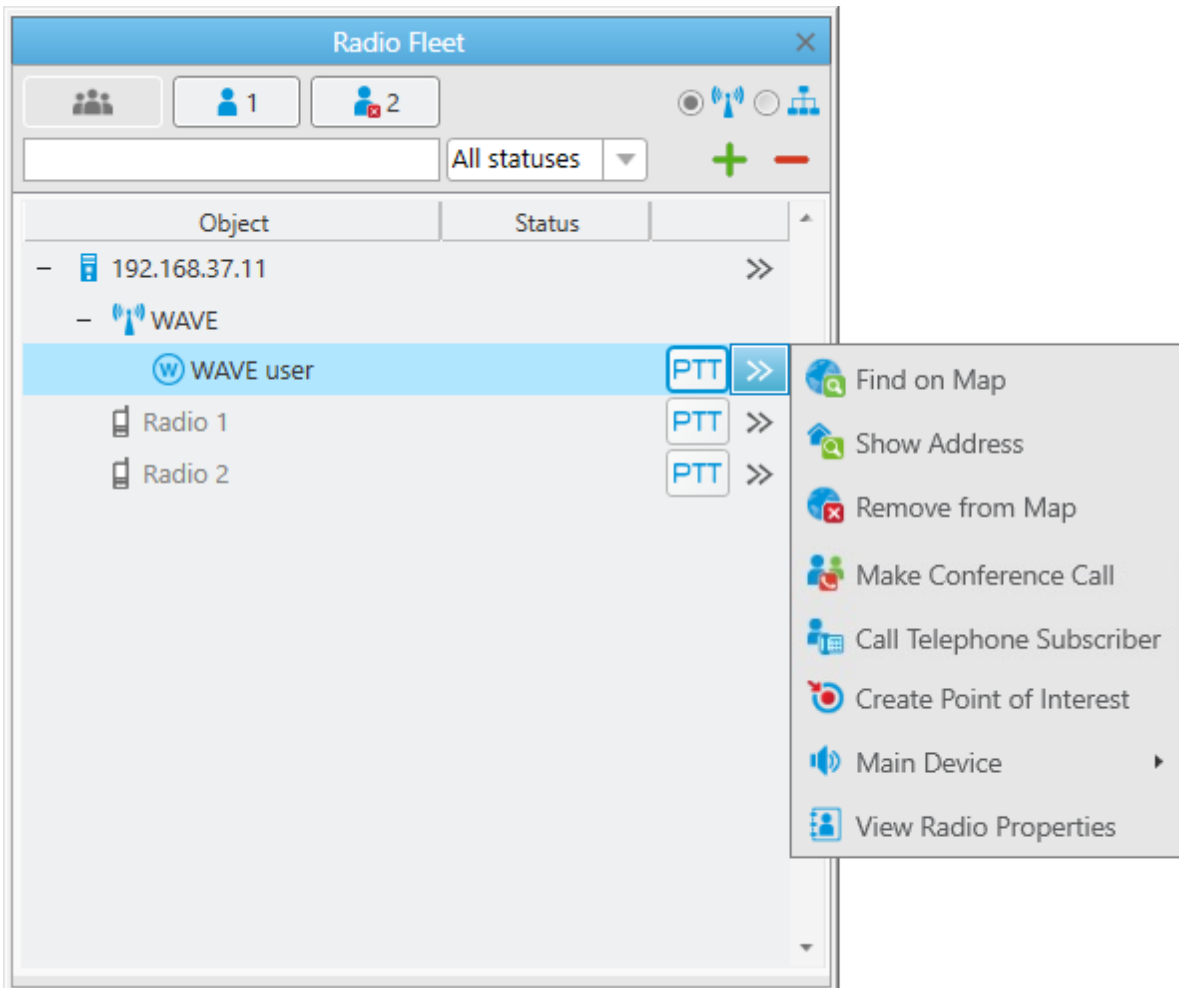
Find on Map: Shows the WAVE user on the map. If there are more than one WAVE user or radio on the same position on the map, this WAVE user label will be placed above all other labels.

Show Address: Displays the WAVE user address based on the current GPS coordinates. If it is impossible to define the address, the notification **No Coordinates** appears. When you reopen **Call Window** (after it was closed), previously received information on the address is not displayed.

Remove from Map: Removes the WAVE user from the map.

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 WAVE user. If there are no coordinates, the system uses the latest coordinates received from the WAVE user. If coordinates are absent altogether, nothing happens.

Main Device: Shows what audio output device is currently used for this WAVE user. To change to another device, select a specific output device.

View Radio Properties: Opens the WAVE user [Properties](#) window.

The Action Menu of Mobile Device Subscriber
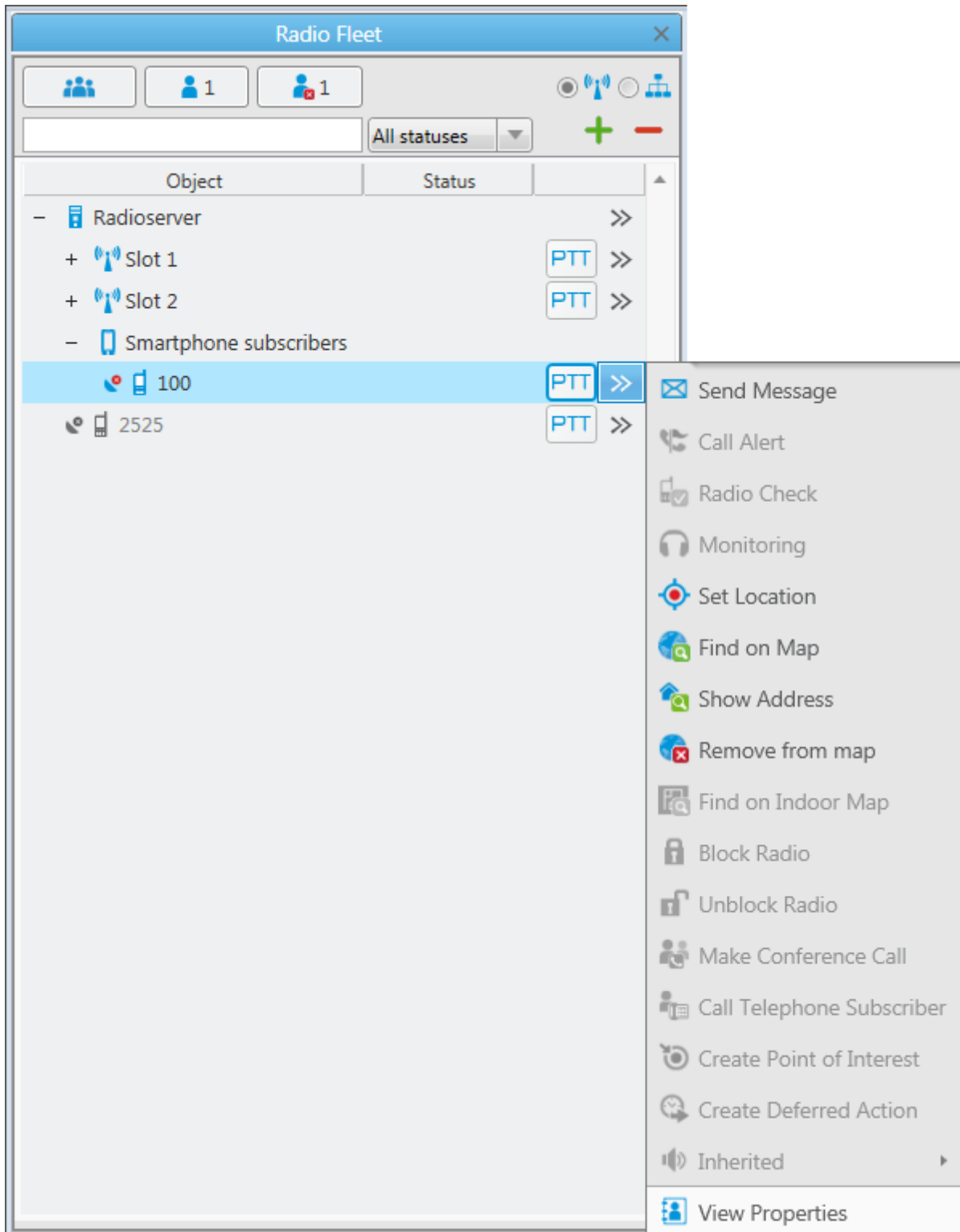
Send Message: Opens a window for creating and sending messages.

Set Location: Allows you to define location of the mobile device on the map manually, without GPS data. If GPS support is enabled in the mobile device's Properties window (in the **Location** tab), the location set manually has a validity period which is defined in the **Positioning Systems** settings in the **Validity of GPS coordinates** field. If GPS support is not enabled in the mobile device's Properties window, the location set manually is always valid.

Find on Map: Shows the device on the map. If there are more than one device or subscriber on the same position on the map, the device's label will placed above all other labels.

Show Address: Displays the device 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 device from the map.

View Properties: Opens the device Properties window.

Call Window

The **Call Window** of a radio or a WAVE user contains some of actions available to it. The main function of the **Call Window** is to give the ability to apply actions to the radio or the WAVE user and to view the action log. To open the window, double-click on the radio or the WAVE user. To customize the appearance and behavior of the **Call Window**, to the Call Window settings.
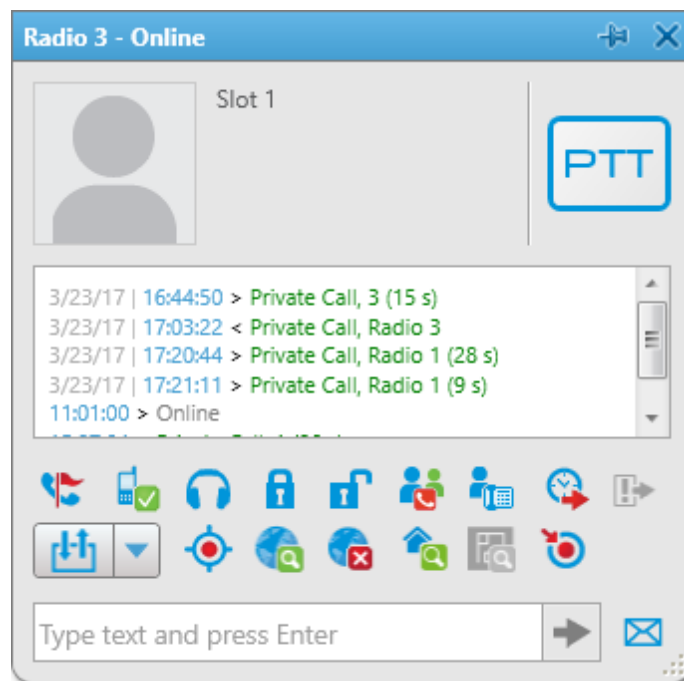
> **NOTE**
>
> In a WAVE user call window the following actions are available only: **Make Conference Call**, **Call Telephone Subscriber**, **Find on Map**, **Remove from Map**, **Show Address**, **Create Point of Interest**.
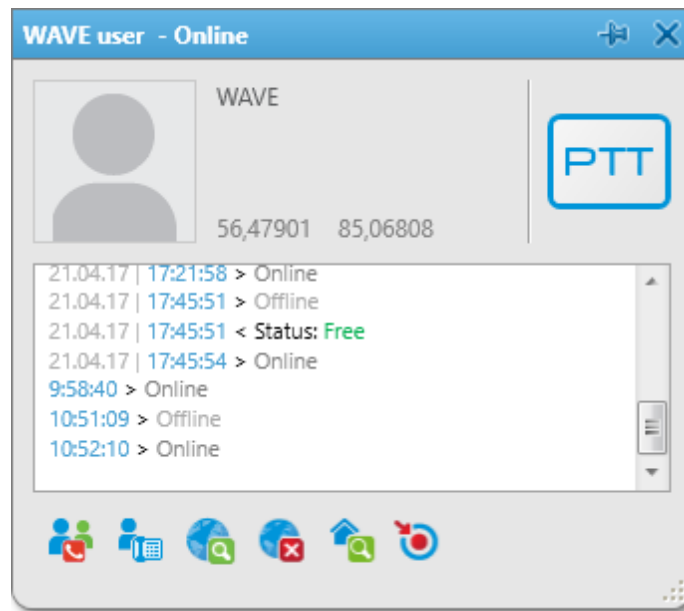
Making a call

The **PTT** button is located in several places: in the **Radio Fleet** panel and in the **Call Window**. Depending on the call status, the **PTT** button can be displayed in the following colors:

Light orange: Outgoing call attempt, or a call in the queue (in conventional systems)

Orange: All outgoing radio calls

Light green: Incoming call attempt to SmartPTT Dispatcher in the Capacity Max systems only

Green: All incoming radio or WAVE user calls or a radio or WAVE user monitoring.

Blue: None of the parties transmit or receive voice (hang time). The radio or the WAVE user 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. In the Capacity Max systems the dispatcher can end the call during the hang time by right clicking PTT in the Call Window.

To call a radio or a WAVE user in any system, except Capacity Max, follow these steps:

1.   Select the radio or WAVE user from the **Online Radios** list.

2.   Click **PTT** next to its name or press the specified keyboard <u>hot key</u>. The PTT button changes its color to light yellow, and then to yellow. The person will hear your voice.

3.   Click **PTT** again to give the person an opportunity to respond. The color of the PTT button changes to blue.

4.   When the person starts to respond, the color of the PTT button changes to green.

To call a radio or a WAVE user in the Capacity Max systems, follow these steps:

1.   Select a radio or a WAVE user from the **Online Radios** list.

2.   Click **PTT** next to its name or press the specified keyboard <u>hot key</u>. The PTT button changes its color to light yellow. The person will not hear your voice and will see two options on the display: Accept or Reject.

3.   When the person presses **PTT** on his radio and accepts the call, the color of the PTT button on your console changes to green and you hear the person.

4.   When the person finishes to talk and releases **PTT** on his device, the PTT button on your console changes to blue (hang time). During the hang time you can either continue or end the call.

5.   To continue the call, click **PTT** again. The PTT button changes to yellow. The person will hear your voice.

6.   To end the call, click the **Cross** button in the **Calls** panel or right-click the corresponding call record or **PTT** in the radio or the WAVE user **Call** window.

Sending messages

To send a message on a radio, click ✉ in the **Call window** of the radio or click **Send Message** in the **Action List**.
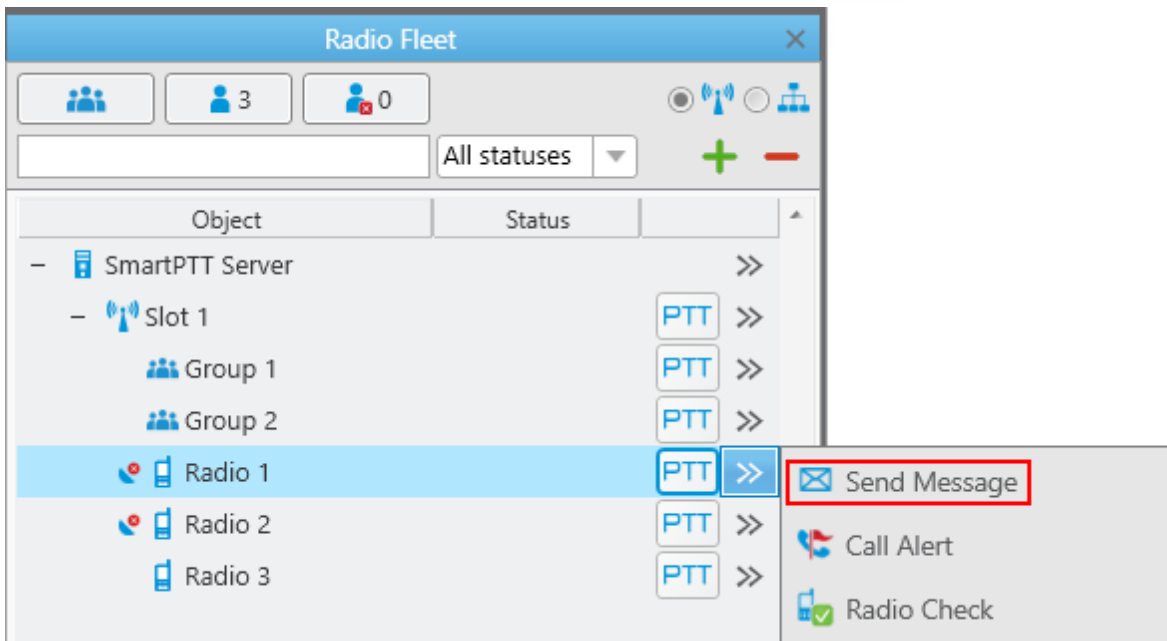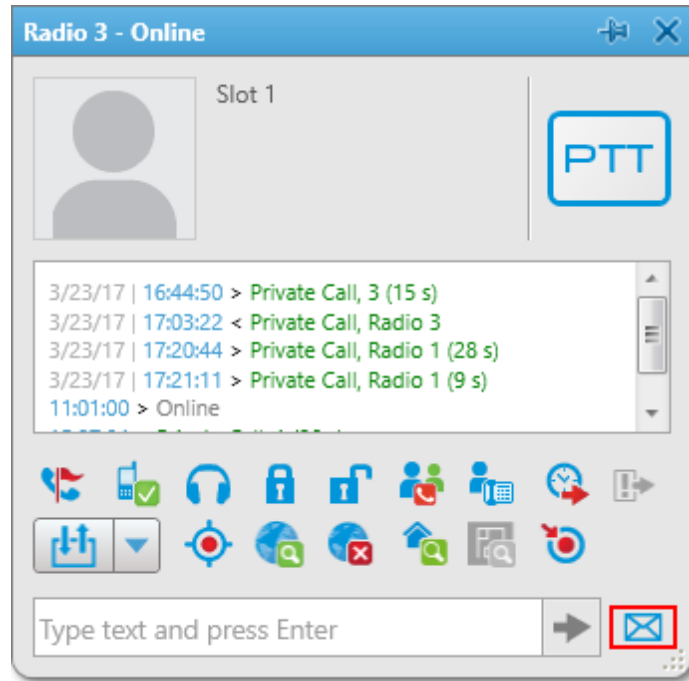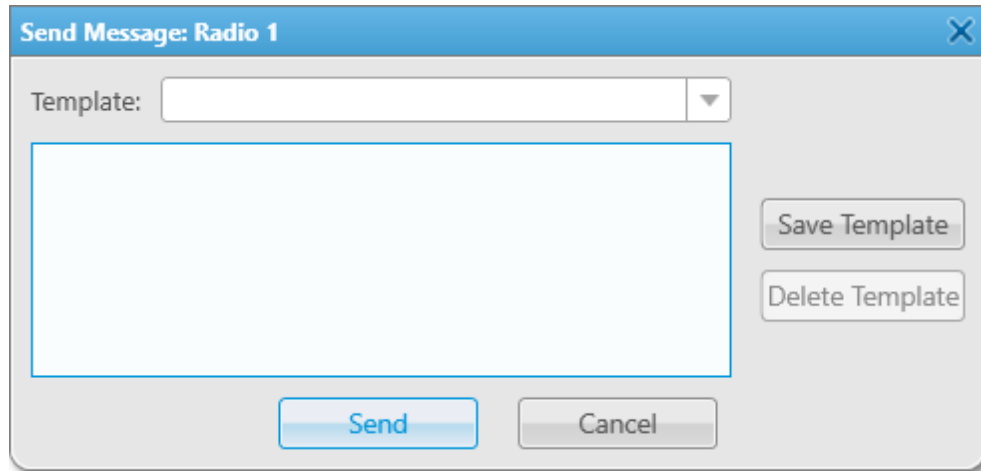
Save Template: Saves the typed message as a template.

Delete Template: Deletes a template selected in the list of templates.

Send: Sends the typed message on the radio.

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.

How to change radio name

A radio subscriber can easily change his or her name by using the radio. The new name will appear in the **Radios 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:
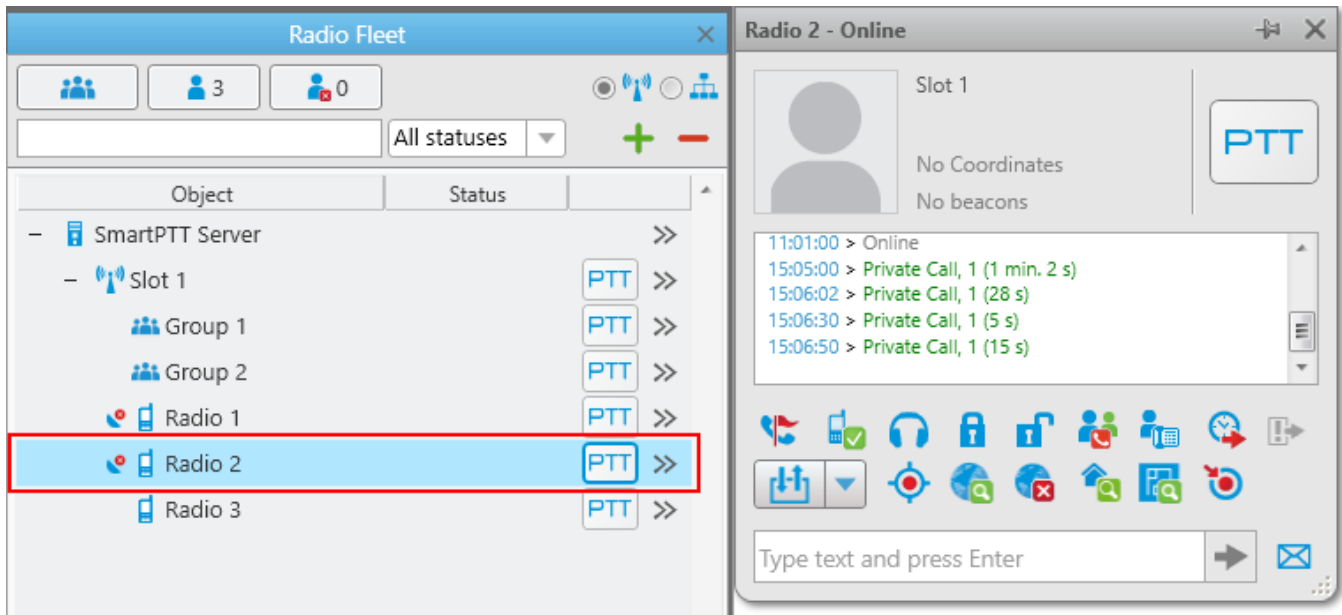
After sending the message:
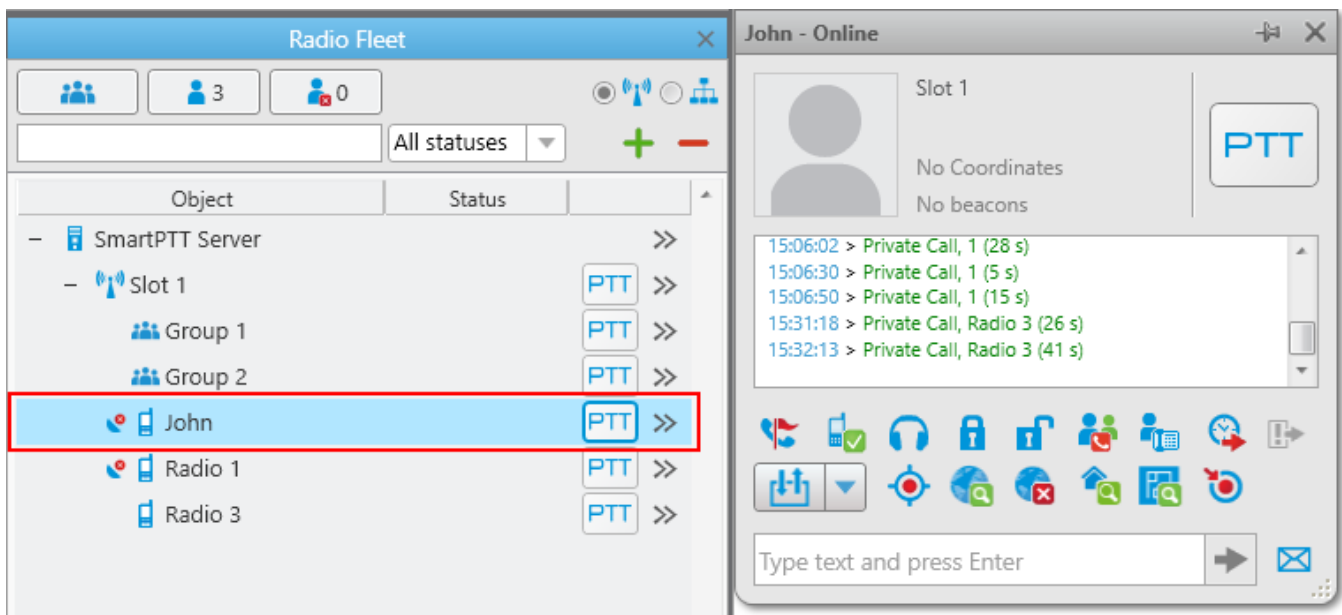
The Properties Window

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

The Properties Window of Radioserver
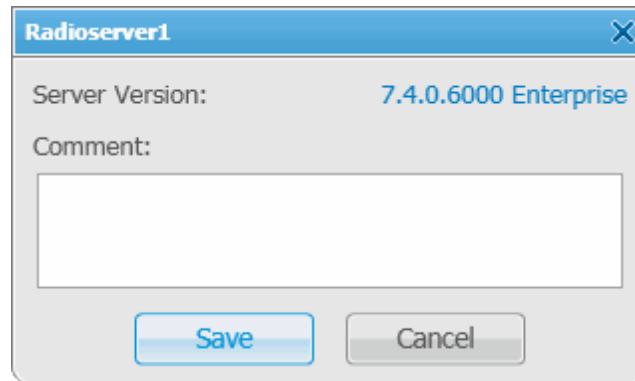
Server Version: The version of the radioserver. If the version of SmartPTT Radioserver does not match the version of SmartPTT Dispatcher, the version number is displayed in red.

Comments: Text field for additional information.

The Properties Window of Hardware Control Station
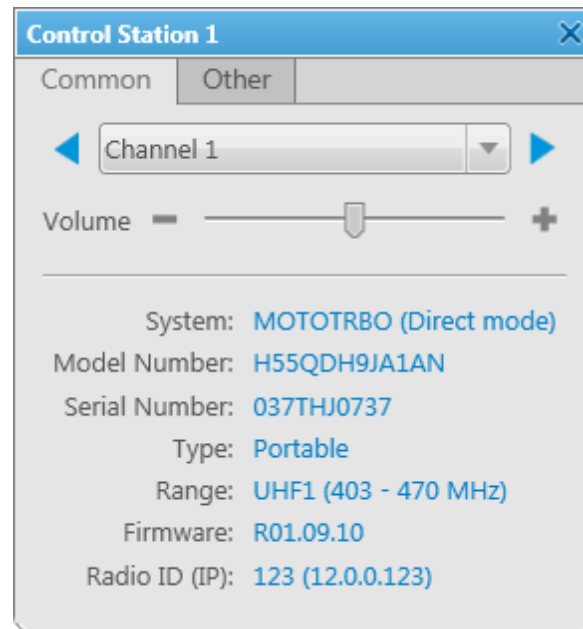
The window displays information on the control station, for example, model number, serial number, control station type, frequency range, firmware version, control station identifier.

You can change the channel of the control station by selecting it from the list or clicking arrow buttons.

The **Volume** slider allows you to set a volume on the channel. This option also effect on the emergency alert and subscriber voice at the emergency call.

The Properties Window of Virtual Control Station
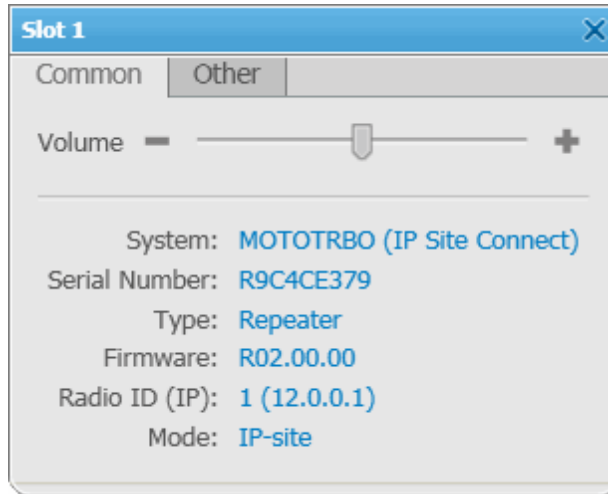
The window displays an information about the control station, for example, serial number, firmware version, control station identifier, type of network configuration.

The **Volume** slider allows you to set a volume on the channel. It also regulates the volume of the emergency alert.

> **NOTE**
> The adjusted volume level of the selected channel affects the volume of all incoming voice calls (including emergency calls) on all the audio devices of the given channel.

Talkgroup Properties Window
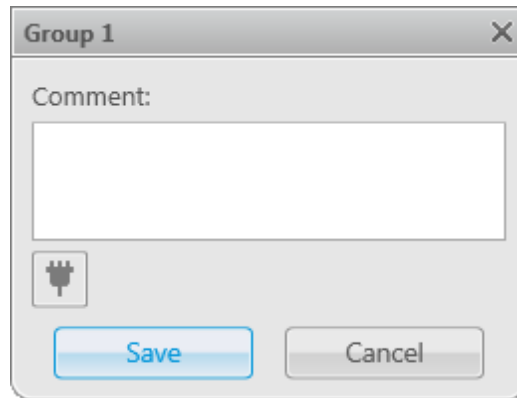
Comments: Text field for additional information.

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

Radio Properties Window

The **Common** tab:

Radio Properties: Radio 1   ✕

| Common | Location | Other |

Radio ID [34]   CAI   [12]

5 Tone ID [   ]   MDC ID [   ]

Name [Radio 1]

Status [(empty)   ▾]   [Select] [x]

☑ Lone Worker

[Default   ▾]

[Save]   [Cancel]

Radio Properties: Radio 1   ✕

| Common | Location | Other |

IP [12.0.0.34]

5 Tone ID [   ]   MDC ID [   ]

Name [Radio 1]

Status [(empty)   ▾]   [Select] [x]

☑ Lone Worker

[Default   ▾]

[Save]   [Cancel]

Radio ID: A unique identifier of a radio. You can set the **Radio ID** value in the range from 1 to 16776415 for non-Capacity Plus - Single Site systems and from 1 to 65535 for Capacity Max - Single Site System.

CAI: A network identifier that should be combined with **Radio ID**. You can set the **CAI value** in the range from 1 to 126, but we recommend you to use the default *12* value

> **NOTE**
>
> You can change radio ID input format from **CAI+Radio ID** to radio **IP** address in General Settings.

IP: IP address of a radio.

MDC ID: The identifier of the radio configured to the analog mode with active Motorola Data Communication (MDC 1200) signaling. This parameter requires 4-digit hexadecimal number in the range from 0001 to DEEE. No numbers with "*F*" digit in any place should be used.

5 Tone ID: A radio 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. You can set the value in the range from 0 to 9 or from A to G.

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

Name: A radio name.

Status: A radio status.

Select: Click to upload the radio image if there is any. To delete the selected image, click the cross symbol on the left to **Select**.

Click the button to select the icon of the radio.

Click the **Telemetry** button to specify telemetry actions to the radio.

Lone Worker: Select the check box to assign the **Lone Worker Profile** to a radio. 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:
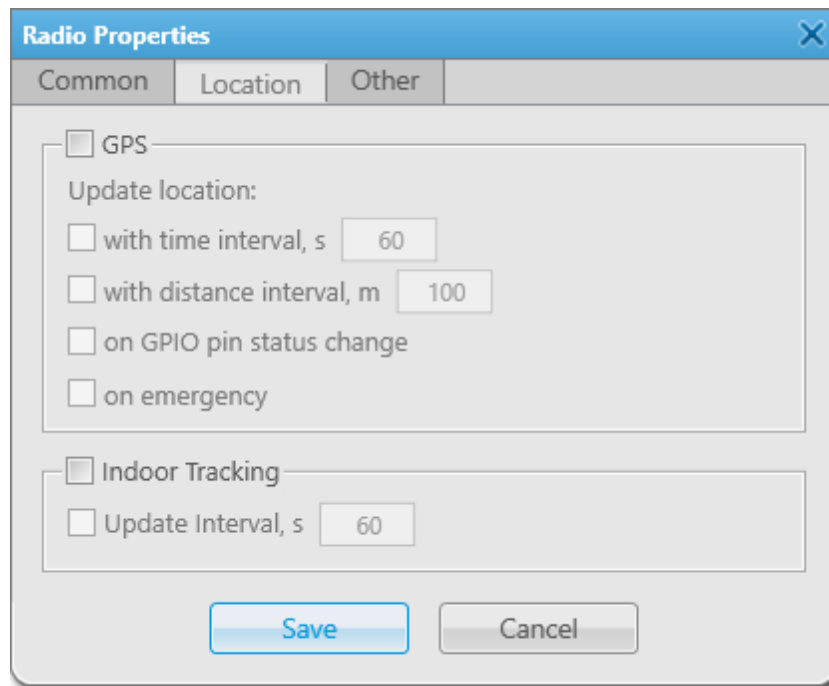
GPS: Select the check box to see the radio on the map. The radio must support **GPS**.

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

The **Update location** area allows you to specify the location update criteria:

with time interval, s: The time interval in seconds after which the GPS coordinate request will be sent to the radio. You can set *7.5 s, 15 s, 30 s, 60 s, 120 s, 240 s* or *480 s* location update time interval. The value should not be less than the value set in SmartPTT Radioserver Configurator.

> **NOTE**
>
> You can set *7.5 s* interval in SmartPTT Dispatcher using *7* or *8* values only. These values are considered as *7.5 s* update period.

with distance interval, m: The distance interval in meters or feet after which the GPS coordinate request will be sent to the radio.

on GPIO pin status change: The GPS coordinate request will be sent to the radio when the status of telemetry contacts changed.

on emergency: The GPS coordinate request will be sent to the radio when the radio sends an emergency alarm.

Indoor Tracking: Select the check box to see the radio on the building plan by the dispatcher request (the **Find on Indoor Map** action) or after the predefined time period (the **Update Interval, s** field in the **Location** tab of the radio **Properties** window). The radio must support Indoor Tracking. If you use *Motorola* source (iBeacon technology), the **Update Interval** field must be selected and specified together with the **Indoor Tracking** field for enabling Indoor support for a radio.

> **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 in seconds for location data update from special beacons, which are installed in buildings. The field is mandatory in case of *Motorola* source (iBeacon technology) use.

The **Custom** tab:
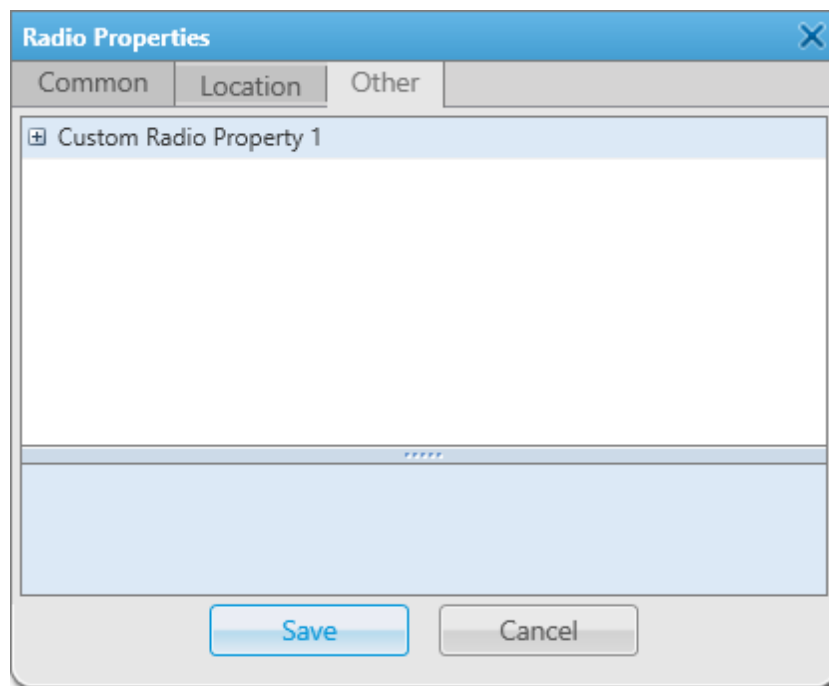
 The Custom tab contains custom radio properties, which were added by the system administrator. If there are no any added custom properties, the **Custom** tab is absent.

The Properties Window of WAVE User

The **Common** tab:

IP: IP address of a [WAVE user](#) to identify it. If the **IP** field is absent, specify **CAI** and **Radio ID**.

> **NOTE**
> The **MDC ID** and **5 Tone ID** fields are unavailable to WAVE users.

Name: The WAVE user name.

Status: The WAVE user status.

Select: Click to upload a WAVE user image if there is any. To delete the selected image, click the cross symbol on the left to **Select**.

Lone Worker: Select the check box to assign the **Lone Worker Profile** to a WAVE user. Select the lone worker profile from the list.

> **NOTE**
> You can add lone worker profiles in SmartPTT Dispatcher in the **Settings** menu under [Lone Worker Rules](#).

> **NOTE**
> You cannot change the WAVE user icon ⓦ.

The **Custom** tab contains custom radio properties, which were added by the system administrator. If there are no any added custom properties, the **Custom** tab is absent.

3.5 Channels

The **Channels** panel allows you to see all the active control stations available in the system.
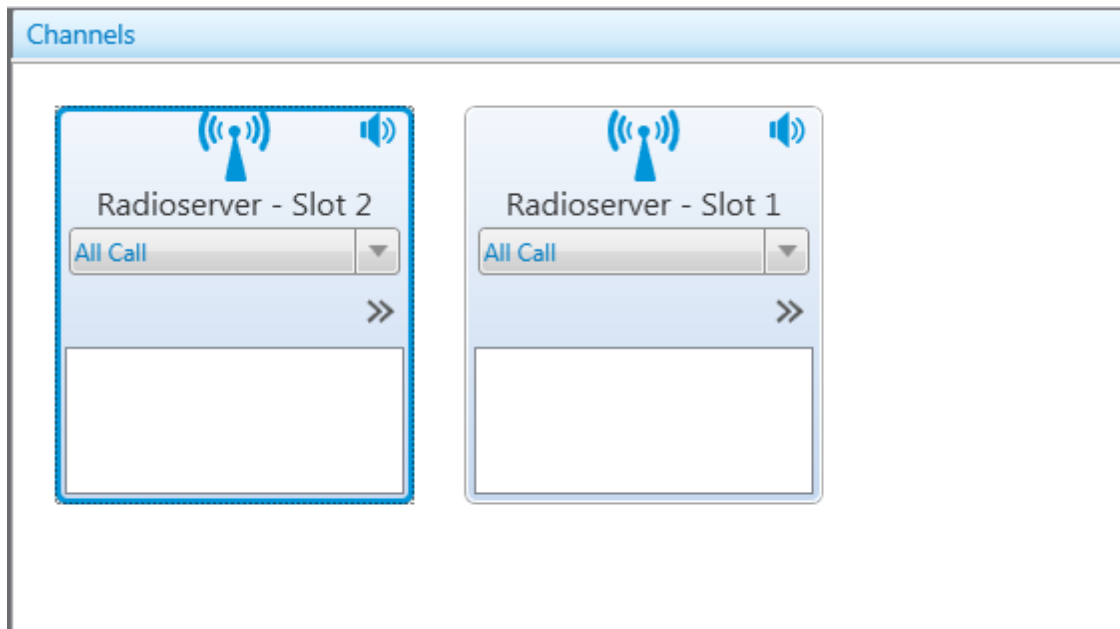
In this panel you can do the following:

- Make an All Call or a group call depending on the selected type of call

- Mute or unmute the channel. If the channel is muted, the dispatcher won't hear the talkers on the channel

- View information about the current call on the channel: the call state, the called party and the call originator

- Perform other actions from the **Action List**. The actions in the **Action List** may be different. This depends on whether the channel is physical or virtual. For more information on the **Action List** of control stations, see **Radio Fleet** in the Help file of SmartPTT Dispatcher

> **NOTE**
>
> If in the **General Settings** window the Show radio user name check box is selected, and on SmartPTT Radioserver the user authorization service is activated and users are added, then during a call the name of the user authorized on the radio is displayed next to the radio name in brackets.

3.6 Radios

The **Radios** panel provides convenient interface to perform voice calls, to edit properties of a radio or a WAVE user and to filter the list of radios and WAVE users by generating a list of control buttons.

To open the **Radios** panel, click **Main Menu → Tools → Radios**.
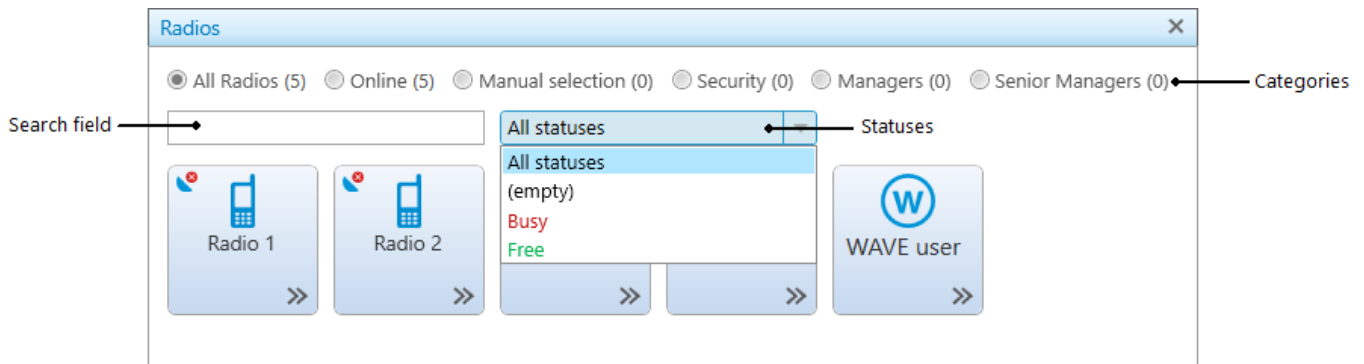
You can perform the following actions on the **Radios** panel:

- Filter the list of radios and WAVE users by various criteria

- Customize the list of radios and WAVE users

- Call a radio or a WAVE user

- Find the necessary radio or WAVE user in the filtered list by its name or ID, using the **Search** field

- Open the radio or WAVE user Call Window, by right clicking the corresponding control button on the panel

- Open the radio Actions List or the WAVE user Action List, by clicking the button »

The **Radios** panel contains the following filter criteria:

All Radios: All registered radios and WAVE users (online and offline).

Online: Online radios and WAVE users only.

Manual selection: Customized list of radios and WAVE users.

Categories: Radios and WAVE users of the specific category, predetermined in the [Categories](#) window. If there are no any added categories, this filter is absent.

The **All Radios**, **Online**, **Manual selection**, **Categories** filter criteria show in brackets the number of radios including WAVE users in the list, filtered by one of these criteria.

Statuses: Radios and WAVE users with the selected status. The statuses are predetermined in the [Statuses](#) window. If there are not any added statuses, this filter is absent.

> **NOTE**
>
> The **Statuses** criteria is applied to the list of radios and WAVE users already filtered by one of the following criteria: **All Radios**, **Online**, **Manual selection**, or **Categories**.

To customize the list of radios and WAVE users, select the **Manual selection** radio button and drag the necessary objects to the panel from the **Radio Fleet** panel. To delete the objects from the customized list, select a radio or a WAVE user and press the **Delete** button.

To make a call to a radio or a WAVE user, click its button, or select a radio or a WAVE user and click the **PTT** button. The **PTT** settings defined in [Control Devices](#) are applied to this panel.

You can distinguish between radio and WAVE user states on the panel. Different states differ by color of the control button and the frame around it. The colors are the same as in [Custom Consoles](#).

The icon on the radio or WAVE user button shows that the dispatcher did not answer the call from a radio or a WAVE user. The figure next to it shows the number of missed calls.

3.7 Job Tickets

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

> **NOTE**
>
> This functionality is supported only 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 **Tools** menu on 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 operator taste.

You can hide job tickets from the job list after the particular status is achieved. To do that, deselect the **Show complete job tickets** check box.

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.

Validity period: Defines the time period during which a job ticket can be assigned to offline radios. After this validity period expires, the job ticket is never sent. If a job ticket is not completed before the validity period has expired, the job ticket gets the status **Outdated**.

Assigned: Job tickets can be assigned to an individual radio or to a talkgroup. To do this, simply drag a radio or a talkgroup in this field. To remove the assigned radios or talkgroups, select them in the list and click **Delete**.

After creation, the job ticket will be displayed in the job list with the default status value. When the radio changes the job ticket status, the status in the job list will be changed accordingly. If the job ticket is assigned to a talkgroup, the job ticket table will contain the name of the radio, which changed the job ticket status. Job tickets can be assigned to offline radios too. As soon as offline radios become online, they get the job tickets (if the validity period has not expired).

To see the history of changes for job ticket statuses, click on the job ticket status. 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**. The radio, to which the job ticket was assigned, will receive a text message that the job ticket was canceled (only if **Send**

notification to radio when uncompleted job ticket was deleted by dispatcher 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 the existing job ticket to a radio or a talkgroup, click **Resend**. In this case, the edit window will open, and after clicking **OK**, a job ticket with a unique number will be sent. Use of unique numbers is important for job ticket resending, because radios ignore job tickets with same titles. Therefore, before resending a job ticket, make sure automatic numbering is enabled (**Settings →**
Job Ticket Statuses).

To get information about job ticket statuses for a period, when the dispatch console was turned off, click **Get Update Status**.

3.8 Monitoring

3.8.1 Monitoring

The **Monitoring** panel is a complex tool which gives a comprehensive outlook on the whole radio system.

It includes four tabs:

- Monitoring

- Topology

- Diagnostics

- Event Log

Monitoring is a graphical representation of data and voice received from MOTOTRBO repeaters, which allows observing the ongoing system operation.

Each logical channel has a section for displaying transmitted packets in the form of colored vertical bars. The height of the bar corresponds to the level of the received signal; and the color corresponds to the event type according to the legend.

In order to see the radioserver and its network in the **Monitoring** tab, ensure that the Monitoring service is enabled for this radioserver in SmartPTT Radioserver Configurator.
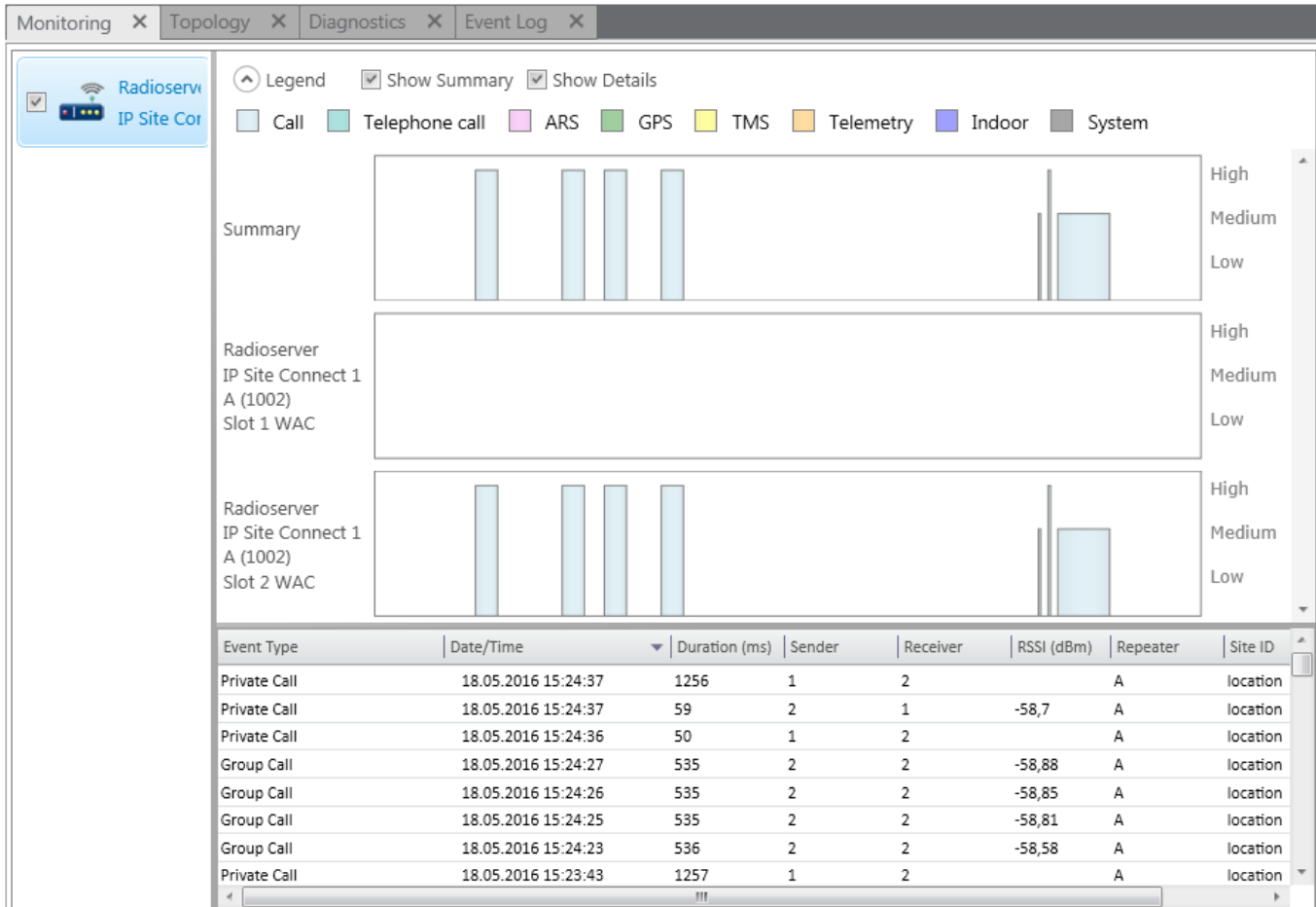
To use Monitoring in SmartPTT Dispatcher you should activate it in the SmartPTT Radioserver Configurator program. You can learn how to activate and configure it from SmartPTT Radioserver Configurator User guide.

Graphical representation of data packets is displayed only for the selected network.

> **NOTE**
> The list on the left shows only active networks of SmartPTT Radioserver. If a network becomes inactive, it disappears from the list.

Show Summary: When selected, events from different slots appear in one block.

Show Details: When selected, events from different slots appear in separate blocks.

When checking both parameters, all the three blocks are displayed.

Data is displayed in blocks:

Name	Description
Call	All Call, group calls, private calls, remote monitoring, emergency calls
Telephone call	Telephone calls
ARS	Registration information, that is information about radio availability in the network (ARS service)
GPS	GPS coordinates of radios and WAVE users (GPS service)
TMS	Text messages (TMS service)
Telemetry	Telemetry commands and signals
Indoor	Data from beacons showing radio locations inside a building (i.e., Indoor Positioning)
System	System events from and to MOTOTRBO equipment (data confirmation, private call confirmation, alarms, remote monitoring (only a command), Radio Check and some other)

Levels displayed on the right to the blocks (*High*, *Medium*, *Low*) correspond to the RSSI level ranges: -80 or more (*High*), -80 to -100 (*Medium*) and -100 or lower (*Low*).

The event log at the bottom of the screen gives more detailed information, namely the type of transmitted data (ARS, GPS, Message, Emergency Call, etc.), date and time of the event, its duration, initiator's and addressee's IDs, repeater ID and RSSI level, site ID (applied to LCP systems only), network name.

3.8.2 Topology
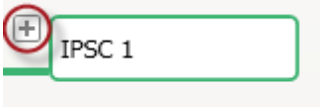
Topology is a schematic representation of active networks. A network topology is set in SmartPTT Radioserver Configurator and displayed in SmartPTT Dispatcher.
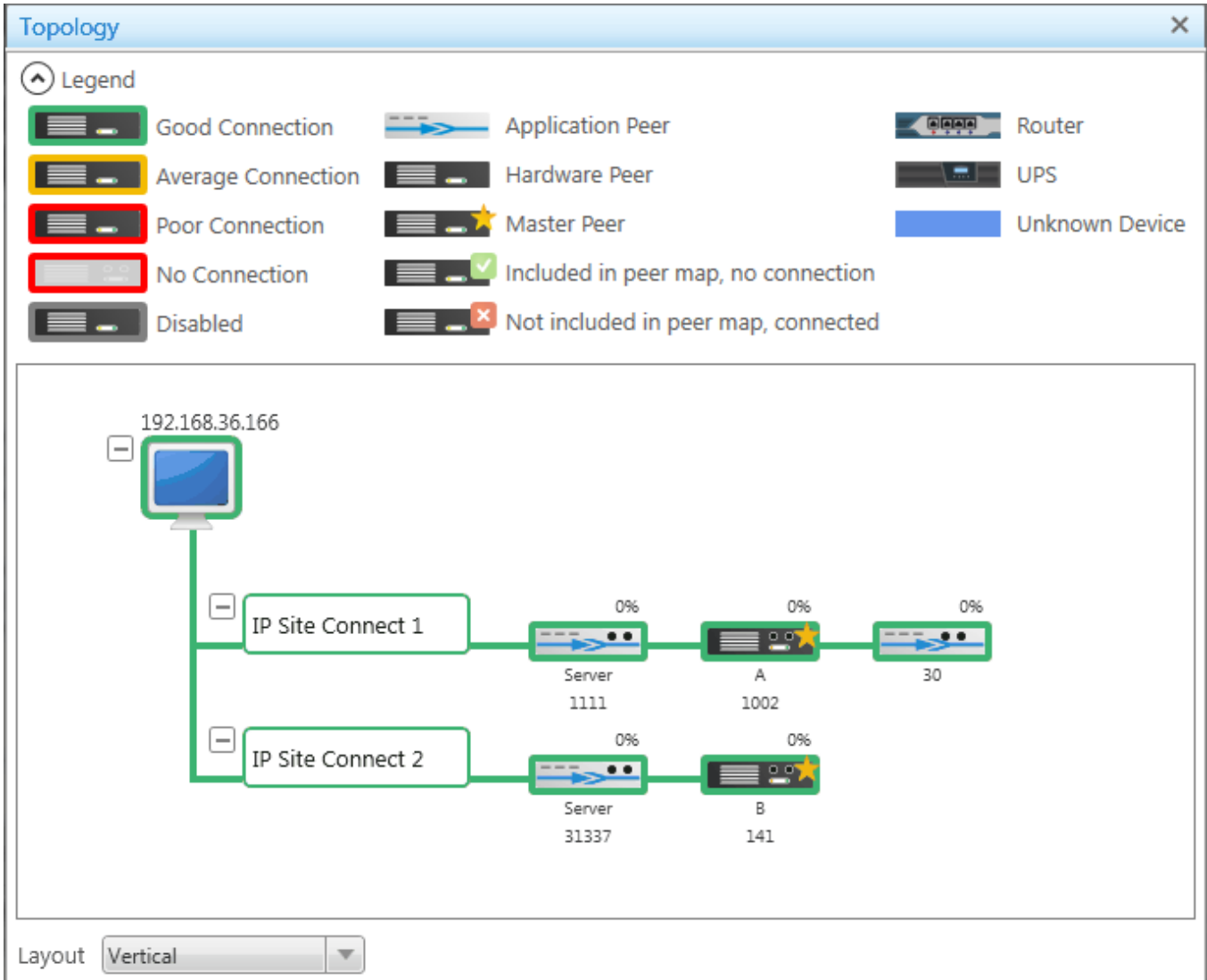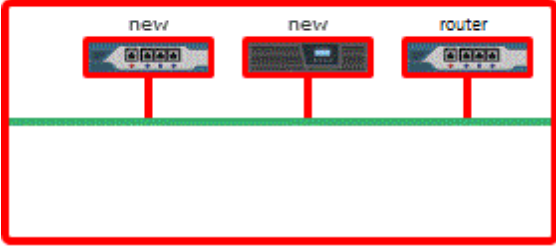
> **NOTE**
>
> In order to see the radioserver and its network in the **Topology** tab, ensure that the **Monitoring** service is enabled for this radioserver in SmartPTT Radioserver Configurator.

Graphical objects used in topology

Graphical Object	Description
———	Major alarm on device or no connection
———	Device is connected or no alarms registered on device
———	Minor alarm is registered on device or there are more than 5 packets lost or corrupted
———	Repeater is turned off
	Repeater is not connected
	SmartPTT Radioserver
IPSC 1	Network in folded state
	Virtual repeater (i.e., SmartPTT Radioserver), or MNIS
	Slave hardware repeater
	Master hardware repeater Master virtual repeater
	Repeater is not connected, but it is included in the peer map
	Repeater is connected, but it is not in the peer map

Graphical Object	Description
	Location in a folded state
	Location in an unfolded state
	UPS (Uninterruptible power supply)
	Router
	Unknown device (any other device)

NOTE

Network configuration is set in SmartPTT Radioserver Configurator. Repeaters, which are added but not active, are marked red. If network configuration is not set in SmartPTT Radioserver Configurator, the network topology will be generated automatically based on the information received from the available network repeaters.

Repeater loading on both logical channels is displayed above each repeater.
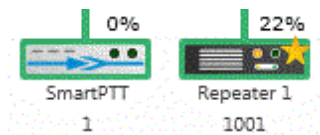
Loading grows steadily, not sharply, until the maximum value. When both logical channels are used, the maximum value is 100%, when only one logical channel is used – 50%.

A busy channel is represented by a yellow LED on the repeater.
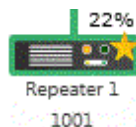
Repeater ID is displayed under repeater.
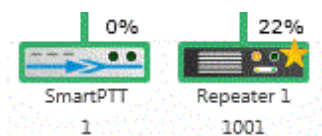
Application peer ID is specified in SmartPTT Radioserver Configurator (**Peer ID**).

> **NOTE**
> All the repeaters used in one network should have unique ID's.

Radioserver

To fold and unfold the network, right-click on the radioserver and select **Fold** or **Unfold** respectively.

To view radioserver parameters and the ongoing performance information, right-click on the radioserver image and select **Information**.

Operating System: Provides information on the OS used on the server.

Processor Load: Displays current CPU load and other information about PC memory.

Hard Disks: Provides information on the available hard disks of the PC and their characteristics.

Network Interfaces: Displays the network interface and the sub network mask of the PC.

Sensors: Displays platform status (for example, system temperatures, voltages, fans, power supplies and chassis intrusion).

To operate remotely, right-click on the radioserver image and select **Control**. To be able to control the radioserver remotely, make sure that IPMI parameters are set in the settings of the radioserver. If the IPMI settings are correct, the following window will open:
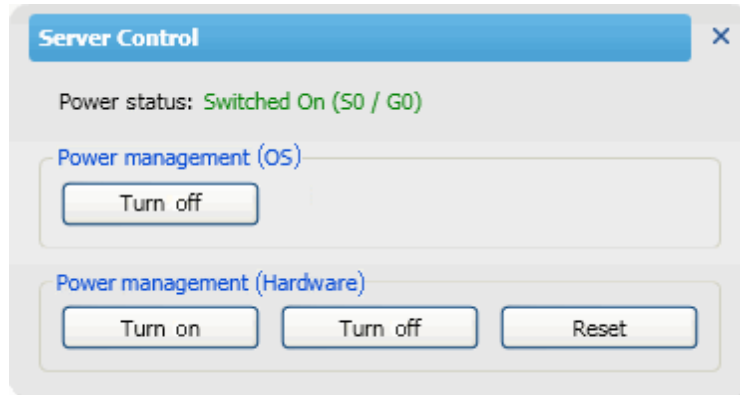
Power Status: Shows the current status of the radioserver. There can be three statuses:

- **Switched On**

- **Switched Off**

- **N/A Unknown** (in this case check that IPMI settings are correct)

Power Management (OS): Allows to turn off the radioserver at the OS level.

Power Management (Hardware): Allows to turn on/off or to hard reset the radioserver computer at the hardware level.

> **NOTE**
>
> If the radioserver computer is blocked, you can turn off the radioserver computer only at the hardware level.

If you have more than one radioserver, you can arrange them in the **Topology** tab either vertically or horizontally.

The layout can be selected in the **Layout** list at the bottom of the **Topology** tab. The selected layout is applied not only to radioserver elements, but to all elements, which can be folded and unfolded.

Repeater

To view repeater parameters and statistics, right-click on the repeater element and select **Information**.
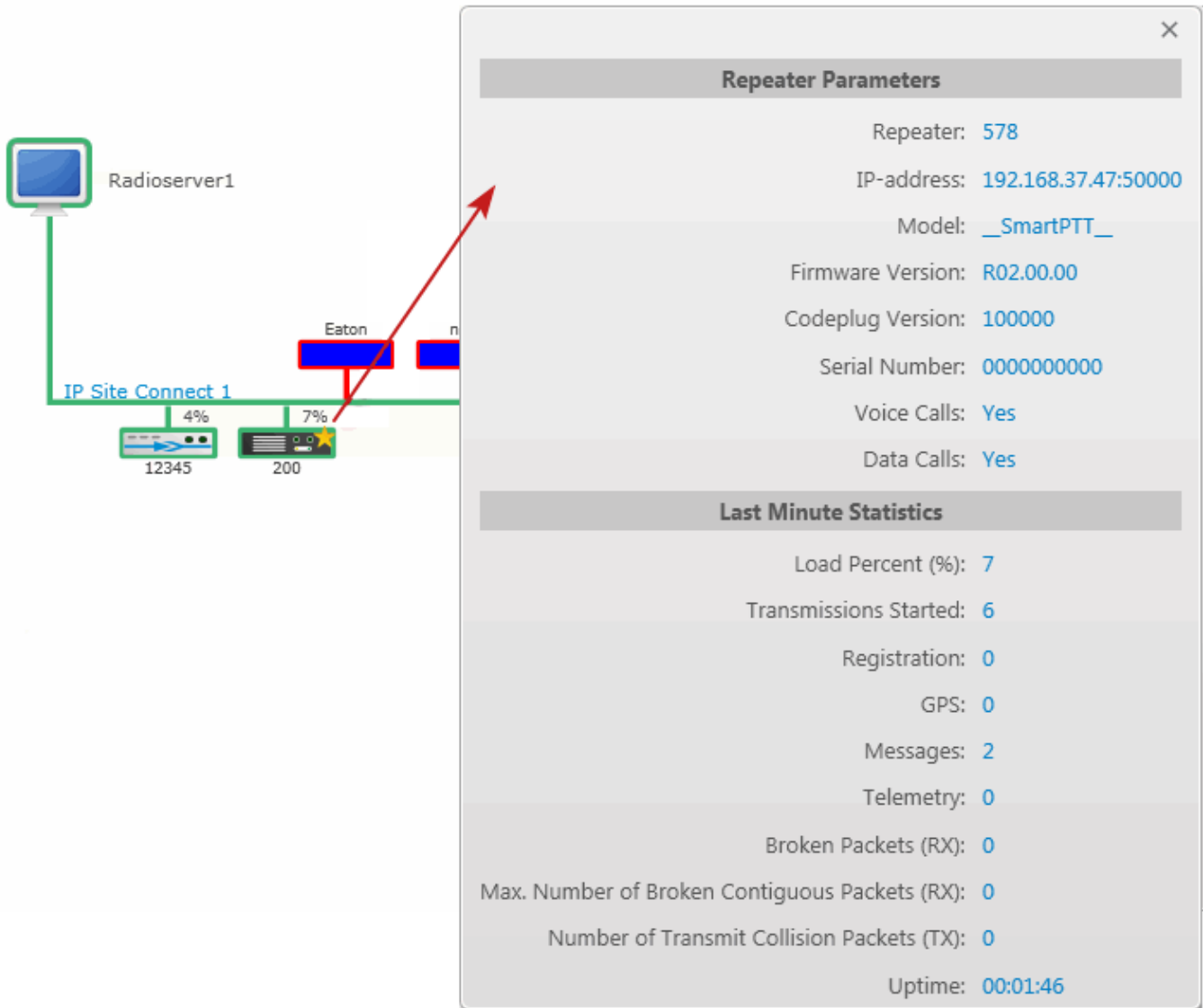
Repeater parameters

Name	Description
Repeater	Repeater ID
IP-address	Repeater IP-address

Name	Description
Model	Repeater model number
Firmware Version	Version of firmware used in repeater
Codeplug Version	Repeater parameter block version
Serial Number	Repeater serial number
Voice Calls	Ability to transmit voice (Yes, No)
Data Calls	Ability to transmit data (Yes, No)

Statistics

Name	Description
Load Percent (%)	Channel loading on repeater for the last 10 seconds
Transmissions Started	Number of times the PTT button was pressed
Registration (ARS)	Number of registration packets transmitted for the last minute
GPS	Number of GPS coordinates transmitted for the last minute
Messages	Number of text messages transmitted for the last minute
Telemetry	Number of telemetry packets transmitted for the last minute
Broken Packets (RX)	Number of packets (Rx) with errors, received for the last minute
Maximum Number of Broken Contiguous Packets (RX)	Maximum number of broken packets (Rx) in a row

Name	Description
Number of Transmit Collision Packets (TX)	Number of not transmitted packets due to collisions on the channel
Uptime	The time during which the repeater is available in the network

To operate remotely, right-click the repeater element and select **Control**. The following window appears:
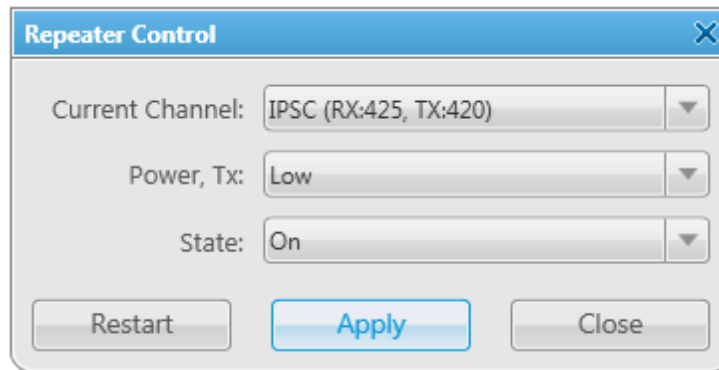
> **NOTE**
>
> You cannot operate virtual repeaters remotely, therefore, the **Repeater Control** window is available only for hardware repeaters connected to the radioserver.

Current Channel: Channel used by the repeater. Channels are set in repeater settings with the help of *MOTOTRBO CPS*.

Power, TX: Transmitter power of repeater. There are high and low modes. Bands for both modes are specified in *MOTOTRBO CPS*.

State: Allows switching the repeater to **active** or **not active** mode. When in the **not active** mode, repeater does not transmit any signals. To switch the repeater to the **active** mode, select *On* in the **State** field.

Restart: Allows restarting repeater remotely.

Apply: Applies settings specified in the **Repeater Control** window.

Close: Closes the **Repeater Control** window without making changes in the repeater settings.

Uninterruptible Power Supply (UPS)

Currently, you can select between Eaton, UPS ATS-Convers and Apc 5000 and any other UPS if you select *Unknown* in the **Type** field.

To view parameters and status information of a UPS, right-click on its symbol and select **Information**.

Identification

Name	Description
Model	UPS model
Serial Number	Device serial number
Firmware	Firmware version
IP-address	IP-address
Network Mask	Network mask

State

Name	Description
Alarm Details	Informs about issues in UPS operation
Input Power Source	Input Power Source
Output Power Source	Output Power Source
Last Battery Replacement	Date and time when battery was replaced last time

Parameters

Name	Description
Input Voltage (V)	Input voltage level (V)

Name	Description
Input Frequency (Hz)	Input frequency level (Hz)
Output Voltage (V)	Output voltage level (V)
Output Frequency (Hz)	Output frequency level (Hz)
Output Current (A)	Output current level (A)
Output Power (W)	Output power level (W)
Load (%)	UPS loading in percent
Battery Charge (%)	Battery charge left in percent
Charge Left (hh:mm)	Battery charge left in hours and minutes

Router

Currently, you can select between Cisco and Huawei routers and any other router if you select *Unknown* in the **Type** field.

To view parameters and other information of the router, right-click on the element and select **Information**.

Identification

Name	Description
Model	Router model
Serial Number	Router serial number

Alarms: Gives information about issues in the router operation.

Unknown Device

Unknown device is any kind of device.

To view information on the device, right-click on the element and select **Information**.

Parameters

Name	Description
System Name	Name of the device
System Description	Description of the device
Alarm Details	Informs about issues in the device operation

Location

To change the way **Location** is displayed, right-click on the **Location** element, or click on the **Plus/Minus** icon. There are two display modes:

- Folded

- Unfolded

Folded: Location is displayed as an image inside a box.

Unfolded: Displays which devices, repeaters and routers are used in this location.
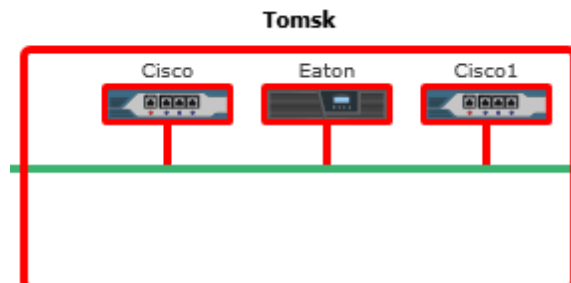
To change the default image of **Location**, right-click on the object. The drop-down list appears where you can either upload your own image or set the default image.
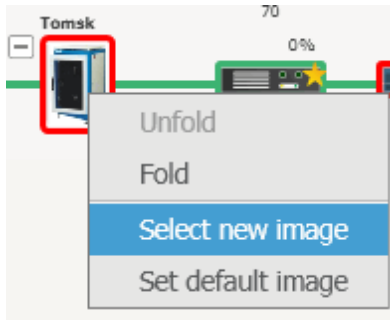
3.8.3 Diagnostics

Diagnostics provides information about the current state of the connected MOTOTRBO repeaters and alarms.

To select columns to be displayed, right-click on the menu bar with the column names. The following list opens.
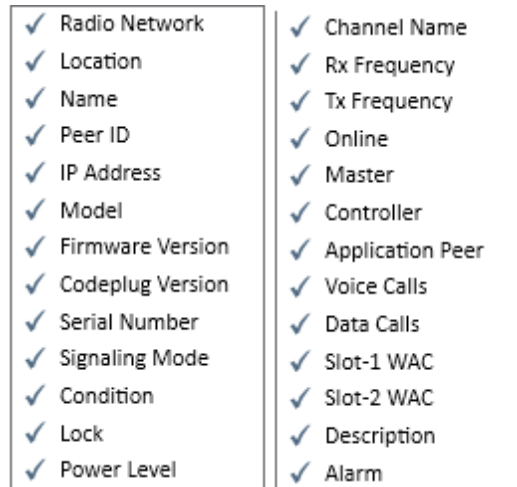
NOTE

By default, all columns are enabled.

On the right side of the panel you can find all the technical information about the repeater selected in the table, including the repeater's statistics, its properties, and alarms (if there are any).

You can also get the latest information on RSSI levels per slot and other parameters by clicking the **Refresh** button under **Diagnostics**.

3.8.4 Event Log

The event log of monitoring is one of the best ways to learn about hardware alarms, for example, it informs about repeater connection or about the states of connected routers and UPS.

> **NOTE**
>
> Events with severity **Critical**, **Major** and **Minor** are highlighted with red, pink and yellow respectively.

Besides reviewing current events, **Event Log** provides the ability to view saved events for the particular time period.

To review events for a time period, select **Show Logged Events**, define the period limits by using the calendars for start and end dates, select the radioserver from the drop-down list and click **Apply**.

3.9 Lone Workers

The **Lone Workers** panel displays the list of radios and [WAVE users](#) which 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 **Tools** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Lone Workers**. The following window appears:
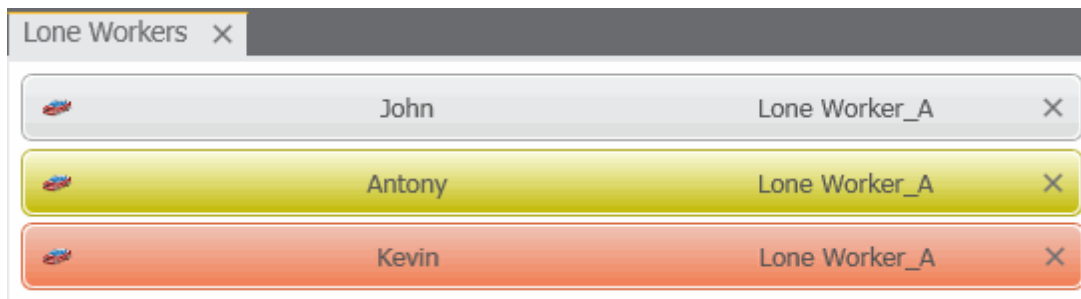
The **Lone Workers** panel shows radios and WAVE users working in the **Lone Worker** mode marked with specific color. The color shows if the radio or the WAVE user meets the requirements set for the lone worker profile the radio or the WAVE user belongs to:

- **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, see [Lone Worker Rules](#).

To turn off the **Lone Worker** mode, click the cross button.

> **NOTE**
>
> If in the **General Settings** window the Show radio user name check box is selected, and on SmartPTT Radioserver the user authorization service is activated and users are added, then the name of the user authorized on the radio is displayed next to the radio name in brackets.

3.10 Recent Incoming Calls

The **Recent Incoming Calls** panel shows the latest radios which made a call in the radio network. It also provides quick access to the call window of the radios.

To open the panel, on the **Tools** menu click **Recent Incoming Calls**.
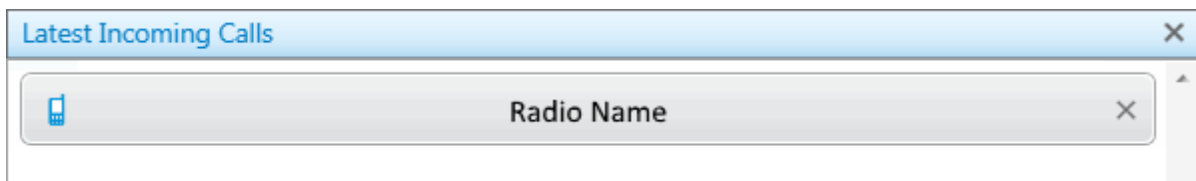
> **NOTE**
>
> If in the **General Settings** window the Show radio user name check box is selected, and on SmartPTT Radioserver the user authorization service is activated and users are added, then the name of the user authorized on the radio is displayed next to the radio name in brackets.

To call a radio, click it in the panel. This opens the **Call Window** of the radio.

To change the number of radios in the panel, change the Recent Incoming Calls settings.

3.11 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

- Radio or WAVE user name and time

- Text of the alarm

NOTE

If in the **General Settings** window the Show radio user name check box is selected, and on SmartPTT Radioserver the user authorization service is activated and users are added, then the name of the user authorized on the radio is displayed next to the radio name in brackets.

3.11.1 Emergencies

The **Emergencies** panel appears in SmartPTT Dispatcher when a radio sends an emergency alarm.
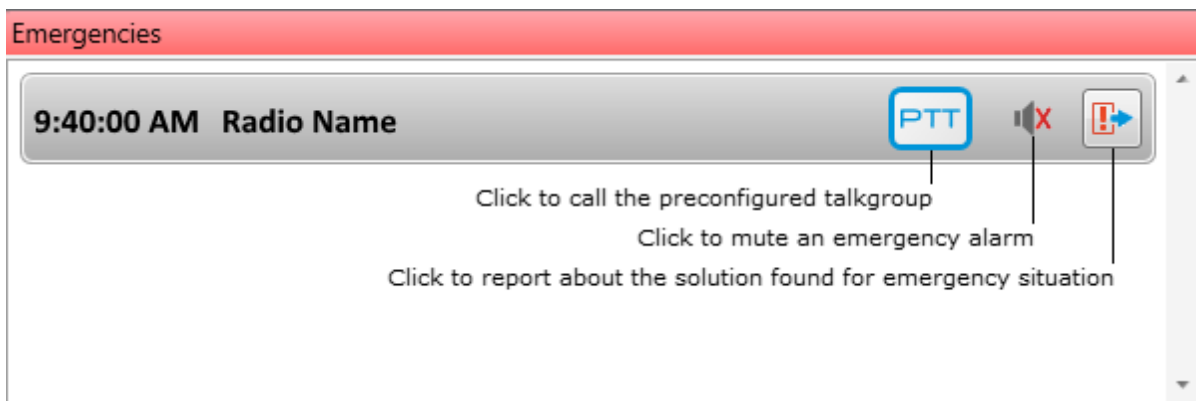
Operator can perform the following actions:

- Call the talkgroup which is preconfigured in the radio via the MOTOTRBO CPS program. To start the call it should click **PTT**.

- Mute the emergency alarm by clicking **Mute** .

- Report about the solution found for the situation. When operator clicks **Close Emergency** , the panel closes. However, the emergency mode of the radio stops only when it is turned off on the radio.

3.12 System Messages

The **System Messages** panel displays messages on events related to the radio network functionality.

The system messages can inform you about the following:

- The statuses of the connections to the radio networks

- The statuses of the connections to the radio network components

- The activity statuses of the network components

- The statuses of the connection to the server and more

You can see three types of messages:

- Error messages for losing a great functionality:
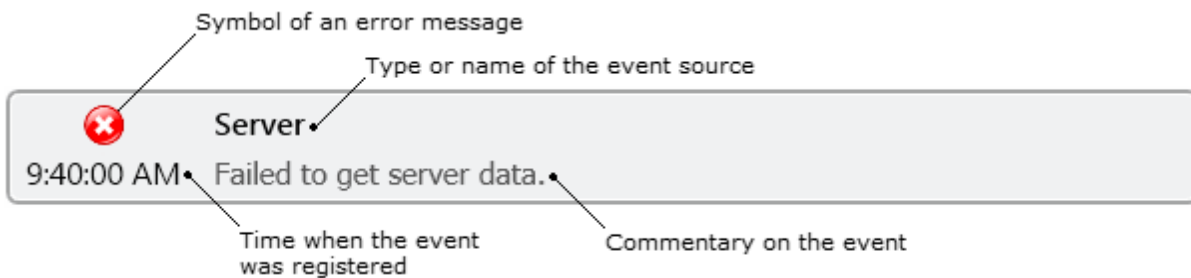
- Warning messages for losing a minor functionality:
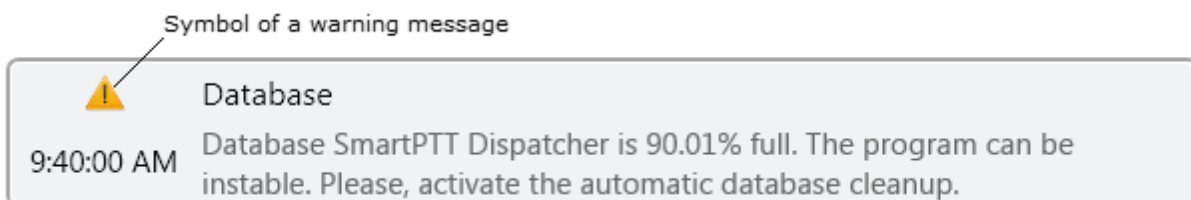
- Information messages about getting or restoring functionality

You can configure rules for message appearance in the Events and Notifications menu.

You can learn a source of the event from the message:

- Client, i.e. the SmartPTT Dispatcher program

- Server, i.e. the SmartPTT Radioserver program

- Client-Server Connection

- Database, i.e. the SmartPTT Dispatcher database

- Your radio network and its components

You can also see a time of the event and commentary on it.

You can show the **System Messages** panel in two ways:

- On the **Tools** menu, click **System Messages**. The **System Messages** window appears.
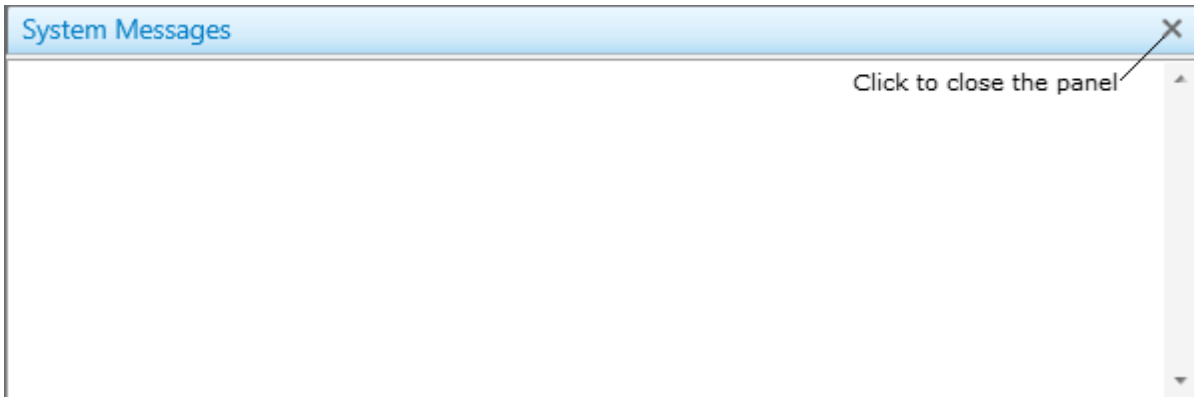
- By configuring its automatic showing in the System Messages menu.

To close the **System Messages** panel click **Close** ×.

Error Message Example
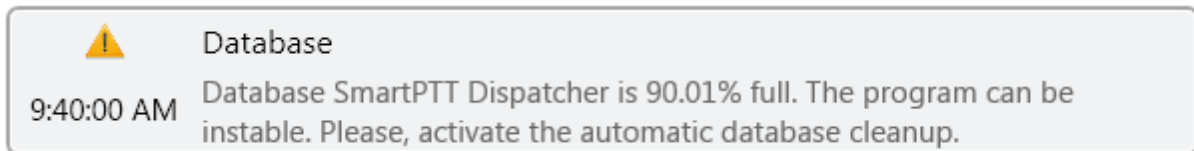
This message appears when amount of records in the database exceeds 90% of the maximum size of the database. It will appear at the start of SmartPTT Dispatcher and will reappear every 30 min until database is not cleaned up.

In rare cases you can see a message that database in 100% full. It appears only when 0.005% of free space left in the database.

Warning Message Example
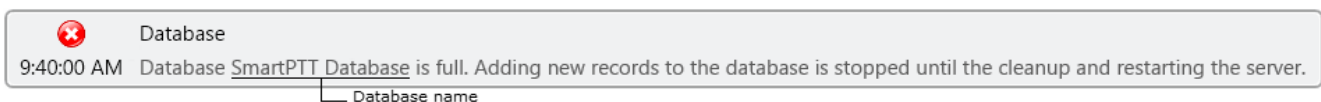
> This message indicates that amount of records in the database reached its maximum. It will appear at the start of SmartPTT Dispatcher and will reappear every 30 min until database is not cleaned up.

3.13 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.
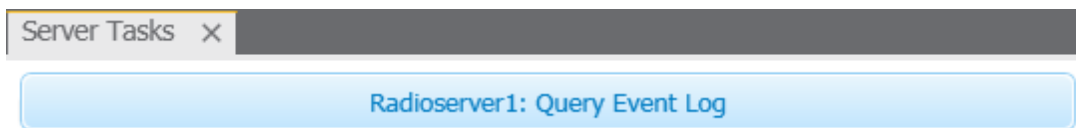
3.14 Map Tools

3.14.1 Points of Interest

The **Points of Interest** panel displays all the existing 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 **Tools** menu in the **Main Menu bar** of the SmartPTT Dispatcher window, click **Map Tools** → **Points of Interest**.

The **Points of Interest** panel opens.
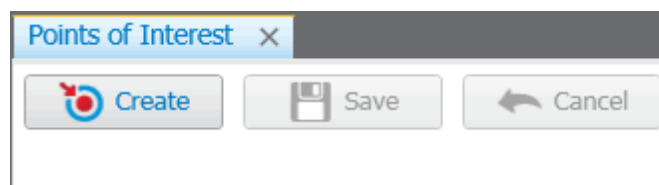
In the panel window you can do the following:

- Create a new POI

- View the list of created POIs

- Hide or show POIs on the map

To create a new POI, follow these steps:

1. Open a map and click **Create**.

2. In the opened window, type the name of the POI and upload its picture, and then click **OK**.

3. Place the new POI on the map by clicking the left mouse button.

4. 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 check box next to the POI title.

3.14.2 Geofences

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

You can add a geofence in two ways:

- By drawing a geofence on the map. You will learn about it in this article

- By specifying coordinates of the geofence. For more information see [Geofences](#)

To open the **Geofences** panel, expand the **Tools** menu in the **Main Menu** bar of the SmartPTT Dispatcher window, click **Map Tools** and then **Geofences**. The following window opens.
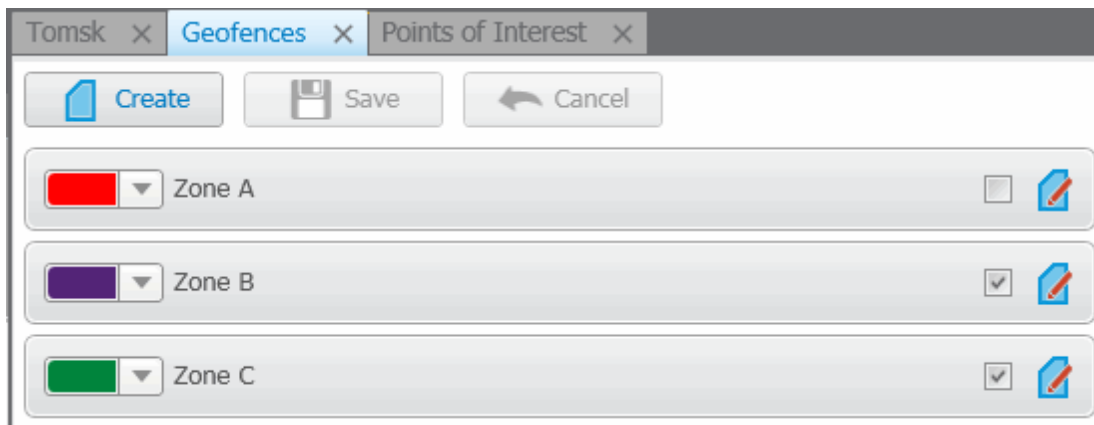
To create a new geofence, follow these steps:

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**.
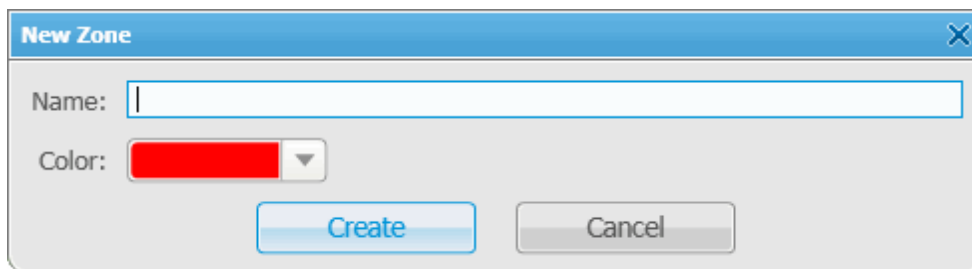
4.   Draw the geofence on the map with the help of mouse and the keyboard. The geofence
      must have at least 3 points. To undo the last added point press the Esc key. You can also
      stop drawing the geofence by double-clicking on the last point of the zone.

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 check box next to the name of
      the geofence and edit it by clicking **Edit**. You can also change the color of the geofence.

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

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

3.14.3 Routes

Route is a tool of SmartPTT that significantly extends functionality of the dispatch system,
especially for monitoring and controlling networks of highly mobile radios and WAVE users
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 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. Radio or WAVE user location near the key points is identified by the specified radius of the route and can be summarized in the **Radio Locations** report.

To open the **Routes** panel, expand the **Tools** menu in the **Main Menu** bar of the SmartPTT Dispatcher window, click **Map Tools → Routes**. The **Routes** panel opens:
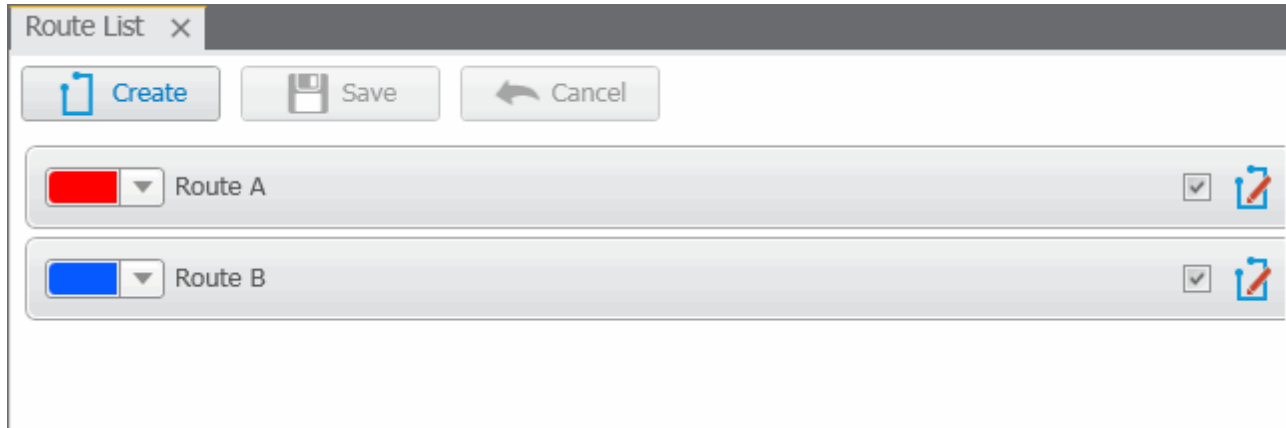
To create a new route, follow these steps:

1. Open the map window and click **Create**. The **New Route** window appears:
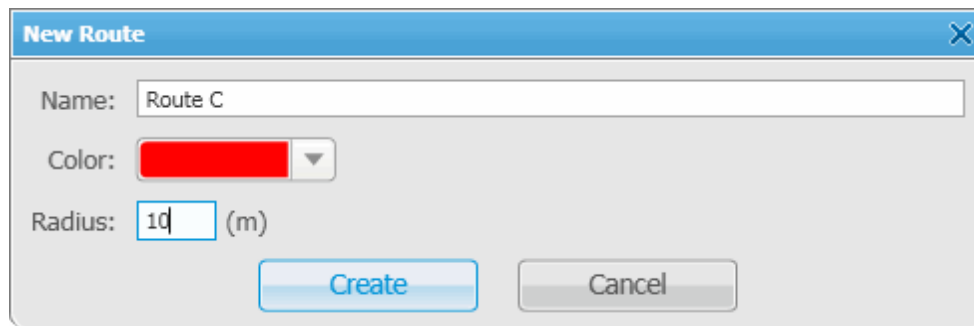
2. In the field **Name** type the name of the new route.

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.

> **NOTE**
>
> Route points are created by clicking 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 🖉.

3.14.4 Radio Locations

The **Radio Locations** panel shows radios and WAVE users inside the selected area on the map.

To open the **Radio Locations** panel manually, click the **Tools** menu in the **Main Menu** bar and then open **Map Tools**. The **Radio Locations** panel opens.
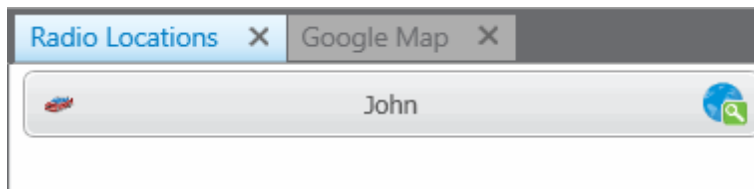
Click 🌐 to find the radio or the WAVE user on the map.

To select area on the map, press Ctrl and click with the left mouse button and draw the area covering radios and WAVE users.

> **NOTE**
>
> The **Radio Locations** panel will be opened automatically if it is hidden at the moment of selection.

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4 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 radios and WAVE users. You can open **Call Window** by double-clicking on the radio or a WAVE user displayed on the map, or open **Action List** by clicking with the right mouse button.

> **NOTE**
> If in the **General Settings** window the Show radio user name check box is selected, and on SmartPTT Radioserver the user authorization service is activated and users are added, thenon the radio label the name of the user authorized on the radio is displayed next to the radio name in brackets.

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.

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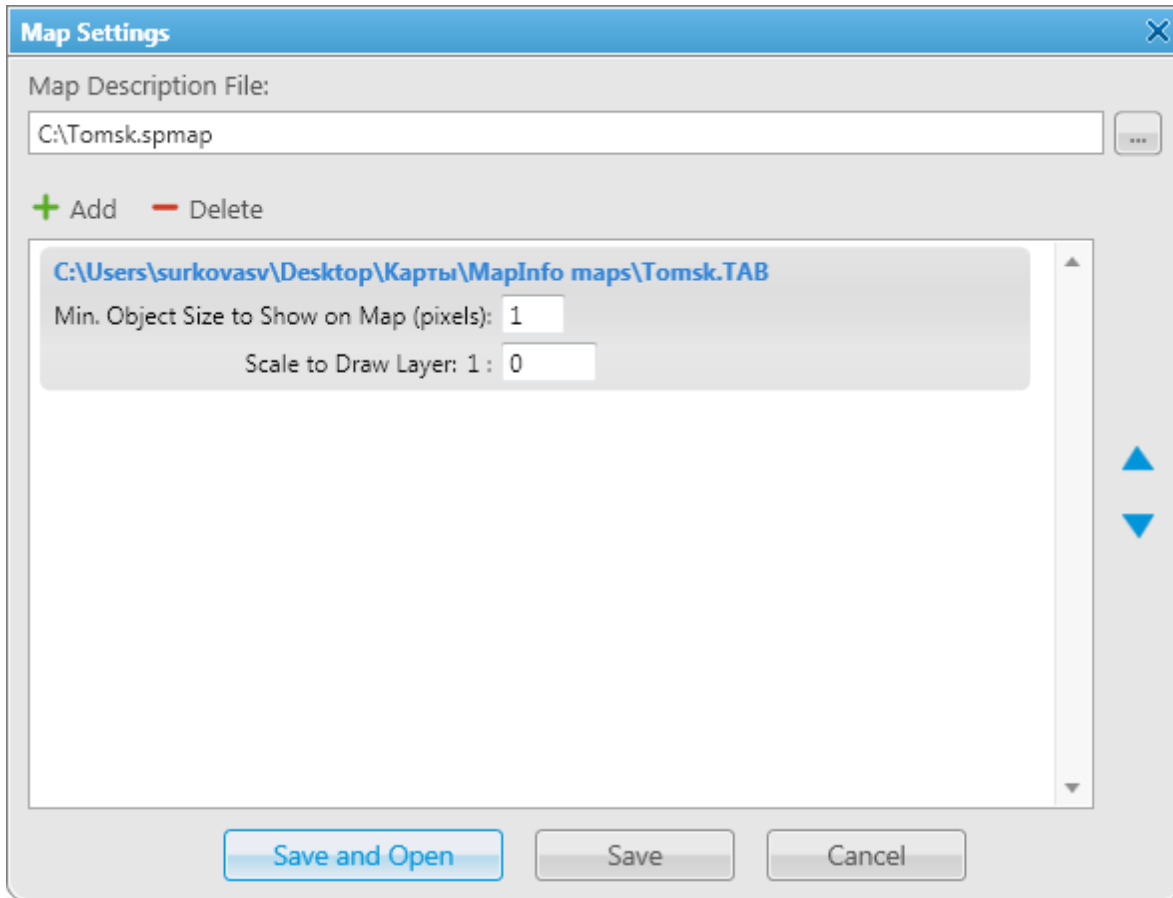
Min. Object Size to Show on Map (pixels): Minimum size of the object displayed on the map in pixels. Affects the detail level of the displayed map.

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**.

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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 or .ttkgp format. You can create a
map in the .ttkgp format using the TatukGIS Viewer free version
(http://www.tatukgis.com/Products/EditorViewer/Editions/Viewer.aspx).

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 or .tilesurl 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
specify the path to the local server. If you want to get back to the default address, clear **Data
Source for OpenStreetMap Online** and click **OK**.

OpenStreetMap Settings	✕
Data Source for OpenStreetMap Online:	http://elcom.openstreetmap.org/
	OK Cancel
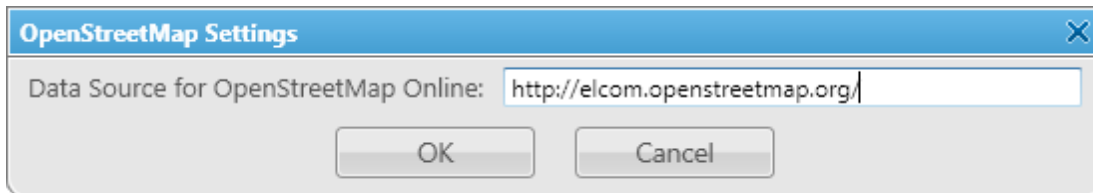
How to Use Maps

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.

Majority of maps allow you to display the object address. To do this, right-click at any place on the
map. The object address appears.

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Certain types of maps may have the additional functions such as a context menu. Right-click the map. The context menu appears.
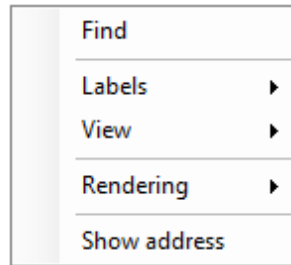
Using this menu you can:

- Search on the map

- Select elements to be labeled on the map

- Change the map appearance

- Select the map rendering type

- Display the object address at any place on the map, where the given menu is opened

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4.1 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** → **New Map**. 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 .

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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 is 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 radio or WAVE user current locations, are also shown in the radio or the WAVE user **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

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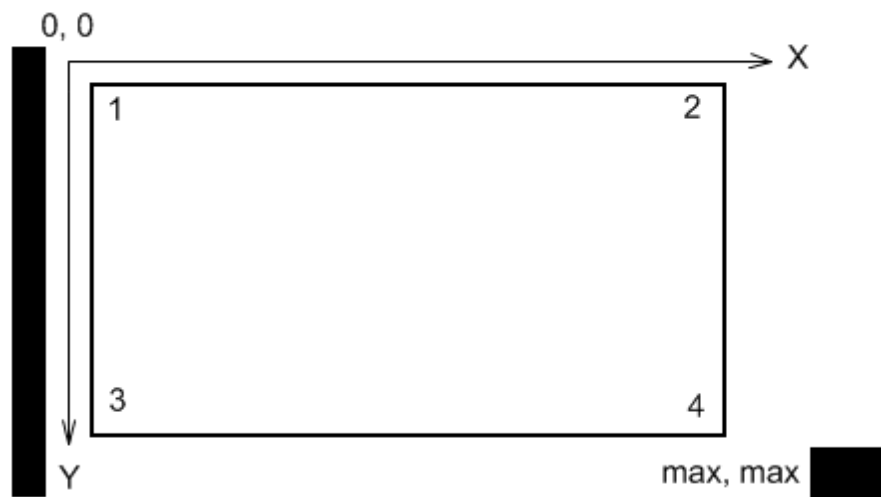
After all coordinates are entered, click **Finish**. In the opened window set the raster map name and click **Save**.

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.

4.2 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](#).

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After the database is restored, expand the **Map** menu in the **Main Menu** bar and click **Raster Map From Database** → **Settings**. Click **Scan Databases** 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).
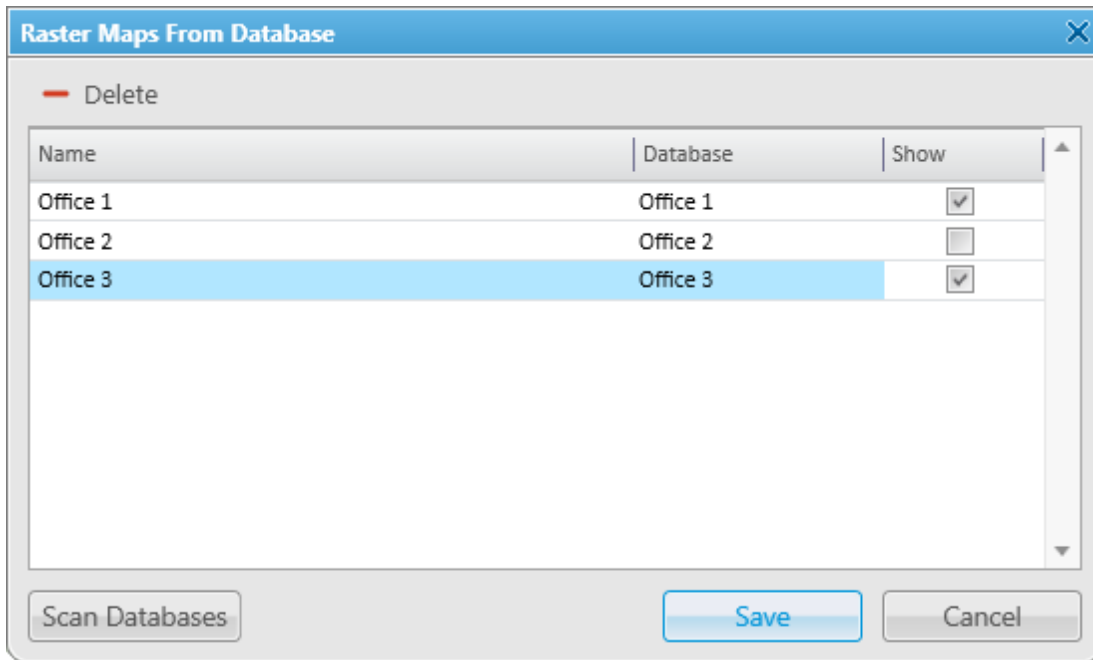
Name: Name of the map stored in the database. To change the name of the map, double-click on the name in the **Name** field and enter a new name.

Database: Name of the database.

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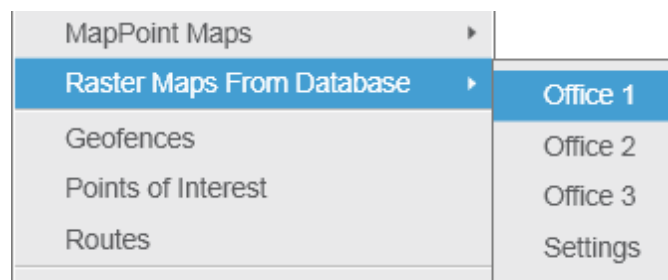
To remove the map from the list, select the map and click **Delete**. To save your changes, click **Save**. If you want to undo the last changes, click **Cancel**.

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4.3 Indoor Tracking

Big organizations with huge premises require constant control over their employees' displacement inside buildings. For this purpose Indoor Tracking system was implemented. Indoor Tracking system allows getting data from special beacons and transmitting it to SmartPTT Dispatcher or any other client application using API. Contact our technical support (http://support.smartptt.com/hc/en-us) for SmartPTT Client API documentation.

Currently, SmartPTT system supports the following technologies and products:

- **iBeacon technology:** With the use of MOTOTRBO radios with the firmware version 2.6 and above and the beacons that support iBeacon technology

- **Blufi option boards (RF800):** With special beacons (Connect-RTLS RF800)

- **Kilchherr option boards (K-TERM 44):** With special beacons (K-TERM 70IC Beacon Transmitter)

NOTE

The Indoor Tracking feature is available only for MOTOTRBO radios with the firmware version 2.6 and above or for radios with special option boards (see above). Also, it is necessary to configure special settings in SmartPTT Radioserver Configurator and SmartPTT Dispatcher. The required settings for SmartPTT Radioserver are described in the **Indoor Tracking** section of the SmartPTT Radioserver Configurator help file.

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> **NOTE**
>
> If in the **General Settings** window the Show radio user name check box is selected, and on SmartPTT Radioserver the user authorization service is activated and users are added, thenon the radio label the name of the user authorized on the radio is displayed next to the radio name in brackets.

To enable Indoor support for a radio in SmartPTT Dispatcher, open the Properties window of the radio and in the **Location** tab select **Indoor Tracking**.

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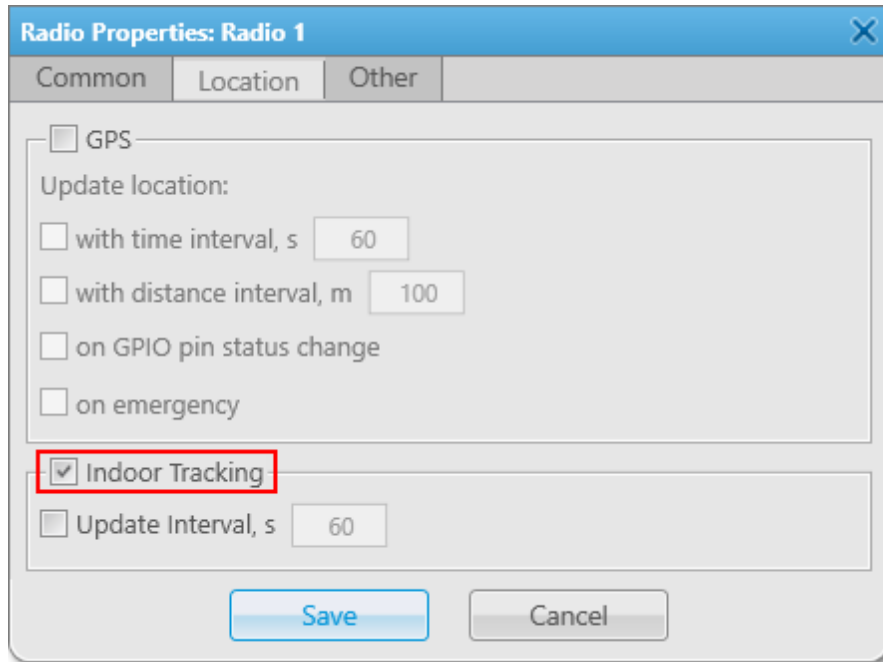
> **NOTE**
>
> If you use *Motorola* source (iBeacon technology), the **Update Interval** field must be selected and specified together with the **Indoor Tracking** field for enabling Indoor support for a radio.

To create a building plan, expand the **Map** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Indoor Tracking → New**. In the **Floor Plan** window you can create a plan of the building floor or of a multi-store building.
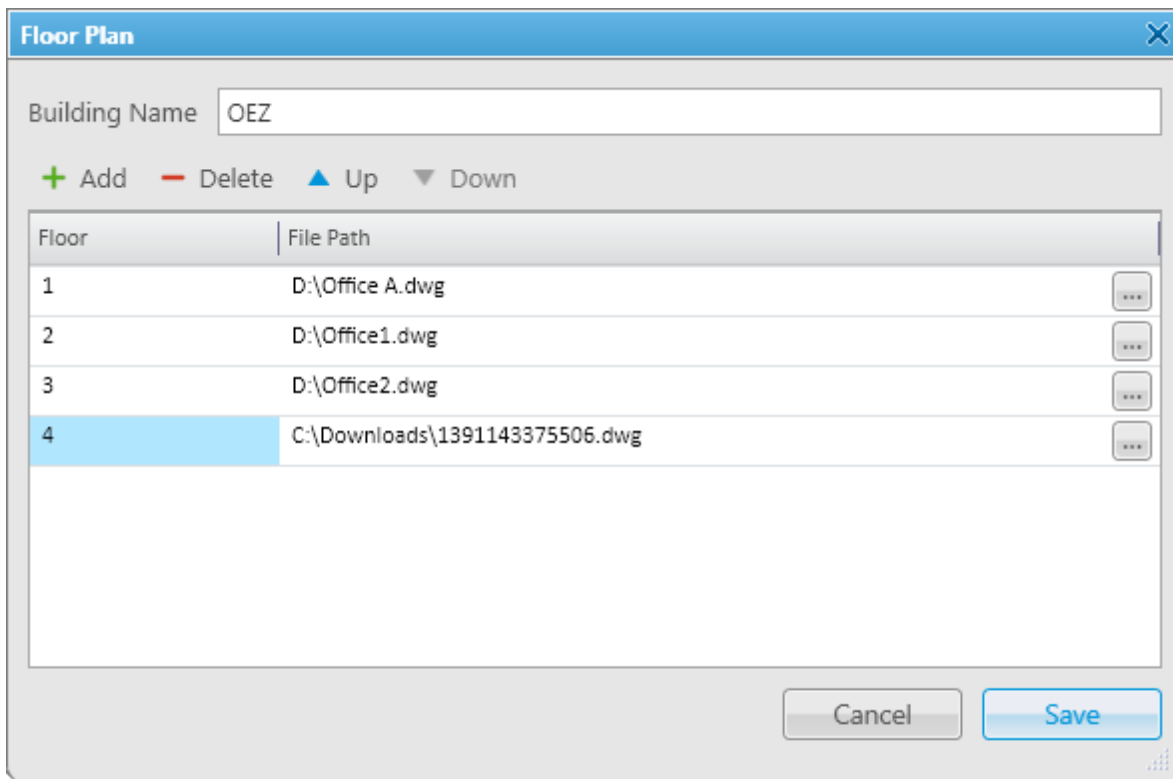
Building Name: A name of the building plan.

To add a floor of a building, click the **Add** button. To remove a floor of a building, select it from the list and click **Delete**. To change the floor order inside the building, use the **Up** and **Down** buttons.

Floor: A name or an ordinal number of a floor in a building. To change the name of the floor, click the old name in the **Floor** field and type a new value.

File Path: A path to the floor plan file. You can use a floor plan in a .dwg format or a raster image. To attach a plan to the floor, click the ⋯ button and select the required file.

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> **NOTE**
>
> .dwg (drawing) is a binary file format used for storing two and three dimensional design data and metadata. It is the native format for several CAD packages including nanoCAD, AutoCAD, IntelliCAD.

Save: You can save the floor or the building plan changes to a .splanx (archive) format.

To open a building plan, expand the **Map** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Indoor Tracking → Open**. To control more than one building at the same time in SmartPTT Dispatcher, you can open several **Indoor Tracking** panels.

Building Floor Plan

Save: You can save the building plan changes to a .splanx file.

Save As: You can save a copy of the building plan with another name.

View Mode (2D or 3D): A mapping of the building plan in a two- or three-dimensional form. This feature is available only for floor plans in a .dwg format.

Add Beacon: You can add a beacon to the building plan.

For that, in the **Beacon Settings** window specify the beacon number and name in the corresponding fields and click **OK**. The beacon icon 📡 appears instead of the mouse cursor. Place it on the map where the beacon is located and left click. If you use *Motorola* source, specify the number of the beacon in the **Beacon Number** field in the *Major.Minor* format, where the *Major* value is separated from the *Minor* value by a dot. *Major* stands for the group number of the beacons and *Minor* stands for the individual number of the beacon in the group.

If you use the *BluFi* or *Kilchherr* source, specify the **Beacon ID**s in the **Beacon Number** field. If the beacon name is not specified in the **Beacon Name** field, the value from the **Beacon Number** field will be shown as a beacon name on the building plan. To remove the beacon from the plan, double-click on the beacon and in the opened window click **Delete**.

Geofences: Allows you to unite the existing beacons to control the radios moving about the building. These geofences are used in Indoor positioning rules.

Routes: Allows you to create routes for radios. These routes are used in Indoor positioning rules.

Edit Plan: Opens the **Floor Plan** window that allows you to change the floor name, the floor order inside the building, or the floor plan file.

Map **252**

Grid Size: The grid size of the building plan. For building plans based on raster images, the **Grid Size** option is not available.

Label Size: The size of the radio and beacon labels displayed on the building plan.

Beacons: Select a color for a beacon label.

Radios: Select a color for a radio label.

Radios on Plan: A list of radios which support the Indoor Tracking feature. Select the check box, to display the radio labels on the building plan.

Radio Tracks: Here you can record tracks of radios and watch them in real time, or check old records. To watch the radio move about the building, click **Add Track**. In the opened window specify the following parameters:

Source: The radioserver whose data will be used for building a track. If the drop-down list is empty, check that Event log is created and activated in SmartPTT Radioserver Configurator.

Radio: Radio ID or name.

User: User name.

Color: The color of the future radio track.

Start Date: Start time and date of the track record.

End Date: End time and date of the track record. To watch the radio moving in real time, select **Update in real time**.

Show All: Shows tracks of all the radios from the **Radios on Plan** list. You can see details of each track. To open **Track details**, click ⓘ :
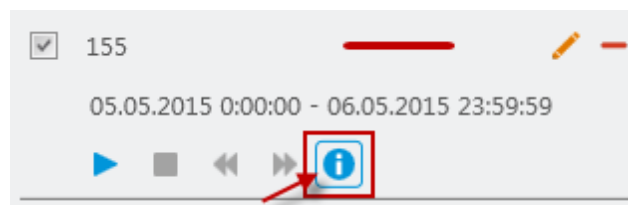
Clear All: Removes all the track records displayed at the moment.

The following buttons allow to control the way the building plan is displayed:

 Zooming up the marked area of the building plan. Click the button, then left-click on the building plan and mark the necessary area.

Map 253

🔍	Zooming up or zooming out the entire building plan. To zoom in, click the button and withholding the button pressed move the mouse pointer up. To zoom out – move the mouse pointer down. Also, use the wheel button to change the scale of the building plan.
✥	Moving the building plan. Click the button and withholding the button pressed relocate the plan.
⤡	Fits the scale of the building plan to the size of the **Indoor Tracking Overview Map** panel.

The following object is available for three-dimensional building plans only. It allows to change an angle of the displayed building plan.

4.4 Geofences

Geofences help dispatchers to keep an eye on radios and [WAVE users](#). A dispatcher can define the area of the geofence on his or her own and attach [Positioning rules](#) to it.

You can add a geofence in two ways:

- By drawing a geofence on the map. For more information see [Geofences](#)

- By specifying coordinates of the geofence. You will learn about it in this article

Map   **254**

To add a geofence by specifying its coordinates, 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:
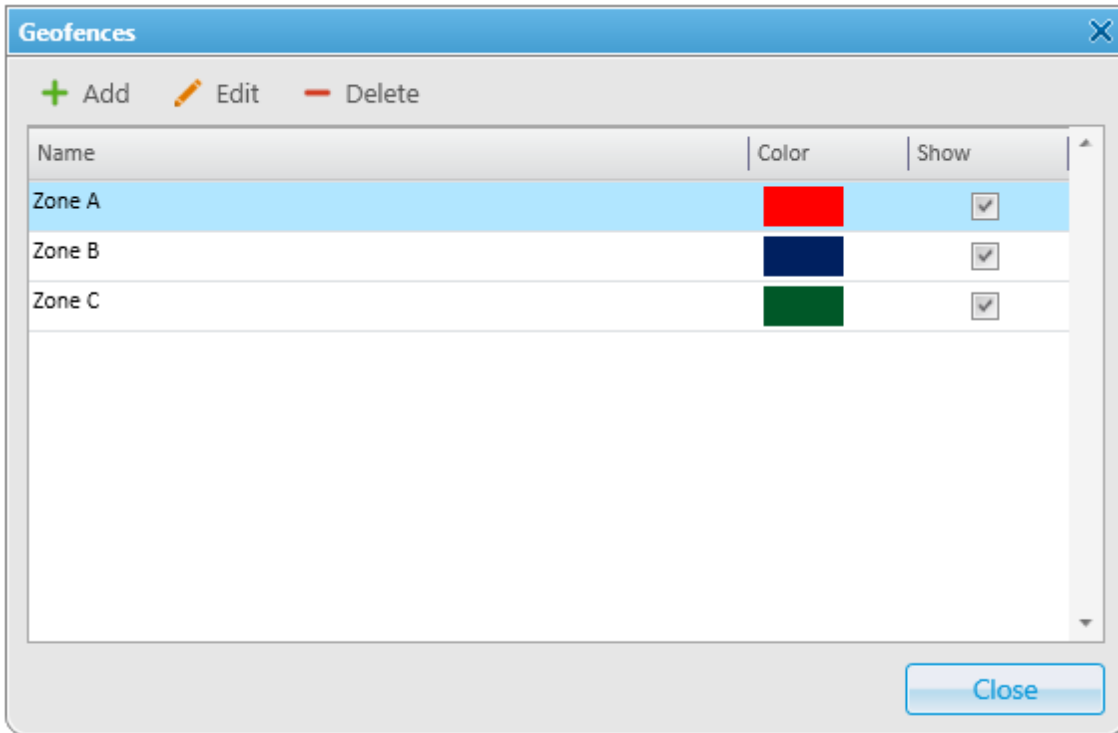
Name: The geofence name.

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, the rules set for the geofence are enabled. To assign a rule to the geofence, go to Positioning 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** or double-click the required zone in the list.

Map 255

In the **Geofence Coordinates** window type the name of a new zone, specify the color of a new zone and 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**.

4.5 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**.

Map **256**

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** or double-click the required point of interest in the list. To delete the point of interest, select it and click **Delete**.
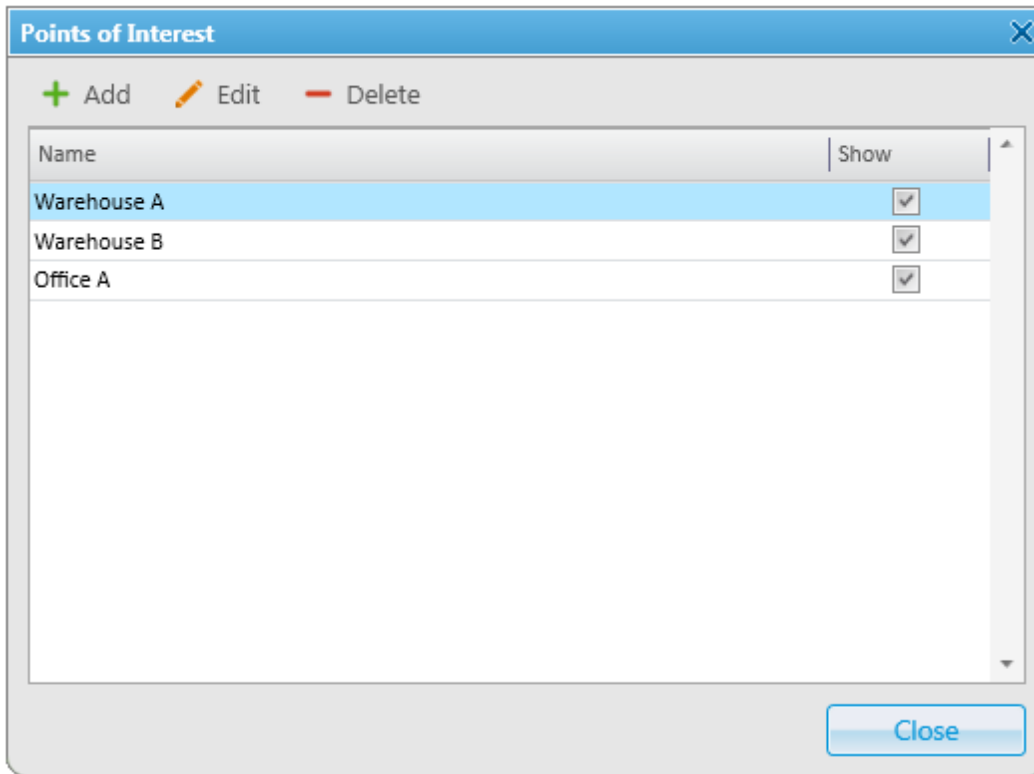
To add a new point of interest, click **Add**. The **Point of interest** window appears:

Name: Name of the point of interest.

Latitude: Latitude coordinate of the point of interest.

Map 257

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 **Tools** menu. For more information see Points of Interest panel.

4.6 Routes

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

Map 258
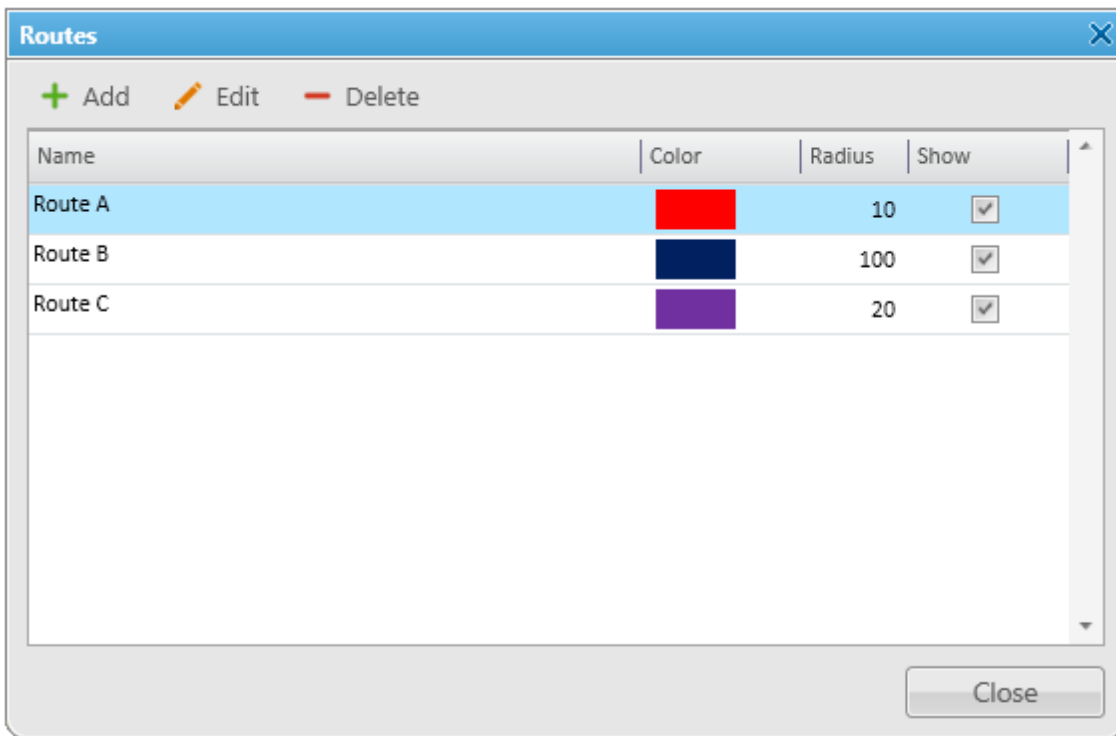
Name: The route name.

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** or double-click the required route in the list.

In the **Route Coordinates** window specify the route name, the route line color, the acceptable deviation from the route for the radio or the WAVE user, 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**.

Map 259

Example

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

4.7 Show Track

GPS tracking is very helpful for seeing real-time positions of radios and WAVE users you are tracking. In addition, the **Show Track** feature allows the dispatcher to see where a radio or a WAVE user was during a particular time period.

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

Map   **260**

To specify draw parameters of the track, expand the **Map** menu in the **Main Menu** of SmartPTT Dispatcher and click **Show track**. The **Show Track** window appears:
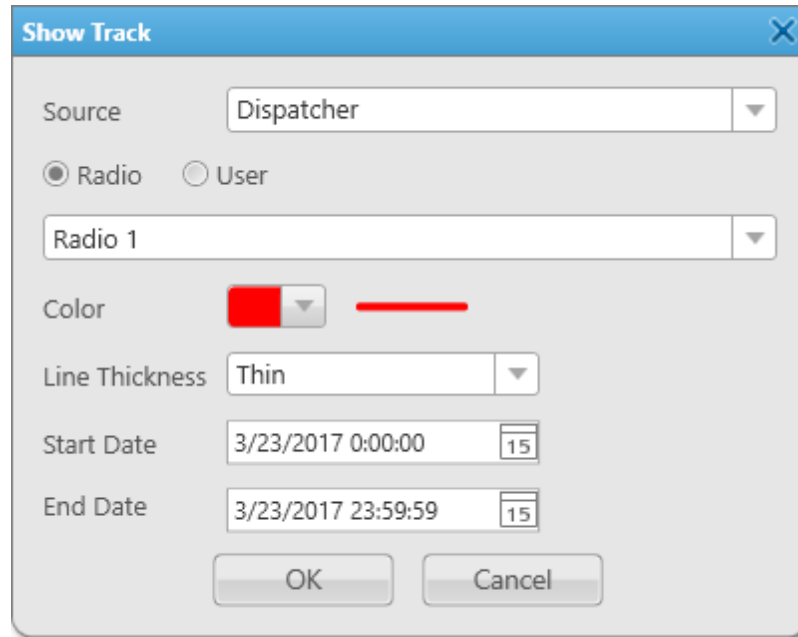
Source: Defines the source, which database will be used for drawing the track. If *Dispatcher* is selected, the data is taken from the local database. Apart from *Dispatcher*, any available radioserver can be chosen as a data source. In that case all data is taken from the database of the chosen radioserver.

> **WARNING**
>
> The user show track is unavailable if from the **Source** list a radioserver with not activated user authorization service or a radioserver without users is selected.
>
> If from the **Source** list a dispatcher is selected, and the dispatcher radioservers have no activated user authorization service or added users, the user show track is unavailable.

Radio: Defines a radio or a WAVE user whose track is displayed.

User: Defines a radio user whose track is 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.

Map 261

4.8 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 appears:
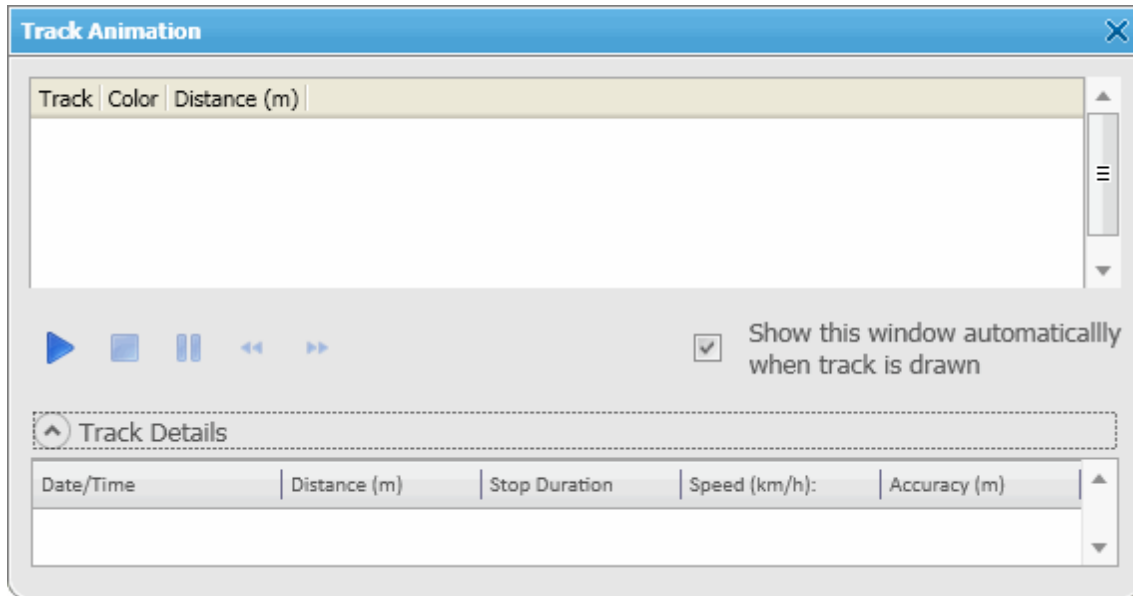
	Run track animation
	Stop track animation
	Pause
	Run track animation slower
	Run track animation faster

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.

Map 262

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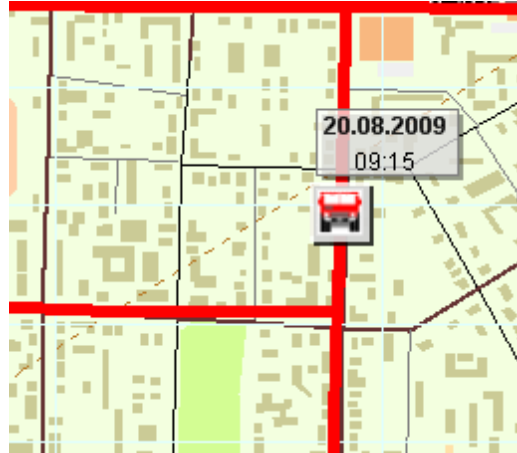
To clear the tracks shown on the current map, expand the **Map** menu in the **Main Menu** of SmartPTT Dispatcher and click **Clear Shown Tracks**.

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**.
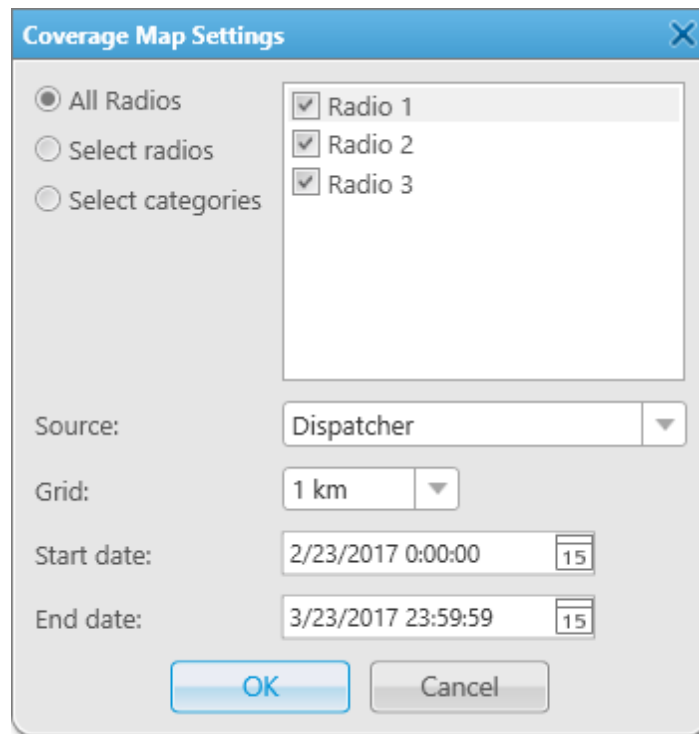
4.9 Coverage Map

Coverage maps give you information about signal strength (RSSI) of a particular radio in a particular place. To build a coverage map for a radio, make sure that it has GPS enabled, and there is GPS data in the database.

> **WARNING**
> SmartPTT 9.0 supports the Coverage Map function in systems with MOTOTRBO Network Interface Service 2.60 or earlier. Support for newer MOTOTRBO Network Interface Service versions is implemented in SmartPTT 9.1.

Map   **263**

To build a coverage map, click **Map** → **Coverage map** → **Show**.

All Radios: Select this option to build a coverage map for all the radios on the list.

Select radios: Select this option to build a coverage map for the selected radios only.

Select categories: Select this option to build a coverage map for all the radios of the selected category.

Source: Defines the source, whose database will be used for drawing the track. If *Dispatcher* is selected, the data is taken from the local database. If a radioserver is selected, the data is taken from the database of the chosen radioserver.

Grid: Defines a radius for checking signal strength. The system of units selected in **Settings** → **Positioning systems** → **System of Units** will be applied to this field.

Start date/End date: Defines over which period the data will be used for the map.

Map **264**

Example

Map 265
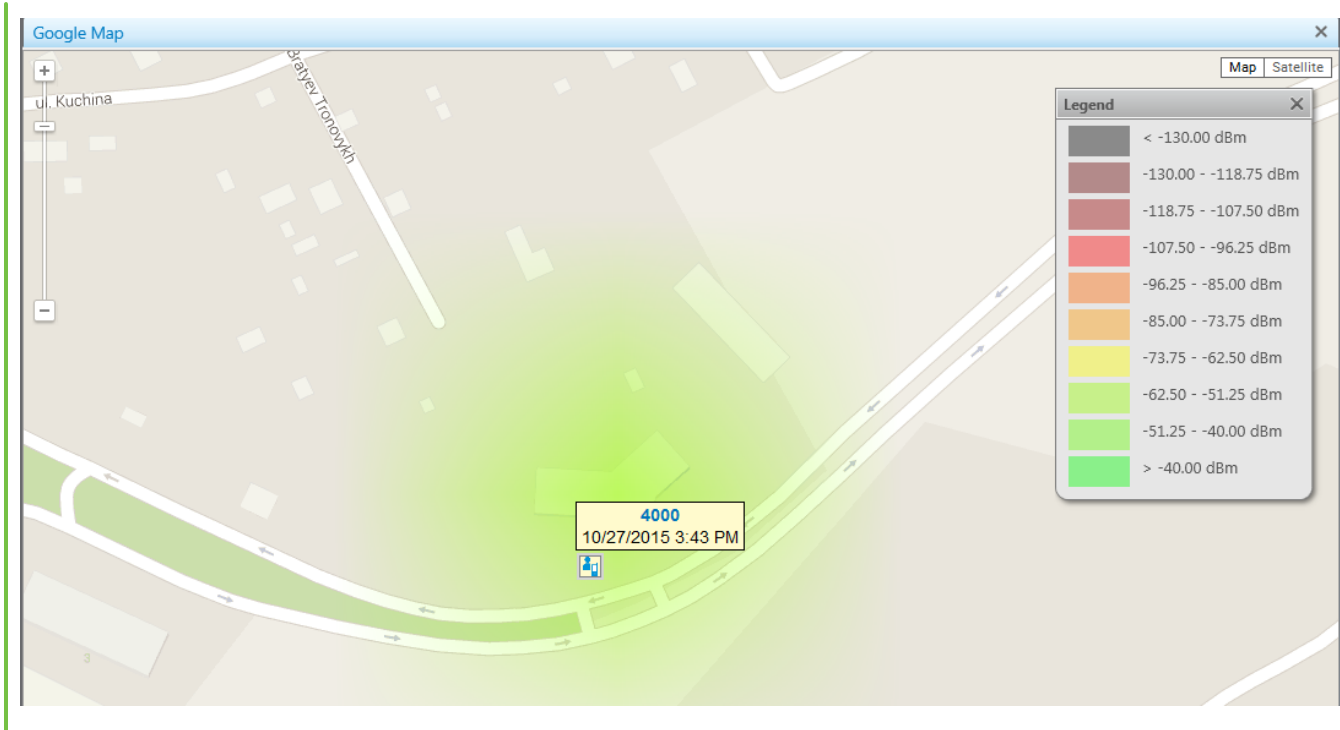
Coverage Map Settings: Window identifies the colors used for different RSSI ranges in the coverage map.

You can adjust the legend on your own, change colors for different RSSI ranges, add and delete RSSI ranges. To do it, click **Map** → **Coverage map** → **RSSI ranges**.
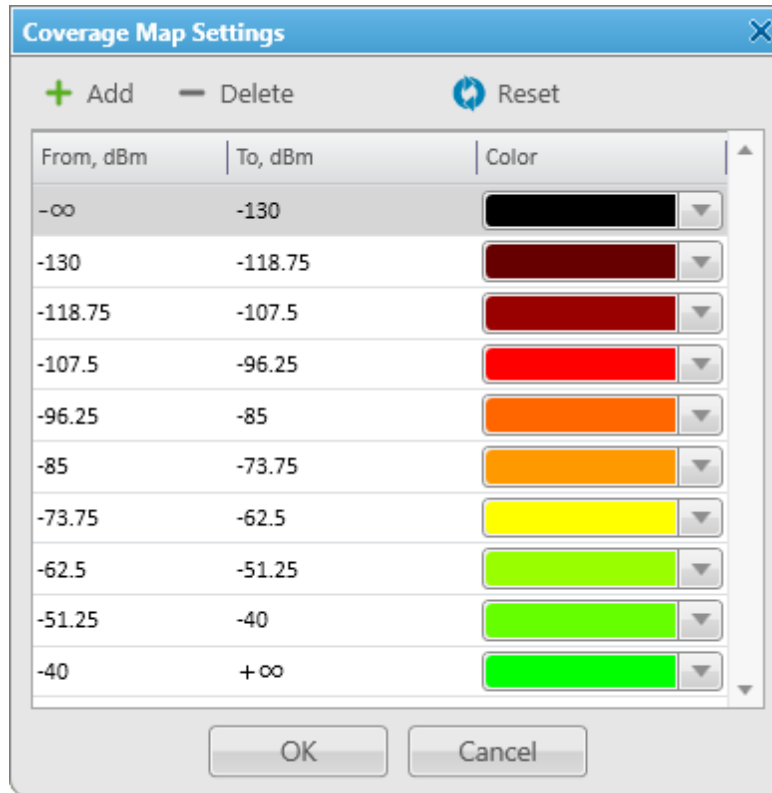
To clean the map, select **Map** → **Coverage map** → **Hide**.

Map 266

4.10 Map Settings

To configure the parameters of displaying radio on a map, follow these steps:

1. In the **Main Menu** bar of the SmartPTT Dispatcher, click **Map** and select Map Settings. The Map Settings window appears:
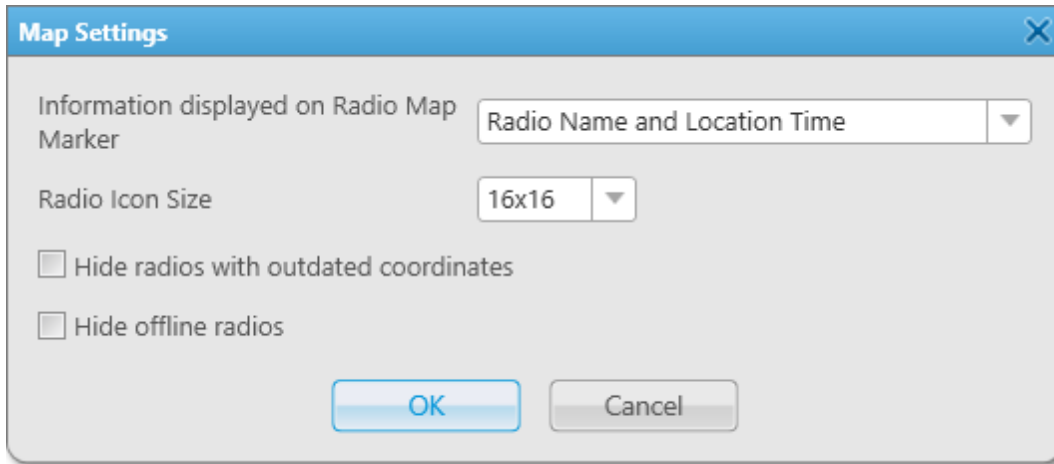
2. In the Map Settings window, from the **Information displayed on Radio Map Marker** list, select the information is shown on a radio or a WAVE user map marker:

   • *Radio Name and Location Time:* Shows radio name and coordinates time on the map.

   • *Radio Name:* Shows on the map radio name only.

   • *None:* Does not show any radio data.

3. From the **Radio Icon Size** list, select the size of a radio or WAVE user icon on a map.

4. *Optional:* Select the **Hide radios with outdated coordinates** check box to hide map labels for radios and WAVE users with outdated GPS coordinates.

> **NOTE**
>
> GPS coordinates become outdated if they were not updated during the period set in the **Settings** ⚙ → **Positioning Systems** window, in the **Validity of GPS coordinates** field.

5. *Optional:* Select the **Hide offline radios** check box to hide a map label when a radio or a WAVE user goes offline.

6. Click **OK** to apply changes and close the window.

5 Event Log

The **Event Log** panel displays information about SmartPTT statuses, system events and other.

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

The system event log appears as follows.

D...	Event Type	Date/Time		Additional Informa...	Not read	Operator	Radioserver
→ 👤	Registration	06.05.2016 11:28:14			☐	Administrator	Radioserver
→ 📞	Call	06.05.2016 11:28:14		4	☐	Administrator	Radioserver
→ 👤	Registration	06.05.2016 11:28:51			☐	Administrator	Radioserver
→ 👤	Registration	06.05.2016 11:28:51			☐	Administrator	Radioserver
→ 📞	Call	06.05.2016 11:28:51		4	☐	Administrator	Radioserver
→ 📞	Call	06.05.2016 11:29:05		4	☐	Administrator	Radioserver
→ 👤	Registration	06.05.2016 11:29:42			☐	Administrator	Radioserver
→ 👤	Registration	06.05.2016 11:29:42			☐	Administrator	Radioserver
→ 📞	Call	06.05.2016 11:30:03		4	☐	Administrator	Radioserver
→ 📞	Call	06.05.2016 11:31:28		4	☐	Administrator	Radioserver
→ 📞	Call	06.05.2016 11:33:08		4	☐	Administrator	Radioserver
← 🔄	Lone Worker	06.05.2016 11:34:05			☐	Administrator	
→ 📞	Call	06.05.2016 11:46:47		4	☐	Administrator	Radioserver

Alerts and event initiated in the emergency mode colored red in **Event Log**.

The event log of SmartPTT Dispatcher contains the following columns:

By default, all the columns are displayed in the log. To hide or show columns in the log, right-click on the menu with column names and select the necessary columns.

Column Name	Description
Direction	Shows whether the event is incoming or outgoing. You can tell the direction by the arrows: the green one stands for the incoming event, and the blue one – for the outgoing event
Event Type	Shows the type of the event. It can be a call, registration, a block command, a message, change of a status, an alarm, a telemetry command, a job ticket, enabling or disabling the lone worker mode, the Radio Kill command and other
Date/Time	Shows the date and time of the event
Not Read	Shows if the message was read or not

Column Name	Description
Additional Information	Additional information includes: text messages, titles and description of tasks, initiators and contributors of group calls, and other
Operator	This column exists in the event log of the dispatch console only Shows the operator of the dispatch console who participated in the event
Radioserver	Shows the name of the radioserver used in the event
Dispatcher	This column exists in the event log of the radioserver only Shows the operator of the dispatch console who participated in the event
Channel	Shows the channel on which the event was registered
Radio	Shows the radio or the WAVE user that can be a source or target in the event. Here you can also see all the radios and WAVE users that participated in a group call
User	Shows the radio user which can be a source or target in the event
Source	Shows the event initiator name or ID
Talkgroup	Shows the talkgroup which participated in the event
Status	Shows the status of the event
Duration	Shows how long the event lasted in seconds
Connection Type	This column exists in the event log of the dispatch console only Shows the connection type of the event. It can be IP, PBX and DMR

Column Name	Description
Repeater IP	This column exists in the event log of the dispatch console only Shows the IP address and port of the repeater which was used
Destination	Shows the recipient ID
Record	Shows if you can play the record or not
Lone Worker	Shows if the lone worker profile is assigned to a radio or a WAVE user or not
Note	Contains the text which the dispatcher added to a record

NOTE

If in the **General Settings** window the Show radio user name check box is selected, and on SmartPTT Radioserver the user authorization service is activated and users are added, thenin the Source, Destination and Additional Information the name of the user authorized on the radio is displayed next to the radio name in brackets.

You can filter the event log by any of these columns. You can also filter the event log by the **Not Read** column by clicking **There are unread messages:** in the **Information bar**.

Click 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 the column title and drag it to the area labeled as "*Move column header here for grouping*".
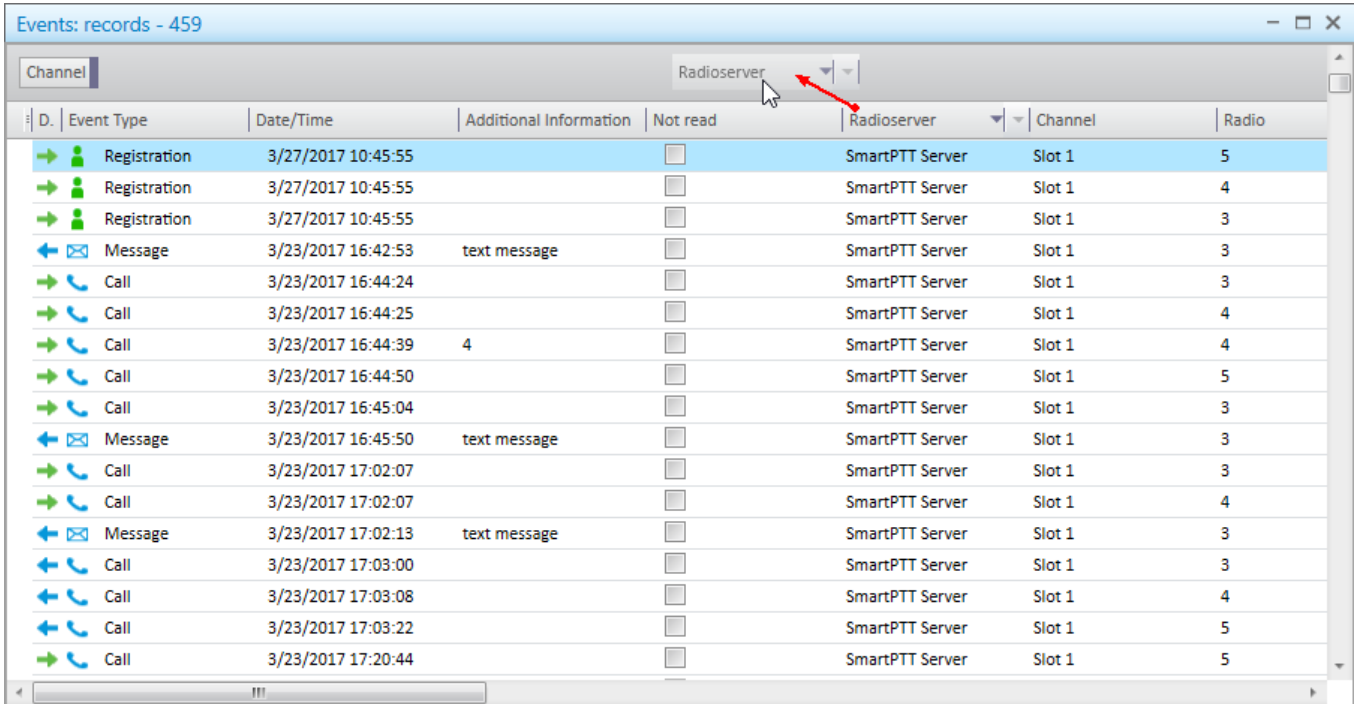
If you want to have particular columns to be always seen in the log regardless of the scroll position, use the special element in the column titles. Just drag it after the column you want to be always there.
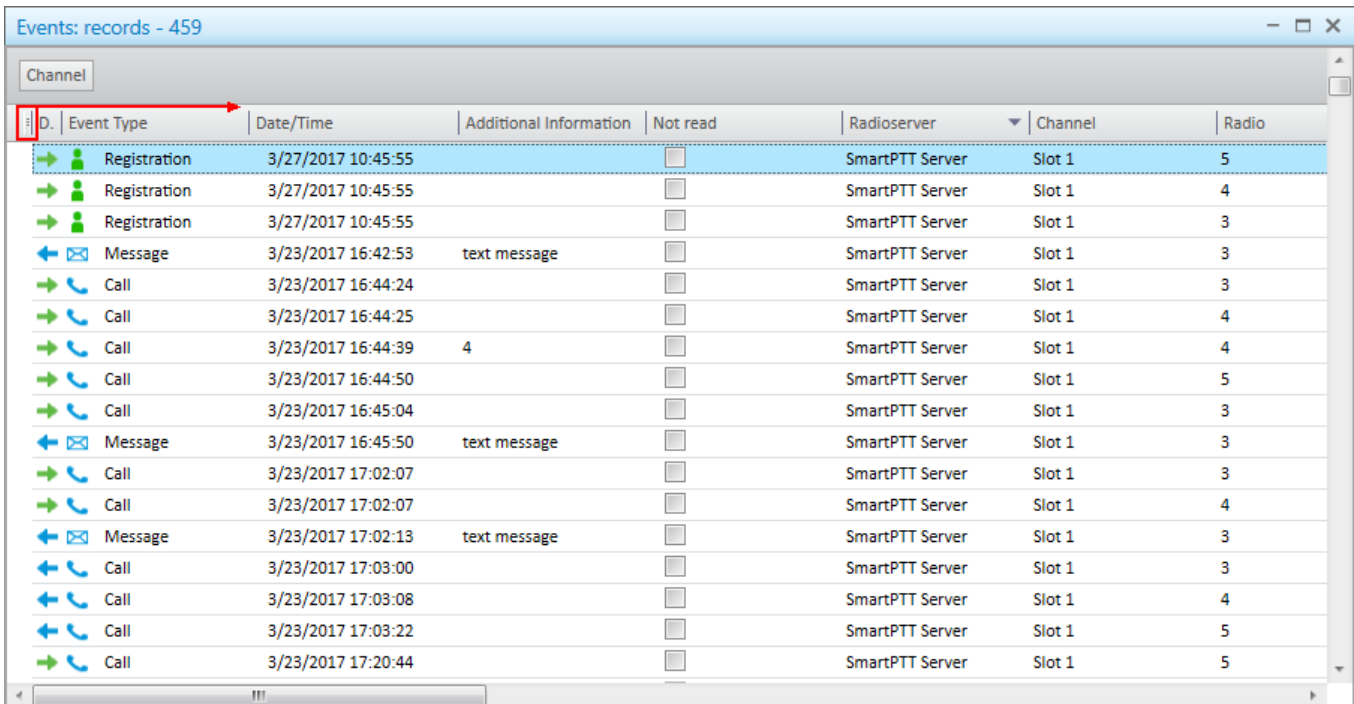
To listen to audio records of the calls, select the call in the event log and click the **Play Selected Records** button.

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

D.	Event Type	Date/Time	Additional Information	Not read	Radioserver	Channel	Radio
➡ 👤	Registration	3/27/2017 10:45:55		☐	SmartPTT Server	Slot 1	5
➡ 👤	Registration	3/27/2017 10:45:55		☐	SmartPTT Server	Slot 1	4
➡ 👤	Registration	3/27/2017 10:45:55		☐	SmartPTT Server	Slot 1	3
⬅ ✉	Message	3/23/2017 16:42:53	text message	☐	SmartPTT Server	Slot 1	3
➡ 📞	Call	3/23/2017 16:44:24		☐	SmartPTT Server	Slot 1	3
➡ 📞	Call	3/23/2017 16:44:25		☐	SmartPTT Server	Slot 1	4
➡ 📞	Call	3/23/2017 16:44:39	4	☐	SmartPTT Server	Slot 1	4
➡ 📞	Call	3/23/2017 16:44:50		☐	SmartPTT Server	Slot 1	5
➡ 📞	Call	3/23/2017 16:45:04		☐	SmartPTT Server	Slot 1	3
⬅ ✉	Message	3/23/2017 16:45:50	text message	☐	SmartPTT Server	Slot 1	3
➡ 📞	Call	3/23/2017 17:02:07		☐	SmartPTT Server	Slot 1	3
➡ 📞	Call	3/23/2017 17:02:07		☐	SmartPTT Server	Slot 1	4
⬅ ✉	Message	3/23/2017 17:02:13	text message	☐	SmartPTT Server	Slot 1	3
⬅ 📞	Call	3/23/2017 17:03:00		☐	SmartPTT Server	Slot 1	3
⬅ 📞	Call	3/23/2017 17:03:08		☐	SmartPTT Server	Slot 1	4
⬅ 📞	Call	3/23/2017 17:03:22		☐	SmartPTT Server	Slot 1	5
➡ 📞	Call	3/23/2017 17:20:44		☐	SmartPTT Server	Slot 1	5

Events: records - 459 — Channel

Direction ➡ Incoming   Channel Slot 1   Note
Event Type 📞 Call (26 s)   Status Private Call
Source 3   Additional Information
Destination 1
Date/Time 3/23/2017 16:44:24

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

Play Records

Dire...	Date/Time	Channel	Source	Destination	Status	Duration
➡	06.05.2016 11:31:28	Slot 1	4	Group 1	Group Call	5

00:00.000 / 00:01.296
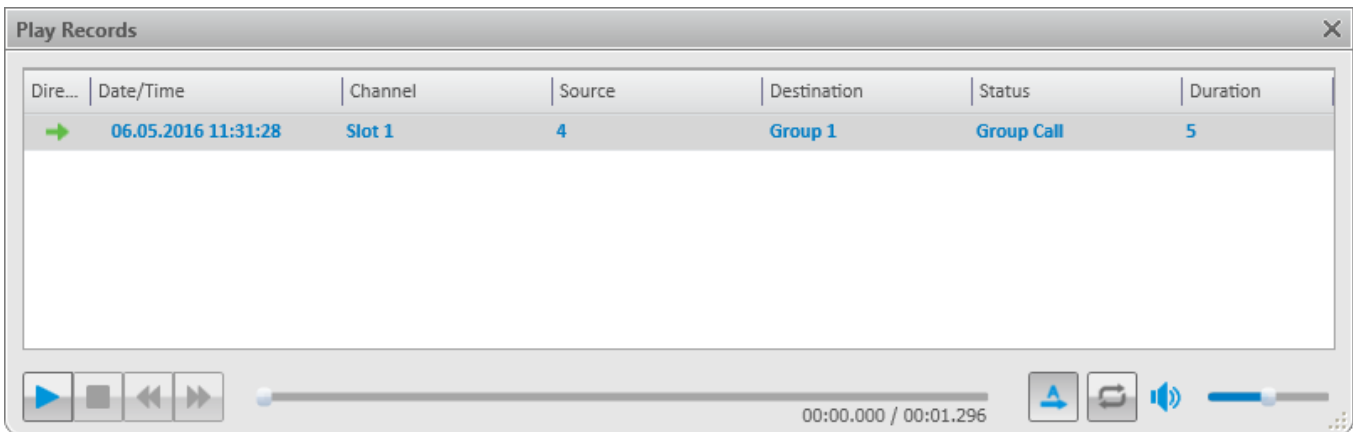
After the record playback window opens, selected records are reproduced automatically, starting from the earliest date.

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 radio or a WAVE user call window. Button opens a window for message sending.

> **NOTE**
> Sending messages is unavailable to WAVE users.

Opening Radioserver Event Log

Depending on 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, follow these steps:

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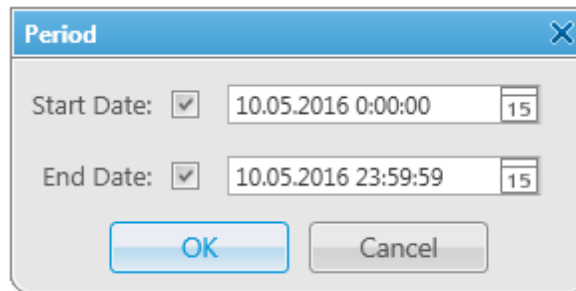
2. Select the **Start** and **End Dates** to show events of the period. The **Radioserver Event Log** is displayed in the same way as the **Dispatcher Event Log** in a separate tab.

To make radio and WAVE user activity report based on the radioserver data, in the **Main Menu** select **Reports → Radio Activity Report**. In the opened window specify the period of time, source, channel, grouping and click **OK**.

5.1 Event Log Settings

In the Event Log Settings window, you can activate the events recording and configure its parameters.
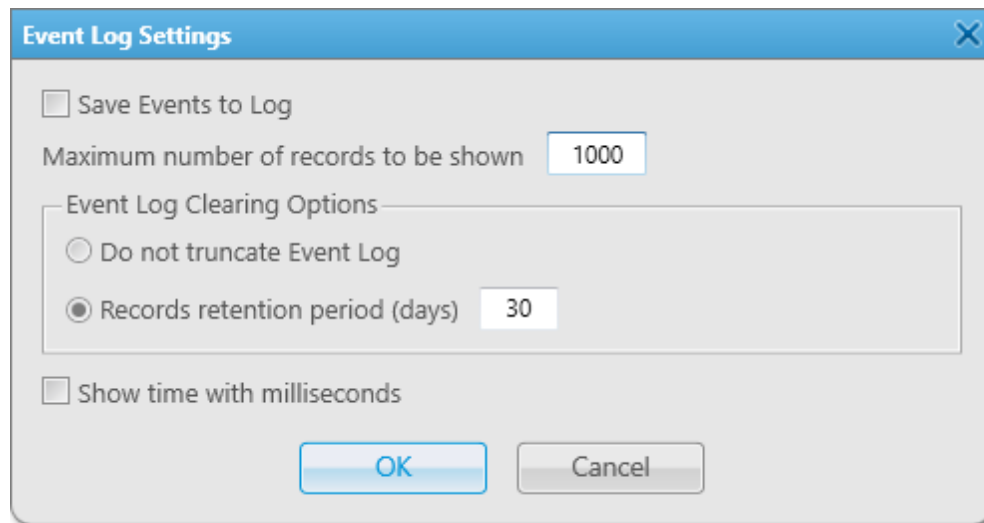
To activate and configure the event log, follow these steps:

1. From the menu bar, select **Event Log** → Event Log Settings.

2. In the Event Log Parameters window, perform the following actions:

a. Select Save Events to Log to record events to the SmartPTT Dispatcher database.

b. Optional: In the **Maximum number of records to be shown**, enter the desired value. Maximum value is *9999.*

c. In the **Event Log Clearing Options** area select:

   • **Do not truncate Event Log** – to record new events to the database until it takes maximum space on a hard drive.

   • **Records retention period (days)** – to delete records which are older than specified amount of days.

d. Optional: If **Records retention period (days)** is selected, enter the desired amount of days of records keeping. Maximum value is *999.*

e. Select **Show time with milliseconds** to display milliseconds in the **Data/Time** column of the event log.

f. Click **OK** to apply changes and close the window.

6 Service

The **Service** menu allows you to carry out secondary functions, namely:

- Radio Check allows you to send the radio check command to radios.

- Voice Notifications allows you to play voice notifications.

- Deferred Actions allows you to view and edit deferred actions.

- Received Files allows you to view files received by the radioserver via SmartPTTFile Transfer.

- Radio Kill allows you to block a radio irreversibly.

- System Information allows you to check event statistics registered on the radioserver or in the dispatcher console and other information on the system.

- Export Radio List allows you to save the list of registered radios and WAVE users in .xml or .xls formats.

- Import Radio List allows you to import previously exported list of radios and WAVE users.

- Upload to KML allows you to export current geographical position of radios in .kml format.

- Import Connect Plus Logs allows you to import data from the Connect Plus network.

- 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.

6.1 Radio Check

The **Radio Check** command allows you to check whether a radio is available.

> **NOTE**
> If you connected to the Capacity Max system by using a control station, the **Radio Check** command is unavailable.

You can send the **Radio Check** command on the selected control stations available to a dispatcher in the following ways:

- From the **Radio Check** menu. Ensure you have a *Radio ID* or radio *IP Address*

- From the radio call window

- From the radio action list

Before sending the **Radio Check**, you can change the **Radio ID input format** in the General Settings menu.

After the command sending, the radio status is shown:

- In the open radio call window (if you send the radio check from the radio call window or from the radio action list):

- In the **Event Log**:

6.1.1 Sending Radio Check

Radio Check Window

To perform a radio check from the **Radio Check** window, follow these steps:

1.   Click **Service → Radio Check**. The **Radio Check** window appears:

   •   If *CAI+Radio ID* input format is selected in the <u>General Settings</u> menu:
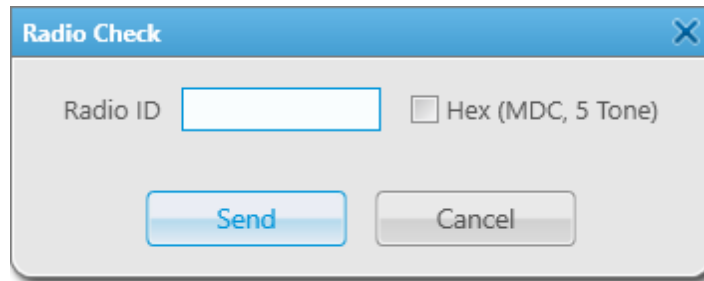
   •   If *IP Address* input format is selected in the <u>General Settings</u> menu:
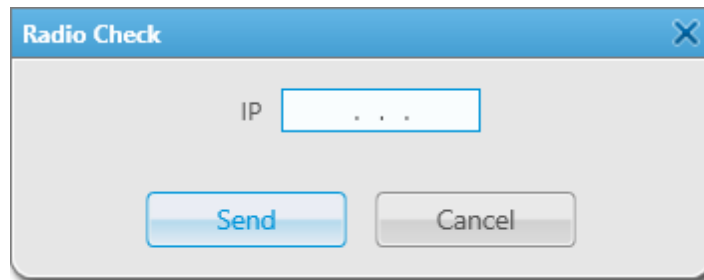
2.   In the **Radio ID** or **IP** field, enter the radio ID or IP Address correspondingly.

3.   *Optional:* If *CAI+Radio ID* input format is selected, select **HEX (MDC, 5 Tone)** check box for sending hexadecimal ID values to control stations using the same IDs format.

NOTE

If the **HEX (MDC, 5 Tone)** check box is clear, the Radio ID value is sent in the decimal format.

4.   Click **Send** to send the radio check command the radio.

Radio Call Window

To send a radio check from the radio call window, follow these steps:

1.   In the **Radio Fleet** panel, double-click the desired radio.

2. In the open window, click **Radio Check**.
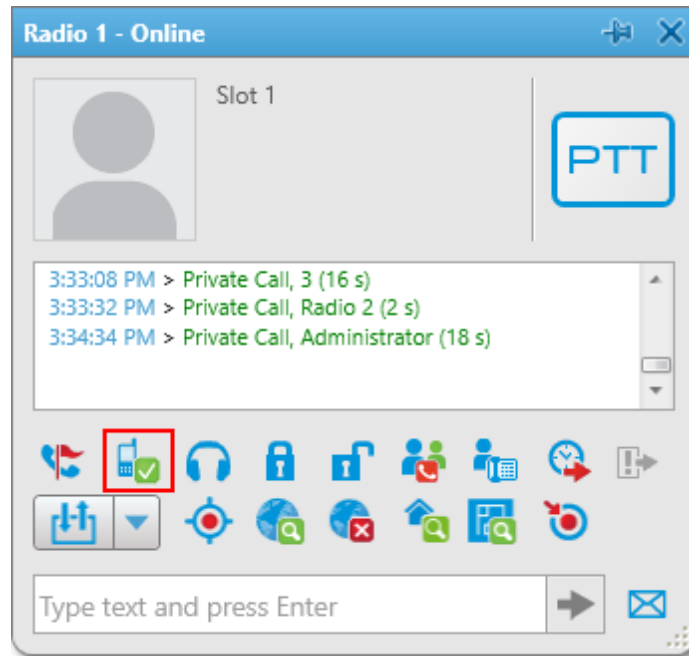
The radio status appears in the radio call window:
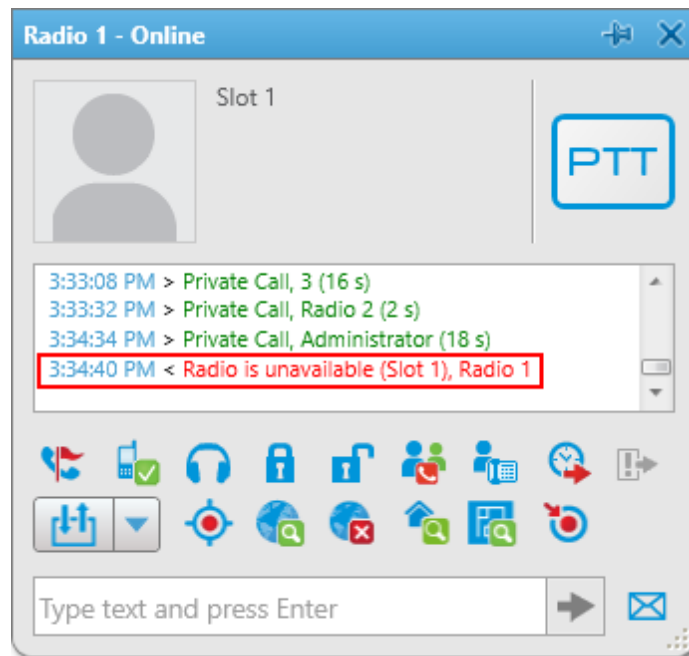
Radio Actions List

To send a radio check in the radio actions list, follow these steps:

1. In the **Radio Fleet** panel, click » .

2. From the open menu, select **Radio Check**.
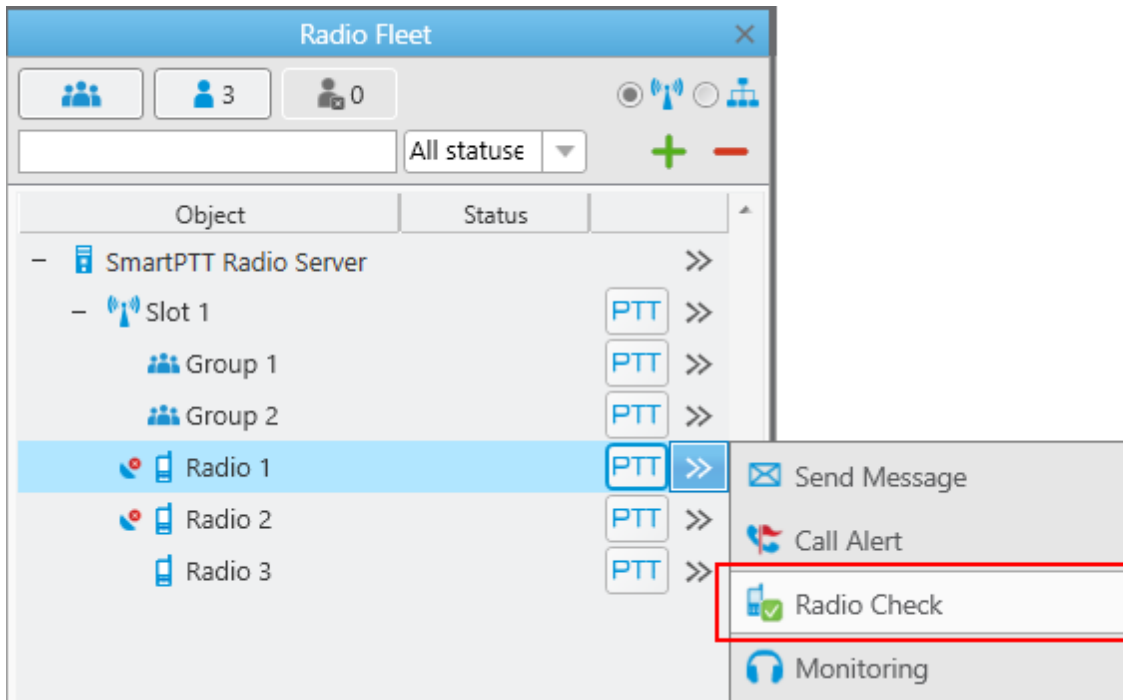
NOTE

If you selected the **Radio Check** check box in the **Open Call Window for Event Types** box of the Call Windows menu, the radio call window with the radio status appears.

6.2 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.

WARNING

You can create voice notifications only in SmartPTT Radioserver Configurator (**Radioserver** → **Add-on Modules** → **Voice Notifications**). You can run the created voice notifications from SmartPTT Dispatcher.

To play a voice notification in selected systems, expand the **Service** menu in the **Main Menu** bar and click **Voice Notifications**. The **Voice Notifications** window appears:
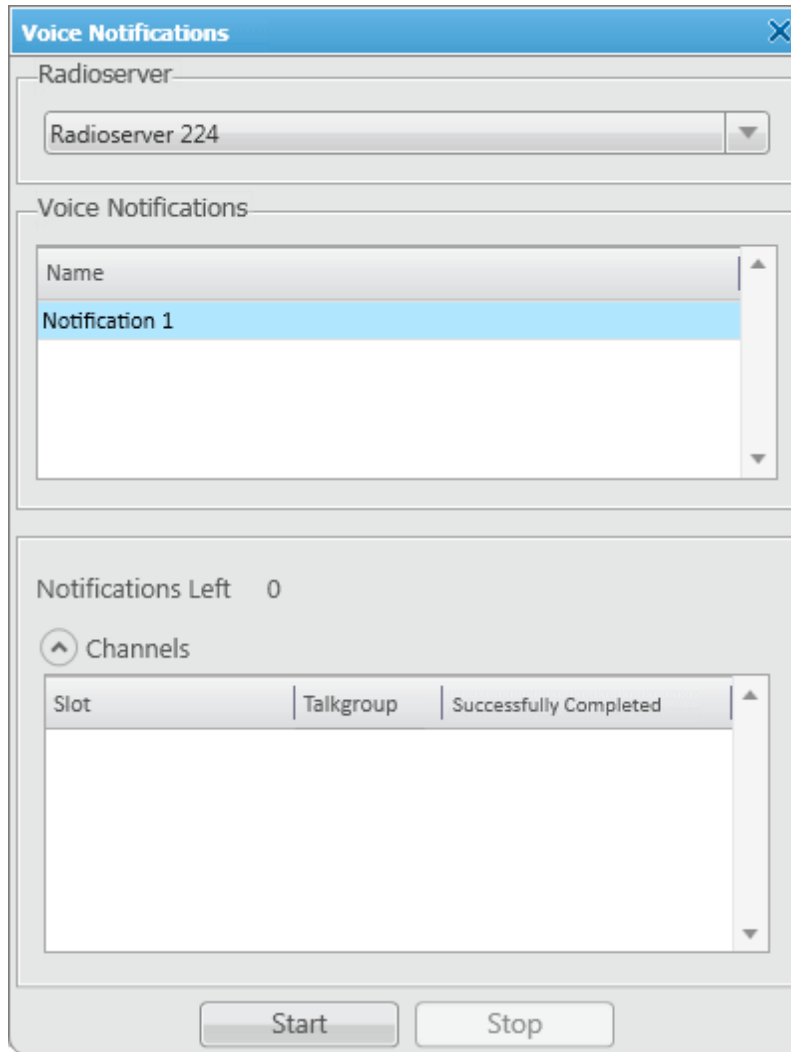
Radioserver: Select the radioserver from the list. The list contains only active and running radioservers, registered in the dispatch console.

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 play 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.
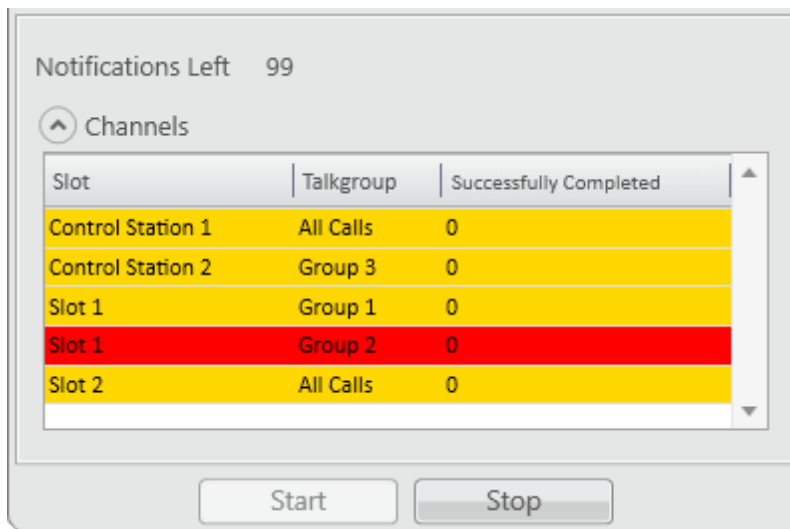
6.3 Deferred Actions

Deferred actions allow to deliver an information to the offline radio. When radio becomes online, it will immediately receive it.

You can use deferred action for the online radios. They will receive them immediately after the creation.

SmartPTT Dispatcher allows you to create, edit, view and delete two types of deferred actions:

- Voice messages

- Text messages

> **NOTE**
>
> Operator of SmartPTT Dispatcher should have the right to create deferred actions.

You can create a deferred action in two ways:

- Double-click the radio in the **Radio Fleet** window and click **Create Deferred Action** icon in the radio window.
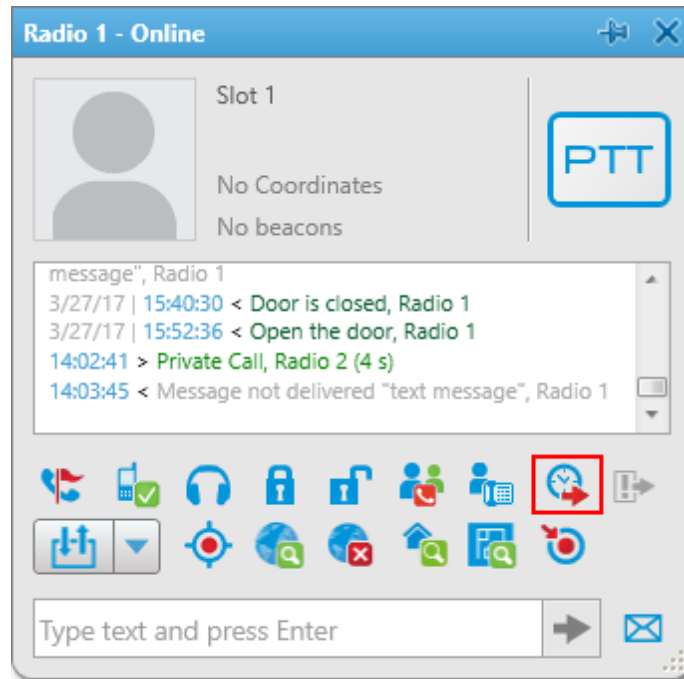
- Click » next to the radio and click **Create Deferred Action.**
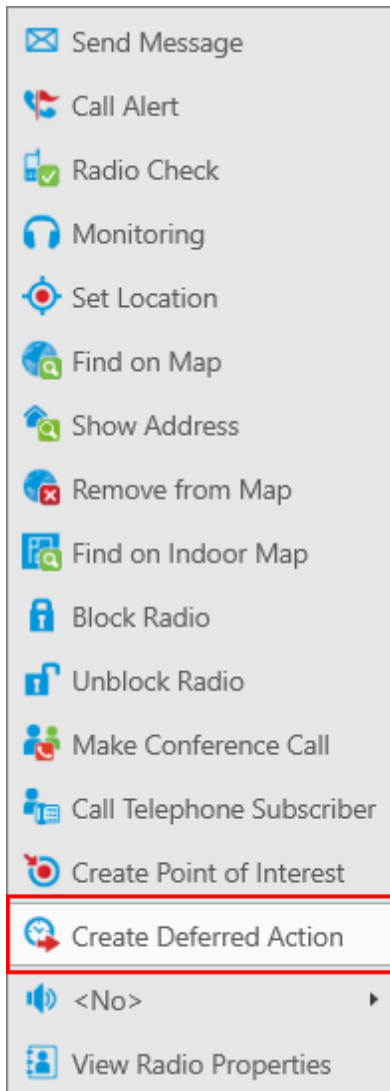
The **Create Deferred Action** window will be opened:
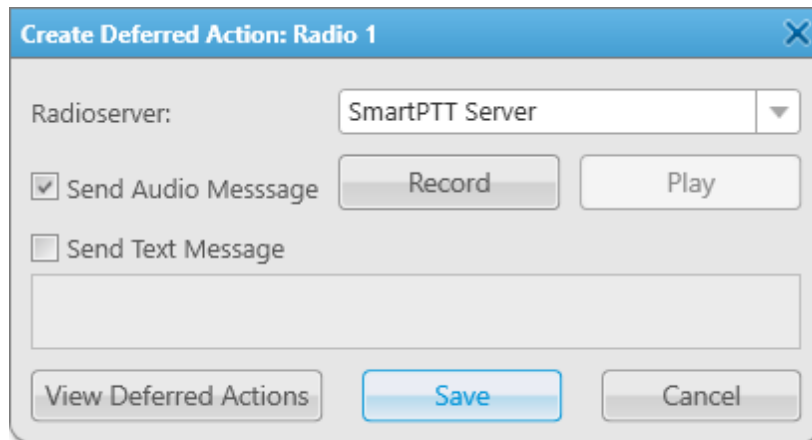
Radioserver: A list of the active radioservers, to which a radio belongs.

Send Audio Message: Select to create a voice message:

- Click **Record** and start the recording of the voice message. When you do, the button changes to **Stop**. Click it to stop the recording.

- Click **Play** to play the recorded message. When you do, the button will change to **Stop**. Click it to stop the recording.

If you do not record the voice message, you can rewrite it by recording a new voice message.

Send Text Message: Select to create a text message and type your text message in the field below.

> **NOTE**
> If you clear **Send Text Message,** the text will be kept in the field except it becomes unavailable and will not be included into action when you will save it.

Save: Click to save the action. At this, your message will be transmitted to the radioserver, so the execution of the deferred action is independent on SmartPTT Dispatcher. You will be notified about the successful creation of the deferred action or issues that resist its creation.
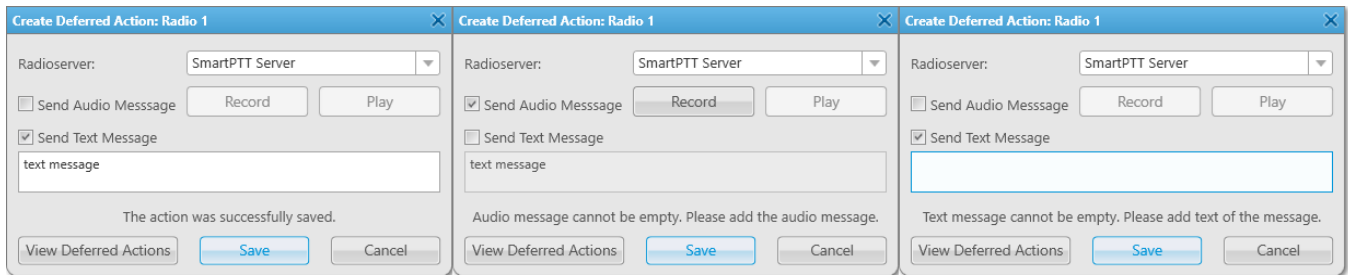
Cancel: Click to cancel the creation of the action or adding changes to it.

View Deferred Actions: Closes the **Create Deferred Action** window without saving and opens the **Deferred Actions** list.
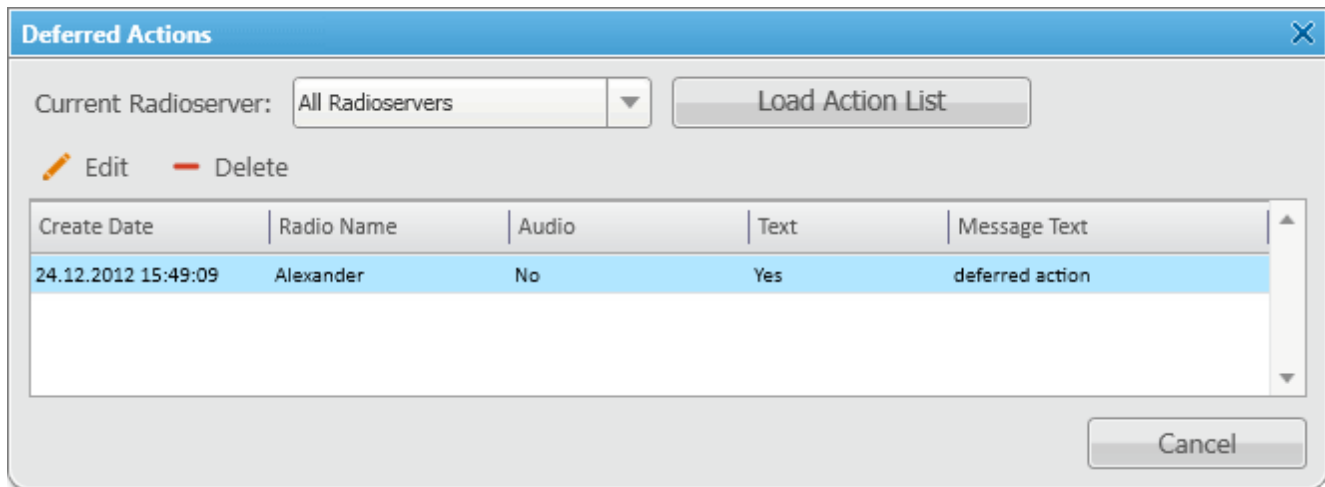
In this list you can view deferred actions which were not executed yet (queued actions). When the deferred action is executed, it will be removed from the list.

Current Radioserver: Select the radioserver to view actions which it should execute.

> **NOTE**
>
> If you do not see your radioserver in the list, check if it is active in the Radioservers menu.

Load Action List: Click to show or refresh the list of deferred actions on the selected radioserver.

Edit: Click to change the selected action. At this, **Create Deferred Action** will be opened again.

Delete: Click to delete the selected action. Be careful with this, because no notifications occur at this action.

6.3.1 Received Files

SmartPTT Dispatcher provides the ability to view files sent from radios with the help of a free application SmartPTT File Transfer.

To view the files received from radios, expand the **Service** menu in the **Main Menu** bar and click **Received Files**. The following window appears:

Received Files   ✕

| Current Radioserver: | All Radioservers ▼ | Retrieve File List |

| File name | Radio | Date/Time | Size (Bytes) | Radioserver | |

| Download | Delete | Close |
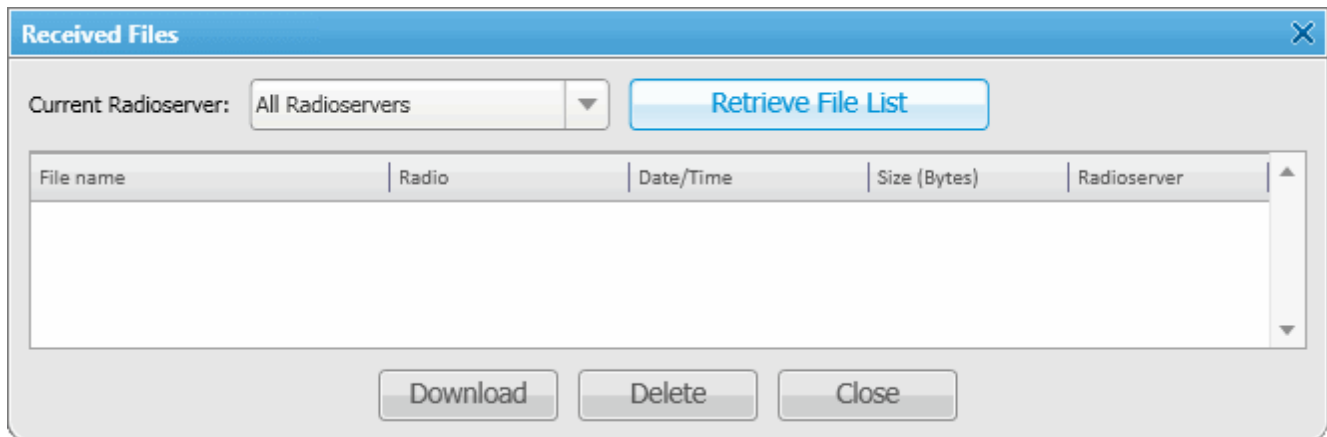
Current Radioserver: Allows selecting files from one available radioserver or all available radioservers.

Retrieve File List: Loads received files for the selected radioserver.

Download: Opens the window for saving the selected file. You can also open this window by double-clicking on the selected file.

Delete: Deletes the selected file from the list.

Close: Closes the **Received Files** window.

6.4 Administration

6.4.1 Radio Kill

Capacity Max system supports the **Radio Kill** function, which allows to block a radio irreversibly.

> **WARNING**
> After sending **Radio Kill** to the radio, you can restore this radio only in Motorola service center.

To send **Radio Kill** to the radio, perform the following actions:

1. Expand the **Service** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Administration** → **Radio Kill**. The **Radio Kill** window appears:

2. In the **Radio ID** field enter the radio unique identifier. If this identifier has a name in the SmartPTT Dispatcher database, this name will be displayed on the right. To continue, click **OK**. To cancel the command, click the **Cancel** or **Cross** button.

Pay attention that the **Radio Kill** command can be executed only under the following conditions:

- The radio is registered in a network (it is online).

- The radio identifier is in the range of allowed radio IDs for radioserver and profile configured in SmartPTT Radioserver Configurator (for more detailed information refer to SmartPTT Radioserver Configurator User Guide).

If one of the given conditions is not fulfilled, after clicking **OK** the **Warning** window will open and **Radio Kill** will not be sent.
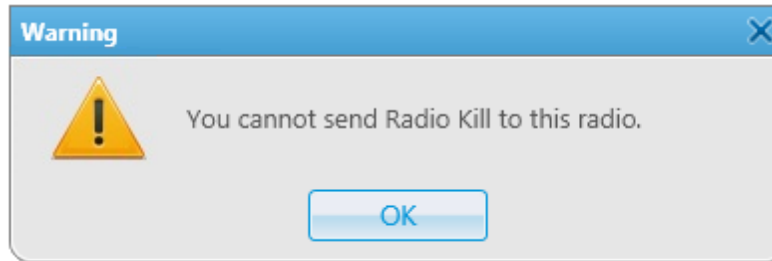
3. If all the conditions described above are fulfilled, after clicking **OK** the **Enter Password** window appears: In the **Operator password** field enter the password used to log in SmartPTT Dispatcher. To send the **Radio Kill** command, click **OK**. To cancel the command, click the **Cancel** or **Cross** button.
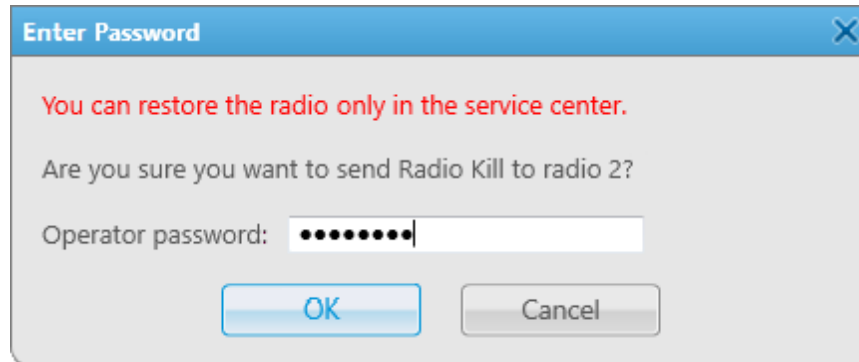
6.5 System Information

The **System Information** window contains brief information about the usage of the SmartPTT network systems. To call this window click **System Information** in the **Service** menu of the Dispatcher main menu.

6.6 Export Radio List

SmartPTT Dispatcher provides the ability to export the radio and <u>WAVE user</u> list from one SmartPTT Dispatcher and then to import it into another. Only registered radios and WAVE users can be exported.

To export the list of radios and WAVE users, expand the **Service** menu in the **Main Menu** bar and click **Export Radio List**. The following window appears:
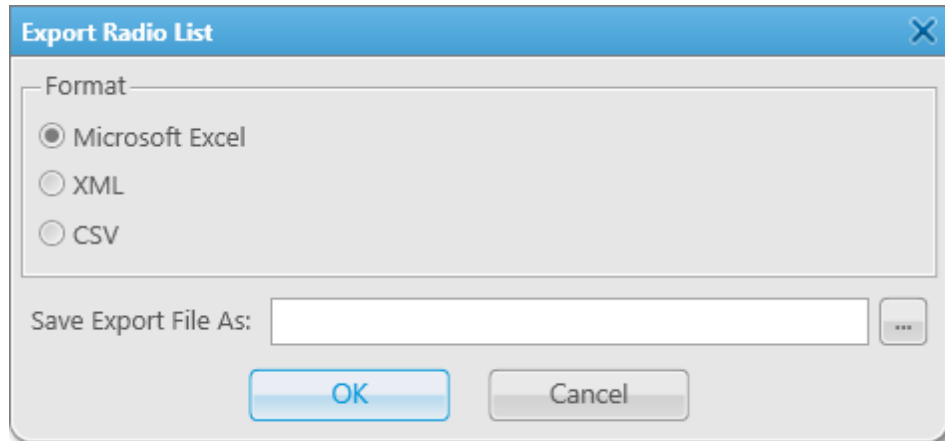
In the **Format** area select the format in which you want to export the list. To select the file for export, click ⊡. Supported file formats: .xls, .xml and .csv. Then click **OK**. The file with the exported data will open.

XLS format example

<div align="center">**Export Radio List**</div>

ID	Radio IP address	Network ID	Radio ID	Name	GPS	MDC ID	Icon	Show on map	Lone Worker	Select 5 ID	Indoor Support	Indoor Request	Indoor Update Interval	GPS update with time interval	Time Interval	GPS update with distance interval	Distance Interval	GPS on GPIO pin status change	GPS on emergency
50331660	12.0.0.3	12	3	Radio 1	True			True	False		True	False	60	True	60	True	100	True	True
67108876	12.0.0.4	12	4	Radio 2	True			True	False		True	True	60	True	60	False	100	True	True
83886092	12.0.0.5	12	5	Radio 3	False			False	False		False	False	60	False	60	False	100	False	False

XML format example

Export Radio List

ID	Radio IP address	Network ID	Radio ID	Name	GPS	MDC ID	Icon	Show on map	Lone Worker	Select 5 ID	Indoor Support	Indoor Request	Indoor Update Interval	GPS update with time interval	Time Interval	GPS update with distance interval	Distance Interval	GPS on GPIO pin status change	GPS on emergency
50331660	12.0.0.3	12	3	Radio 1	Yes			Yes	No		Yes	No	60	Yes	60	Yes	100	Yes	Yes
67108876	12.0.0.4	12	4	Radio 2	Yes			Yes	No		Yes	Yes	60	Yes	60	No	100	Yes	Yes
83886092	12.0.0.5	12	5	Radio 3	No			No	No		No	No	60	No	60	No	100	No	No

ID: Automatically generated ID of a radio or a WAVE user.

Radio IP Address: Radio or WAVE user IP address.

Network ID: Network ID which is specified in *MOTOTRBO CPS* (see parameter **CAI Network**).

Radio ID: Unique identifier of a radio or a WAVE user.

Name: Radio or WAVE user name specified in its **Properties** window in SmartPTT Dispatcher.

GPS: Shows whether the radio supports GPS.

MDC ID: Radio ID in the analog mode and MDC 1200 signaling.

Icon: Path to the icon selected per a radio or a WAVE user. If a radio has a default icon, the corresponding field in the export file is empty.

Show on map: Shows whether the radio or WAVE user location is visible on the map.

Lone Worker: Shows whether a radio or a WAVE user is in the "lone worker" mode.

Select 5 ID: Shows the 5 Tone identifier of the radio.

Indoor Support: Shows whether the radio is visible on the building plan by the dispatcher request or after the predefined time period.

Indoor Request: Shows whether the option **Update Interval** for **Indoor Tracking** is selected.

Indoor Update Interval: The time interval in seconds for location data update from special beacons, which are installed in buildings.

GPS update with time interval: Shows whether the **GPS Update location with time interval** option is selected.

Time Interval: Shows the time interval in seconds after which the GPS coordinate request will be sent to the radio.

GPS update with distance interval: Shows whether the **GPS Update location with distance interval** option is selected.

Distance Interval: Shows the distance interval in meters or feet after which the GPS coordinate request will be sent to the radio.

GPS on GPIO pin status change: Shows if the GPS coordinate request will be sent to the radio when the status of telemetry contacts changed.

GPS on emergency: Shows if the GPS coordinate request will be sent to the radio when the radio sends an emergency alarm.

> **NOTE**
> The following properties of the radio in exported files may have two possible values: **True** or **False** in .xls and .csv files; **Yes** or **No** in .xml files: **GPS**, **Show on map**, **Lone Worker**, **Indoor Support**, **Indoor Request**, **GPS update with time interval**, **GPS update with distance interval**, **GPS on GPIO pin status change**, **GPS on emergency**.

6.7 Import Radio List

SmartPTT Dispatcher provides the ability to import radios and WAVE users (in .xls, .xml and .csv) from one SmartPTT Dispatcher to another.

To import the list of radios and WAVE users, expand the **Service** menu in the **Main Menu** bar and click **Import Radio List**. The following window appears:
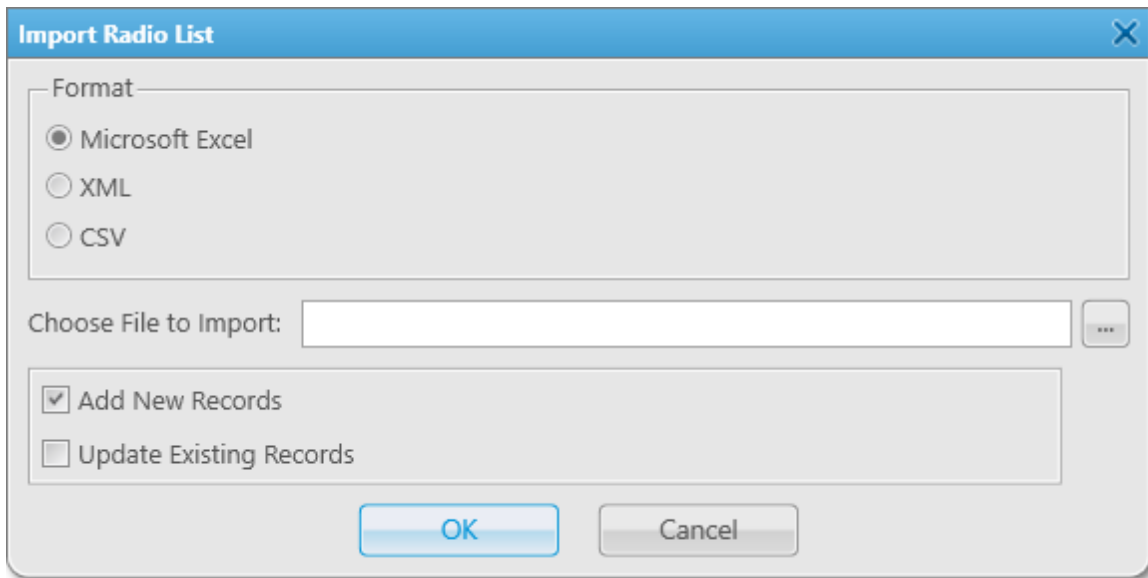
In the **Format** area select the format in which you want to import the radio and WAVE user list. To select the file for import, click ⌊…⌋. Then select the import options.

Add New Records: When the check box is selected, at importing, new radios and WAVE users (not existing in SmartPTT Dispatcher) will be added to the list.

Update Existing Records: When the check box is selected, at importing, the existing data on the radios and WAVE users in SmartPTT Dispatcher is replaced with the data from the imported file.

> **NOTE**
> It is possible to select both import options at a time. New records will be added and the existing records will be updated.

Click **OK** to launch import process.

Click **Cancel** to close the window.

> **NOTE**
>
> To apply changes after importing, it is important to restart SmartPTT Dispatcher.

The formats of the importing files should match the formats of the exported files.

6.8 Upload to KML

SmartPTT Dispatcher supports export of the current radio coordinates in .kml format. This format is used in Google Maps/Google Earth systems.

To save radio coordinates in .kml file format, expand the **Service** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Upload to KML**. The following window appears:
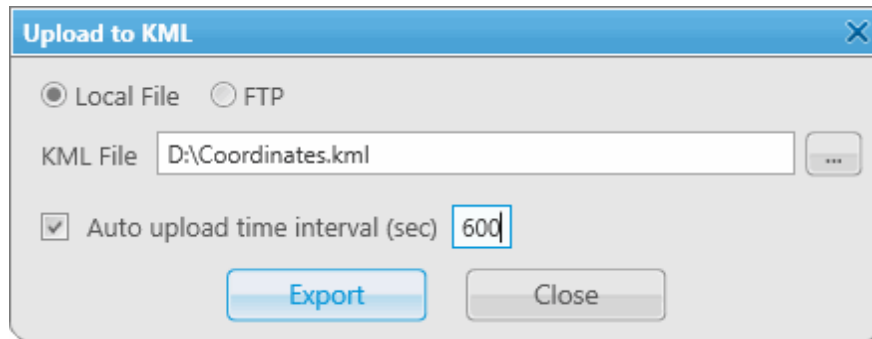
The interface of the window depends on where you selected to store the .kml file – to a local folder or to FTP.
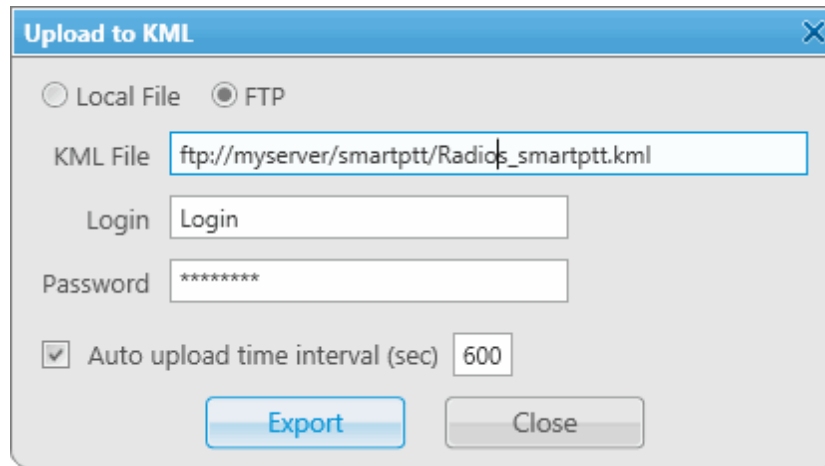
Click **Local File** to keep the uploaded .kml file locally.

KML File: Specify the destination folder and the name of the KML file with the radio coordinates.

You can also set up automatic upload. Simply, select the **Auto upload time interval** check box 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 radio coordinates on the FTP server.

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 radio coordinates

To view radio coordinates from the FTP file, follow these steps:

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/Radios_smartptt.kml*) in the Google maps field and click **Search Maps**.

To view radio coordinates from the local file in Google Earth, follow these steps:

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 radio coordinates in KML format and click **Open**.

How to configure radio 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/Radios_smartptt.kml*).
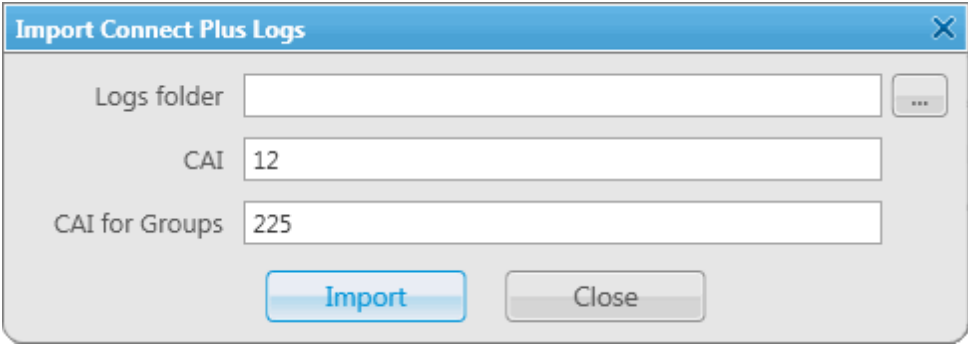
To view the file from the local disk, click **Browse**, specify the path to the file with radio coordinates in KML format and click **Open**.

1. Click the **Refresh** tab, select the **Periodically** option and set an update interval.

2. Click **OK**: SmartPTT radios should now be displayed in Google Earth.

3. To open the added KML file automatically the next time Google Earth is run, you should save the temporary place mark Radios (SmartPTT) to **My Places** list. To do this please select the menu command **File/Save/Save to My Places** or press Ctrl+Shift+S.

6.9 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 appears:

Logs 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.
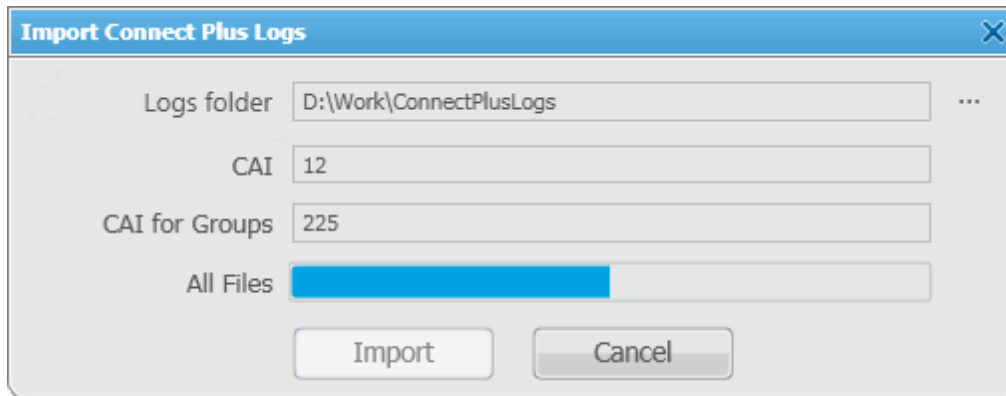
All Files: Displays the total download progress.

When **Connect Plus Log** file is imported, you will see the following notification window.
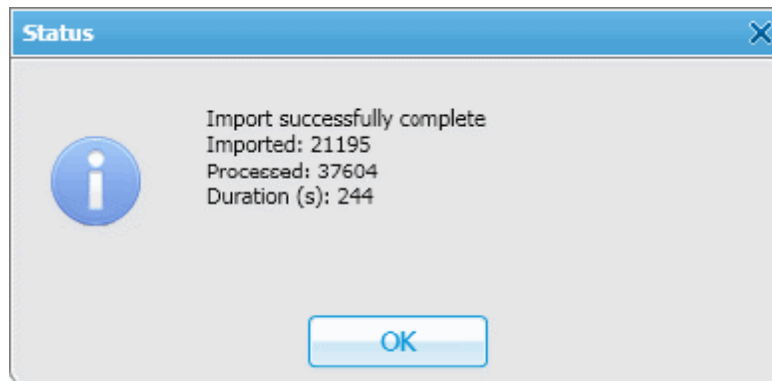
6.10 Save Dispatcher Settings

Starting from version 8.3 you can save and restore not only the event log database, but also the dispatch console settings such as:

- Opened panels

- Application interface language

- Other settings

NOTE

This feature is unavailable if SmartPTT Dispatcher is connected to the remote database.

To save current settings or database, follow these steps:

1. Open the **Service** menu and select **Save Dispatcher Settings**. The following window appears:
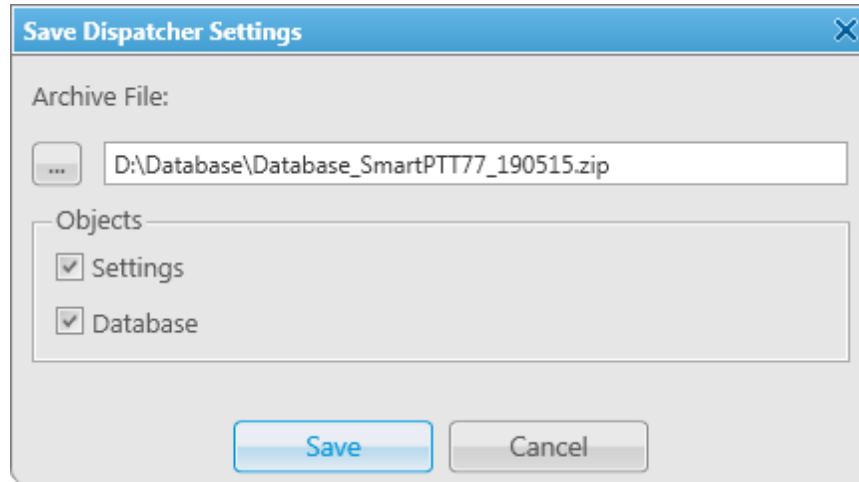
2. In the **Archive File** field, specify the path to the folder where you want to save the archive.

3. In the **Objects** area, define what you want to save. You can select both check boxes, if needed:

   - Select the **Settings** check box to save the dispatch console settings.

   - Select the **Database** check box to save the dispatch console database.

4. Click **Save**, to save the selected objects.

6.11 Restore Dispatcher Settings

This feature allows you to restore the saved dispatch console settings or database (see how to save the dispatch console settings here).

NOTE

This feature is unavailable if SmartPTT Dispatcher is connected to the remote database.

To restore the saved settings, follow these steps:

1. Open the **Service** menu and select **Restore Dispatcher Settings**. The following window will open:
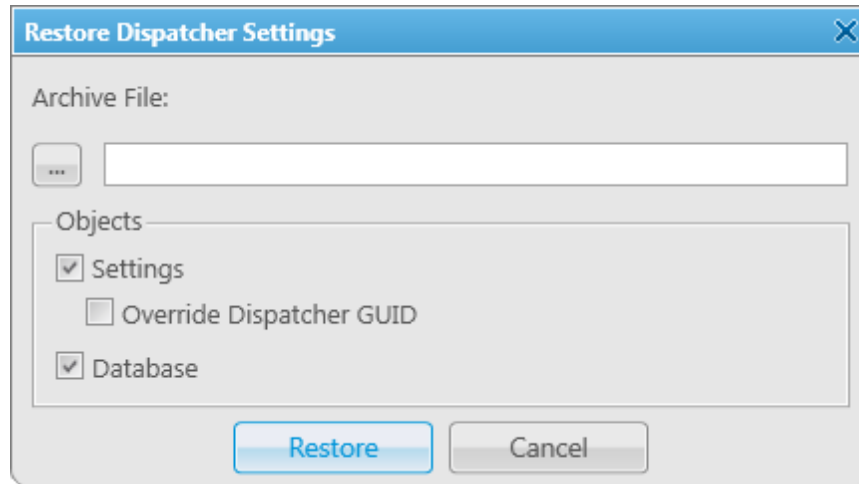
2. In the **Archive File** field, specify the path to the archive folder.

3. In the **Objects** area, define what you want to restore. Select more than one check box if needed:

   • Select the **Settings** check box to restore the dispatch console settings.

   • Select the **Database** check box to restore the dispatch console database.

   • Select the **Override Dispatcher GUID** check box, if you transfer the dispatcher to another computer or restore current dispatcher settings. As a result, you create 2 SmartPTT Dispatcher consoles with identical GUIDs and configuration settings.

WARNING
If you want to copy current dispatcher settings to another dispatch console, do **not** select the **Override Dispatcher GUID** check box. In this case you create 2 SmartPTT Dispatcher consoles with different GUIDs and identical configuration settings.

4. Click **Restore** to restore the selected objects.

5. Restart SmartPTT Dispatcher to apply the restored settings.

7 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.

- [Radio Locations Report](#) is a special report that displays GPS coordinates of the selected radios and [WAVE users](#).

- [Online Radios](#) report gives you a list of registered and non-registered online radios and [WAVE users](#).

- [Monitoring Report](#), [Monitoring Analytics](#), [Monitoring Log](#) give you consolidated information collected during monitoring process.

- [Lone Workers](#) report gives you the information about events that occur when a radio or a [WAVE user](#) is in the Lone Worker mode.

7.1 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**. The **Report Wizard** window appears:

1.   In the **Report Wizard** window select the data source of the future report. You can select
      between the database of the dispatch console and the database of the radioserver. To be
      able to select the radioserver database, ensure the radioserver is up and running.
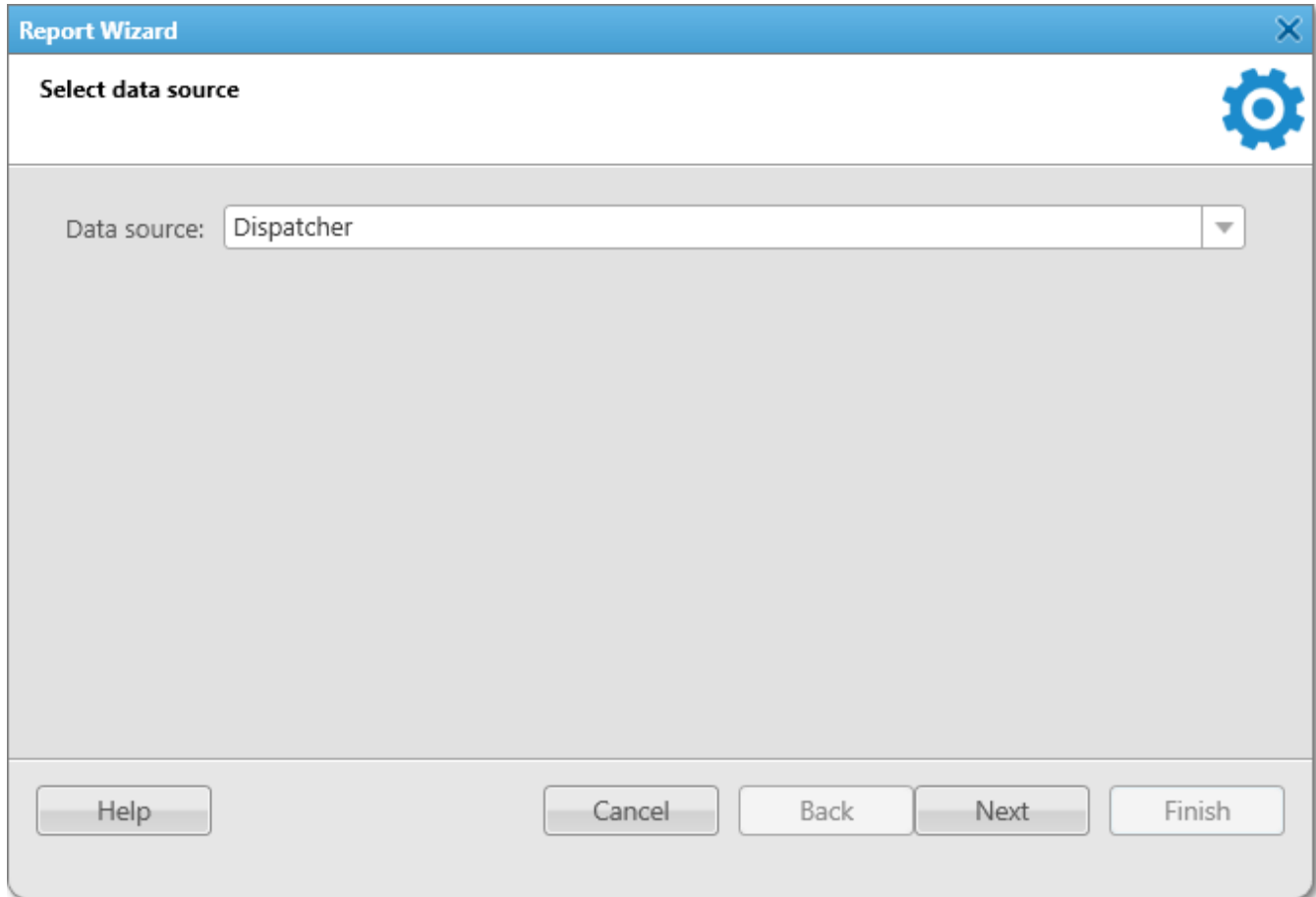
2.   Select fields which you want to include in the report and click **Next**.
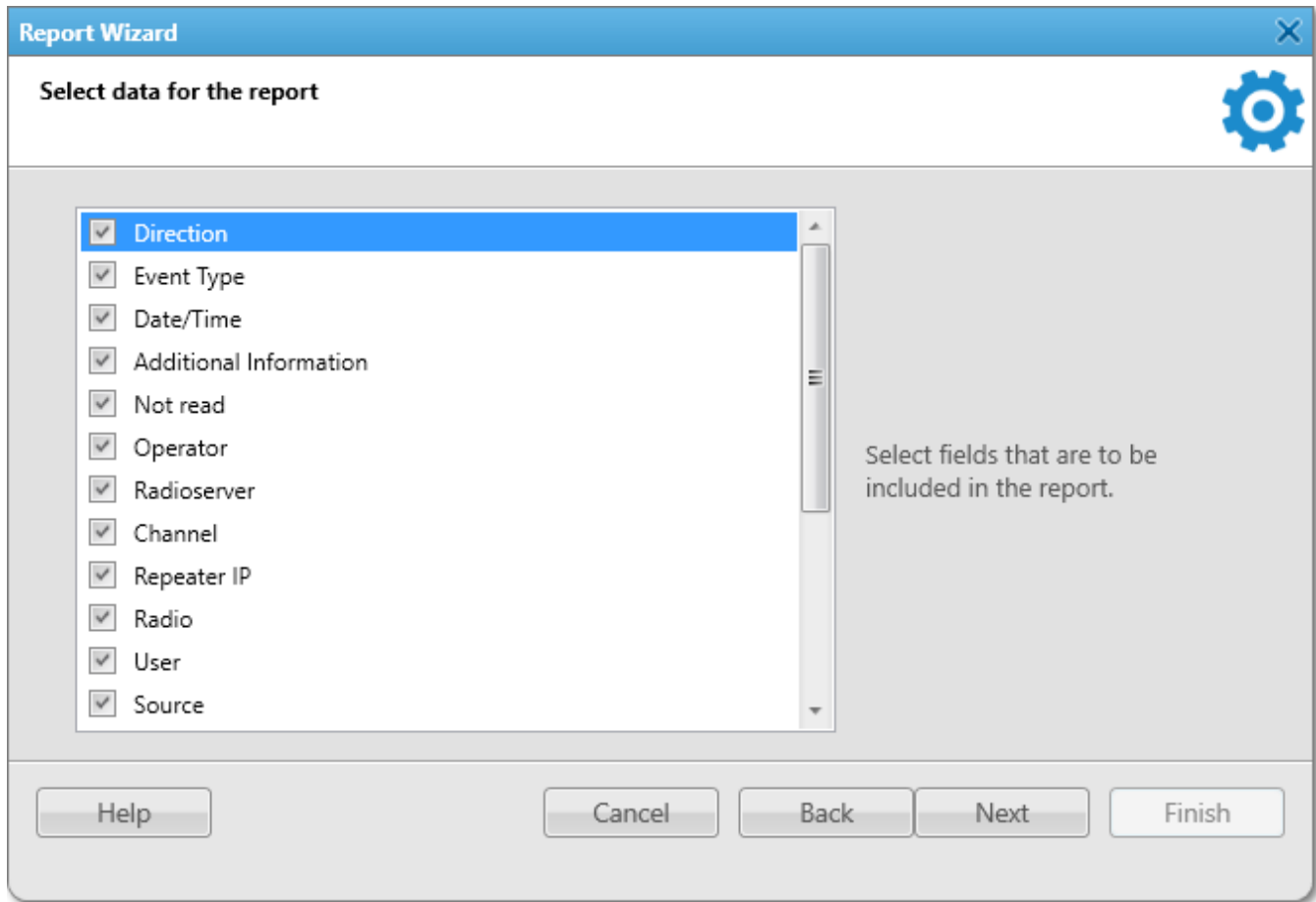
3.   Define the structure of the report – its grouping and sorting and click **Next**.

NOTE
If both fields are not specified, the report will be grouped and sorted by default.

Report Wizard   ✕

Group and sort report data   ⚙

Group by: | Not Specified   ▼ |

Sort by: | Not Specified   ▼ |

| Help | | Cancel | | Back | | Next | | Finish |

4. Filter the report by values. Click **Next** to continue.

Report Wizard ✕

Filter conditions ⚙

	Active	Condition	Value
Direction	☐	Equal to ▼	Incoming ▼
Event Type	☐	Equal to ▼	Registration ▼
Date	☑	Between ▼	3/28/2017 15 - 3/28/2017 15
Radioserver	☐	Equal to ▼	Not Specified ▼
Channel	☐	Equal to ▼	Not Specified ▼
Repeater IP	☐	Equal to ▼	Not Specified ▼
Talkgroup	☐	Equal to ▼	Not Specified ▼
Radio	☐	Equal to ▼	Not Specified ▼

[Help]   [Cancel]   [Back]   [Next]   [Finish]
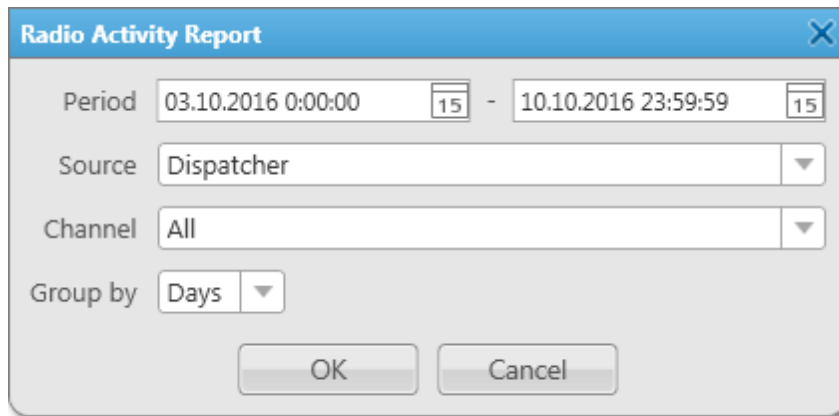
5.   Specify the file name of the report. To complete the process, click **Finish**. The report can be saved in .html, .mht, .xls, .xlsx, .csv, and .txt formats.
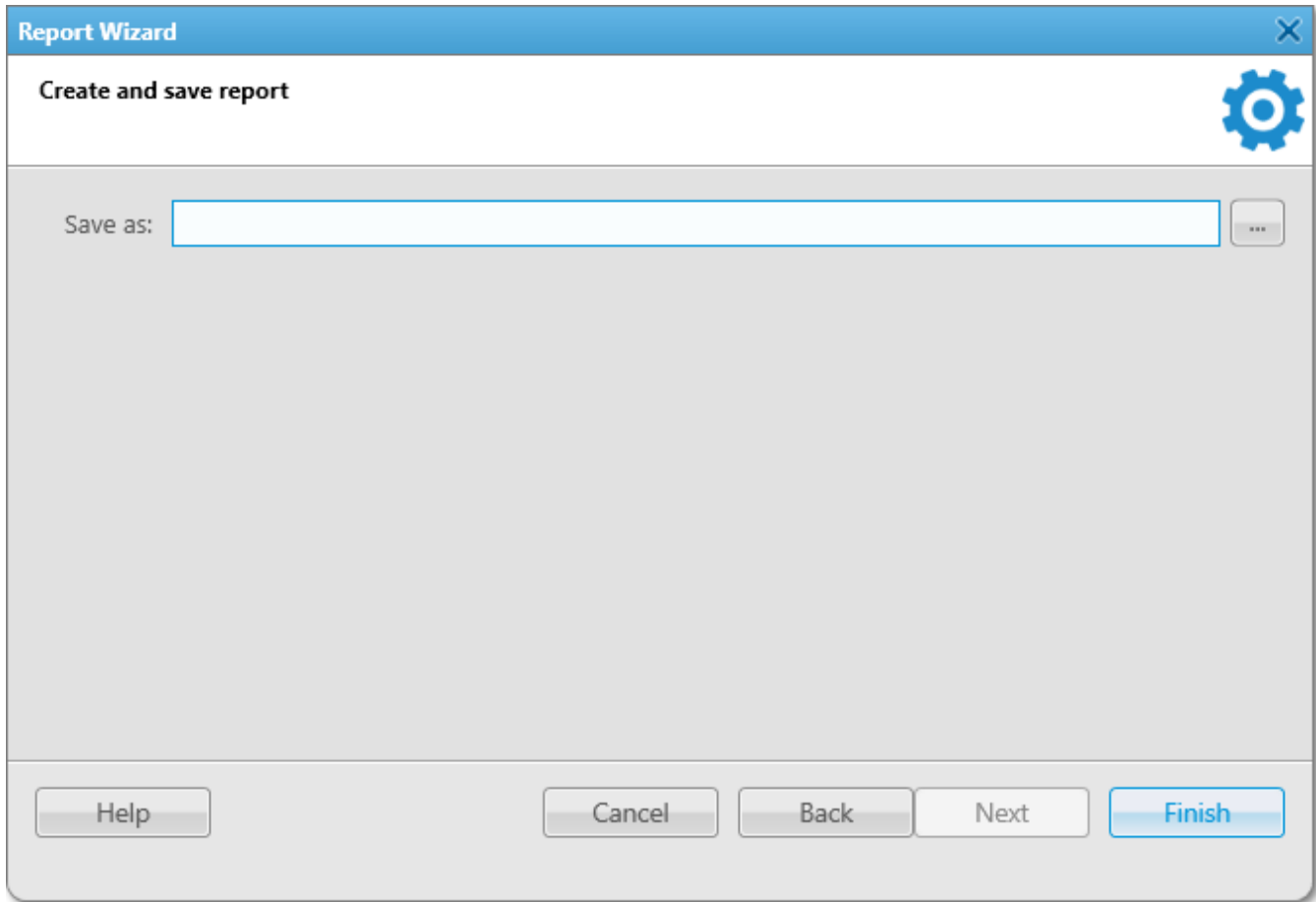
7.2 Radio Activity Report

Radio Activity Report gives 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 appears:

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.

Channel: Allows to build a report for a particular channel or for all control stations.

Group by: Defines the level of detail, whether you want to see the report information divided into days, hours or minutes.

The report can be saved in .pdf, .html, .mht, .rtf, .xls, .xlsx, .csv, .txt, .image or .xps formats.

Example

Radio Activity Report

from 04.06.2015 0:00:00 to 08.06.2015 23:59:59

	Amount of Calls	Duration, hh:mm:ss
Total Calls	25	00:09:36
Group 1	21	00:06:04
Group 2	4	00:03:32

Hourly Details
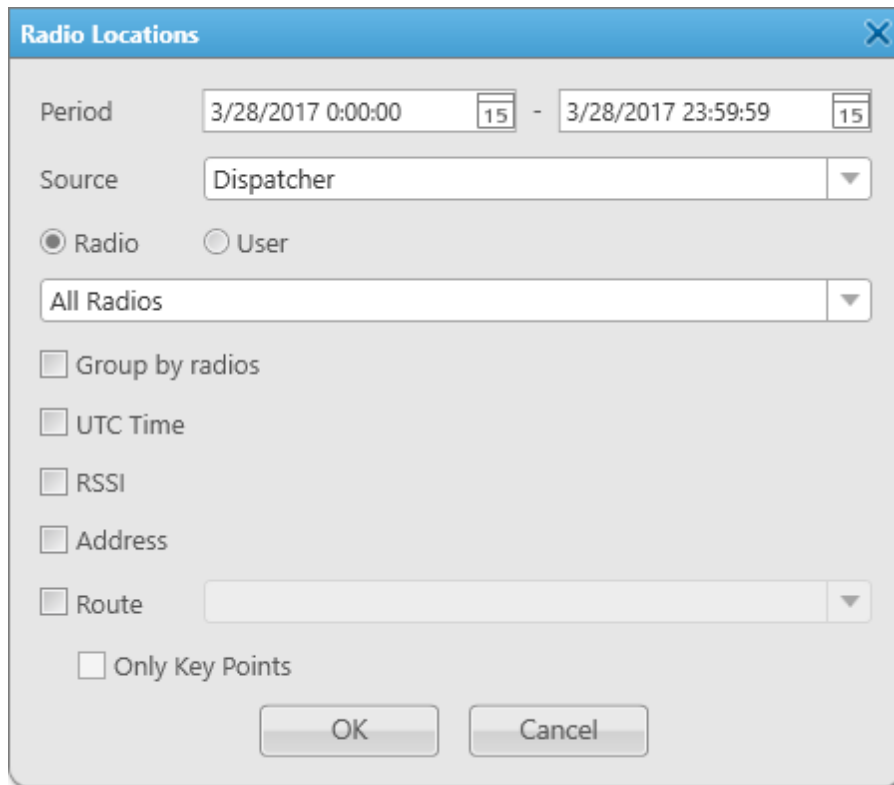
	Amount of Calls	Duration, hh:mm:ss	Period
Total Calls	9	00:08:07	04.06.2015 17:00 - 04.06.2015 18:00
Group 1	5	00:04:35	04.06.2015 17:00 - 04.06.2015 18:00
Group 2	4	00:03:32	04.06.2015 17:00 - 04.06.2015 18:00
Total Calls	16	00:01:29	05.06.2015 15:00 - 05.06.2015 16:00
Group 1	16	00:01:29	05.06.2015 15:00 - 05.06.2015 16:00
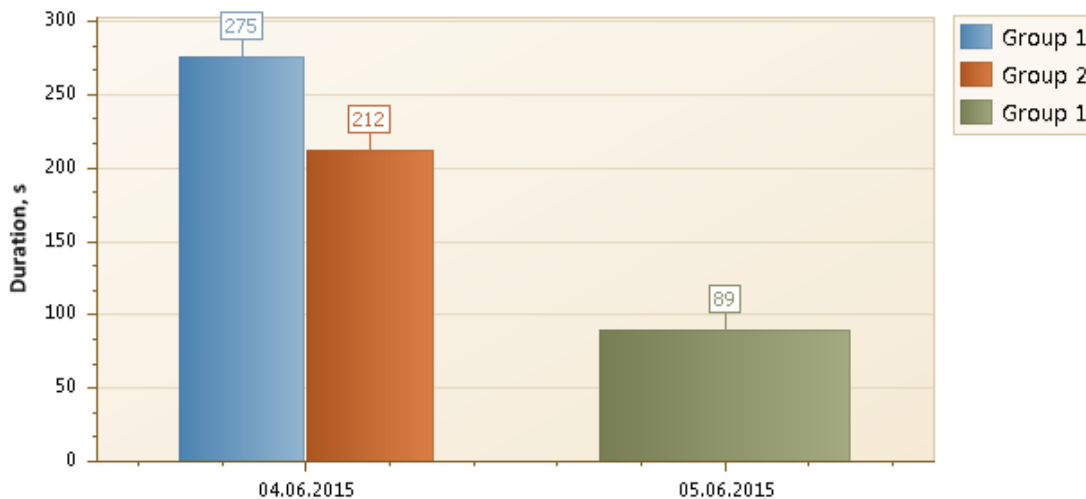
7.3 Radio Locations

SmartPTT Dispatcher allows creating a report on radio and WAVE user 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** and click **Radio Locations**. The **Radio Locations** window appears:

Period: Defines the time frame of the report.

Source: Defines the source, whose 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 the data is taken from the database of the chosen radioserver. To build a report based on the radioserver database, make sure that **Event Log** is enabled and connected in SmartPTT Radioserver Configurator.

Radio: Defines a radio or WAVE user for which the report is generated. The list of radios is taken from the current database. When *All Radios* is selected, the report will be generated for all radios and WAVE users which have GPS coordinates in the database.

User: Defines a radio user for whom the report is generated. The list of users is taken from the current database. When *All Users* is selected, the report will be generated for all users which have GPS coordinates in the database.

Group by radios: Groups data in the report by radios or WAVE users.

UTC Time: If selected, the report period time and the event time in the report are shown in UTC (UTC+00:00). If **UTC Time** is not selected, the report period time and the event time in the report are shown according to the time zone set on the computer of dispatcher (for example, UTC+05:00).

RSSI: If selected, the signal strength of the received signal (RSSI) is displayed in the report.

Address: Allows displaying address information based on the received coordinates. The addresses are received from one of the two services Google Maps or OpenStreetMap. The service is selected in **Settings → Positioning Systems → Address Data Provider**. If the **Address** check box is not selected, there will be a link **Find on Map** instead of the address. You can use the link to see the address.

Route: Defines the route on the basis of which the **Radio Locations** report is to be generated.

Only Key Point: Displays only the key points of the route in the report.

Click **OK** to create the report.

Example

Radio Location Report
from 01.03.2015 0:00:00 to 12.05.2015 23:59:59

Date	Radio	Latitude	Longitude	Speed m/s	Precision (ft)	RSSI (dBm)	Address
04.03.2015 17:10:11	4000	56,47897	85,06805	0,38	33,12	-58,64	ulitsa Bratyev Tronovykh, Nauka, Tomskaya oblast', Russia, 634055
04.03.2015 17:08:57	4000	56,47897	85,06808	0,24	57,72	-58,71	ulitsa Bratyev Tronovykh, Nauka, Tomskaya oblast', Russia, 634055
04.03.2015 17:08:39	4000	56,47897	85,06808	0,15	51,83	-58,68	ulitsa Bratyev Tronovykh, Nauka, Tomskaya oblast', Russia, 634055
04.03.2015 17:08:23	4000	56,47897	85,06808	0,05	58,72	-58,62	ulitsa Bratyev Tronovykh, Nauka, Tomskaya oblast', Russia, 634055
04.03.2015 17:08:07	4000	56,47897	85,06808	0,39	53,80	-58,57	ulitsa Bratyev Tronovykh, Nauka, Tomskaya oblast', Russia, 634055
04.03.2015 17:07:55	4000	56,47897	85,06806	1,19	108,91	-58,65	ulitsa Bratyev Tronovykh, Nauka, Tomskaya oblast', Russia, 634055
04.03.2015 17:07:47	4000	56,47898	85,06811	0,23	104,32	-58,72	ulitsa Bratyev Tronovykh, Nauka, Tomskaya oblast', Russia, 634055
04.03.2015 17:07:03	4000	56,47898	85,06811	0,10	48,55	-58,63	ulitsa Bratyev Tronovykh, Nauka, Tomskaya oblast', Russia, 634055
04.03.2015 17:06:51	4000	56,47898	85,06811	0,05	316,60	-58,55	ulitsa Bratyev Tronovykh, Nauka, Tomskaya oblast', Russia, 634055
04.03.2015 17:05:37	4000	56,47898	85,06812	0,49	100,37	-58,65	ulitsa Bratyev Tronovykh, Nauka, Tomskaya oblast', Russia, 634055
04.03.2015 17:05:15	4000	56,47899	85,06812	0,23	144,66	-58,71	ulitsa Bratyev Tronovykh, Nauka, Tomskaya oblast', Russia, 634055
04.03.2015 17:04:59	4000	56,47899	85,06810	0,48	119,75	-58,70	ulitsa Bratyev Tronovykh, Nauka, Tomskaya oblast', Russia, 634055

To set up the format of **Latitude**, **Longitude**, **Speed** and **Precision** columns of the **Radio Location Report**, see Positioning Systems, the **GPS tab**, in SmartPTT Dispatcher.
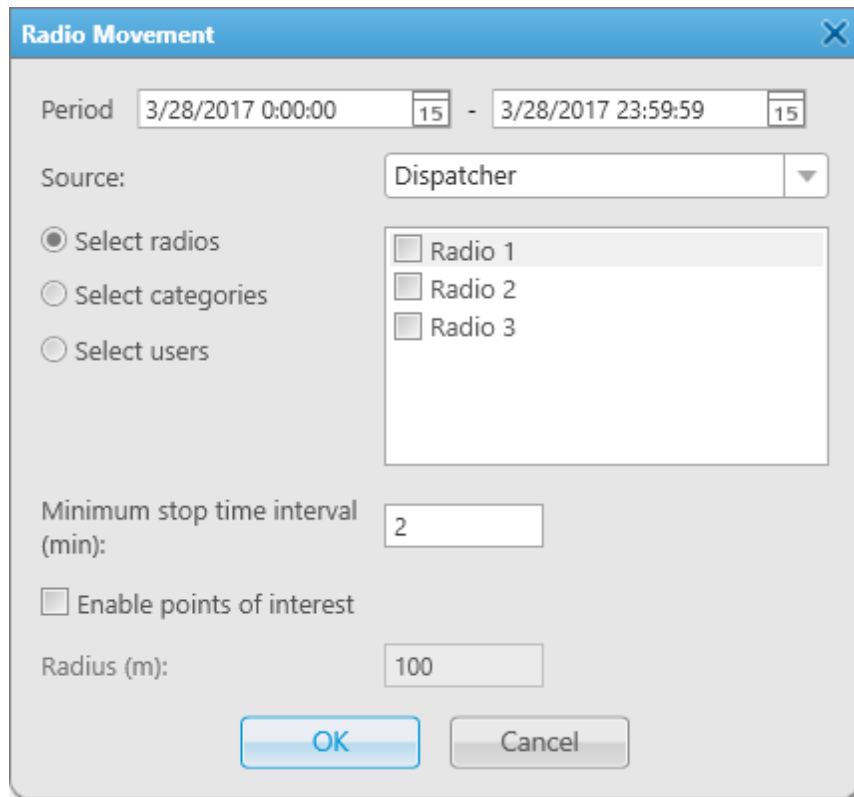
> **NOTE**
>
> The Universal Transverse Mercator Coordinate System format is not applicable to this report. If it is selected, Latitude and Longitude are displayed in Decimal degrees format.

7.4 Radio Movement

The **Radio Movement** report provides information about the radio and WAVE user movement on the basis of received GPS data.

To create a report, on the **Reports** menu, click **Radio Movement**. The following window appears:

Period: Defines the time frame for the report data.

Source: Defines the source, whose database will be used for building the report for selected radios, WAVE users, categories or radio users. If Dispatcher is selected, the data is taken from the local database. If a radioserver is selected, the data is taken from the database of the chosen radioserver.

Select radios: Select the radios or WAVE users whose GPS data will be used to build the report.

Select categories: Select the categories of radios or WAVE users whose GPS data will be used to build the report.

Select users: Select the radio users whose GPS data will be used to build the report.

Minimum stop time interval (min): Used to define the time when the radio or the WAVE user stops. If it stays at the same place longer than the specified time interval, the it is supposed to be parked.

Enable points of interest: Select to use the points of interest when building the report.

> **NOTE**
> When **Enable points of interest** is selected, in the **Radio Movement** report the **Location** field will contain only the name of the point of interest.

Radius (m): Specify the allowed distance deviation from the point of interest.

> **NOTE**
> The **Radius** field is available only if **Enable points of interest** is selected.

To build the report, click **OK**. To cancel this action, click **Cancel**.

After clicking **OK**, the report opens automatically. The report can be saved in the .pdf, .html, .mht, .rtf, .xls, .xlsx, .csv, .txt, .image or .xps formats.

Example

Radios Movement Report

Period: 05.08.2016 0:00:00 - 02.09.2016 23:59:59 (UTC+7)

Start time	Stop time	Moving time	Distance, km	Maximum speed, km/h	Location	Stop time interval	Idle time
Radio: 1							
24.08.2016							
-	-	-	-	-	ElcomPlus	00:10:24	00:10:24
12:24:46	12:28:22	00:03:36	0,07	0,42	ElcomPlus	00:02:00	00:02:00
12:30:22	12:33:07	00:02:45	0,02	1,49	ElcomPlus	00:50:35	00:01:07
13:23:42	13:25:12	00:01:30	0,14	6,33	ElcomPlus	00:12:24	-
13:37:36	13:44:36	00:07:00	0,42	7,79	ElcomPlus	00:07:48	-
13:52:24	13:56:24	00:04:00	0,03	0,06	ElcomPlus	-	00:01:00
Total for 24.08.2016		00:18:51	0,68			01:23:11	00:14:31
Total for period		00:18:51	0,68			01:23:11	00:14:31
Radio: 2							
05.08.2016							
11:37:26	11:49:16	00:11:50	0,21	1,66	ElcomPlus	00:12:42	00:03:25
12:01:58	12:35:58	00:34:00	0,74	2,11	ElcomPlus	-	-
Total for 05.08.2016		00:45:50	0,95			00:12:42	00:03:25
08.08.2016							
10:05:58	10:15:23	00:09:25	0,23	1,83	ElcomPlus	00:10:27	00:02:33
10:25:50	10:33:52	00:08:02	0,19	2,00	ElcomPlus	-	00:00:30
Total for 08.08.2016		00:17:27	0,42			00:10:27	00:03:03
Total for period		01:03:17	1,37			00:23:09	00:06:28
Radio: 3							
08.08.2016							
13:26:56	13:30:26	00:03:30	0,19	6,64	ElcomPlus	00:04:58	00:01:04

7.5 Online Radios

SmartPTT allows exporting online radios and WAVE users (registered and not registered) in no time by means of the **Online Radios** report.

To create the report, expand the **Reports** menu in the **Main Menu** bar of the SmartPTT Dispatcher window and click **Online Radios**. The following window appears:
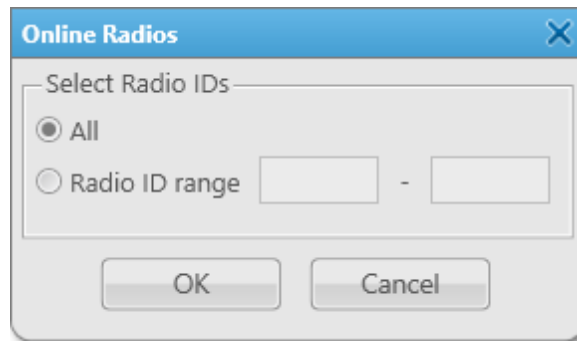
All: Select this radio button to include all registered and not registered online radios and WAVE users in the report.

Radio ID range: Select this radio button to limit the radio and WAVE user IDs in the report.

Click **OK**. 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.

Example

Online Radios (3)

Radio ID	Channel Type	Name
3	MOTOTRBO	Radio 1
4	MOTOTRBO	Radio 2
5	MOTOTRBO	Radio 3

7.6 Monitoring Reports

Monitoring Reports allow creating the following reports:

- Monitoring Report

- Event Log Report

- Analytic Report

- System Usage Report

They are based on the data collected during the monitoring and filtered by different criteria.

To create a report, in the **Main Menu** bar click **Reports,** point on **Monitoring** and click the needed type of report.

> **NOTE**
>
> Before creating a report, make sure the radioserver is running and **Monitoring** is active in SmartPTT Radioserver Configurator.
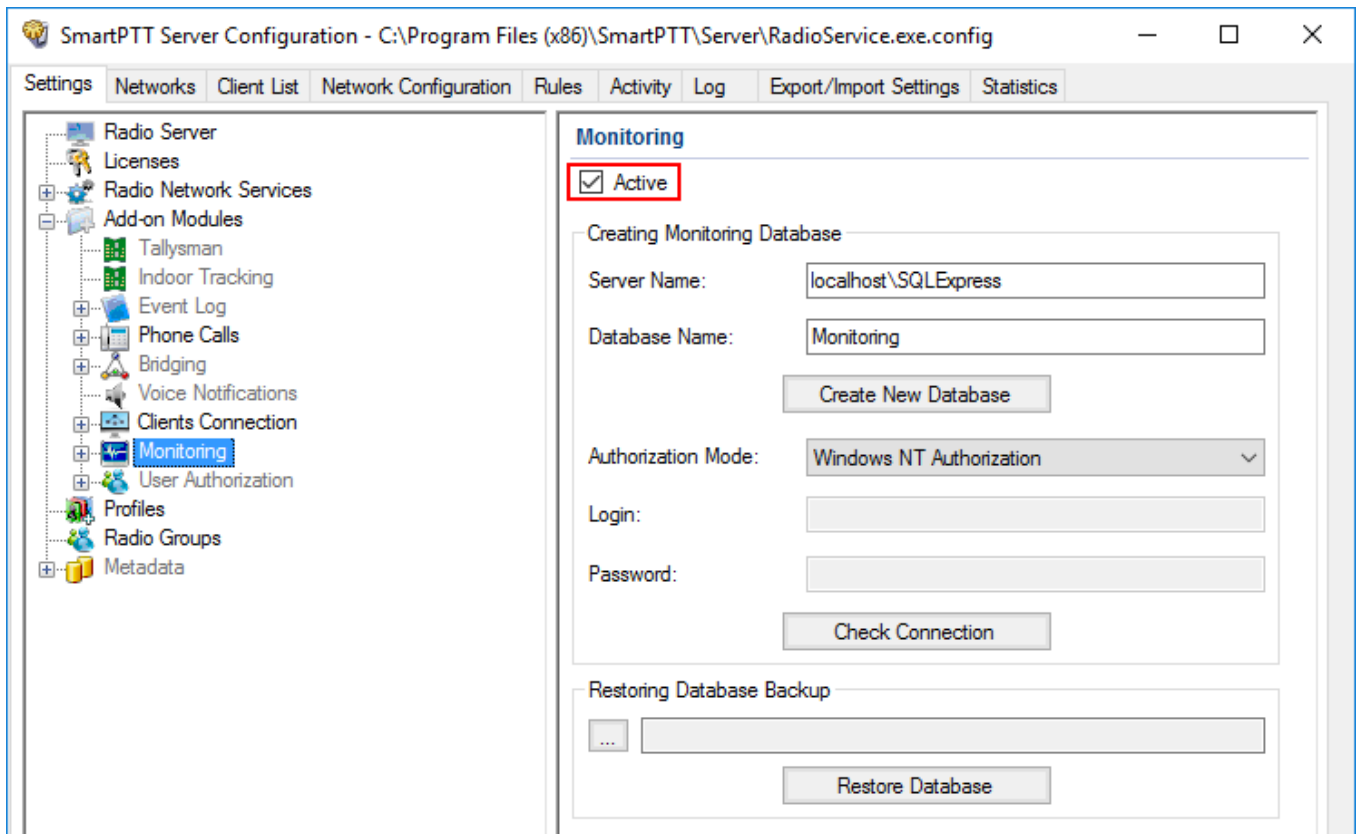
7.6.1 Monitoring Report

Monitoring Report gives such information as repeater ID, ID's of the calling and receiving parties, duration of the event and its type, RSSI and many other.

To create the report, expand the **Reports** menu in the **Main Menu** bar and under **Monitoring** select **Report**. The following window appears:

Period: Defines the time frame of the report.

Radioserver: Defines the radioserver, whose database you want to use as a data source.

System: Defines the radio system for which you want to build a report. In the drop-down list you can find both existing and removed radio systems. Network IDs are used for outdated radio systems, and names – for existing ones.

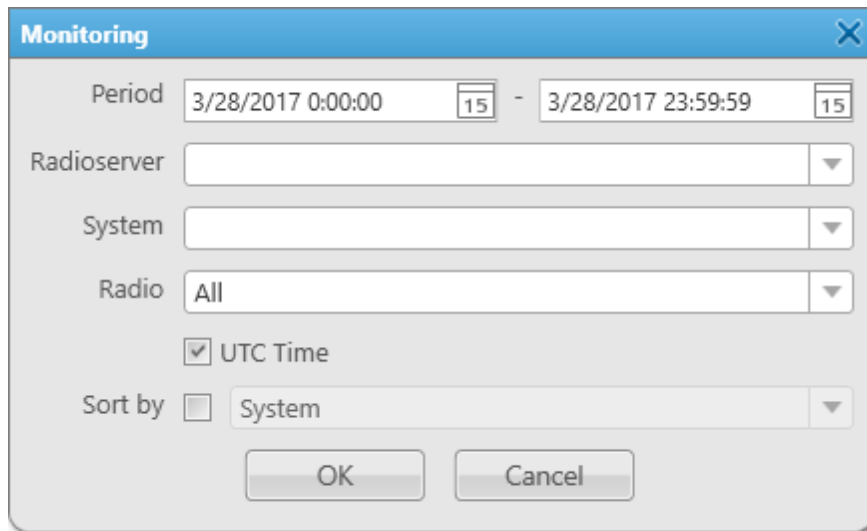**Radio:** Selects the radio or the WAVE user for which the report is to be generated. If you select *All*, the report will be generated for all registered radios and WAVE users.

UTC Time: If **UTC Time** is selected, the report time and report start date and end date are shown in UTC (UTC+00:00). If **UTC Time** is not selected, the report time and report start date and end date are shown according to the time zone set on the computer of dispatcher (for example, UTC+05:00).

Sort By: You can select the column by which you want to sort the report data: network, repeater, slot, protocol, sender, receiver, duration, RSSI.

7.6.2 Event Log Report

Event Log Report shows information about available devices in the system (e.g., repeaters, routers, uninterruptible power supplies) and alarms registered on these devices.

To create the report, expand the **Reports** menu in the **Main Menu** bar and under **Monitoring** select **Event Log**. The following window appears:
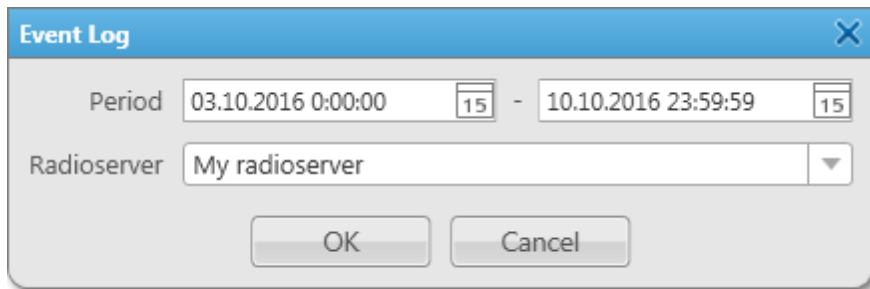
Period: Defines the time frame of the report.

Radioserver: Defines the radioserver whose database you want to use as a data source.

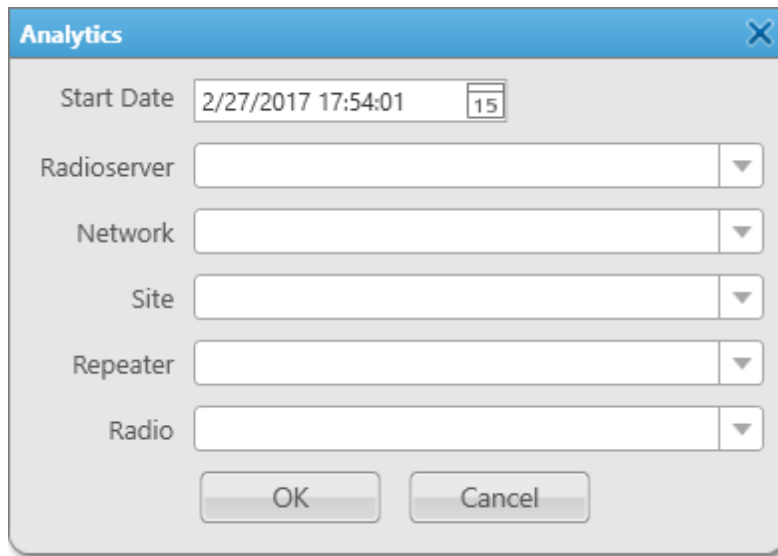After clicking **OK**, the report opens automatically:

Example

Event Log
Radioserver: All Radioservers
from 01.11.2014 00:00:00 to 13.11.2014 00:00:00

Radioserver	Network	Site	Event Time	Device Type	Repeater	Device Name	Device ID	Importance	Description
71			12.11.2014 15:31:05	Router		Cisco	192.168.37.72:161	High Alarm	No response from the device
71			12.11.2014 15:30:58	UPS		Eaton	192.168.37.73:161	High Alarm	No response from the device
71	IP Site Connect 1		12.11.2014 15:30:52	Repeater	141	Motorola	192.168.37.141:50101	Information	Repeater connected
71	IP Site Connect 1		12.11.2014 15:30:47	Repeater	31220		192.168.37.128:50001	Information	Repeater connected
71	IP Site Connect 1		12.11.2014 15:30:45	Repeater	71	SmartPTT	192.168.37.71:50000	Information	Repeater connected
71	IP Site Connect 1		12.11.2014 15:30:29	Repeater	31220	SmartPTT	192.168.37.128:50001	Information	Repeater disconnected
71	IP Site Connect 1		12.11.2014 15:30:29	Repeater	188		192.168.37.137:50000	Information	Repeater disconnected
71	IP Site Connect 1		12.11.2014 15:30:27	Repeater	141	Motorola	192.168.37.141:50101	Information	Repeater disconnected
71			12.11.2014 15:29:56	Router		Cisco	192.168.37.72:161	High Alarm	No response from the device
71			12.11.2014 15:29:49	UPS		Eaton	192.168.37.73:161	High Alarm	No response from the device
71	IP Site Connect 1		12.11.2014 15:29:43	Repeater	141	Motorola	192.168.37.141:50101	Information	Repeater connected
71	IP Site Connect 1		12.11.2014 15:29:38	Repeater	31220		192.168.37.128:50001	Information	Repeater connected
71	IP Site Connect 1		12.11.2014 15:29:38	Repeater	188		192.168.37.137:50000	Information	Repeater connected
71	IP Site Connect 1		12.11.2014 15:29:36	Repeater	71	SmartPTT	192.168.37.71:50000	Information	Repeater connected

7.6.3 Analytic Report

Analytic Report is a graphical representation of the data received during a monthly monitoring process.

To build a report, expand the **Reports** menu in the **Main Menu** bar, and under **Monitoring** select **Analytics**. The following window appears:

Start Date: Specify the start date of the report. This is a monthly report, so the end date is calculated automatically.

Radioserver: Select the available radioserver whose database will be used as a data source.

Network: Select the radio system for which you want to build a report. The drop-down list contains all radio systems which have been ever used. Network ID's are used for old networks, and names – for existing ones.

Site: Select a site. This is used for Linked Capacity Plus networks. You can also build a report for all existing sites, or select no sites at all.

Repeater: Select the particular repeater. You can also build a report for all repeaters.

Radio: Select the radio or the [WAVE user](#) for which the report is to be built. You can build a report on all radios and WAVE users from the drop-down list.
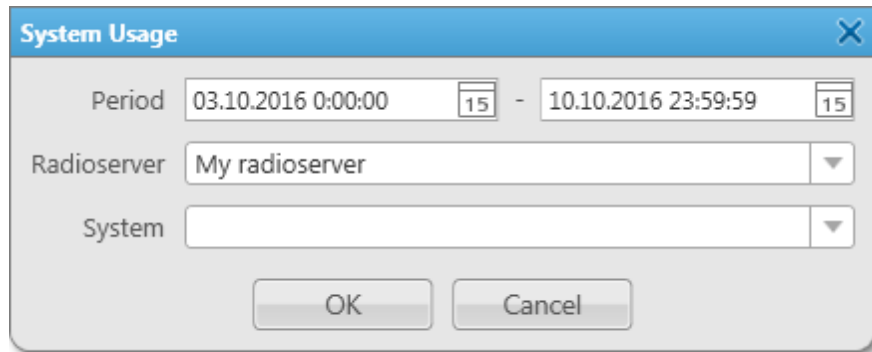
Example
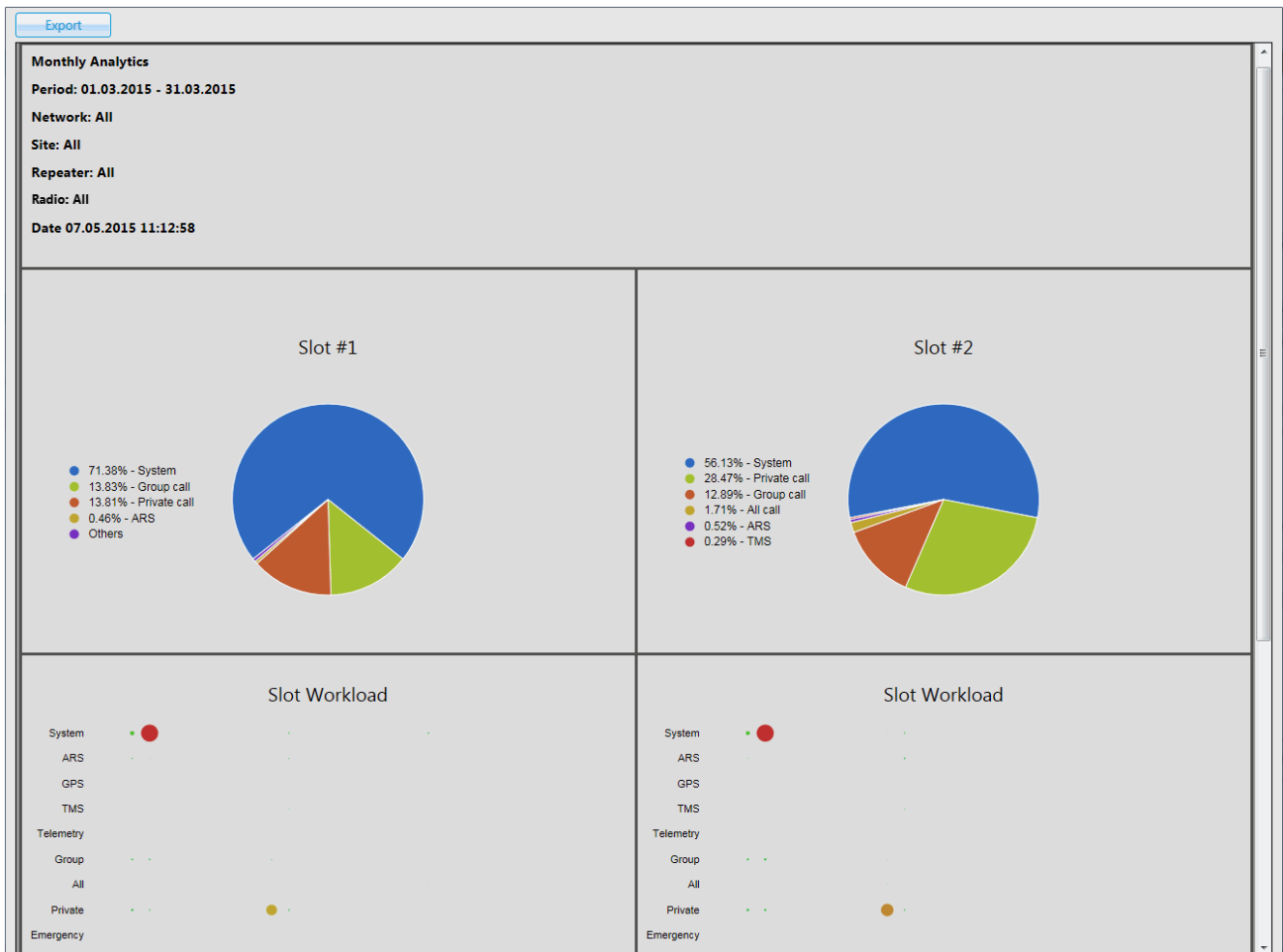
Export: Allows you to save the report in HTML format for further use.

7.6.4 System Usage Report

System Usage Report provides information on the system load, uptime, downtime, and other information. To build the report, expand the **Reports** menu in the **Main Menu** bar and under **Monitoring** select **System Usage**. The following window appears:

Period: Defines the time frame of the report.

Radioserver: Select the available radioserver whose database will be used as a data source.

System: Defines the radio system for which you want to build a report. In the drop-down list you can find both existing and removed radio systems. Network IDs are used for outdated radio systems, and names – for existing ones.

After setting the parameters, click **OK** and the report will open in a new window.

Example

Report: System Usage

Period: 10.11.2014 0:00:00 - 11.11.2014 0:00:00
System: IP Site Connect 1

Sites: 3

Site	Number of Channels	Number of Radios	Online, h:mm:ss	Offline, h:mm:ss
SmartPTT	2	0	0:10:44	9:39:43
Radioserver 77	2	3	0:23:52	9:26:35
Repeater Tomsk 1	2	0	0:10:50	9:39:37
System Total	6	3	0:23:52	9:26:35

Channels Loading

Site	Number of Channels	Duration, h:mm:ss,ms
SmartPTT	1	-
	2	-
	Total	0:00:00
Radioserver 77	1	0:01:07,54
	2	-
	Total	0:01:07,54
Repeater Tomsk 1	1	-
	2	-
	Total	0:00:00
System Total	1	0:01:07,54
	Total	0:01:07,54

Subscribers: 3

#	Radio ID	Name	Sites
1	1	1	Radioserver 77
2	77	77	Radioserver 77
3	4000	Alex O.	Radioserver 77

7.7 Lone Workers

The **Lone Workers** report provides information about the radio events when a radio or a WAVE user 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 appears:
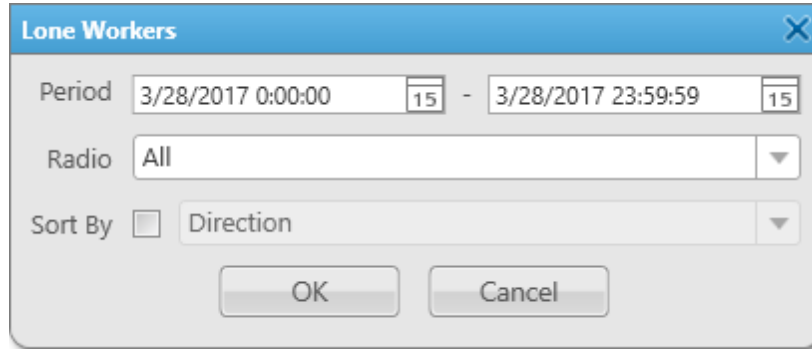
Period: Defines the time frame for the report data.

Radio: Defines the radio or the WAVE user for which the report is to be generated. The list of radios and WAVE users 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, radio (includes WAVE users), 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.

Example

Lone Workers

Period 3/28/2017 0:00:00 - 3/28/2017 23:59:59

Radio: All

Direction	Event Type	Date/Time	Additional Information	Operator	Radioserver	Channel	Radio	Talkgroup	Status	Duration	Repeater IP	Destination	Source
Outgoing	Message	3/28/2017 18:21:16	text message		SmartPTT Server	Slot 1	Radio 1		Message not delivered			Radio 1	1
Incoming	Call	3/28/2017 18:21:05			SmartPTT Server	Slot 1	Radio 2		Private Call	10		1	Radio 2
Incoming	Call	3/28/2017 18:21:01	Radio 1		SmartPTT Server	Slot 1	Radio 1	Group 1	Group Call	13		Group 1	Radio 1
Incoming	Call	3/28/2017 18:21:01	Radio 3		SmartPTT Server	Slot 1	Radio 3	Group 2	Group Call	13		Group 2	Radio 3
Incoming	Call	3/28/2017 18:20:50			SmartPTT Server	Slot 1	Radio 2		Private Call	15		1	Radio 2
Incoming	Call	3/28/2017 18:20:36			SmartPTT Server	Slot 1	Radio 2		Private Call	15		1	Radio 2
Incoming	Call	3/28/2017 18:20:36	Radio 3		SmartPTT Server	Slot 1	Radio 3	Group 2	Group Call	25		Group 2	Radio 3
Incoming	Call	3/28/2017 18:20:36	Radio 1		SmartPTT Server	Slot 1	Radio 1	Group 1	Group Call	26		Group 1	Radio 1
Incoming	Call	3/28/2017 18:20:23	Radio 2		SmartPTT Server	Slot 1	Radio 2	Group 2	Group Call	14		Group 2	Radio 2

8 Conference Calls

The **Conference Call** is a type of call in which the dispatcher can have more than one subscriber of different types at a time. All 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:
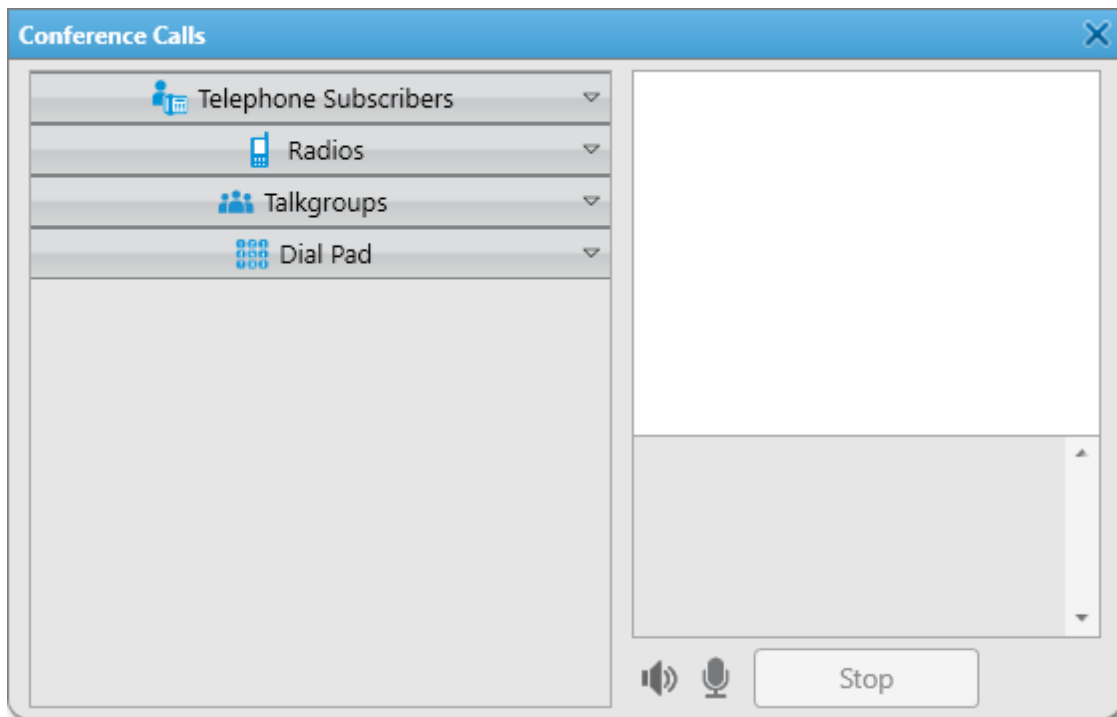
- Telephone subscribers

- Other dispatchers using SmartPTT Dispatcher

- Radios and WAVE users

- Talkgroups

> **NOTE**
>
> To be able to make conference calls, the dispatcher must have the permission **Make conference calls**.

To organize a conference call, click the **Conference Call** button in the **Main Menu** bar of SmartPTT Dispatcher.

The **Conference Call** window appears:

> **NOTE**
>
> If in the **General Settings** window the [Show radio user name](#) check box is selected, and on SmartPTT Radioserver the user authorization service is activated and users are added, thenin the radios list and event log the name of the user authorized on the radio is displayed next to the radio name in brackets.

To add a subscriber to the conference call, unfold the necessary section and double-click on the subscriber, or use drag-and-drop.

The button turns off the sound of the conference call. The dispatcher's microphone is turned off automatically. So the operator does not hear the conference call participants, and the participants cannot hear the dispatcher.

The button turns off the operator's microphone.

Stop: Click the button to end the current conference call. If the person should make a radio call right after the telephone call, it is necessary for him or her to wait for a special tone notifying about the end of the call. If the person presses the PTT button before this tone, an incorrect phone call will be initiated.

Starting from version 8.6 you can hold conference calls with radios and telephone subscribers without enabling Telephone Interconnect in SmartPTT Radioserver Configurator. For more information on how to do it, see help of SmartPTT Radioserver Configurator (**Telephone Calls**).
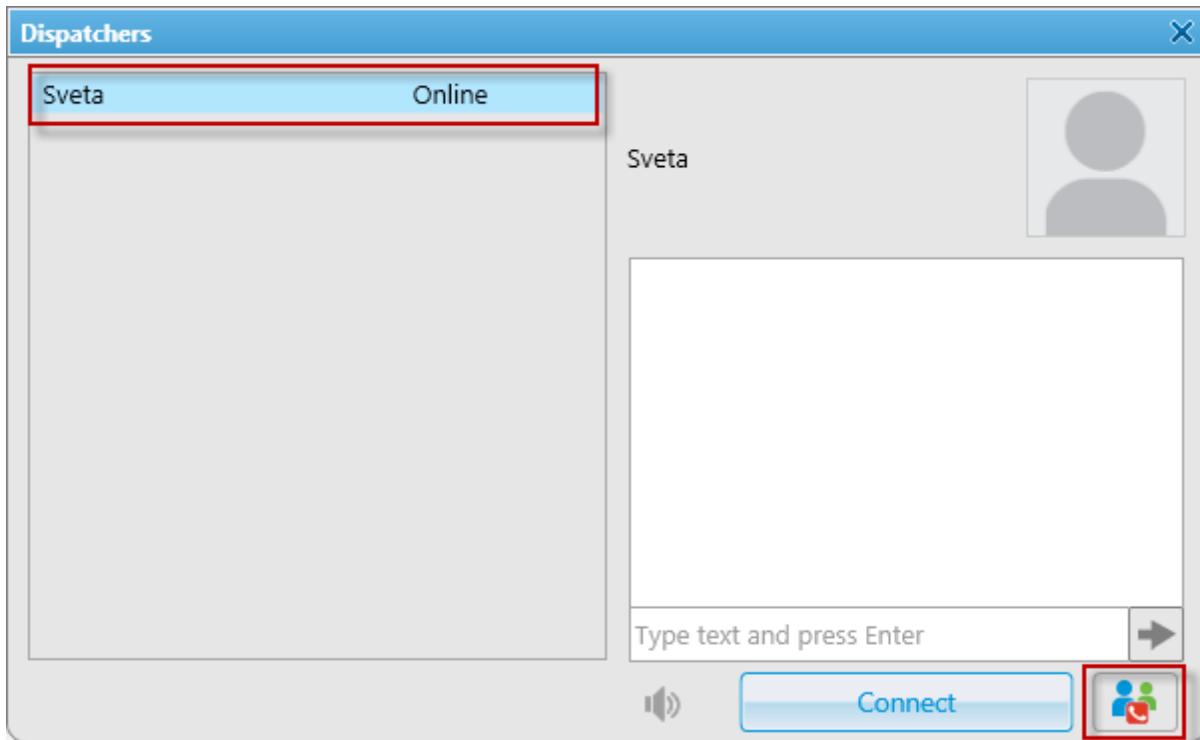
To finish the ongoing conference call with one of the participants, click the button 📞 next to the participant.

There is another way how to organize a conference call.

1. To invite an external dispatcher or a telephone subscriber, click the buttons 🖼 or 📇 respectively.

2. In the open window select a dispatcher or a telephone subscriber, and click 👥.
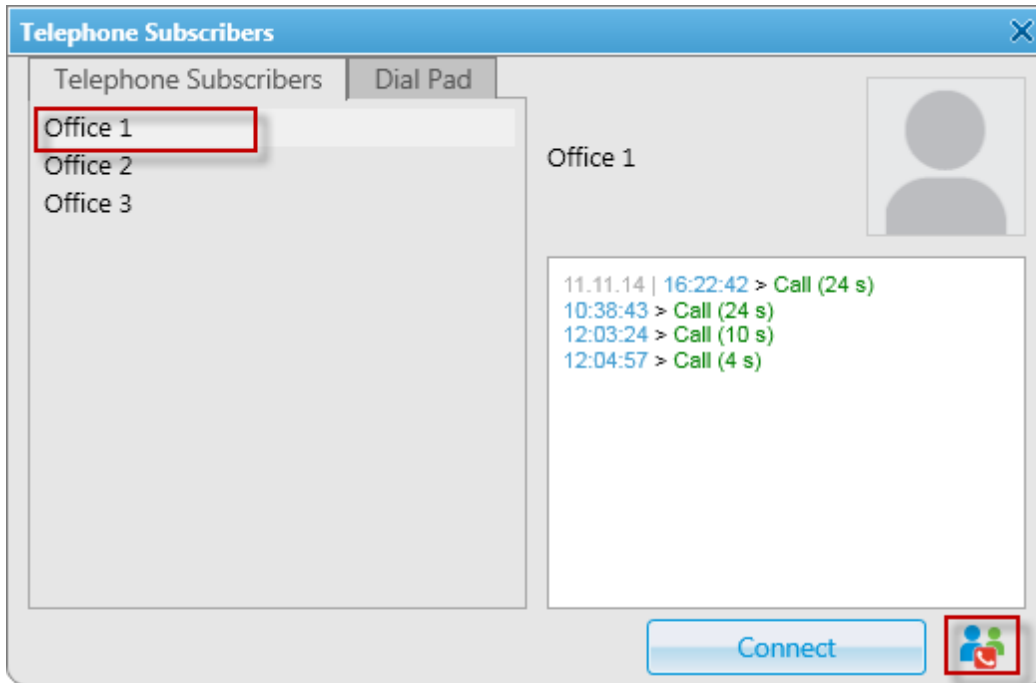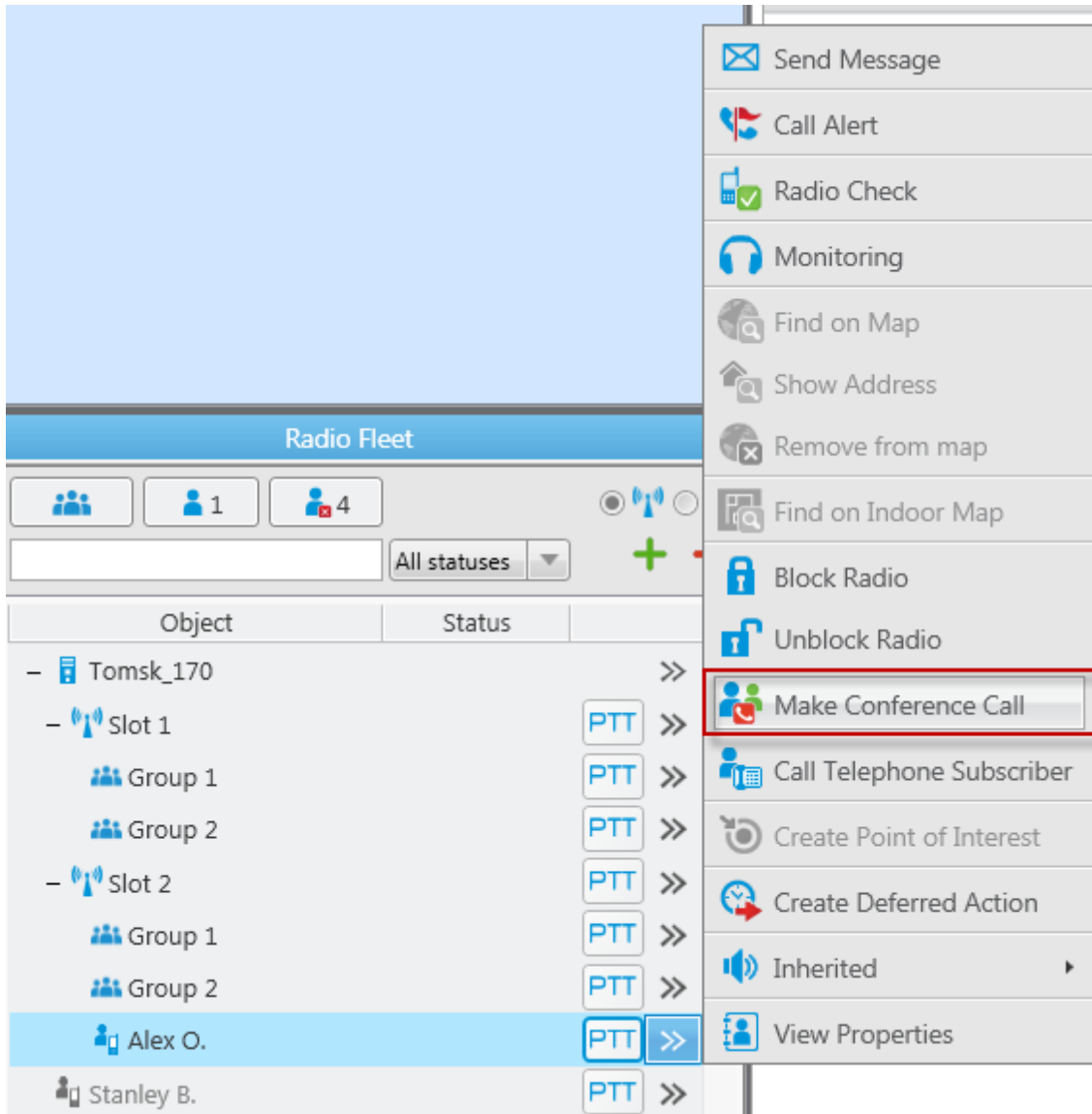
Dispatcher:

NOTE

Only dispatchers from the **Dispatcher List** with status **Active** can be invited into the conference call.

3. Use **Actions List** to make a conference call. The **Conference Call** window appears and the call is initiated.

9 User Interface Layout

The **UI Layout Settings** button ▣ in the **Main Menu** bar contains two features:

- Locking the layout of the user interface of the dispatch console (for more information, see Lock UI Layout)

- Customization of the layout of the user interface of the dispatch console

When working with SmartPTT Dispatcher the operator opens 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 layout of the application user interface for future use, select **Set UI Layout**, and then click **Add**. Enter the name of the user interface layout. To restore the selected user interface layout, click **Apply**. To delete the saved user interface layout, click **Delete**.

There are two default window configurations, which can't be deleted:

- Calls and Event log. It opens Calls, Radio Fleet, Sound and Event Log

- Calls, Channels and Event log. It opens Calls, Radio Fleet, Sound, Channels,and Event Log

9.1 Lock UI Layout

Locking user interface layout feature 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, click ▣ and then select **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 Changing Layout)

- Switching user interface layouts

- Changing the size of the opened panels

- Changing the content of the Radio Fleet panel

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.

10 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, group, telephone, and dispatcher 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:

- NAI networks

- Connect Plus networks. 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), NAI networks (the Voice connection type) or Connect Plus networks. 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.

- SIP/RTP interfaces

- External SmartPTT Radioservers

- Digital conventional channels. Private calls or data can't be bridged in networks based on control stations

- Analog conventional channels. Private calls can't be bridged in networks based on control stations

How to Configure Bridging in SmartPTT Dispatcher Console

You can configure bridging settings in the call bridging table in SmartPTT Dispatcher. 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:
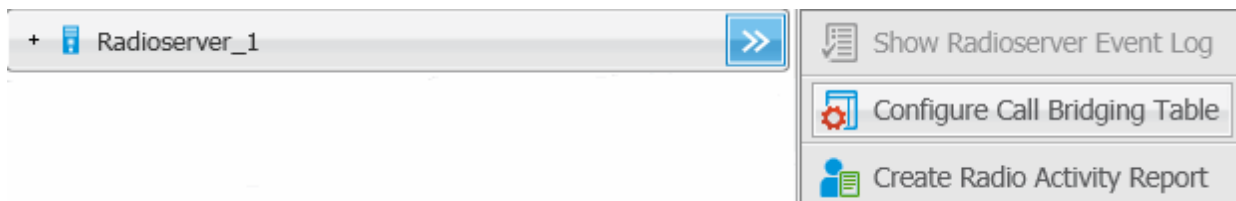
- Routes

- Route Groups

- Profiles

Route: A 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 **Actions List** by clicking the button » next to the radioserver and select **Configure Call Bridging Table**.

The **Bridging Configuration** window opens.
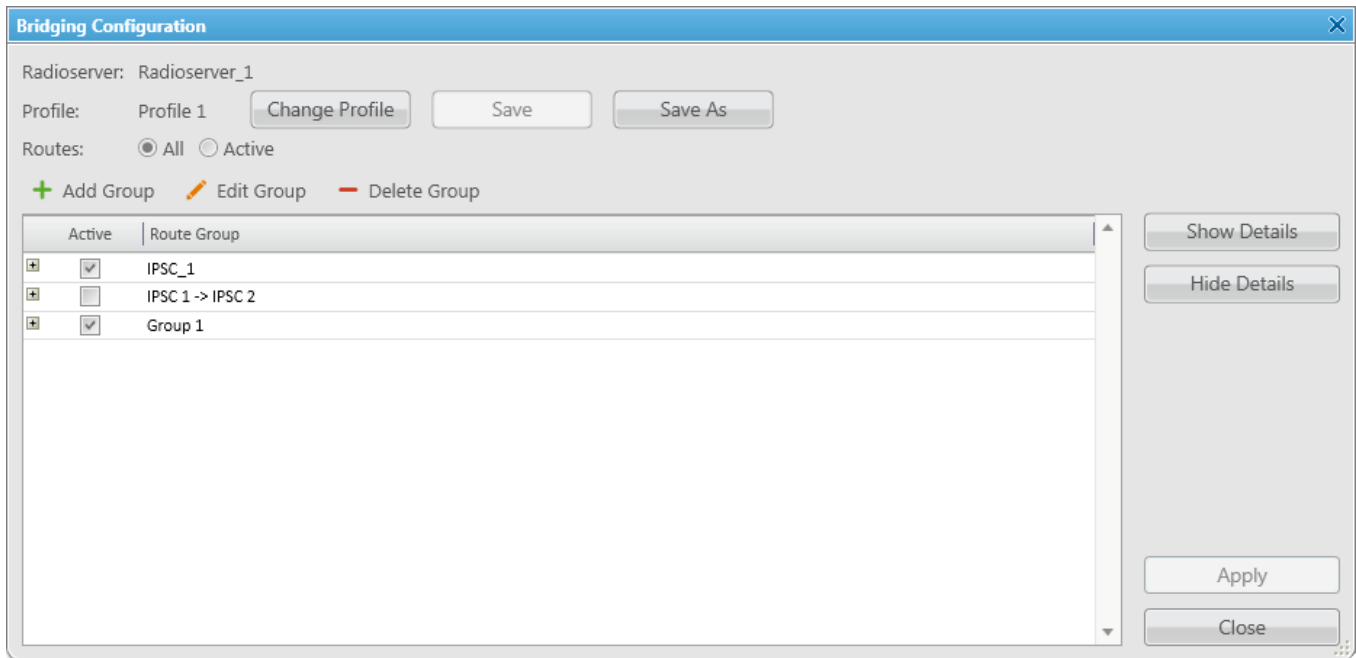
This is the main window from where you can create routes, route groups and add them to new profiles. The window also informs about the name of the current radioserver, its current profile, the list of available routes organized in groups.

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** check box.
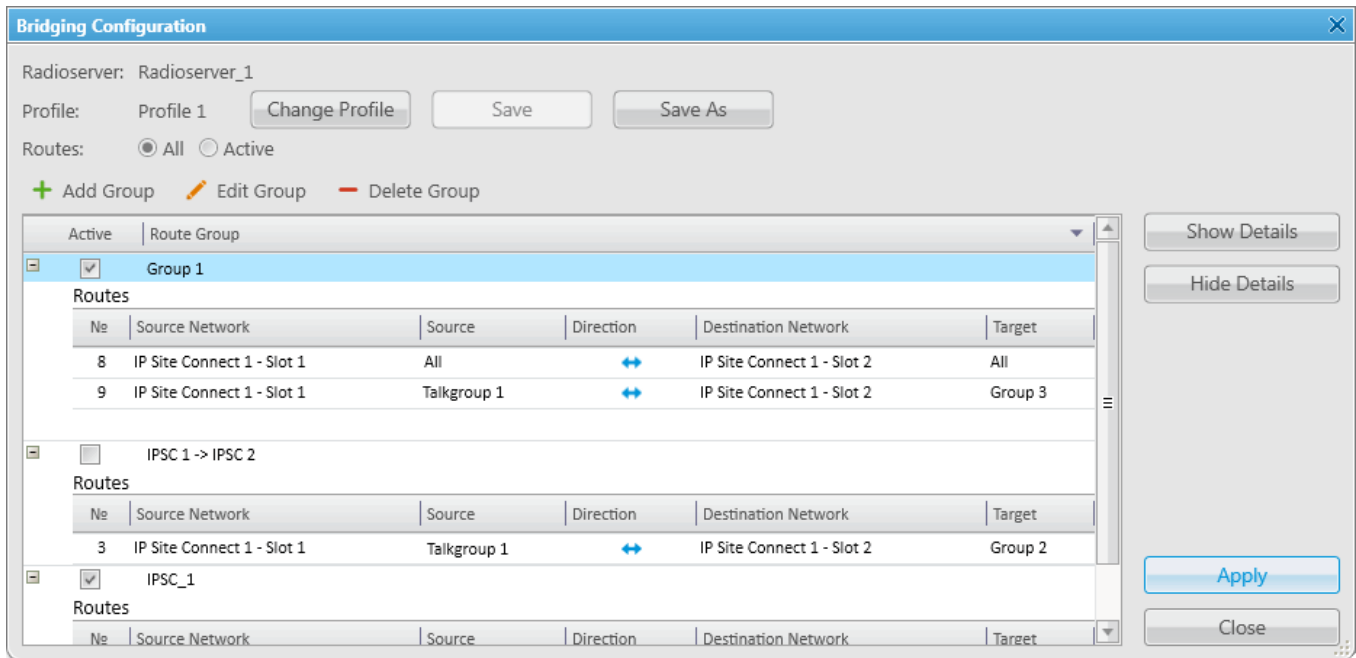
By default, the bridging table displays only active route groups, which belong to the selected profile. To display all route groups, select the **All** option.

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.

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.
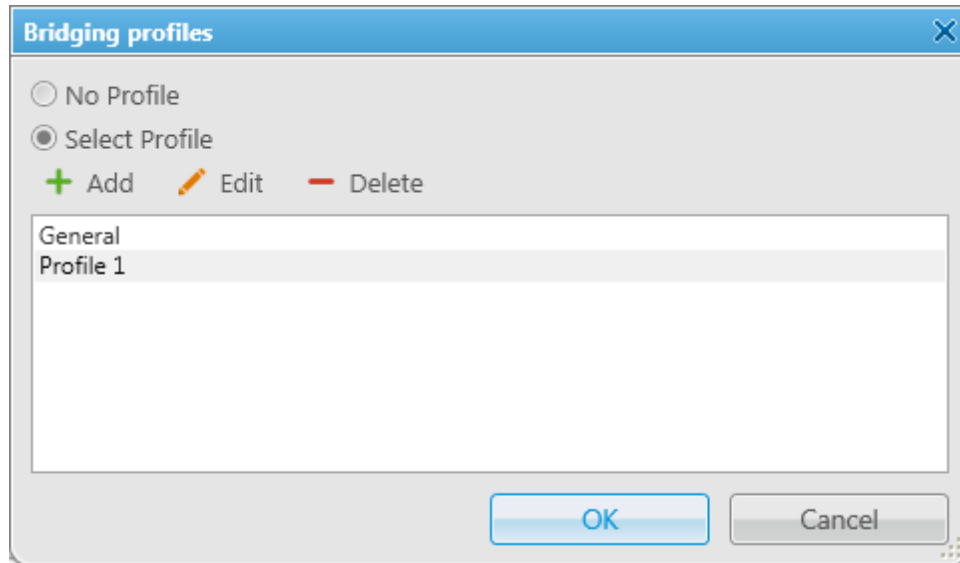
If **No Profile** is selected, the created groups have no reference to a specific profile. The profile list and buttons for profile edition are not available in the **Bridging Profiles** window.

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. The **Enter Profile Name** window appears: Use the **Profile Name** field to specify the profile name, click **OK**.
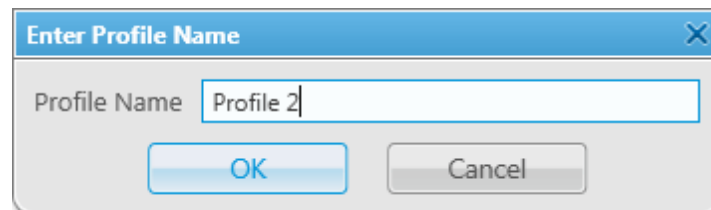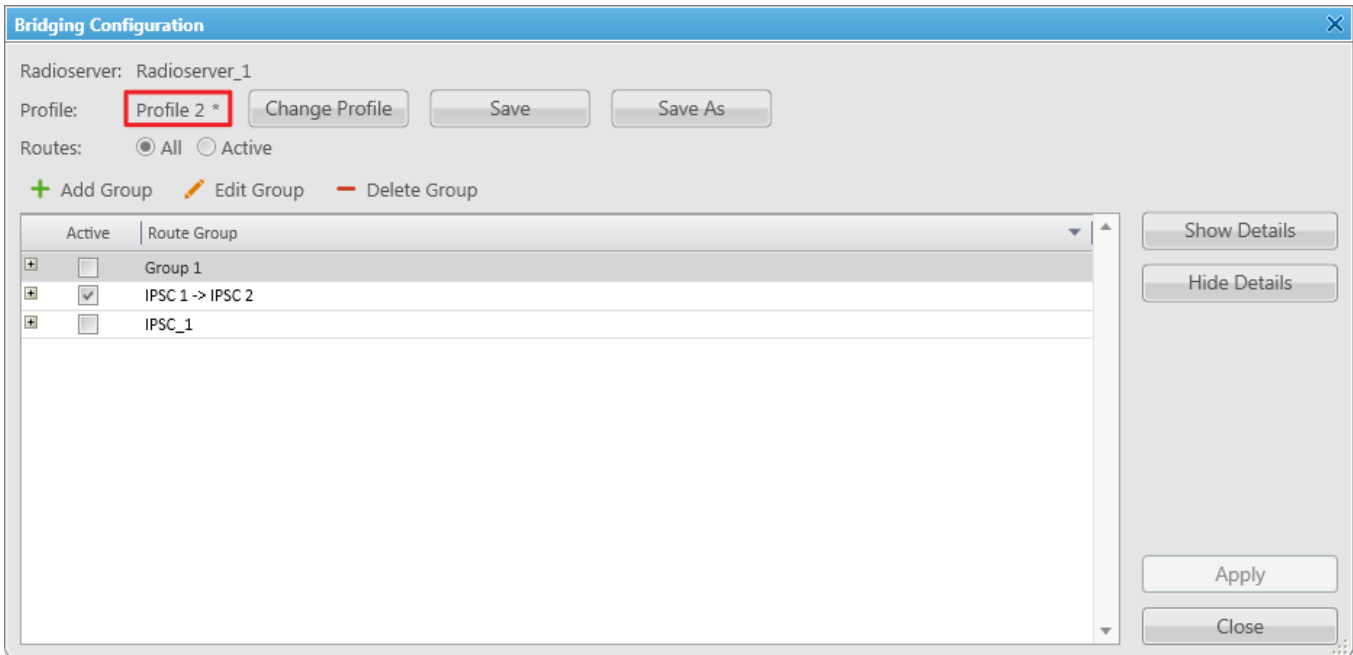

Left-click on the profile name in the **Bridging Profiles** window and click **OK**.

In the list of groups, select **Active** check boxes near the route groups that should apply to the chosen profile.
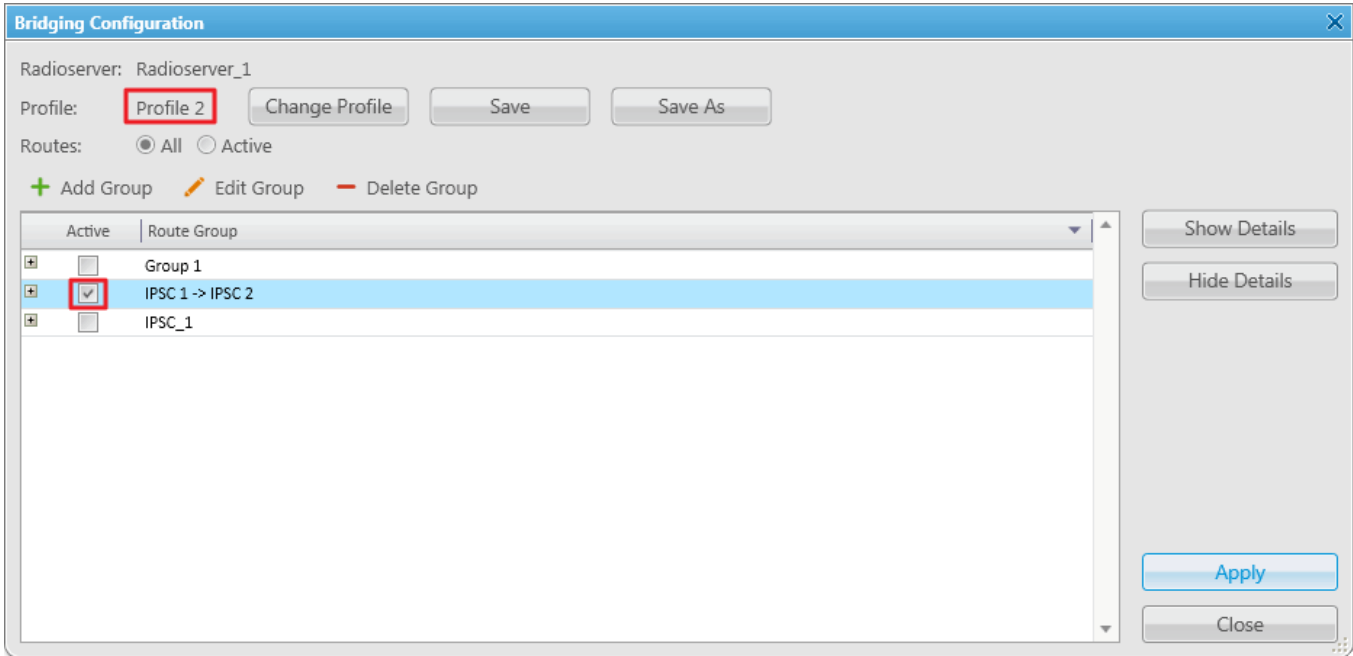

As you finished editing the profile settings, click **Apply** to activate the current profile settings. The asterisk character ("*") appears in front of the profile name.

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.
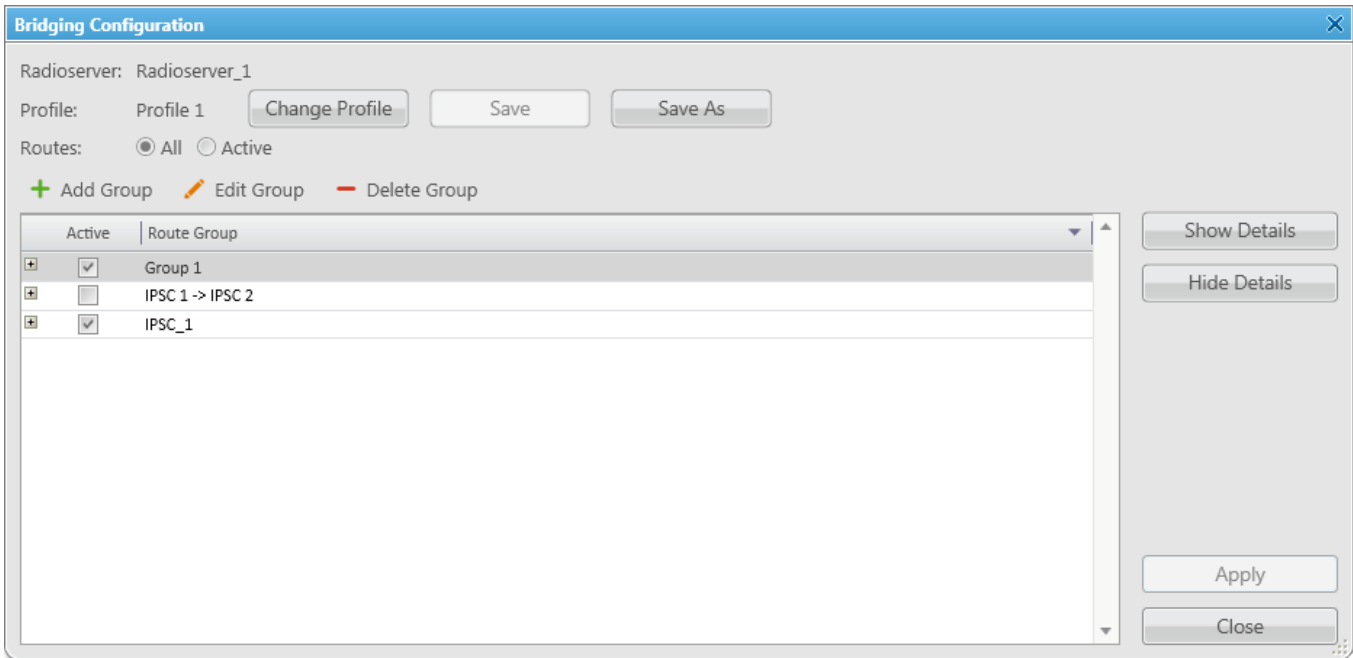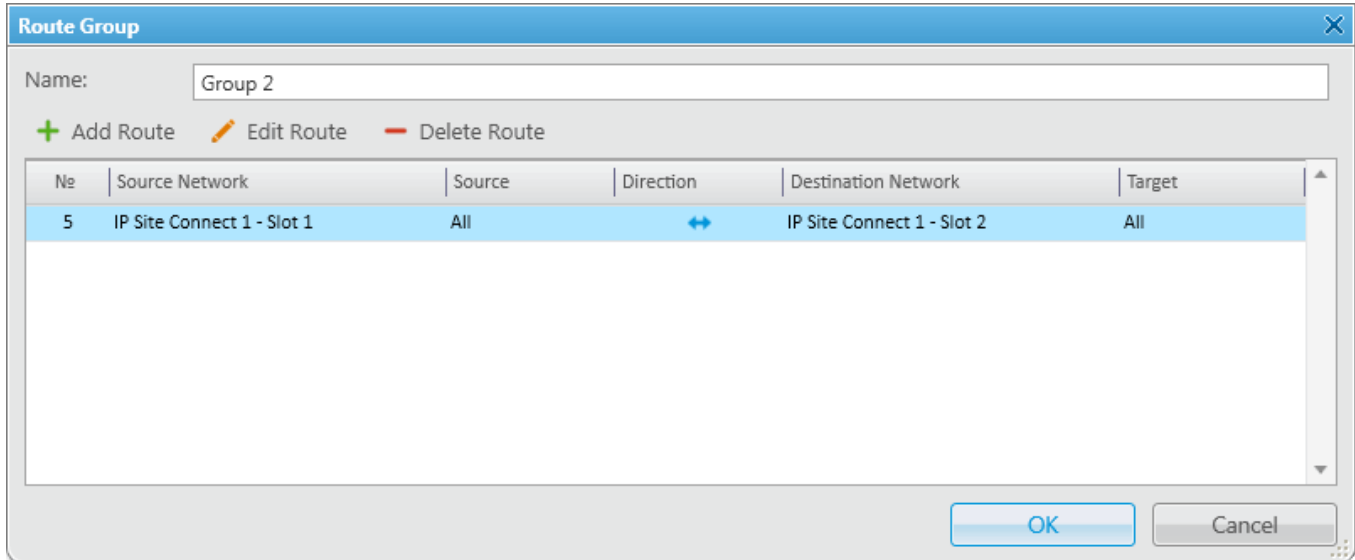

Save As: Allows you to save a copy of the current profile with a new name.

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. The window for adding routes opens up.
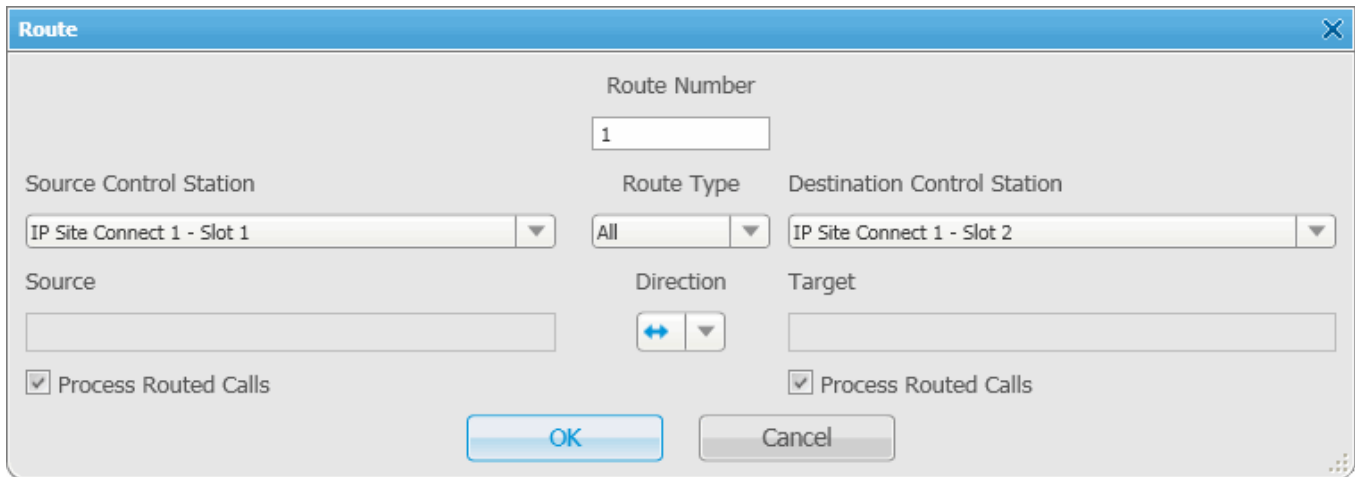
This is the window where you create routes. Here you can define the source and the target networks, route direction (one-way or two-way), the source radio or talkgroup and the target radio or talkgroup. You can also select the **Route Type**, which depends on the data type you want to patch.

Here you can find a detailed description how to configure routes of different types.

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** check box 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 check box 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).

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. For All Call, use *0* as **Source ID** or **Target ID**.

Configuring "Radio" Route Type

To patch individual calls or text messages, in the **Route Type** field select **Radio**.

> **NOTE**
> Since private calls cannot be bridged in control station networks, this route type is not supported in such networks.

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 radio ID from the source network. The **Target** field will be populated automatically. In this case, all the radios from the destination network (see **Destination Control Station**) will be able to call to radio 123 and v.v.



2.4. Configuring "Dynamic" Route Type

> **NOTE**
>
> Since private calls cannot be bridged in control station networks, this route type is not supported in such networks.

To patch private voice calls or text messages of the radios from the **Radio Groups**, select **Dynamic** in the **Route Type** field.
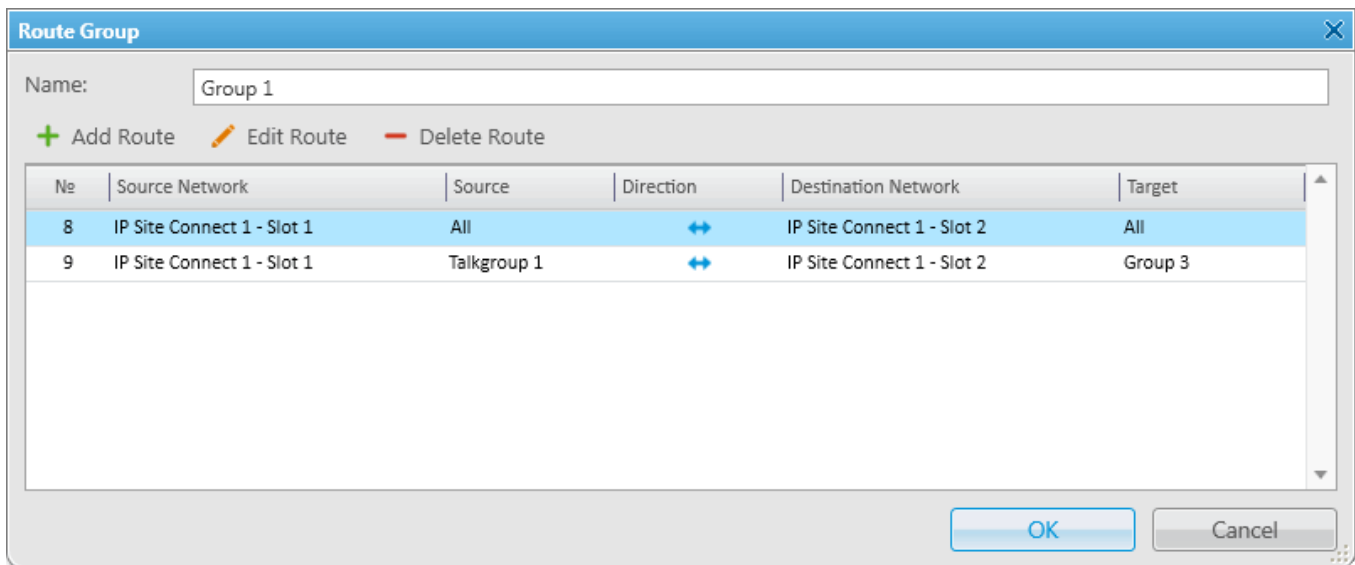
In the **Radio Group** select a group, which was added in **Radio Groups** of SmartPTT Radioserver Configurator.
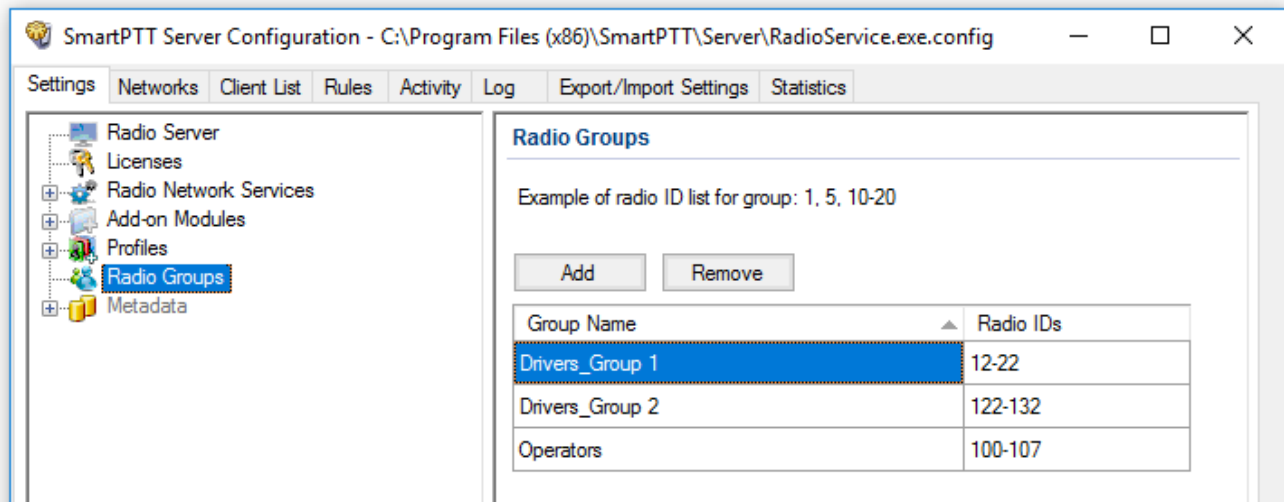
Once created, the routes will display in the **Route Group** window. Here is the example of the route group containing routes of three types (**All**, **Group**, **Radio**).

Activating Bridging Service

To activate Bridging Service, follow these steps:

1. Run SmartPTT Radioserver Configurator.

2. Click **Bridging**.

3.   Select **Active**.

4.   Save changes and restart the SmartPTT Radioserver.

# 11 Help

The **Help** menu includes:

- **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

- Check for Updates

12 Remote Assistance

SmartPTT contains Remote Assistance program which provides the remote access to your computer for SmartPTT technical support engineer. Using this program he can resolve technical issues on your computer.

To use Remote Assistance program, follow these steps:
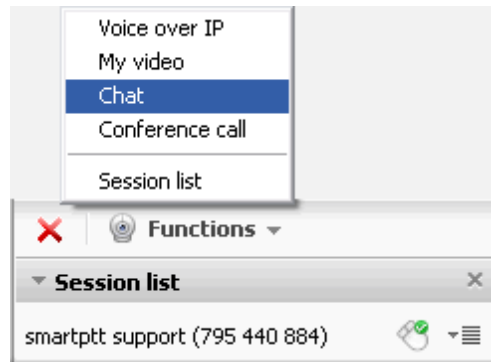
1.   Run *Remote Assistance*.

2.   Contact technical support engineer and pass your ID and password to it.
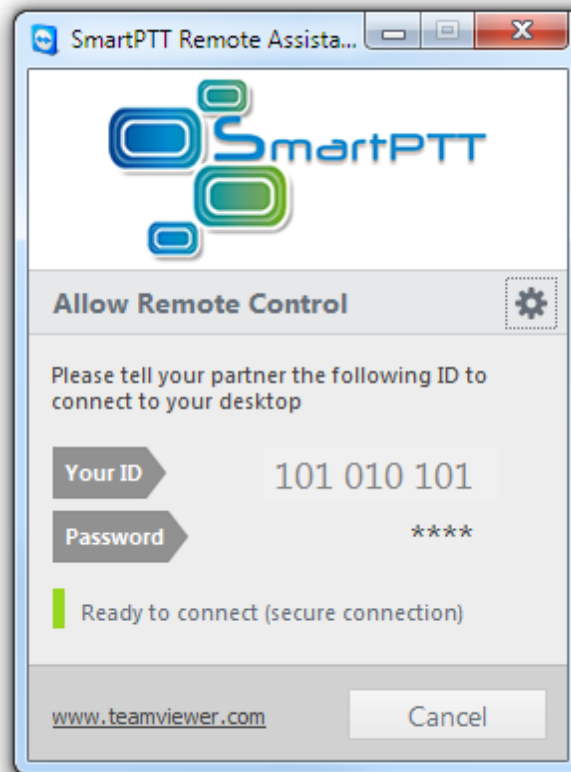
3.   When the connection is established, you will see session window on the screen.
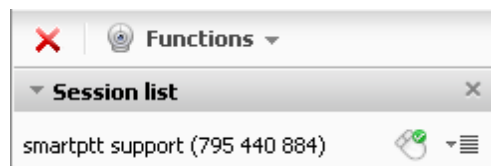
4.   Chat function can be used for communication with the engineer.

5.   To stop the session, click **Close** [×].