ECS (Enhanced Conventional System) Dispatching System User Manual

Version: V1.0

<All rights reserved.No spreading abroad without permission of Caltta.>

Revision record

Edition	Date	Remarks
V1.0	2019.11	

© 2020 Caltta Technologies Co.,Ltd. All rights reserved

Copyright statement:

The copyright of this document belongs to Caltta Technologies Co.,Ltd. Text contains proprietary information owned by Caltta Technologies Co.,Ltd., without the written permission of Caltta Technologies Co.,Ltd., any unit or individual shall not use or leak any document and pictures, this document contains tables, picture, data and other information.

The information in this document contains the development progress of Caltta Technologies Co.,Ltd. products and technology will continue to update, Caltta Technologies Co.,Ltd. would not notice such information updates.

INDEX

1. Overview..... 10
2. System..... 11
2.1. Log in System.....11
2.2. System Parameters Configuration.....12
2.2.1. Storage Path Configuration.....12
2.3. About the System..... 13
2.4. Log out System..... 14
3. Configure.....14
3.1. Terminal Management.....14
3.1.1. Add Terminal.....15
3.1.2. Edit Terminal.....15
3.1.3. Delete Terminal.....16
3.1.4. Batch Export Terminals.....16
3.1.5. Batch Import Terminals.....17
3.1.6. Search Terminal.....18
3.2. Group Management.....19
3.2.1. Add Group.....19
3.2.2. Edit Group.....20
3.2.3. Delete Group.....20
3.2.4. Batch Export Groups.....21
3.2.5. Batch Import Groups.....21
3.2.6. Search Group.....23
3.3. BS (Base Station) Management.....24
3.3.1. Add Base Station.....24
3.3.2. View Base Station.....27
3.3.3. Edit Base Station.....27
3.3.4. Delete Base Station.....29
3.3.5. Search Base Station.....29
3.4. Dispatcher Management..... 30
3.4.1. Add Dispatcher.....31
3.4.2. View Dispatcher.....32
3.4.3. Edit Dispatcher.....32
3.4.4. Delete Dispatcher.....33
3.4.5. Search Dispatcher..... 34
4. Dispatch.....35
4.1. Interface Introduction.....35
4.1.1. Call Panel..... 35
4.1.2. Resource List.....36
4.1.3. Voice Control.....37
4.2. Add to Dispatch Area..... 37
4.3. Voice Call..... 39

<All rights reserved.No spreading abroad without permission of Caltta.>

4.3.1. Initiate Private Call..... 39
4.3.2. Answer Private Call..... 40
4.3.3. Initiate Group Call..... 41
4.3.4. Answer Group Call..... 42
4.3.5. Initiate All Call..... 44
4.3.6. Answer All Call..... 45
4.4. Intercommunication of Dispatchers..... 46
4.5. Receive Emergency Call..... 46
5. Map..... 46
5.1. Interface Introduction..... 47
5.2. Positioning Radio..... 47
5.2.1. Single time Location..... 48
5.2.2. Real-time Location..... 49
5.3. Use Map Toolbar..... 50
5.4. Geo-fencing..... 51
5.4.1. Add Geo-fencing Task..... 51
5.4.2. Geo-fencing Alarm..... 53
5.4.3. Stop Geo-fencing Task..... 54
5.4.4. Delete Geo-fencing Task..... 56
5.5. Interest Point..... 56
5.5.1. Add Interest Point..... 56
5.5.2. Edit Interest Point..... 57
5.5.3. Delete Interest Point..... 58
5.6. Radio Visual Dispatch..... 59
5.7. Track Playback..... 59
6. Message..... 61
6.1. Interface Introduction..... 61
6.2. Send Message..... 62
6.3. Receive Message..... 63
7. Report..... 64
7.1. Interface Introduction..... 64
7.2. Query Call Record..... 65
7.2.1. Voice Recording Download / Replay..... 65
7.3. Query Online / Offline Record..... 66
7.4. Query Short Message..... 67
7.5. Query Geo-fencing..... 67

<All rights reserved.No spreading abroad without permission of Caltta.>

Figure Index

Figure 1-1 Sample diagram of DMR enhanced conventional networking....10
Figure 2-1 IP selection before login....11
Figure 2-2 Login interface....11
Figure 2-4 Dispatcher main interface....12
Figure 2-5 Modify stoarge path....13
Figure 2-6 View system information....13
Figure 2-7 Click "Close" to logout....14
Figure 2-8 Prompt before logout....14
Figure 3-1 Terminal management interface....15
Figure 3-2 Add terminal....15
Figure 3-3 Edit terminal - 1....15
Figure 3-4 Edit terminal - 2....16
Figure 3-5 Delete terminal....16
Figure 3-6 Batch export terminals....16
Figure 3-7 Prompt after export success....17
Figure 3-8 Excel file for batch import terminals....17
Figure 3-9 Batch import terminals....17
Figure 3-10 Prompt after import success....18
Figure 3-11 Search terminal....18
Figure 3-12 Search results containg "60"....18
Figure 3-13 Search results containg "Security"....19
Figure 3-14 Group management interface....19
Figure 3-15 Add group....20
Figure 3-16 Edit group - 1....20
Figure 3-17 Edit group - 2....20
Figure 3-18 Delete group....20
Figure 3-19 Batch export groups....21
Figure 3-20 Prompt after export success....21
Figure 3-21 Excel file for batch import groups....22
Figure 3-22 Batch import groups....22
Figure 3-23 Prompt after import success....22
Figure 3-24 Search group....23
Figure 3-25 Search results containg "65"....23
Figure 3-26 Search results containg "Security"....23
Figure 3-27 BS management interface....24
Figure 3-28 Base Station ID configuration via CPS....24
Figure 3-29 Base station password configuration via CPS....25
Figure 3-30 Configure base station basic information....25
Figure 3-31 Add base station with available group - 1....26
Figure 3-32 Add base station with available group - 2....26
Figure 3-33 View base station basic information....27

<All rights reserved.No spreading abroad without permission of Caltta.>

Figure 3-34 View base station's available group....27
Figure 3-35 Edit base station basic information....27
Figure 3-36 Edit base station's available group....28
Figure 3-37 Delete available group from base station....28
Figure 3-38 Delete base station....29
Figure 3-39 Search base station....29
Figure 3-40 Search results containg "4"....30
Figure 3-41 Search results containg "Caltta"....30
Figure 3-42 Dispatcher management interface....30
Figure 3-43 Add dispatcher basic information....31
Figure 3-44 Add dispatcher with available base station....31
Figure 3-45 View Dispatcher....32
Figure 3-46 Edit dispatcher basic information....32
Figure 3-47 Delete dispatcher's available base station....33
Figure 3-48 Delete dispatcher....34
Figure 3-49 Delete "admin" failure prompt....34
Figure 3-50 Search dispatcher....34
Figure 3-51 Search results containg "906" 34
Figure 3-52 Search results containg "test" 35
Figure 4-1 Dispatch management interface....35
Figure 4-2 Call panel interface....36
Figure 4-3 "Resource" list interface....36
Figure 4-4 Add to dispatch area - 1....37
Figure 4-5 Add to dispatch area - 2....38
Figure 4-6 Add to dispatch area - 3....38
Figure 4-7 Device offline....38
Figure 4-8 Initiate private call via resource list....39
Figure 4-9 Initiate private call via call panel....39
Figure 4-10 Call bar status when receiving private call....40
Figure 4-11 Call panel status when receiving private call....40
Figure 4-12 Call panel status when call is on hold....40
Figure 4-13 Call panel status when there is no call....41
Figure 4-14 Initiate group call via resource list 41
Figure 4-15 Initiate group call via call panel....42
Figure 4-16 Call bar status when receiving group call....42
Figure 4-17 Call panel status when receiving group call....43
Figure 4-18 Call panel status when call is on hold....43
Figure 4-19 Call panel status when there is no call....43
Figure 4-20 Initiate all call via resource list....44
Figure 4-21 Initiate all call via call panel....44
Figure 4-22 Call bar status when receiving all call....45
Figure 4-23 Call panel status when receiving all call....45
Figure 4-24 Intercommunication of dispatchers....46
Figure 4-25 Receive emergency call....46

<All rights reserved.No spreading abroad without permission of Caltta.>

Figure 5-1 Map management interface....47
Figure 5-2 Radio positioning system setting....47
Figure 5-3 Single time location....48
Figure 5-4 Radio information displayed on the map....48
Figure 5-5 Turn on real-time location....49
Figure 5-6 Radio information displayed on the map....49
Figure 5-7 Turn off real-time location....50
Figure 5-8 Map toolbar....50
Figure 5-9 "Geo-fencing" on the map toolbar....51
Figure 5-10 Draw the designated region for Geo-fencing....52
Figure 5-11 Create fence region....52
Figure 5-12 Create fence task....52
Figure 5-13 Geo-fencing alarm....53
Figure 5-14 Geo-fencing alarm detail....53
Figure 5-15 Stop geo-fencing task - 1....54
Figure 5-16 Stop geo-fencing task - 2....54
Figure 5-17 Resource list menu changes after geo-fencing stops....55
Figure 5-18 Start geo-fencing task....55
Figure 5-19 Delete geo-fencing task....56
Figure 5-20 "Interest point" on the map toolbar....56
Figure 5-21 Add interest point....56
Figure 5-22 Interest point display on the map....57
Figure 5-23 Edit interest point - 1....57
Figure 5-24 Edit interest point - 2....58
Figure 5-25 Edit interest point - 3....58
Figure 5-26 Delete interest point....58
Figure 5-27 Radio visual dispatch....59
Figure 5-28 Track Playback - method 1....59
Figure 5-29 Track Playback - method 2....60
Figure 5-30 Play historical track....60
Figure 6-1 Message management interface....61
Figure 6-2 Send Message - method 1....62
Figure 6-3 Send Message - method 2....62
Figure 6-4 Receive new message....63
Figure 6-5 New message in contact list....63
Figure 6-6 Message dialog box detail....63
Figure 7-1 Report management interface....64
Figure 7-2 Query call record....65
Figure 7-3 Call record display....65
Figure 7-4 Voice recording download / replay....66
Figure 7-5 Query online / offline record....66
Figure 7-6 Online / offline record display....66
Figure 7-7 Query Short Message....67
Figure 7-8 Short Message record display....67

<All rights reserved.No spreading abroad without permission of Caltta.>

Figure 7-9 Query geo-fencing.....67
Figure 7-10 Geo-fencing record display.....68

<All rights reserved.No spreading abroad without permission of Caltta.>

Table Index

Table 4-1 "Dispatch" interface explanation..... 35
Table 4-2 "Resource" list interface explanation.....36
Table 5-1 Map interface explanation..... 47
Table 5-2 Map toolbar explanation..... 51
Table 6-1 Message management interface explanation..... 62
Table 7-1 Report management interface explanation..... 65

<All rights reserved.No spreading abroad without permission of Caltta.>

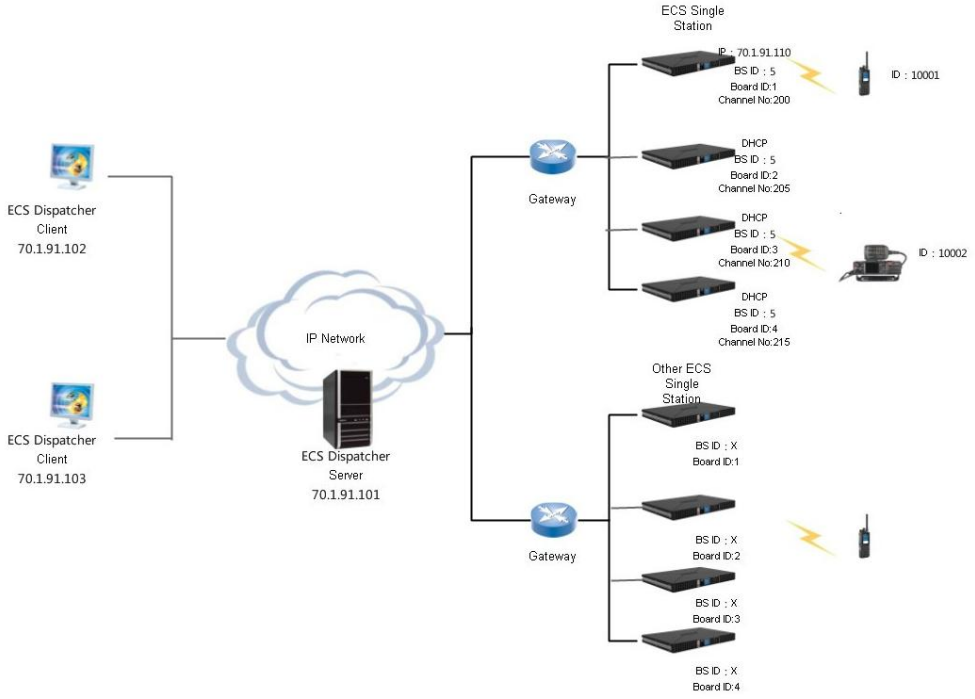
1. Overview

The enhanced conventional PD200 dispatching system is a DMR enhanced conventional dispatching system self-developed by Caltta. The PD200 can realize multifunctional command & dispatch services through access of the repeater PR900 and corresponding DMR radios, build communication network for users, and provide users with great convenience and assistance in PTT communication.

The enhanced conventional PD200 dispatching system adopts C/S architecture and modular design, and is composed of functional modules such as voice dispatch, positioning, short message, and report generation. It is realized based on the standard SIP protocol.

It consists of dispatching client, dispatching server, gateway, repeater, mobile and portable radios.

Figure 1-1 Sample diagram of DMR enhanced conventional networking



<All rights reserved.No spreading abroad without permission of Caltta.>

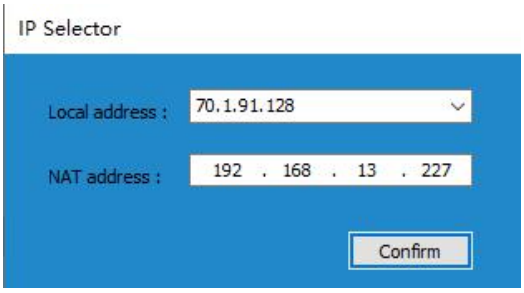
2. System

2.1. Log in System

First, you need to start the server on the server computer, click to run the server software PD200Server on the desktop. The IP selection window pops up as follows.

Select the correct IP address from "Local IP Address" drop-down box, which is used as the server IP address. Fill in "NAT Address" with the mapping IP address during private network traversal (if there is no private network traversal, keep default setting), click "OK" and the server enters background running state.

Figure 2-1 IP selection before login

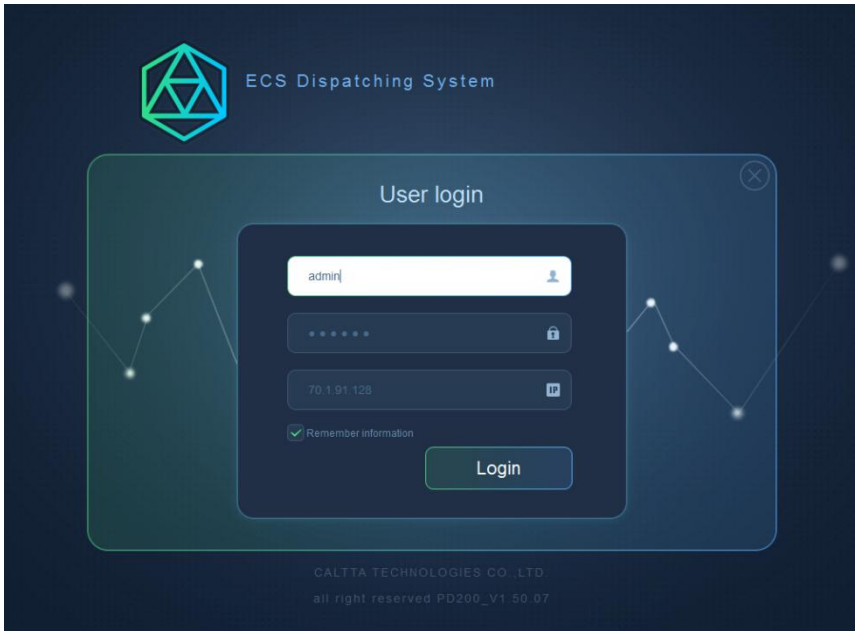


Step 1 Double-click

on desktop or in the installation directory, and login dialog will be shown as follows.

Figure 2-2 Login interface

<All rights reserved.No spreading abroad without permission of Caltta.>



Step 2 Enter username, password (default password 111111) and server IP address, click "Login".

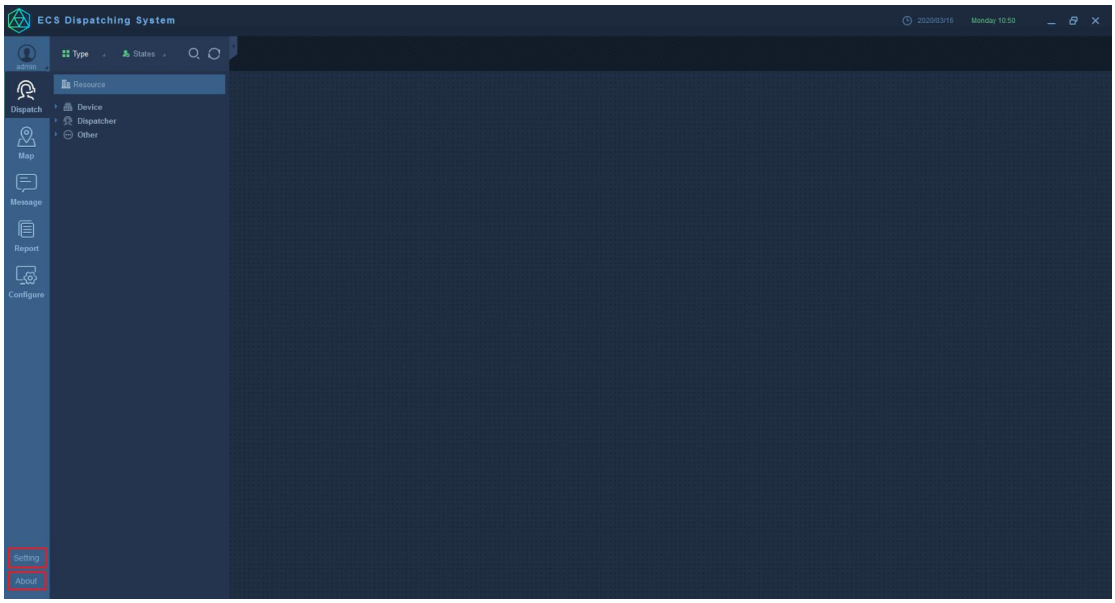
2.2. System Parameters Configuration

2.2.1. Storage Path Configuration

After logging in to the dispatcher client, click "Setting" on the bottom-left corner.

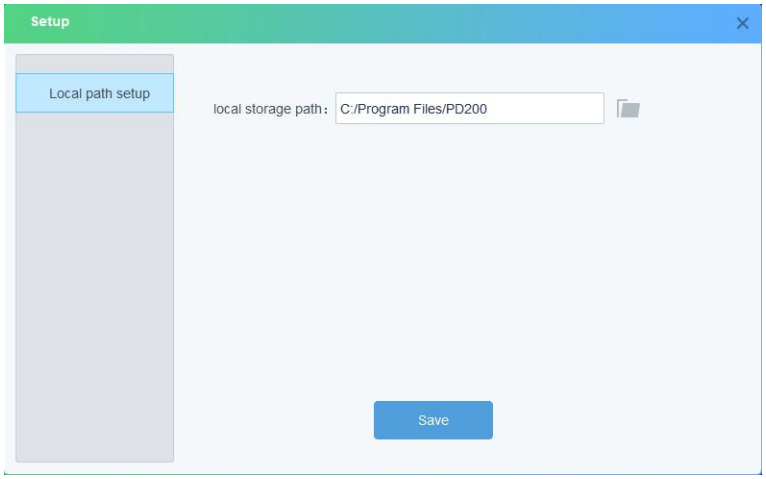
Figure 2-3 Dispatcher main interface

<All rights reserved.No spreading abroad without permission of Caltta.>



You can change the storage path for files saved by clients. This path is used to save client logs, alarm information, recording files, base station tracing logs, and so on.

Figure 2-4 Modify stoarge path



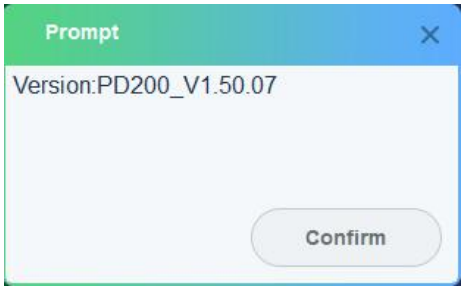
2.3. About the System

After logging in to the dispatcher client, click "About" on the bottom-left corner.

You can view system brief introduction, system version and copyright information, click "OK" to exit.

Figure 2-5 View system information

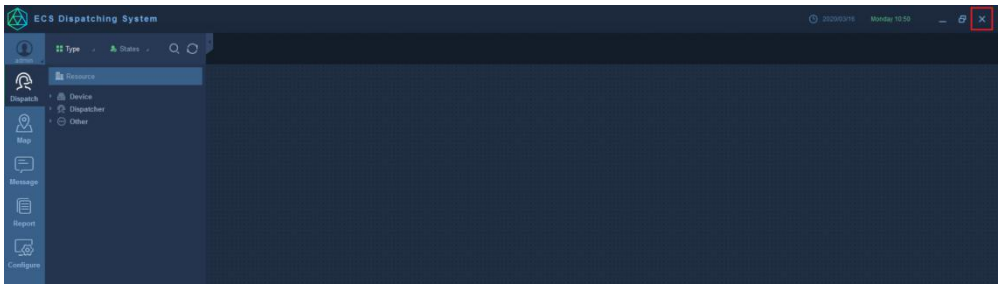
<All rights reserved.No spreading abroad without permission of Caltta.>



2.4. Log out System

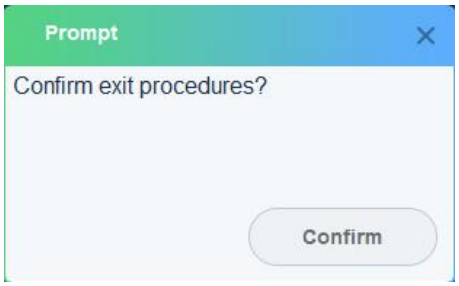
When you do not need to use the system, you can log out the system by clicking the "Close" button in the upper right corner of the interface.

Figure 2-6 Click "Close" to logout



Click "Confirm" on the pop-up page to exit the system.

Figure 2-7 Prompt before logout



3. Configure

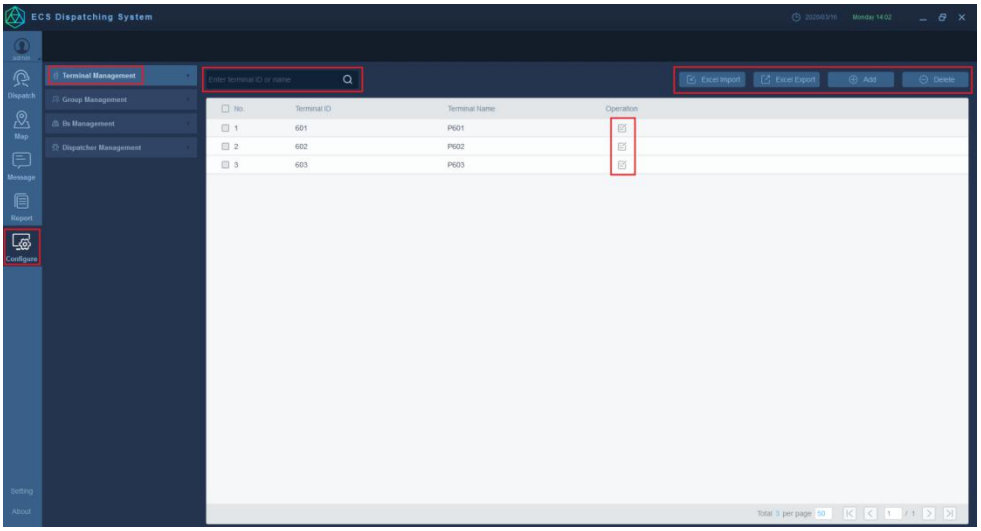
3.1. Terminal Management

"Terminal Management" is mainly used to manage terminal numbers in the dispatching system, which is convenient for the dispatcher to dispatch terminals.

<All rights reserved.No spreading abroad without permission of Caltta.>

"Terminal Management" contains 6 functions: add terminal, edit terminal, delete terminal, batch import / export terminals, search terminal ID / name.

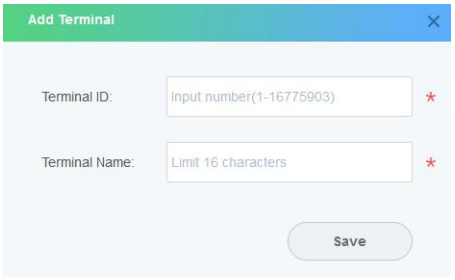
Figure 3-1 Terminal management interface



3.1.1. Add Terminal

The terminal ID range is [1,16775903]. The newly added terminal ID is not allowed to be duplicated with existed terminal ID, and it must be consistent with parameters configured by CPS. The terminal name cannot exceed 16 characters, which can be numbers, letters, symbols, and Chinese characters, and the name is not allowed to be empty.

Figure 3-2 Add terminal



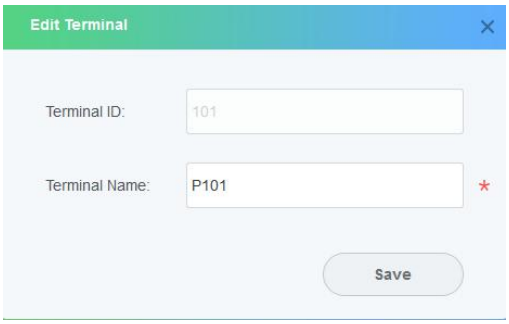
3.1.2. Edit Terminal

The terminal name can be edited and submitted, which cannot exceed 16 characters (can be numbers, letters, symbols, and Chinese characters), and is not allowed to be empty.

Figure 3-3 Edit terminal - 1

<All rights reserved.No spreading abroad without permission of Caltta.>

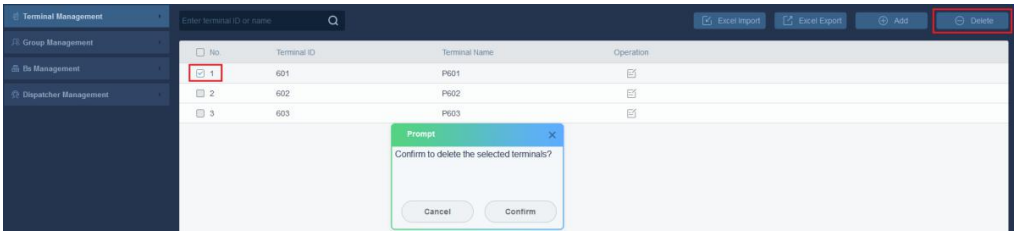
Figure 3-4 Edit terminal - 2



3.1.3. Delete Terminal

Select the terminal you want to delete, select the checkbox in front, and click "Delete" button at the top-right corner. Click "Confirm" on the pop-up page to delete the terminal, otherwise click "Cancel".

Figure 3-5 Delete terminal

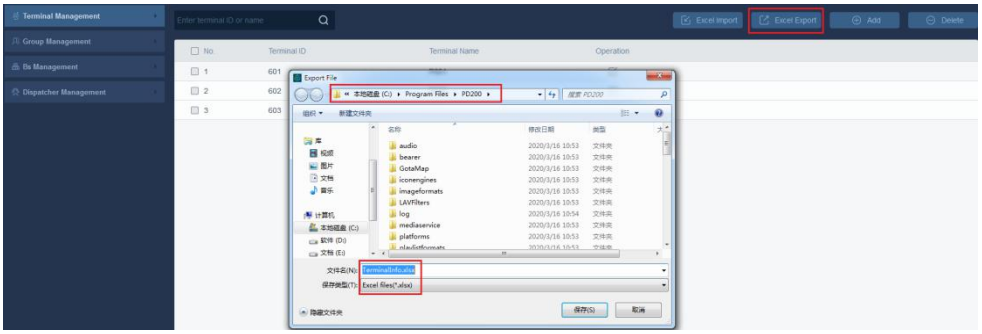


3.1.4. Batch Export Terminals

The "Excel Export" function can export all allocated terminal numbers to an Excel file for easy backup and subsequent use.

On "Terminal Management" page, click "Excel Export", and a dialog box will pop up. Set the path and file name, and click "Save" to save successfully.

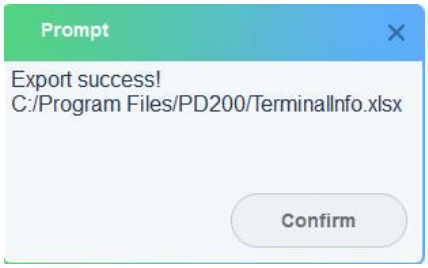
Figure 3-6 Batch export terminals



<All rights reserved.No spreading abroad without permission of Caltta.>

The following dialog box will pop up after successful export.

Figure 3-7 Prompt after export success



3.1.5. Batch Import Terminals

The "Excel Import" function can help you import user number data saved on your local computer, such as a user number file that has been exported as a backup previously.

The user number Excel sheet contains two lines of information: "Terminal ID" and "Terminal Name". You can add / modify "Terminal ID" and "Terminal Name" as you need.

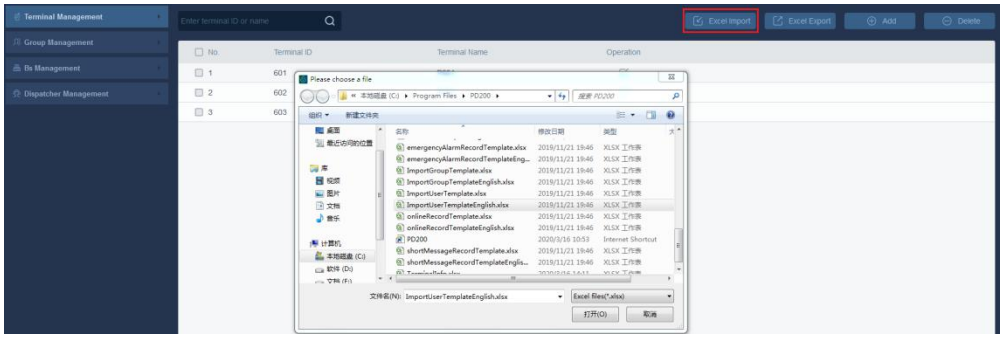
Figure 3-8 Excel file for batch import terminals

Terminal ID	Terminal Name
201	P201
202	P202
203	P203
204	P204
205	P205
206	P206
207	P207
208	P208
209	P209
210	P210

Select "Excel Import", the following page will pop up, you can choose the file to import.

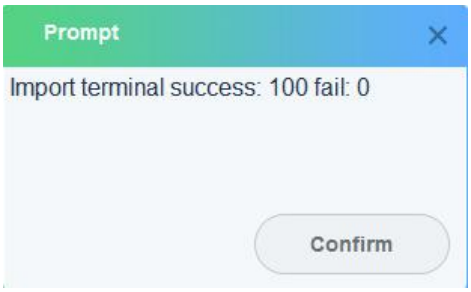
Figure 3-9 Batch import terminals

<All rights reserved.No spreading abroad without permission of Caltta.>



After the import is complete, the number of succeeded and failed imported terminals will be displayed.

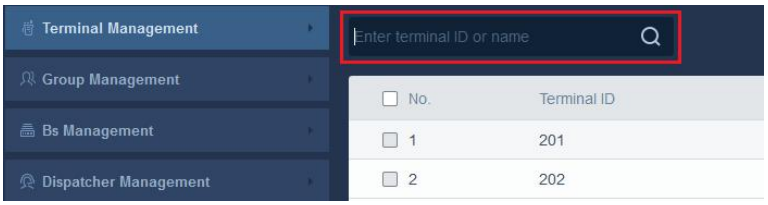
Figure 3-10 Prompt after import success



3.1.6. Search Terminal

Enter the ID or name of the terminal to search. Fuzzy search is supported.

Figure 3-11 Search terminal



The search results are displayed based on search criteria:

Figure 3-12 Search results containg "60"

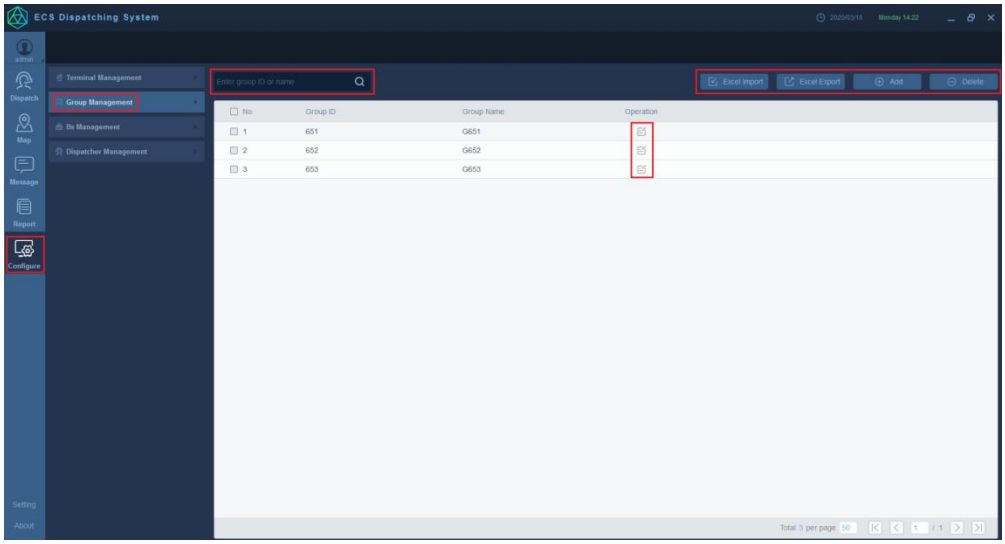
<All rights reserved.No spreading abroad without permission of Caltta.>

Figure 3-13 Search results containg "Security"

3.2. Group Management

"Group Management" contains 6 functions: add group, edit group, delete group, batch import / export groups, search group ID / name.

Figure 3-14 Group management interface

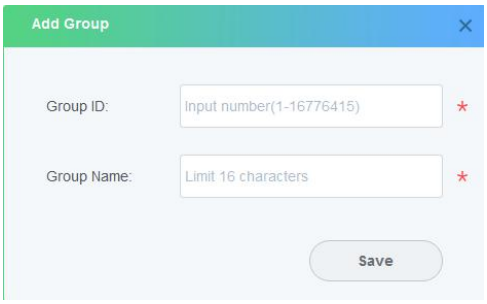


3.2.1. Add Group

The group ID range is [1,16776415]. The newly added group ID is not allowed to be duplicated with existed group ID. The terminal name cannot exceed 16 characters, which can be numbers, letters, symbols, and Chinese characters, and the name is not allowed to be empty.

<All rights reserved.No spreading abroad without permission of Caltta.>

Figure 3-15 Add group



3.2.2. Edit Group

The group name can be edited and submitted, which cannot exceed 16 characters (can be numbers, letters, symbols, and Chinese characters), and is not allowed to be empty.

Figure 3-16 Edit group - 1

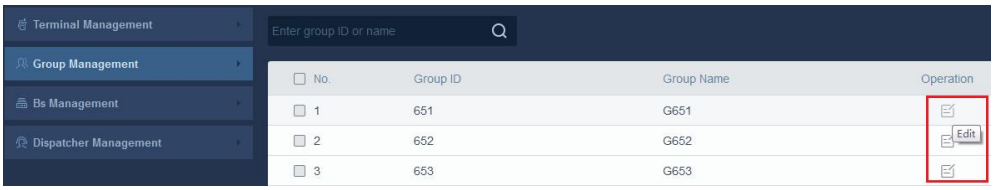
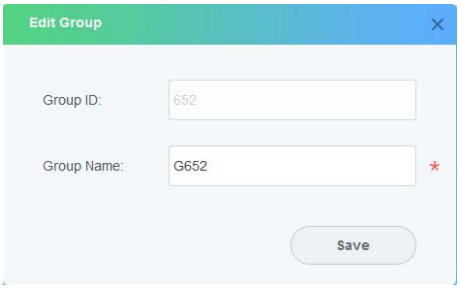


Figure 3-17 Edit group - 2

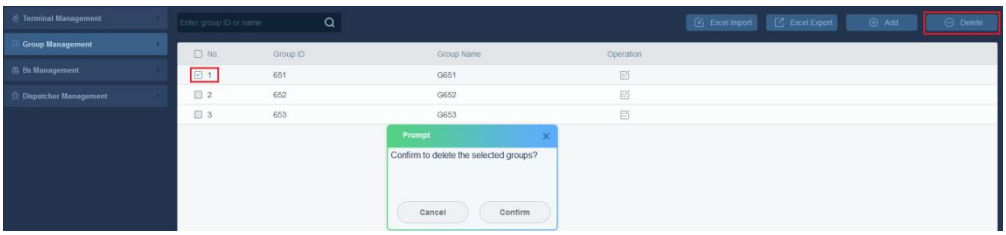


3.2.3. Delete Group

Select the group you want to delete, select the checkbox in front, and click "Delete" button at the top-right corner. Click "Confirm" on the pop-up page to delete the group, otherwise click "Cancel".

Figure 3-18 Delete group

<All rights reserved.No spreading abroad without permission of Caltta.>

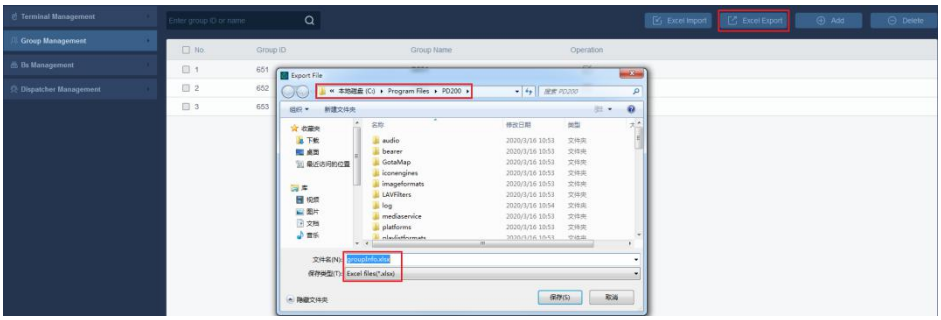


3.2.4. Batch Export Groups

The "Excel Export" function can export all allocated group numbers to an Excel file for easy backup and subsequent use.

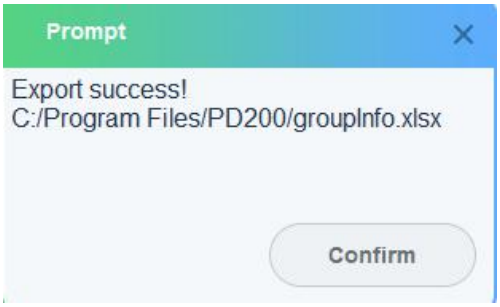
On "Group Management" page, click "Excel Export", and a dialog box will pop up. Set the path and file name, and click "Save" to save successfully.

Figure 3-19 Batch export groups



The following dialog box will pop up after successful export.

Figure 3-20 Prompt after export success



3.2.5. Batch Import Groups

The "Excel Import" function can help you import group number data saved on your local computer, such as a group number file that has been exported as a backup previously.

<All rights reserved.No spreading abroad without permission of Caltta.>

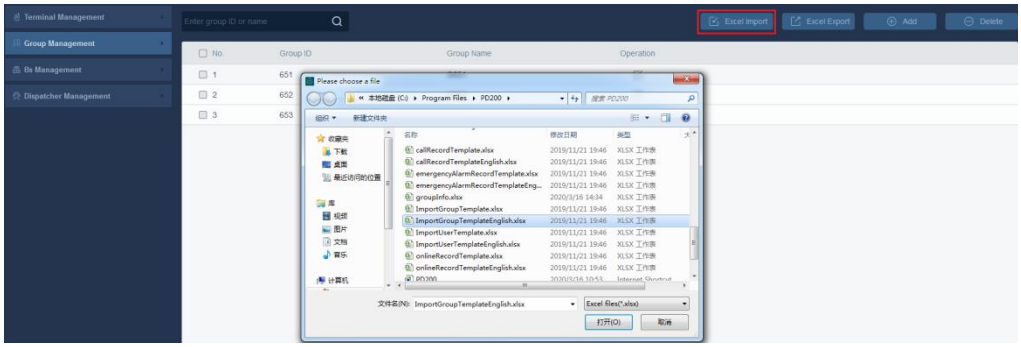
The group number Excel sheet contains two lines of information: "Group ID" and "Group Name". You can add / modify "Group ID" and "Group Name" as you need.

Figure 3-21 Excel file for batch import groups

	A	B
1	Group ID	Group Name
2	900	Security_900
3	901	Security_901
4	902	Security_902
5	903	Security_903
6	904	Security_904
7	905	Security_905
8	906	Security_906
9	907	Security_907
10	908	Security_908
11	909	Security_909
12	910	Security_910

Select "Excel Import", the following page will pop up, you can choose the file to import.

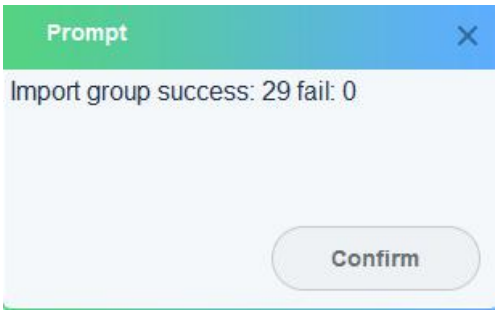
Figure 3-22 Batch import groups



After the import is complete, the number of succeeded and failed imported groups will be displayed.

Figure 3-23 Prompt after import success

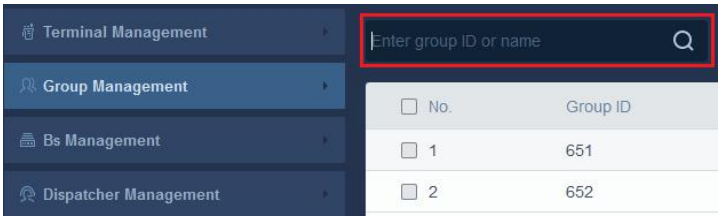
<All rights reserved.No spreading abroad without permission of Caltta.>



3.2.6. Search Group

Enter the ID or name of the group to search. Fuzzy search is supported.

Figure 3-24 Search group

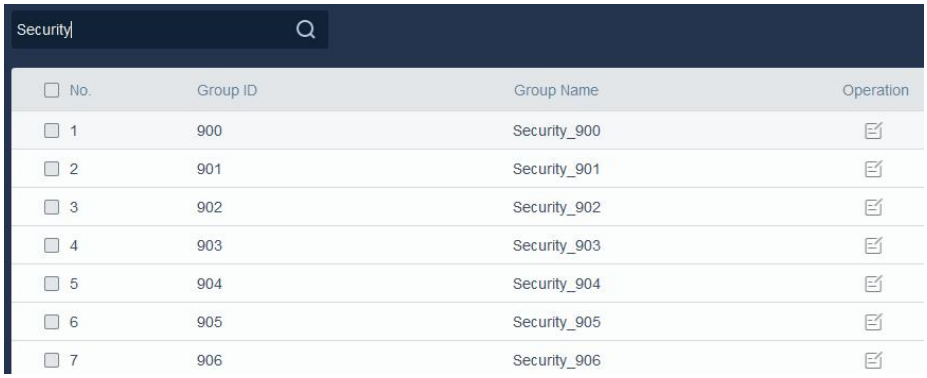


The search results are displayed based on search criteria:

Figure 3-25 Search results containg "65"

Figure 3-26 Search results containg "Security"

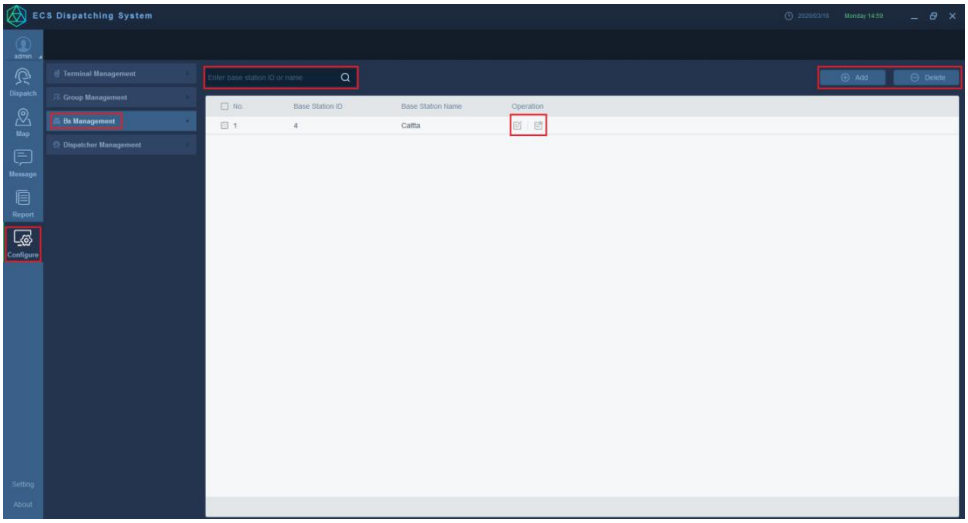
<All rights reserved.No spreading abroad without permission of Caltta.>



3.3. BS (Base Station) Management

"BS Management" contains 5 functions: add base station, view base station, edit base station, delete base station, search base station ID / name.

Figure 3-27 BS management interface



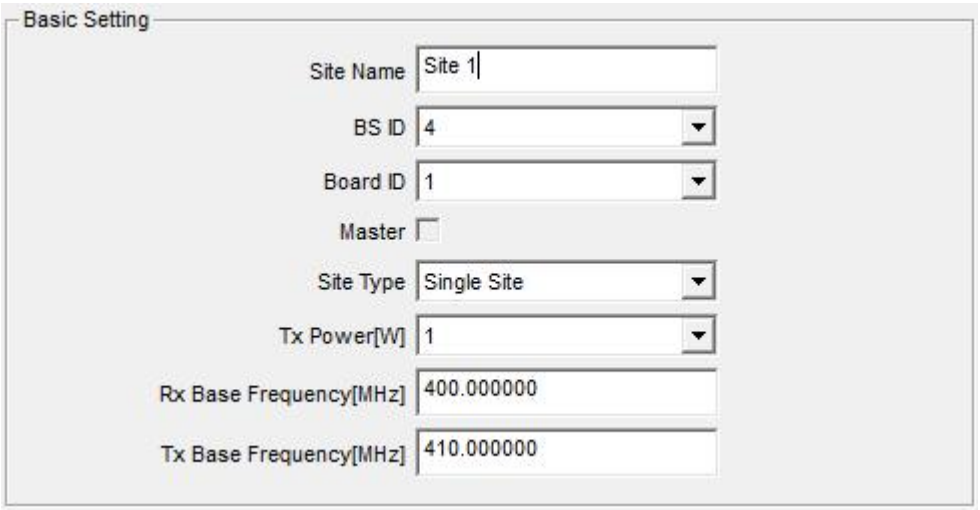
3.3.1. Add Base Station

The base station ID range is [1,16775903]. The newly added base station ID is not allowed to be duplicated with existed base station ID. The base station name cannot exceed 16 characters, which can be numbers, letters, symbols, and Chinese characters, and the name is not allowed to be empty. The base station password can contain the following characters: (0-9, a-z, A-Z, ~!@$%^*).

The base station ID is allocated during CPS configuration.

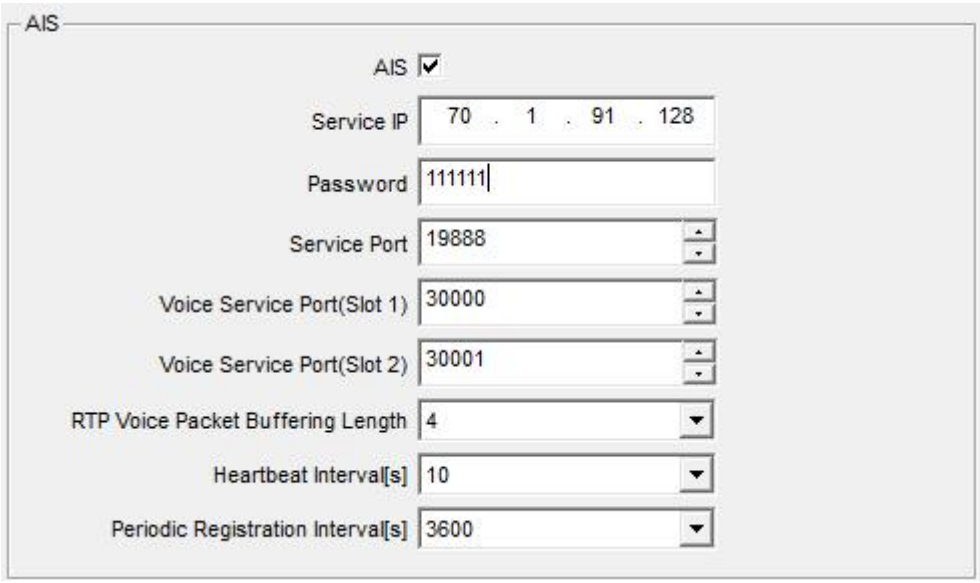
Figure 3-28 Base Station ID configuration via CPS

<All rights reserved.No spreading abroad without permission of Caltta.>



The base station password is configured during CPS configuration, which is used to connect to the dispatching server.

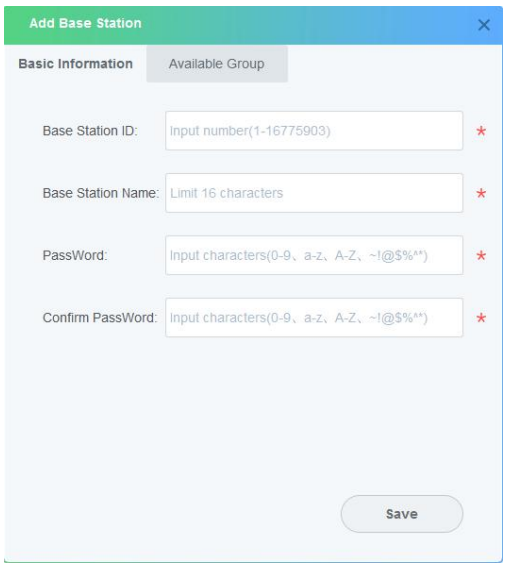
Figure 3-29 Base station password configuration via CPS



When adding a new base station, the base station ID and password must be consistent with CPS configuration, so that the base station can establish link with dispatcher server successfully.

Figure 3-30 Configure base station basic information

<All rights reserved.No spreading abroad without permission of Caltta.>



After entering parameters of the new base station, click "Save",

Select "Add Available Group", to add groups that belong to the base station, and click "Save".

Figure 3-31 Add base station with available group - 1

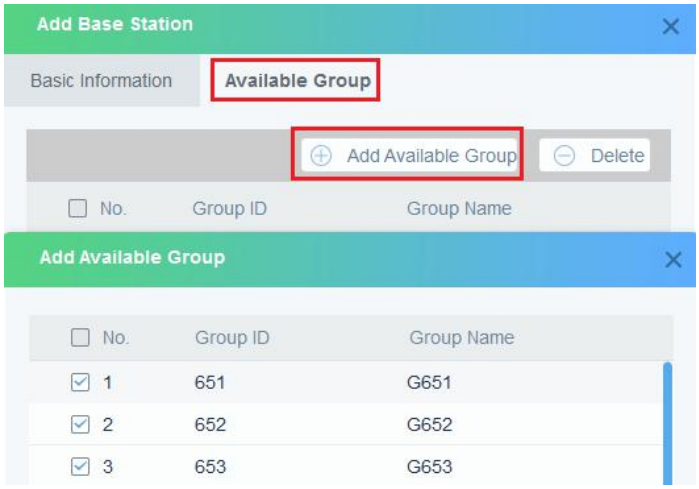


Figure 3-32 Add base station with available group - 2

<All rights reserved.No spreading abroad without permission of Caltta.>

3.3.2. View Base Station

After adding the base station successfully, you can click to view the information of the base station.

Figure 3-33 View base station basic information

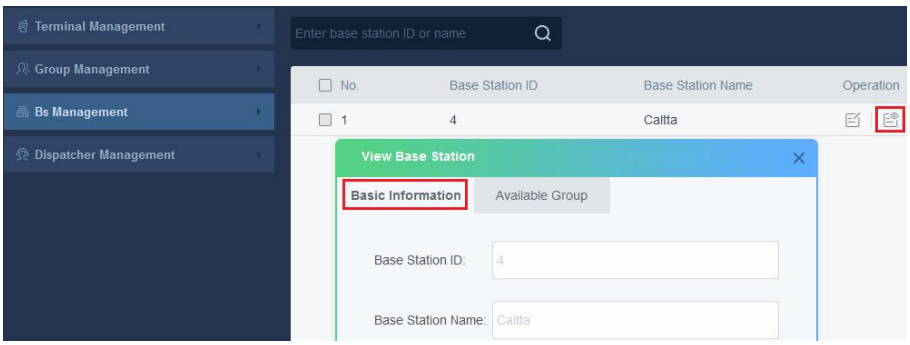
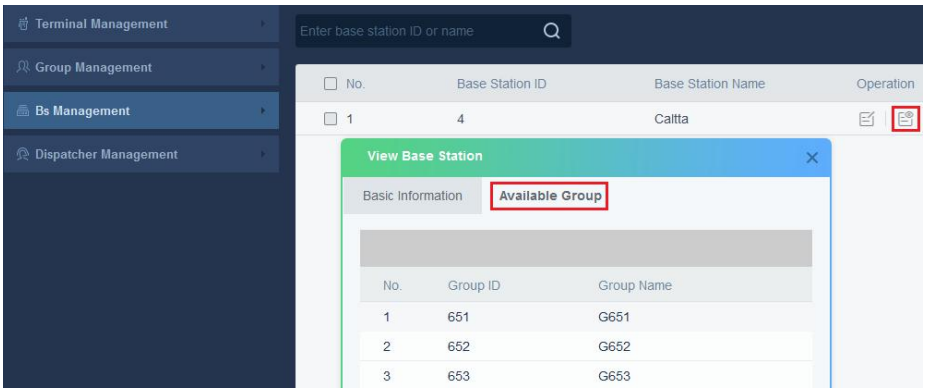


Figure 3-34 View base station's available group

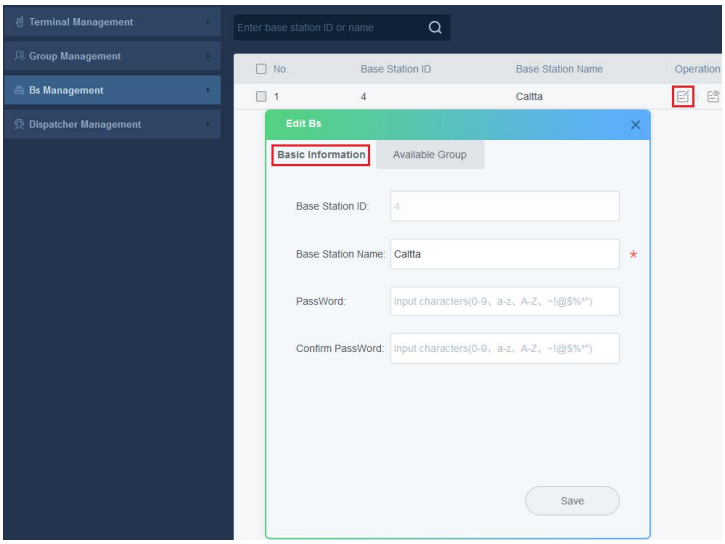


3.3.3. Edit Base Station

You can click to edit the name and password of the base station.

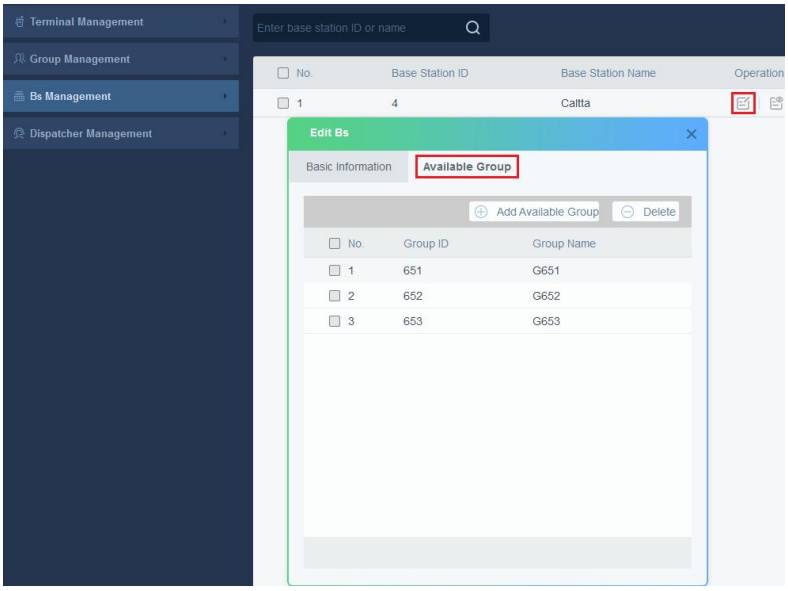
Figure 3-35 Edit base station basic information

<All rights reserved.No spreading abroad without permission of Caltta.>



You can also edit the "Available Group" of the base station.

Figure 3-36 Edit base station’s available group

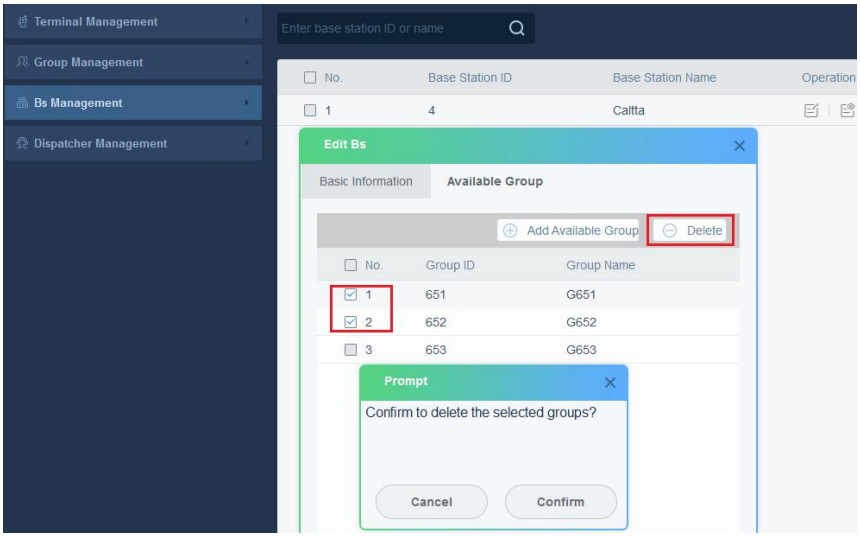


You can perform deletion operation on the "Available Group" of the base station:

Select the group you want to delete, and click "Delete" button at the top-right corner. Click "Confirm" on the pop-up page to delete the group, otherwise click "Cancel".

Figure 3-37 Delete available group from base station

<All rights reserved.No spreading abroad without permission of Caltta.>

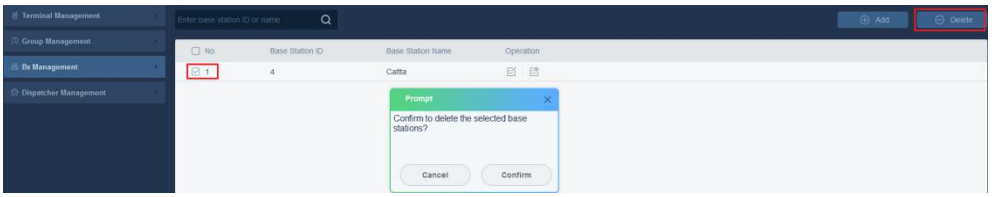


After the deletion is successful, the group no longer belongs to this base station and cannot be dispatched under this base station.

3.3.4. Delete Base Station

Select the base station you want to delete, select the checkbox in front, and click "Delete" button at the top-right corner. Click "Confirm" on the pop-up page to delete the base station, otherwise click "Cancel".

Figure 3-38 Delete base station

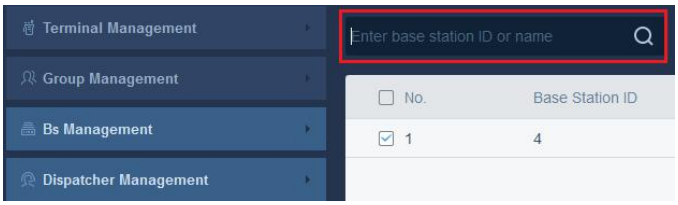


3.3.5. Search Base Station

Enter the ID or name of the base station to search. Fuzzy search is supported.

Figure 3-39 Search base station

<All rights reserved.No spreading abroad without permission of Caltta.>



The search results are displayed based on search criteria:

Figure 3-40 Search results containg "4"

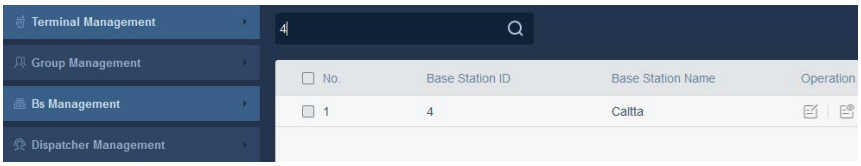
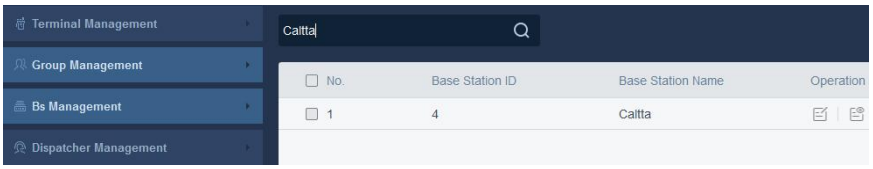


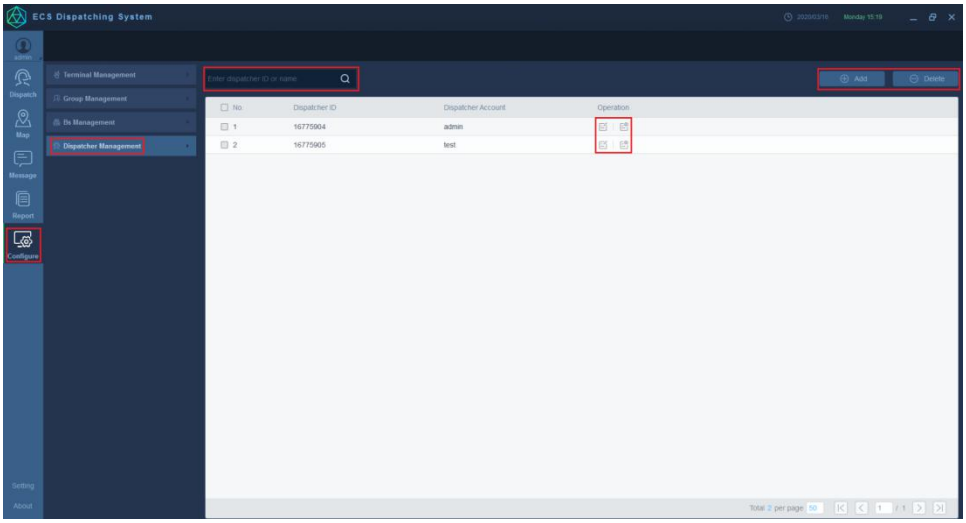
Figure 3-41 Search results containg "Caltta"



3.4. Dispatcher Management

"Dispatcher Management" contains 5 functions: add dispatcher, view dispatcher, edit dispatcher, delete dispatcher, search dispatcher ID / name.

Figure 3-42 Dispatcher management interface

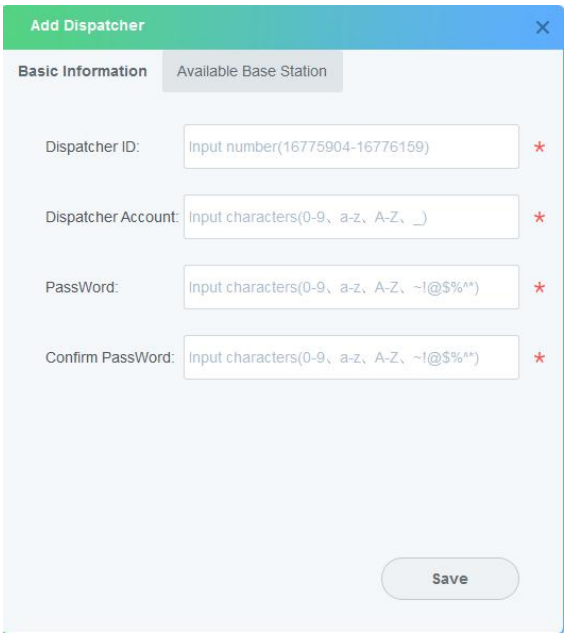


<All rights reserved.No spreading abroad without permission of Caltta.>

3.4.1. Add Dispatcher

The dispatcher ID range is [16775904,16776159]. The newly added dispatcher ID is not allowed to be duplicated with existed dispatcher ID. The dispatcher account cannot exceed 16 characters, which can contain the following characters: (0-9, a-z, A-Z, _, Chinese characters), and the name is not allowed to be empty. The dispatcher password can contain the following characters: (0-9, a-z, A-Z, ~!@$%^*).

Figure 3-43 Add dispatcher basic information

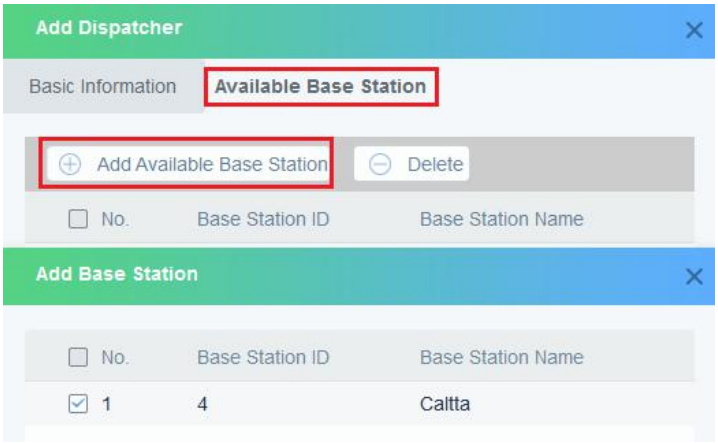


After entering parameters of the new dispatcher, click "Save".

Select "Add Available Base Station" on "Available Base Station" page, to add available base station, and click "Save". Now the dispatcher can perform PTT, positioning, and other dispatching services on the groups and users under the base station.

Figure 3-44 Add dispatcher with available base station

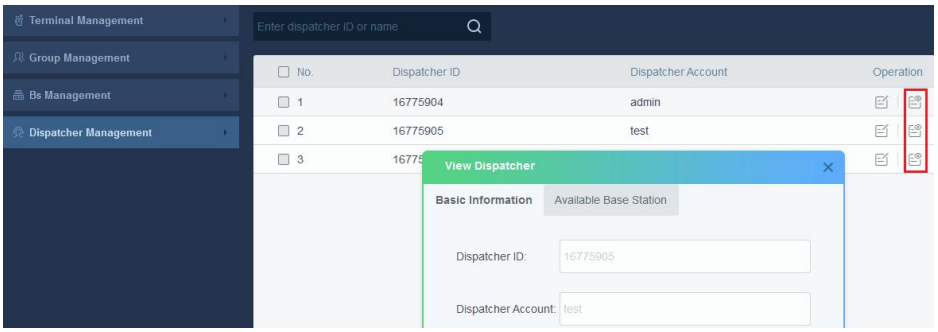
<All rights reserved.No spreading abroad without permission of Caltta.>



3.4.2. View Dispatcher

After adding the dispatcher successfully, you can click to view the information of the dispatcher.

Figure 3-45 View Dispatcher

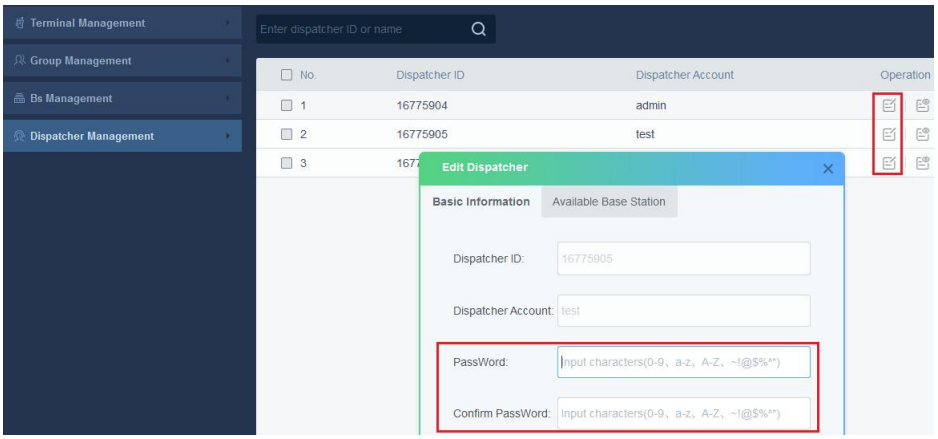


3.4.3. Edit Dispatcher

You can click to edit the password of the dispatcher.

Figure 3-46 Edit dispatcher basic information

<All rights reserved.No spreading abroad without permission of Caltta.>

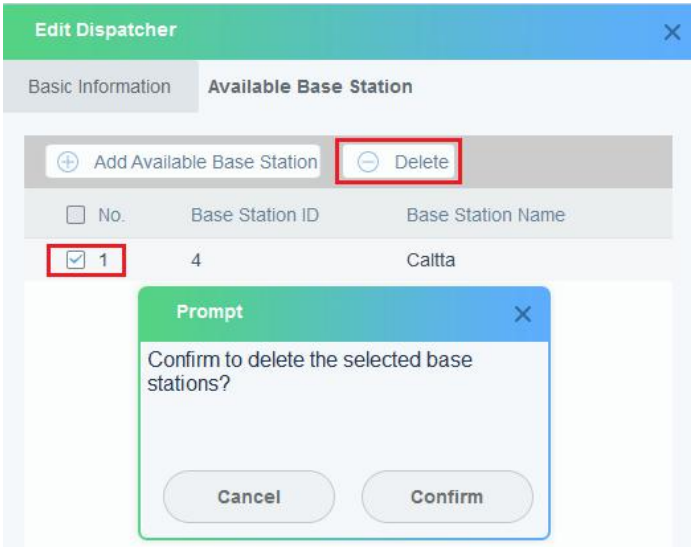


You can also edit the "Available Base Station" of the dispatcher.

You can perform deletion operation on the "Available Base Station" of the dispatcher:

Select the base station you want to delete, and click "Delete" button. Click "Confirm" on the pop-up page to delete the base station, otherwise click "Cancel".

Figure 3-47 Delete dispatcher's available base station

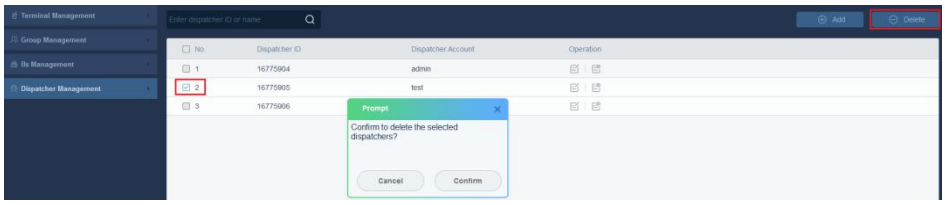


3.4.4. Delete Dispatcher

Select the dispatcher you want to delete, select the checkbox in front, and click "Delete" button at the top-right corner. Click "Confirm" on the pop-up page to delete the dispatcher, otherwise click "Cancel".

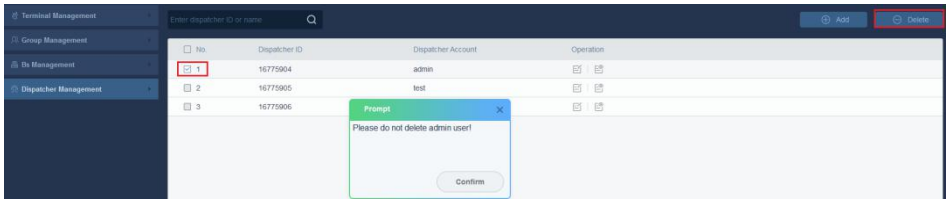
<All rights reserved.No spreading abroad without permission of Caltta.>

Figure 3-48 Delete dispatcher



Note: Dispatcher account "admin" cannot be deleted.

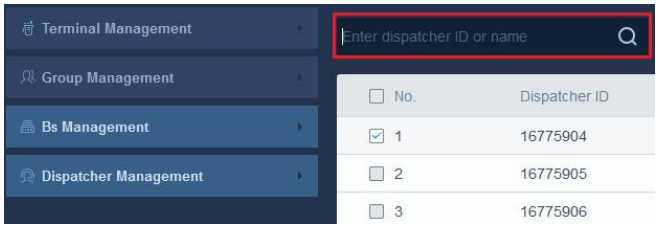
Figure 3-49 Delete "admin" failure prompt



3.4.5. Search Dispatcher

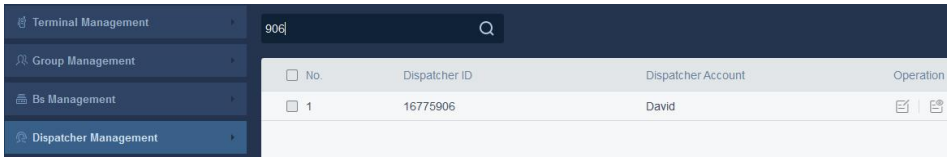
Enter the ID or name of the dispatcher to search. Fuzzy search is supported.

Figure 3-50 Search dispatcher



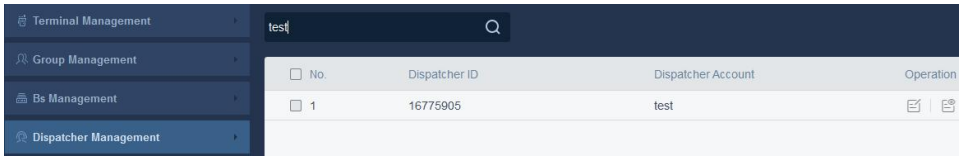
The search results are displayed based on search criteria:

Figure 3-51 Search results containg "906"



<All rights reserved.No spreading abroad without permission of Caltta.>

Figure 3-52 Search results containg "test"



4. Dispatch

The "Dispatch" module provides you with various voice dispatching services such as private call, group call, all call, and dispatcher interworking. The system automatically records the call content during a call, you can check the call log in the "Report" module and replay it.

4.1. Interface Introduction

The main function of dispatch is displayed on the interface, which is convenient for you to use. The main dispatching interface and interface elements are shown as follows.

Figure 4-1 Dispatch management interface

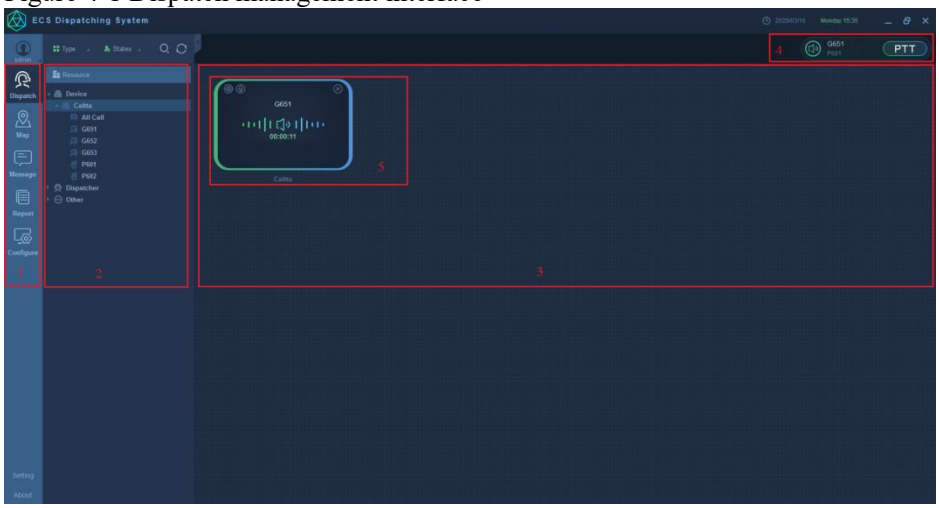


Table 4-1 "Dispatch" interface explanation

No.	Name	No.	Name
1	Main Menu	4	Call Bar
2	Resource List	5	Call Panel
3	Dispatch Area		

4.1.1. Call Panel

The call panel helps you make call and apply for speaking rights.

<All rights reserved.No spreading abroad without permission of Caltta.>

Figure 4-2 Call panel interface

4.1.2. Resource List

The "Resource" list covers all the resources you can access currently. The list contains the following elements:

Figure 4-3 "Resource" list interface

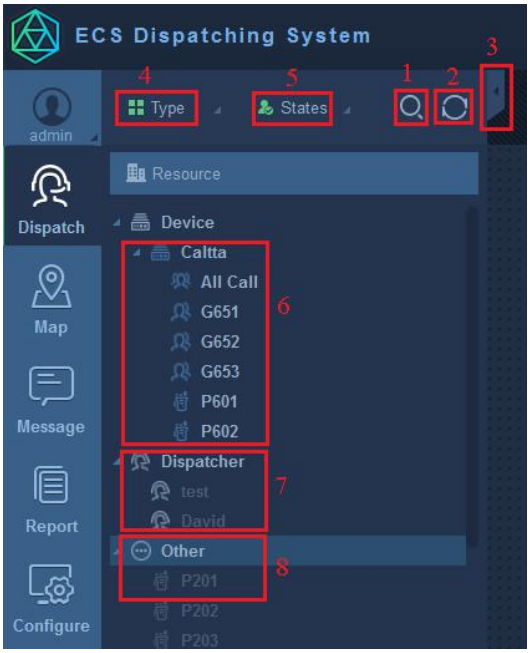


Table 4-2 "Resource" list interface explanation

No.	Name	No.	Name
1	Search	5	States Filter

<All rights reserved.No spreading abroad without permission of Caltta.>

2	Refresh	6	Device List
3	Show details	7	Dispatcher List
4	Type Filter	8	Other List

4.1.3. Voice Control

The sound control is located in the upper left corner of the call panel, and you can set the call to mute state.

Speaker normal mode

Microphone normal mode

Speaker mute mode

Microphone mute mode

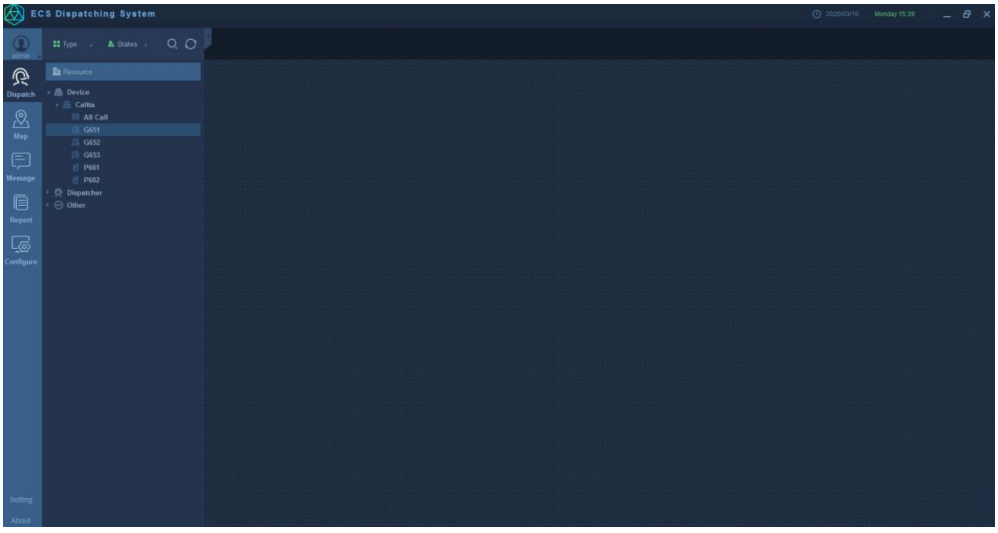
4.2. Add to Dispatch Area

You can add task groups such as dispatching terminals to your dispatch area, which will lead to quick management and dispatch.

Take dispatching terminal as an example, the operation is as follows:

Step 1 Click "Dispatch", and select "Devices" under "Resources" on the left, as shown in the following figure.

Figure 4-4 Add to dispatch area - 1



<All rights reserved.No spreading abroad without permission of Caltta.>

Step 2 Right-click the dispatching terminal, select "Add to Dispatch Area" to add the corresponding terminal to the dispatch area.

Figure 4-5 Add to dispatch area - 2

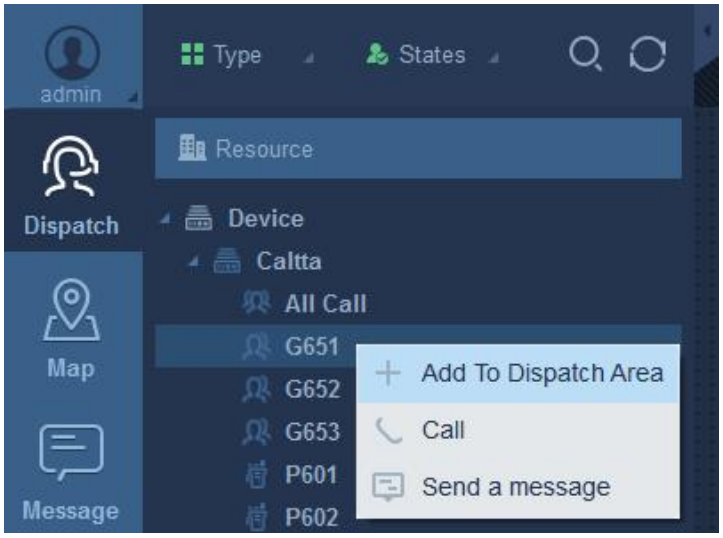
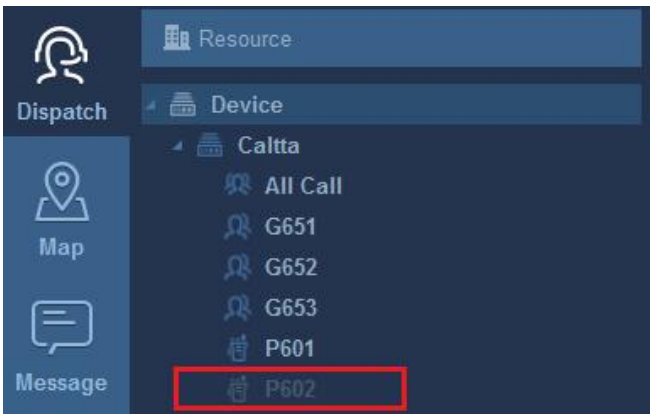


Figure 4-6 Add to dispatch area - 3

If the device icon is in gray (not highlighted), such as , it indicates that the current device should be offline.

Figure 4-7 Device offline

<All rights reserved.No spreading abroad without permission of Caltta.>



4.3. Voice Call

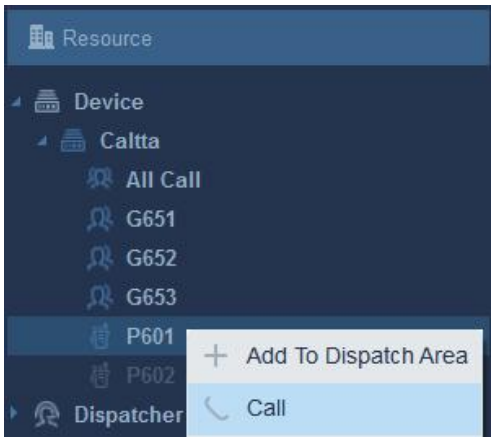
4.3.1. Initiate Private Call

You can initiate a private call to an individual radio. The method for initiating a private call is as follows:

- **Method one**

Search or directly select the radio in the "Device" list. Right-click the radio and select "Call" to initiate a private call.

Figure 4-8 Initiate private call via resource list



- **Method two**

In the call panel, click the list to select the radio, and click "PTT" button to initiate a private call.

Figure 4-9 Initiate private call via call panel

<All rights reserved.No spreading abroad without permission of Caltta.>

4.3.2. Answer Private Call

The system automatically answers the private call, and the call bar prompts that there is a private call in process.

If you need to speak during a private call, there are two scenarios:

1. If you are in non-dispatching interface currently, when the other party releases PTT button and finishes speaking, you can click "PTT" button on the call bar to speak;

2. If you are in dispatching interface currently, when the other party releases PTT button and finishes speaking, you can click "PTT" button in the call panel to speak.

Figure 4-10 Call bar status when receiving private call

Figure 4-11 Call panel status when receiving private call

During the call, when both parties are not pressing "PTT" button, the call panel displays "Call on Hold" status..

Figure 4-12 Call panel status when call is on hold

<All rights reserved.No spreading abroad without permission of Caltta.>

If both parties have not pressed "PTT" button to speak during the call hold time, the call ends automatically.

Figure 4-13 Call panel status when there is no call

4.3.3. Initiate Group Call

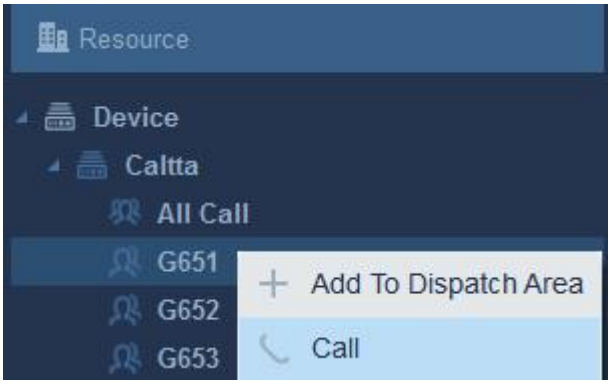
You can initiate a group call to a selected group. The method for initiating a group call is as follows:

- **Method one**

Search or directly select the group in the "Device" list. Right-click the group and select "Call" to initiate a group call.

Figure 4-14 Initiate group call via resource list

<All rights reserved.No spreading abroad without permission of Caltta.>



- **Method two**

In the call panel, click the list to select the group, and click "PTT" button to initiate a group call.

Figure 4-15 Initiate group call via call panel

4.3.4. Answer Group Call

The system automatically answers the group call, and the call bar prompts that there is a group call in process.

If you need to speak during a group call, there are two scenarios:

1. If you are in non-dispatching interface currently, when the other party releases PTT button and finishes speaking, you can click "PTT" button on the call bar to speak;

2. If you are in dispatching interface currently, when the other party releases PTT button and finishes speaking, you can click "PTT" button in the call panel to speak.

Call bar status when answering call:

Figure 4-16 Call bar status when receiving group call

<All rights reserved.No spreading abroad without permission of Caltta.>

Call panel status when answering call:

Figure 4-17 Call panel status when receiving group call

During the call, when both parties are not pressing "PTT" button, the call panel displays "Call on Hold" status.

Figure 4-18 Call panel status when call is on hold

If both parties have not pressed "PTT" button to speak during the call hold time, the call ends automatically.

Figure 4-19 Call panel status when there is no call

<All rights reserved.No spreading abroad without permission of Caltta.>

4.3.5. Initiate All Call

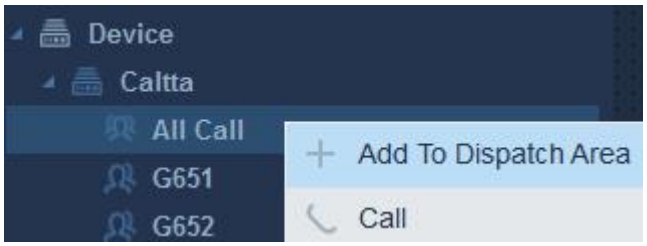
You can initiate all call to all radios under the current base station. The system automatically records the call content. You can query the call history or replay the recording. For details, refer to "Query Call Record".

The method for initiating all call is as follows:

- **Method one**

In the device list, right-click "All Call" under the first-level device and select "Call" to initiate all call

Figure 4-20 Initiate all call via resource list

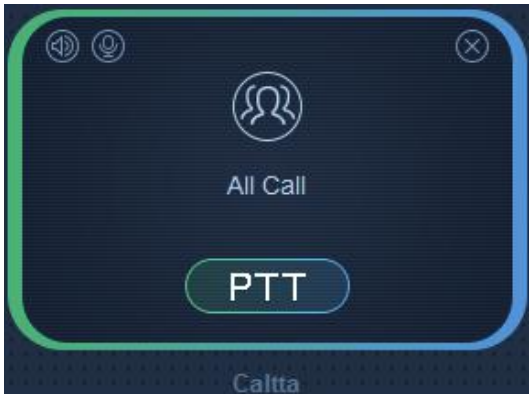


- **Method two**

In the call panel, click the list to select "All Call", and click "PTT" button to initiate a group call.

Figure 4-21 Initiate all call via call panel

<All rights reserved.No spreading abroad without permission of Caltta.>



4.3.6. Answer All Call

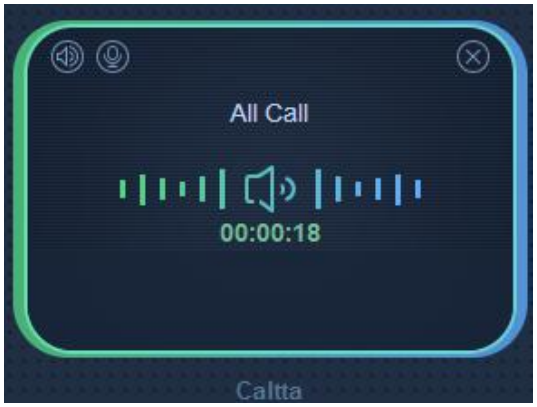
The system automatically answers the all call, and the call bar prompts that there is all call in process.

If you need to speak during all call, there are two scenarios:

1. If you are in non-dispatching interface currently, when the other party releases PTT button and finishes speaking, you can click "PTT" button on the call bar to speak;
2. If you are in dispatching interface currently, when the other party releases PTT button and finishes speaking, you can click "PTT" button in the call panel to speak.

Figure 4-22 Call bar status when receiving all call

Figure 4-23 Call panel status when receiving all call



<All rights reserved.No spreading abroad without permission of Caltta.>

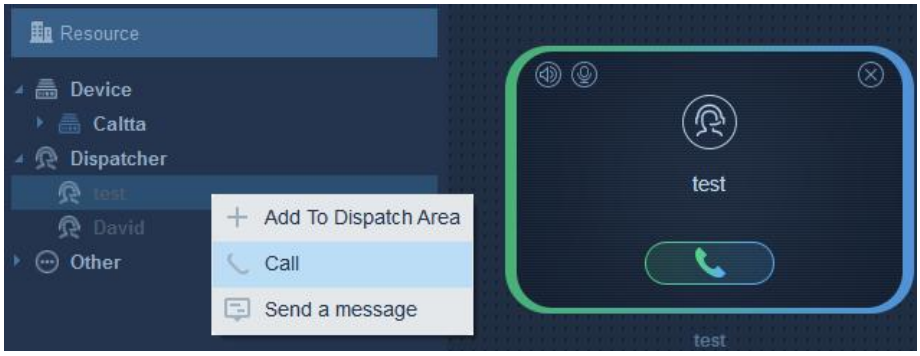
4.4. Intercommunication of Dispatchers

One dispatcher can talk to other dispatchers.

The dispatchers' intercommunication method is shown as follows:

In the "Resource" -> "Dispatcher" list, right-click the dispatcher and select "Call" to initiate a call.

Figure 4-24 Intercommunication of dispatchers



4.5. Receive Emergency Call

In case of emergency, the radio user can use the radio to initiate an emergency call. After receiving the emergency call, the call panel will turn red to give warning.

The following figure shows an emergency call is received:

Figure 4-25 Receive emergency call

5. Map

The "Map" module provides you with end-user positioning, real-time location, and other services. You can also drag, zoom in, and zoom out the map to assist visual dispatch.

<All rights reserved.No spreading abroad without permission of Caltta.>

5.1. Interface Introduction

The main interface of "Map" is composed of map and map toolbar. You can view radio's positioning data and other information on the map.

The "Map" interface and interface elements are shown as follows.

Figure 5-1 Map management interface

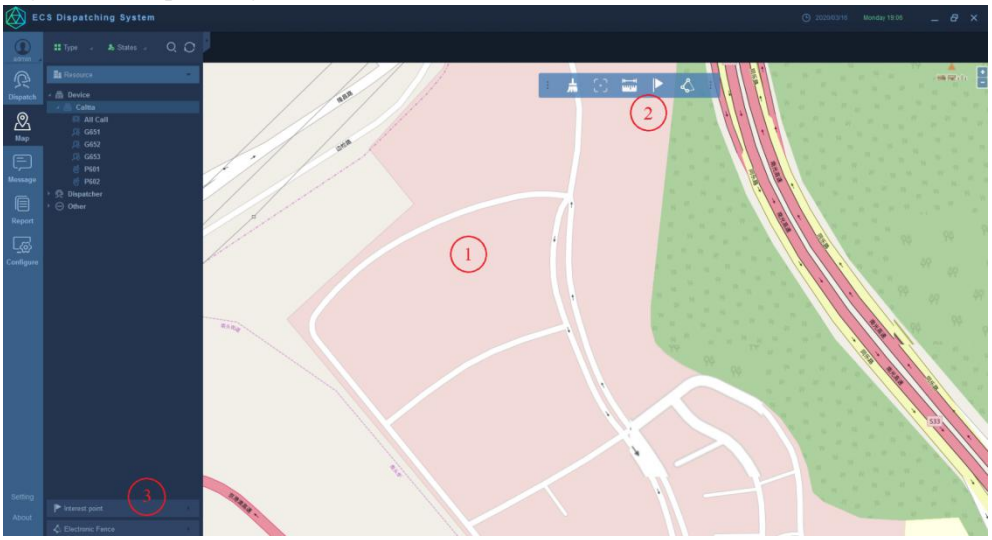


Table 5-1 Map interface explanation

No.	Name	No.	Name
1	Map	3	Interest point & Geo-fencing
2	Map toolbar		

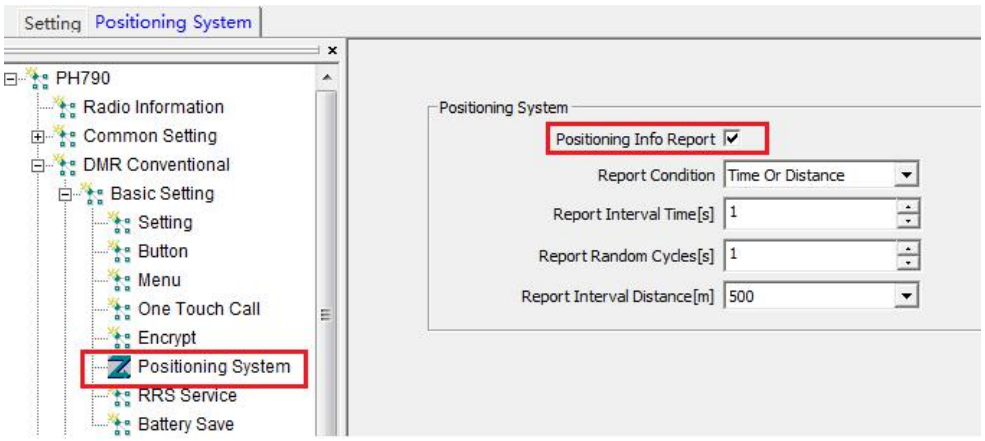
5.2. Positioning Radio

You can locate the radio, and the location information of the radio is displayed on the map after successful positioning. You can right-click on the radio icon and perform corresponding operations to achieve visual dispatch.

The radio must have a positioning module and the positioning function is turned on before it can be positioned.

Figure 5-2 Radio positioning system setting

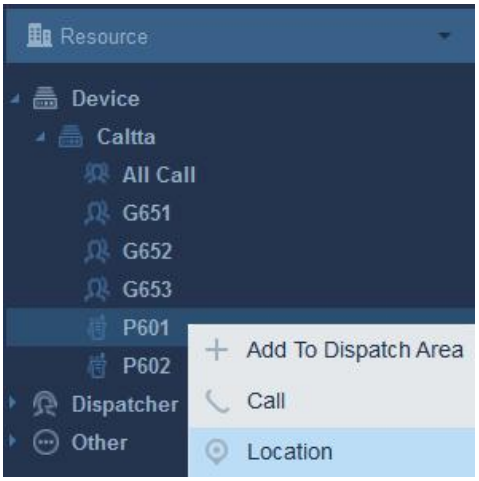
<All rights reserved.No spreading abroad without permission of Caltta.>



5.2.1. Single time Location

Open "Device List", right-click the radio, and select "Location".

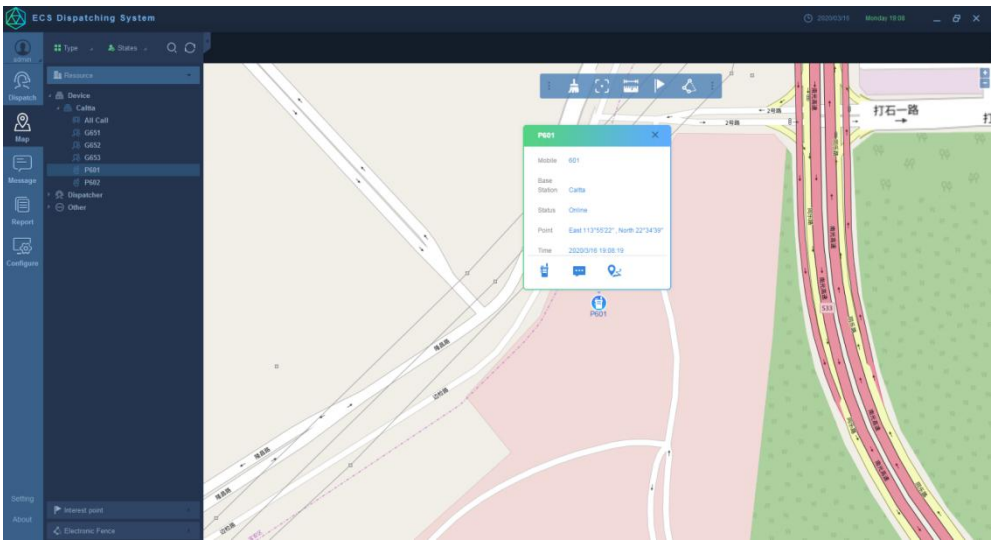
Figure 5-3 Single time location



The current location of the radio will be displayed on the map. Zoom in the map, the radio information is displayed.

Figure 5-4 Radio information displayed on the map

<All rights reserved.No spreading abroad without permission of Caltta.>

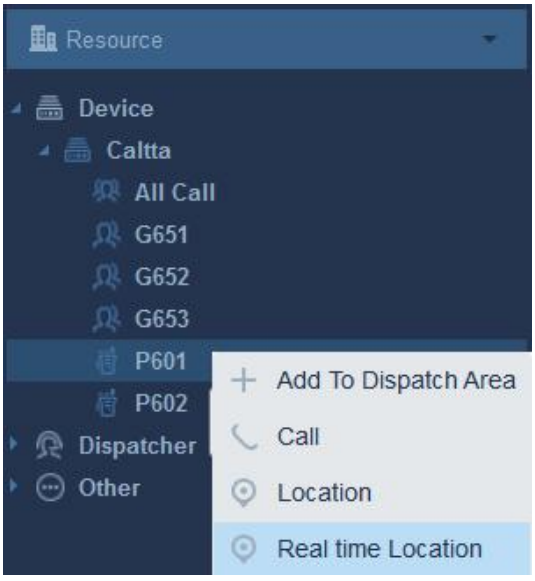


5.2.2. Real-time Location

5.2.2.1. Turn on Real-time Location

Open "Device List", right-click the radio, and select "Real time Location". Open the device list, right-click the terminal, and select "Cancel Location" to cancel the "Real time Location" of the terminal.

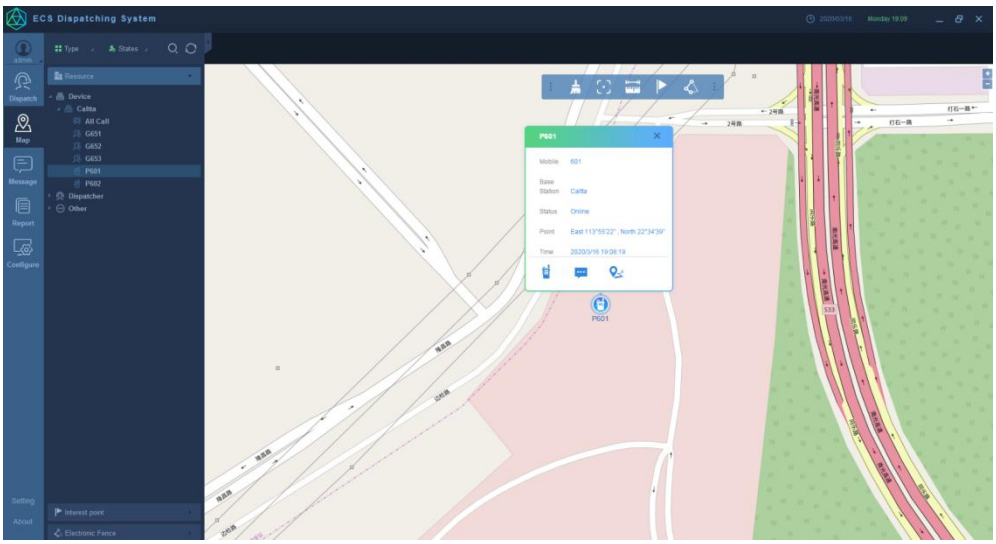
Figure 5-5 Turn on real-time location



The location information of the terminal is periodically refreshed and highlighted on the map.

Figure 5-6 Radio information displayed on the map

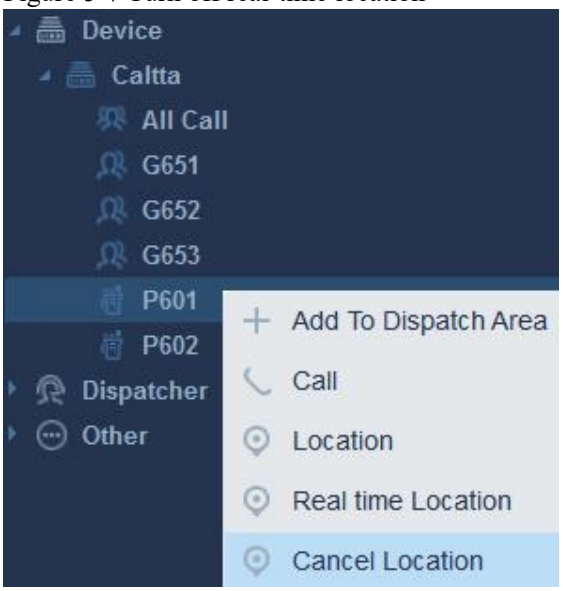
<All rights reserved.No spreading abroad without permission of Caltta.>



5.2.2.2. Turn off Real-time Location

Open "Device List", right-click the radio, and select "Cancel Location" to cancel the Real-time Location of the radio.

Figure 5-7 Turn off real-time location



5.3. Use Map Toolbar

You can use the map toolbar to assist you to perform visual dispatch operation.

Figure 5-8 Map toolbar

<All rights reserved.No spreading abroad without permission of Caltta.>

Click to move the map toolbar.

Table 5-2 Map toolbar explanation

Button	Explanation	Remarks
	Map ranging	Measure distance on the map
	Removal tool	Clear all markers on the map
	Focus on target	Center display the location point on the map
	Geo-fencing	Add Geo-fencing
	Interest point	Add Interest point

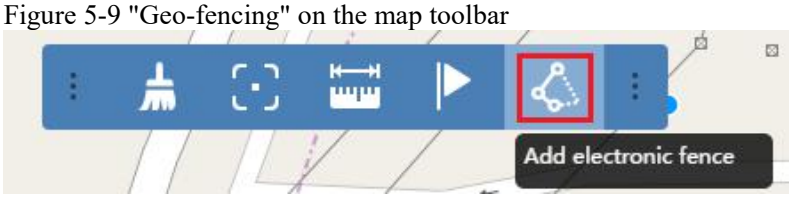
5.4. Geo-fencing

The Geo-fencing means that when the radio leaves the designated fence region, a fencing alarm will be triggered.

5.4.1. Add Geo-fencing Task

Step 1 Click "Geo-fencing" on the map toolbar to open the e-fence setting interface.

Figure 5-9 "Geo-fencing" on the map toolbar



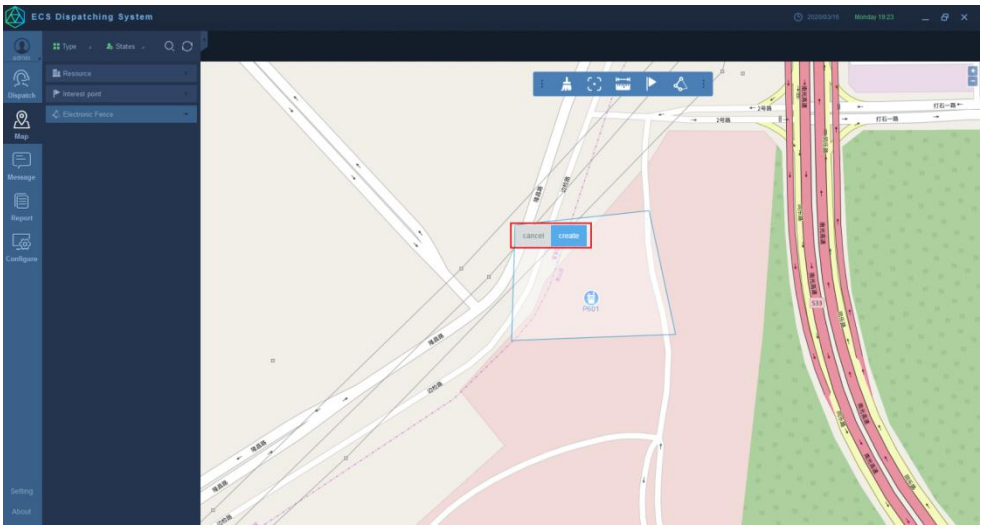
Step 2 Draw the designated region on the map.

<All rights reserved.No spreading abroad without permission of Caltta.>

Figure 5-10 Draw the designated region for Geo-fencing

Step 3 After drawing the fence region, double-click the mouse to finish, and click "Create".

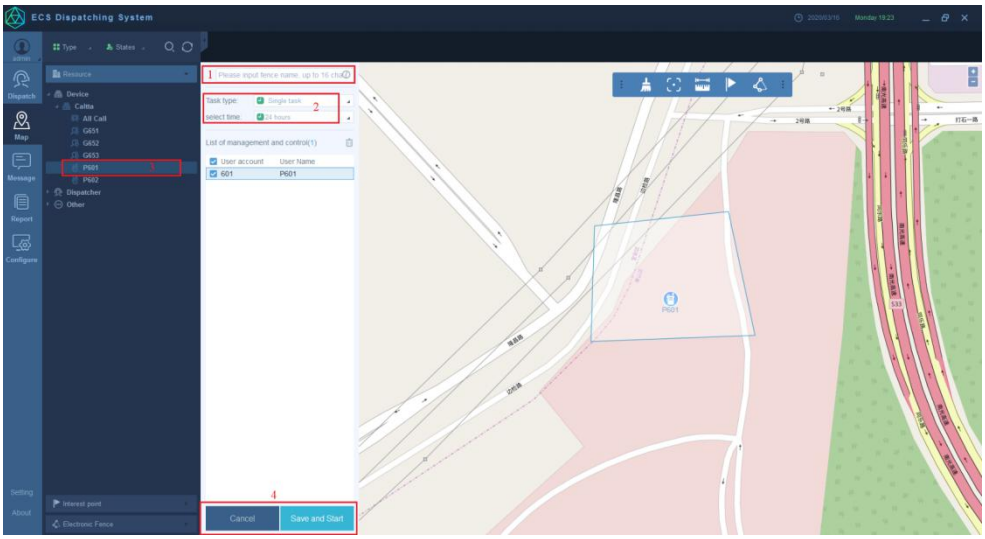
Figure 5-11 Create fence region



Step 4 Enter the "Fence name", "Task type", "Select Time", and "List of management and control", and click "Save and Start".

Figure 5-12 Create fence task

<All rights reserved.No spreading abroad without permission of Caltta.>



1: Enter the name of the Geo-fencing; 2: Select the "Task Type" and "Select Time"; 3: Double-click the radio number to be controlled ; 4: Click "Save and Start".

5.4.2. Geo-fencing Alarm

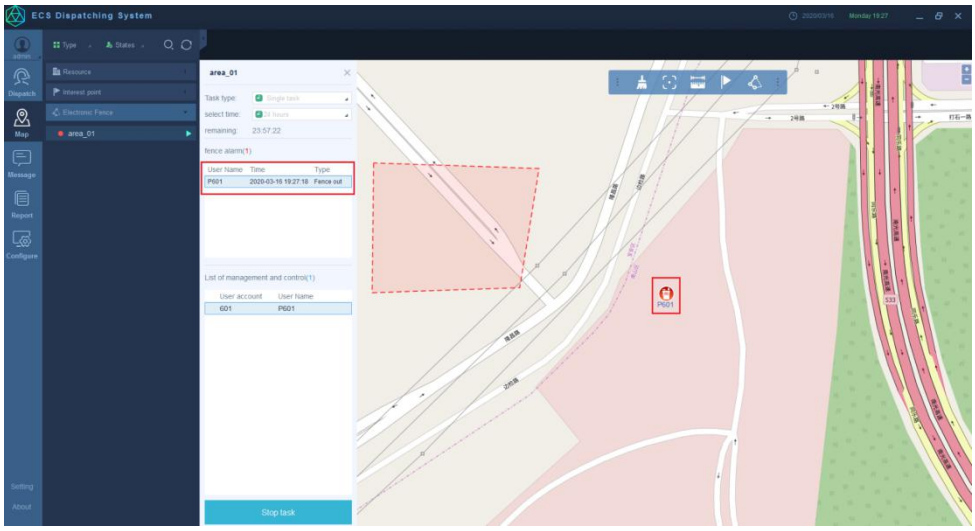
After the task starts, when the controlled radio exceeds the fenced region, a corresponding Geo-fencing alarm will be raised, and the radio outside the fence region will be displayed in red.

Figure 5-13 Geo-fencing alarm

Double-click on the corresponding Geo-fencing to view details.

Figure 5-14 Geo-fencing alarm detail

<All rights reserved.No spreading abroad without permission of Caltta.>



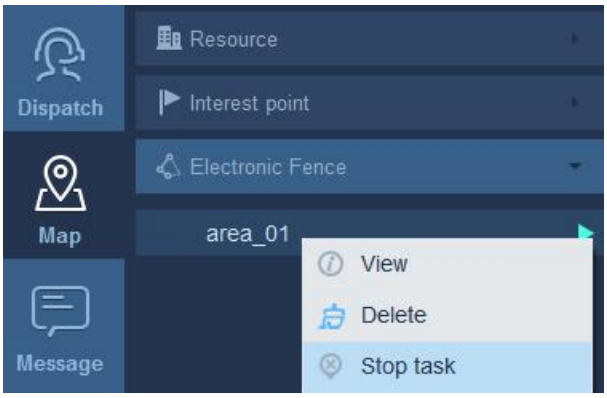
5.4.3. Stop Geo-fencing Task

After stopping the task, you can suspend the control of the current user.

- **Method one**

Right-click on the existing Geo-fencing and select "Stop Task".

Figure 5-15 Stop geo-fencing task - 1

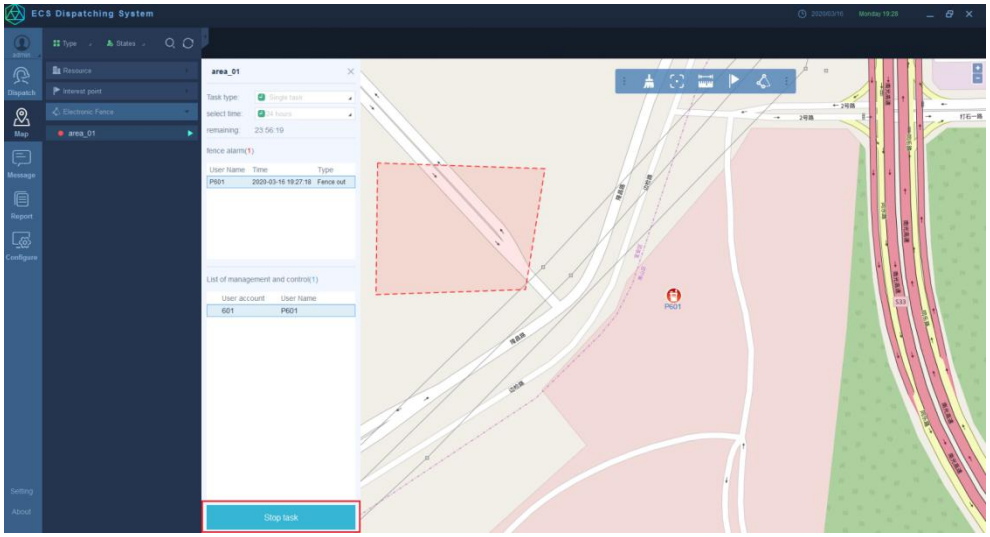


- **Method two**

Double-click on the existing Geo-fencing to view specific information of the fence, and select "Stop Task".

Figure 5-16 Stop geo-fencing task - 2

<All rights reserved.No spreading abroad without permission of Caltta.>



After the task stops, the menu changes to "Start Task", you can click on "Start Task" button again to restart the task:

Figure 5-17 Resource list menu changes after geo-fencing stops

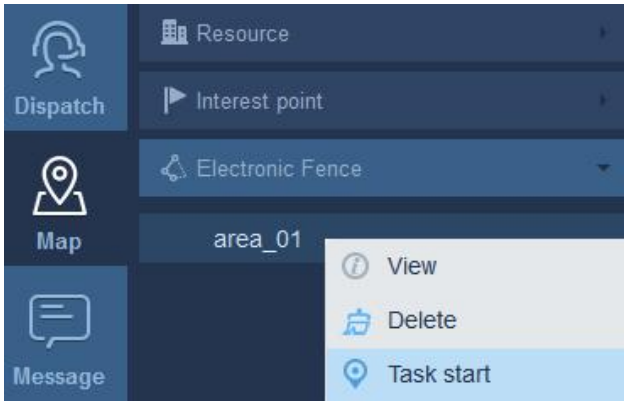
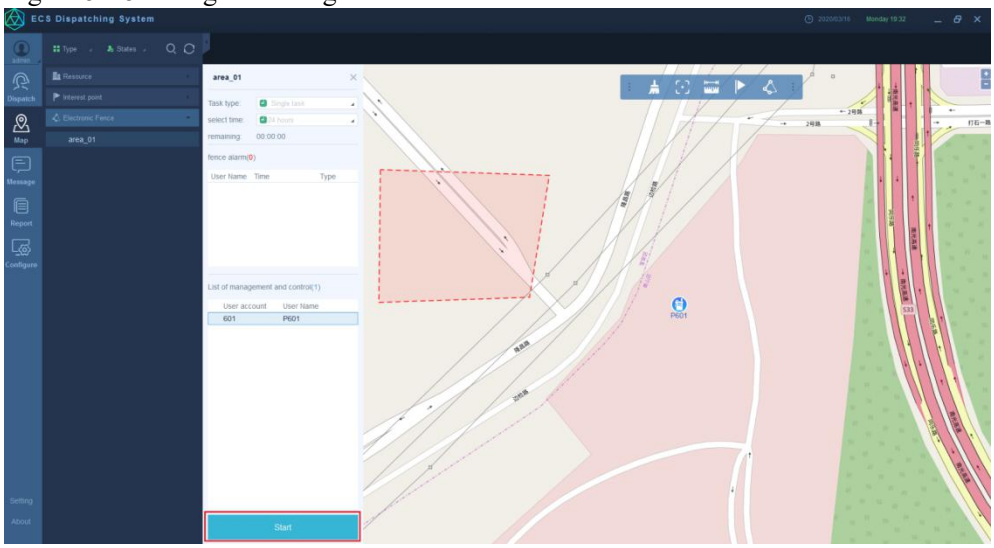


Figure 5-18 Start geo-fencing task

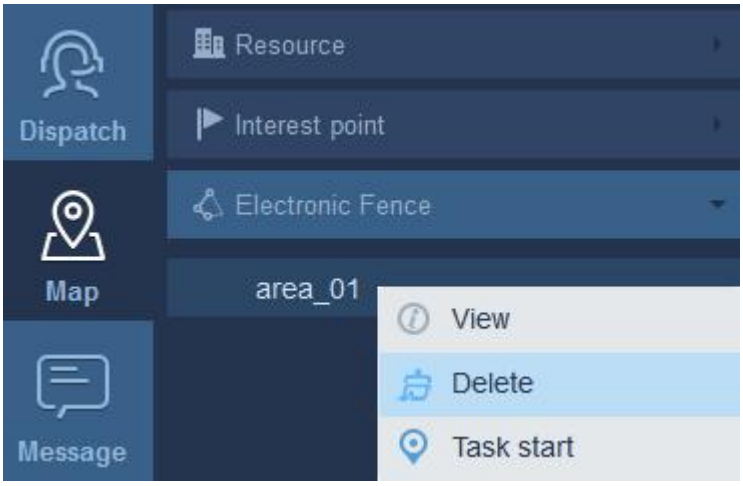


<All rights reserved.No spreading abroad without permission of Caltta.>

5.4.4. Delete Geo-fencing Task

Find the Geo-fencing you want to delete in the resource list, right-click and select "Delete". The Geo-fencing is deleted.

Figure 5-19 Delete geo-fencing task



5.5. Interest Point

The main purpose of "Interest Point" is to mark the place of interest. Click on the Interest point to quickly locate the marked place。

5.5.1. Add Interest Point

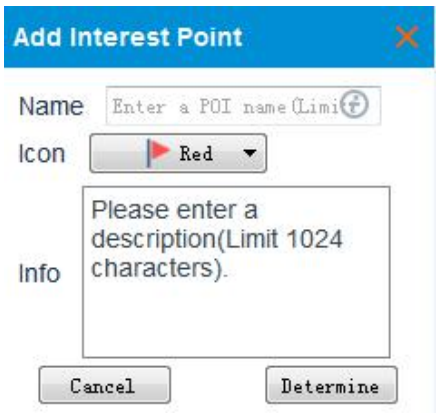
Step 1 Click on the map toolbar .

Figure 5-20 "Interest point" on the map toolbar

Step 2 Find the location needed to be marked on the map, click it, and a dialog box will pop up, enter the "Name", select the "Icon", fill in "Info", and click "Determine".

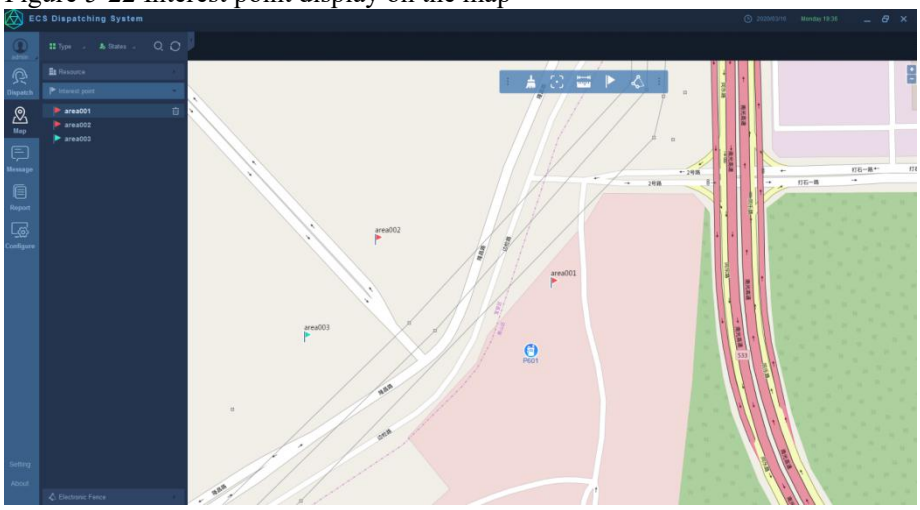
Figure 5-21 Add interest point

<All rights reserved.No spreading abroad without permission of Caltta.>



Double-click an interest point under "Interest point" on the left resource list to center it.

Figure 5-22 Interest point display on the map



5.5.2. Edit Interest Point

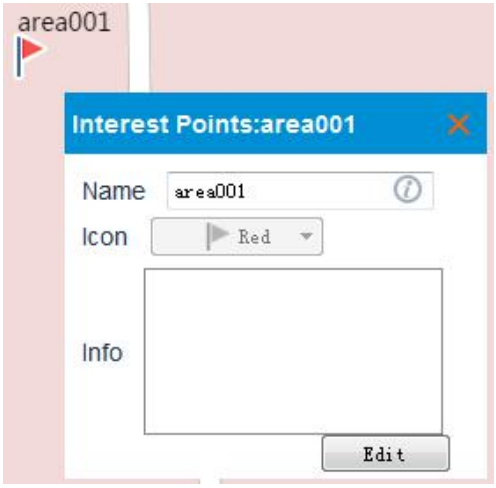
Find "Interest point" on the left resource list, double-click the point you want to modify, and click "Edit" to modify the "Name" and "Description" of the Interest point.

Figure 5-23 Edit interest point - 1

After double-clicking, the following page pops up:

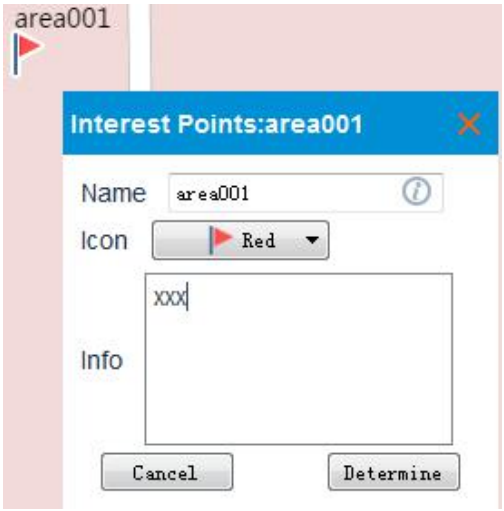
<All rights reserved.No spreading abroad without permission of Caltta.>

Figure 5-24 Edit interest point - 2



Click "Edit" to enter the editable state, you can edit the "Name", "Icon", "Info".

Figure 5-25 Edit interest point - 3



5.5.3. Delete Interest Point

Find the entry you want to delete under "Interest Point" on the left resource list, click to delete.

Figure 5-26 Delete interest point

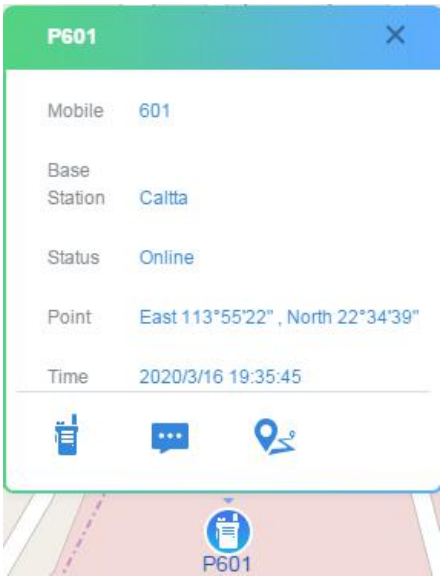
<All rights reserved.No spreading abroad without permission of Caltta.>

5.6. Radio Visual Dispatch

You can make call to the radio, send text message, and view historical track on the map to realize visual dispatch of the radio, to improve your work efficiency.

Left-click the radio on the map and select relevant operation in the toolbar.

Figure 5-27 Radio visual dispatch



5.7. Track Playback

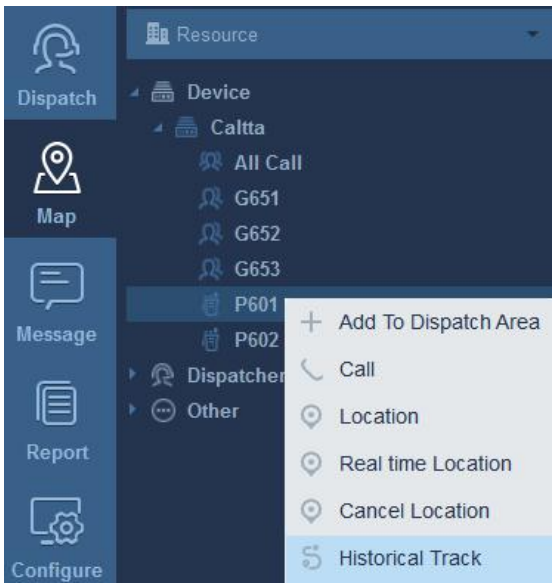
For users who have positioning service, the system will automatically save the user's historical location information. The dispatcher can choose to view the historical track of the user within a certain period of time.

- **Method one**

  Search or directly select the radio. Right-click the radio and select "Historical Track".

Figure 5-28 Track Playback - method 1

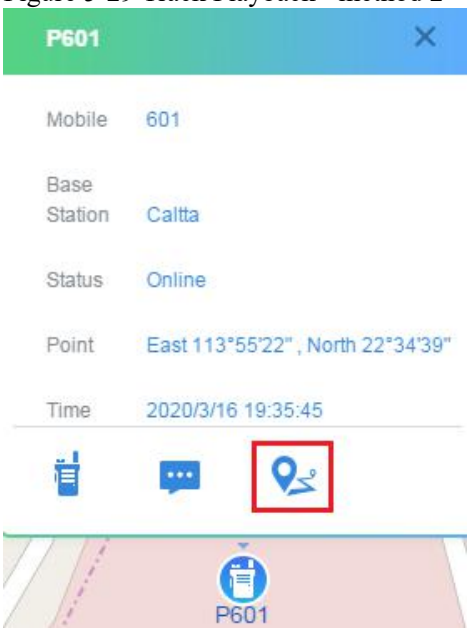
<All rights reserved.No spreading abroad without permission of Caltta.>



- **Method two**

On the map interface, click the terminal that needs to play the track, click on the pop-up page.

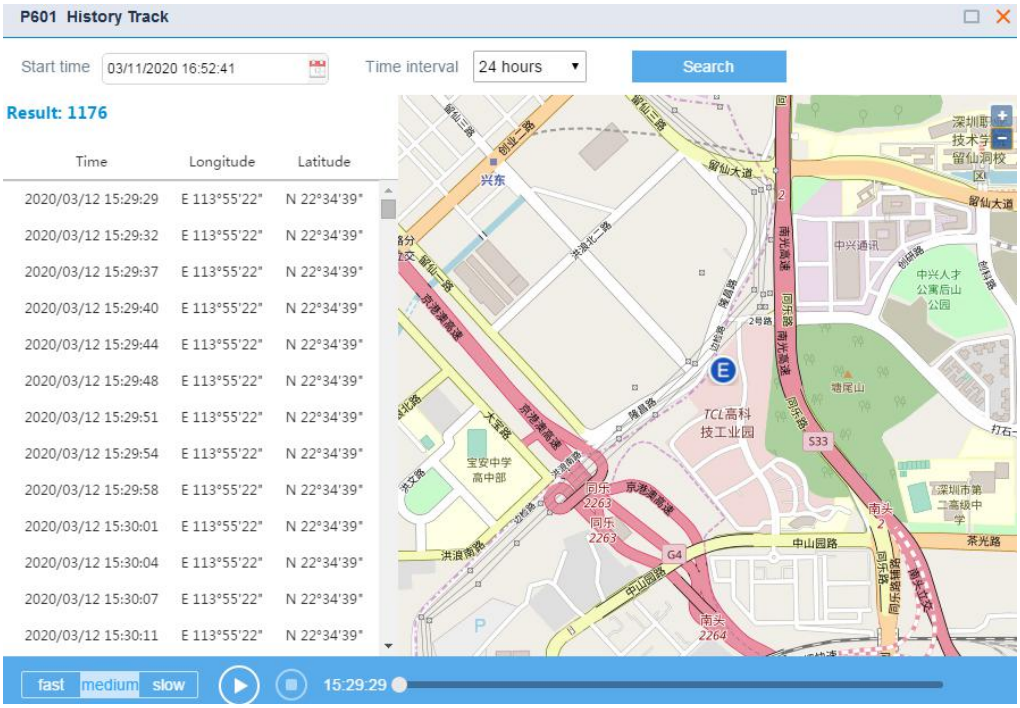
Figure 5-29 Track Playback - method 2



Select the "Start time" and "Time interval" (up to 24 hours), and click "Search". The historical track points is displayed on the left. Click below to play the historical track.

Figure 5-30 Play historical track

<All rights reserved.No spreading abroad without permission of Caltta.>

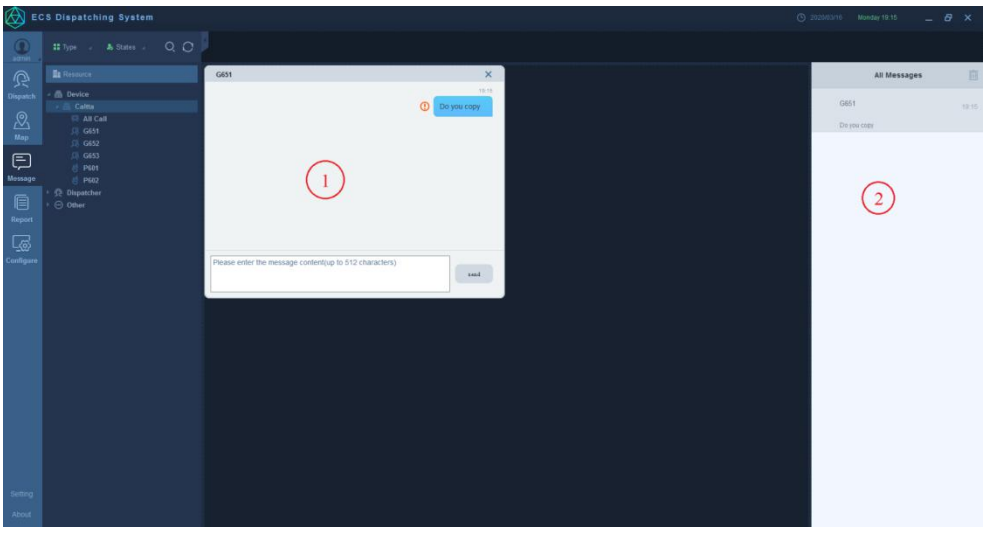


6. Message

The "Message" module provides you with services such as sending short message to group, sending short message to radio, receiving short message, etc. The contents of short message are displayed in a list which makes it easy to browse.

6.1. Interface Introduction

Figure 6-1 Message management interface



<All rights reserved.No spreading abroad without permission of Caltta.>

Table 6-1 Message management interface explanation

No.	Name	No.	Name
1	Message dialog box	2	Recent contact list

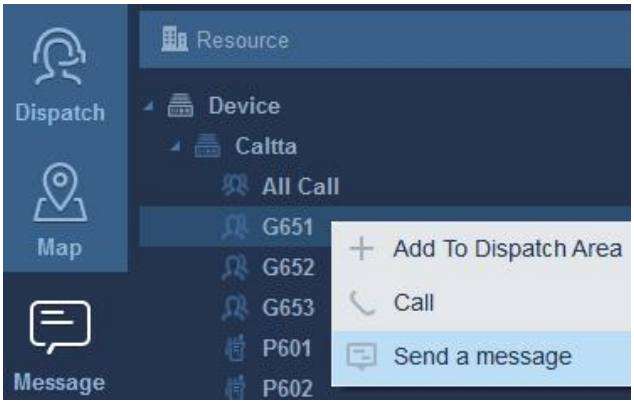
6.2. Send Message

You can send a short message to a predefined group or user.

- **Method one**

Search or directly select the group or user, right-click, and select "Send a Message".

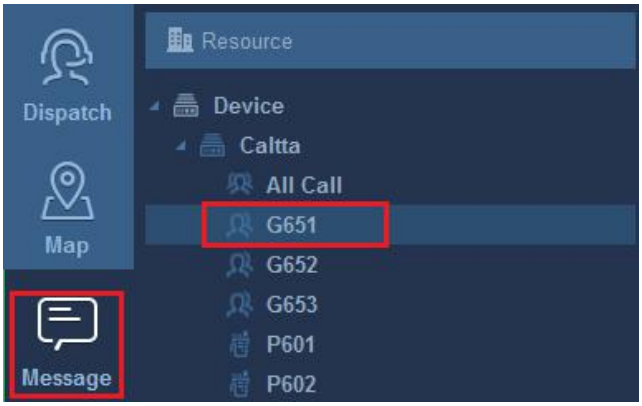
Figure 6-2 Send Message - method 1



- **Method two**

Click "Message" main menu, search or directly select a group or user, and double-click the group or user to send a short message.

Figure 6-3 Send Message - method 2



<All rights reserved.No spreading abroad without permission of Caltta.>

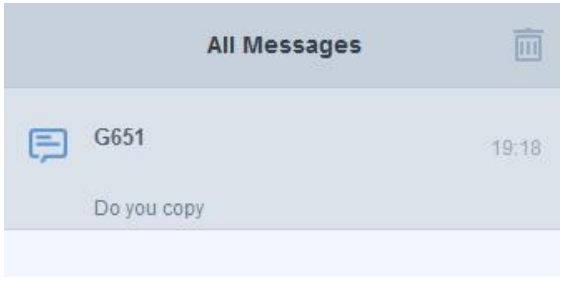
6.3. Receive Message

When dispatcher receives a short message, the "Message" main menu will be displayed with a small orange dot to indicate that there is a new short message.

Figure 6-4 Receive new message

After clicking "Message" main menu, the contact with new short message will be highlighted in the contact list.

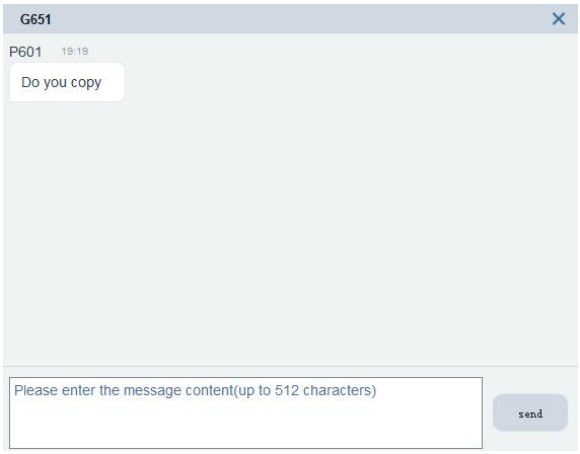
Figure 6-5 New message in contact list



Click on a contact, it will display the details of the short message.

Figure 6-6 Message dialog box detail

<All rights reserved.No spreading abroad without permission of Caltta.>



7. Report

The dispatching system provides you with 4 kind of reports, each one supports export function, which can export data to an Excel file:

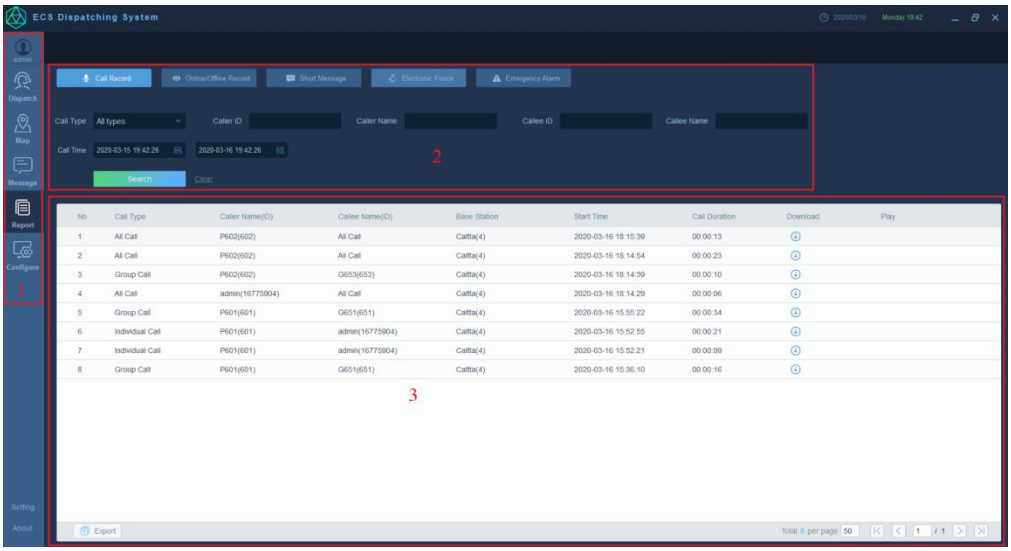
- Call history report
- Online record report
- Short message report
- Geo-fencing report

7.1. Interface Introduction

You can query different records at the main interface of "Report".

The "Report" interface and interface elements are shown as follows.

Figure 7-1 Report management interface



<All rights reserved.No spreading abroad without permission of Caltta.>

Table 7-1 Report management interface explanation

No.	Name	No.	Name
1	Main menu	3	Query result list
2	Query condition input		

7.2. Query Call Record

The system supports querying call history record and downloading voice recording playback.

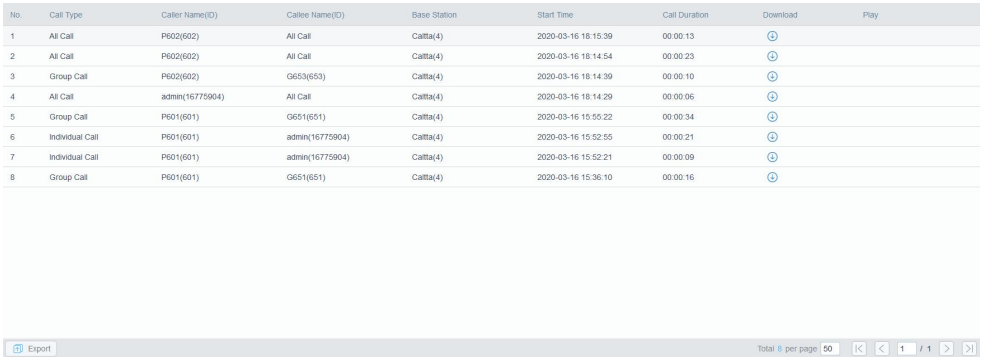
After a call finishes, you can first query the call record, then download and replay the voice recording.

Step 1 Click "Report" in the main menu, select "Call Record", enter query parameters (support fuzzy query), "Call Time" is mandatory, and other parameters are optional as required.

Figure 7-2 Query call record

Step 2 Click "Search". The query is successful, and the corresponding records are displayed in the list below.

Figure 7-3 Call record display

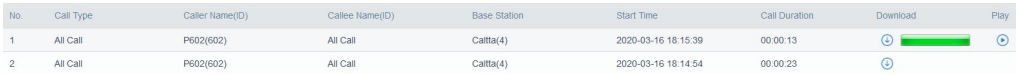


7.2.1. Voice Recording Download / Replay

After the call history query is successful, click to download voice recording, and click to replay voice recording.

<All rights reserved.No spreading abroad without permission of Caltta.>

Figure 7-4 Voice recording download / replay



Every call recording file can be downloaded to the client locally, and the recording file can be replayed.

The recording file path is the "audioHistory" folder in the client's root directory, such as "C: \ Program Files \ PD200 \ audioHistory".

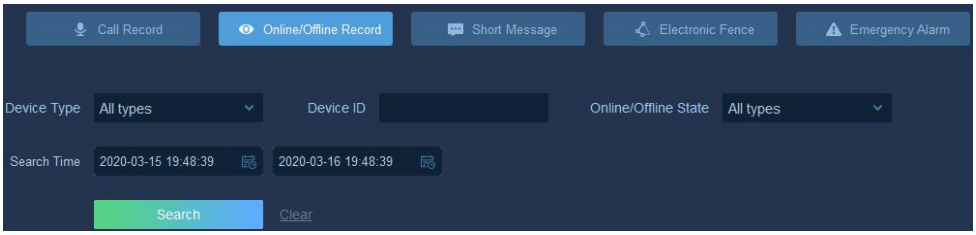
7.3. Query Online / Offline Record

You can query the online and offline records of devices such as radios, dispatchers, and base stations based on keywords such as "Device Type", "Device ID", "Online/Offline State", and "Search Time".

Step 1 Click "Report" in the main menu.

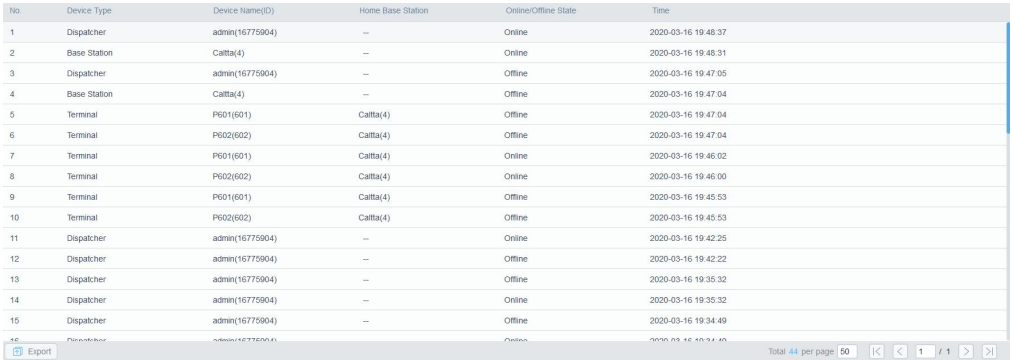
Step 2 Select "Online/Offline Record", enter query parameters.

Figure 7-5 Query online / offline record



Step 3 Click "Search". The query is successful, and the corresponding records are displayed in the list below.

Figure 7-6 Online / offline record display



<All rights reserved.No spreading abroad without permission of Caltta.>

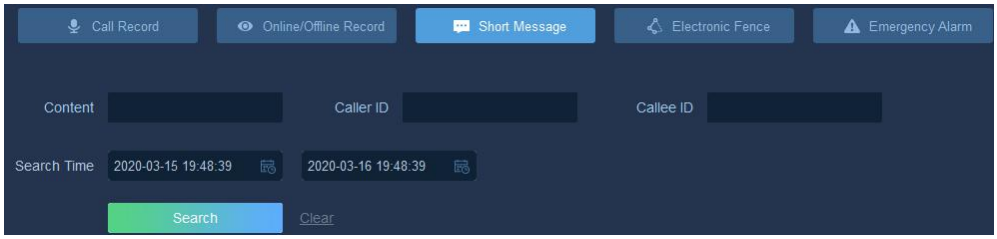
7.4. Query Short Message

You can query short message record based on keywords such as "Content", "Caller ID", "Callee ID", and "Search Time".

Step 1 Click "Report" in the main menu.

Step 2 Select "Short Message Record", enter query parameters (support fuzzy query), "Search Time" is mandatory, and other parameters are optional as required.

Figure 7-7 Query Short Message



Step 3 Click "Search". The query is successful, and the corresponding records are displayed in the list below.

Figure 7-8 Short Message record display

No.	Sending Time	Message Content	Caller ID	Callee ID	Send Type
1	2020-03-16 19:19:57	Do you copy	601	651	Group
2	2020-03-16 19:19:26	Do you copy	16775904	651	Group
3	2020-03-16 19:18:27	Do you copy	601	651	Group
4	2020-03-16 19:15:39	Do you copy	16775904	651	Group

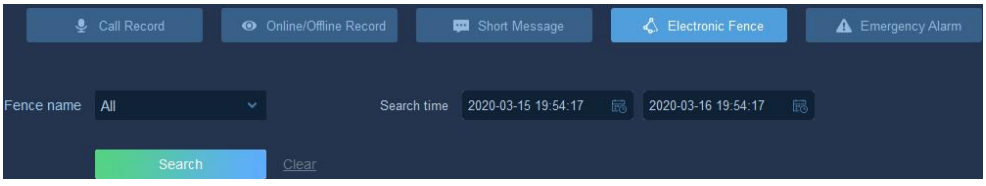
7.5. Query Geo-fencing

You can query alarm record of Geo-fencing based on keywords such as "Fence name" and "Search Time".

Step 1 Click "Report" in the main menu.

Step 2 Select "Electronic fence", enter query parameters (support fuzzy query), "Search Time" is mandatory, and other parameters are optional as required.

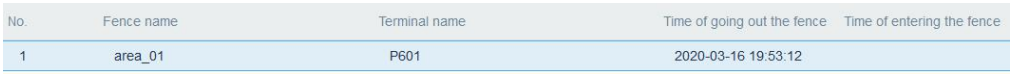
Figure 7-9 Query geo-fencing



<All rights reserved.No spreading abroad without permission of Caltta.>

Step 3 Click "Search". The query is successful, and the corresponding records are displayed in the list below.

Figure 7-10 Geo-fencing record display



No.	Fence name	Terminal name	Time of going out the fence	Time of entering the fence
1	area_01	P601	2020-03-16 19:53:12	

<All rights reserved.No spreading abroad without permission of Caltta.>