



Release 5

5.1 Document Version

Recording Solution

T.RECORDER

Advanced Voice, Data and Call Recording

PRODUCT DESCRIPTION

For server v.5



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H
VERSION HISTORY

Version	Amendment Date	Author	Remarks
0.1	26.09.2016	as, akh, qa	Pre-release
0.2	12.10.2016	as, akh, qa	Key benefits chapter, minor text fixes
0.3	20.10.2016	as, akh, qa	Intermediate Release
0.4	02.11.2016	as, akh	Server chapter added
0.5	08.11.2016	akh, qa	Changes in Authorization chapter
0.6	10.11.2016	akh, qa	Changes of images / Time range filter added
0.7	14.11.2016	akh, qa	A note about data export formats
0.8	26.12.2016	akh, qa	Minor text & images changes
0.9	02.02.2017	akh, qa	Minor text & images changes
0.10	27.03.2017	akh, qa	
0.11	30.03.2017	akh	contacts changed
1.1	20.06.2018	akh, qa	Text and graphics update
1.2	11.09.2018	akh, pk	Minor text updates
5.0	09.11.2018	akh	Release 5
5.1	27.12.2018	akh, qa	

A
LIST OF ABBREVIATIONS

E2EE	End-To-End Encryption
EMC	Enterprise Management and Control
GPS	Global Positioning System
GPRS	General Packet Radio Service
GUI	Graphical User Interface
IP	Internet Protocol
LPS	Local Positioning System
LTE	Long Term Evolution - a telephone and mobile broadband communication standard
LWP	Lone Worker Protection
MPT	MPT 1327 is an industry standard for trunked radio communications networks
NFC	Near Field Communication
iOS	iPhone OS developed and distributed by Apple Inc.
OS	Operating System
PMR	Professional Mobile Radio
PTT	Push-To-Talk
TETRA	Trans-European Trunked Radio
VoIP	Voice over IP
WLAN	Wireless Local Area Network

C
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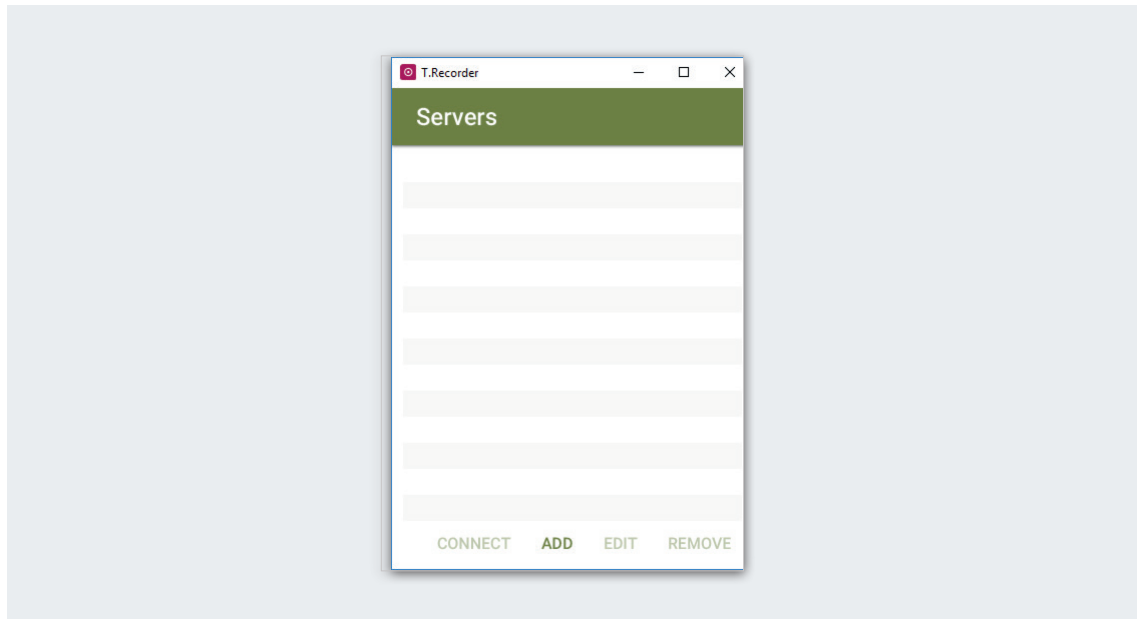
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1

INTRODUCTION

T.RECORDER is a smart, reliable and easy-to-use TASSTA software solution for secure recording, rapid voice replaying and data communications in the TASSTA network. It is designed to help organizations keeping the records and enhance their mission-critical responses. T.Recorder provides great set of tools to sort, search and reply voice records, view the messages history and monitor user activity in the channels. Furthermore, T.Recorder grants operator an ability to analyse user movements based on GPS location history and view emergency events on map (timeline).

In order to keep data secure, all the data and voice records are stored on the TASSTA server. However, T.Recorder provides an opportunity to backup all voice communication on a local drive.



2

BENEFITS AND KEY FEATURES

There are a lot of advantages of using the T.Recorder application:

1. GPS RECORDING

The ability to quickly access to the movement history of the selected user. These coordinates are displayed with reference to the time of change. This feature is designed to keep tracking of the movements of T.Flex users. T.Recorder has the ability to export popular GPS data formats (such as CSV) for importing data into mapping software, such as Google Earth or any other. Tracking your position is very useful for business. It can be imported into Google Earth or similar software to create a 2D virtual user path.

2. CHANNELS CHANGING

The ability to view user's movements through the channels. This feature allows you to track the user's actions, the titles and time of the visited channels.

3. NAMES CHANGING

The ability to view the history of login changes. This feature allows you to keep track of what point in time the user data has been modified.

4. CONNECTION STATS

The ability to view login history of the TASSTA's clients - T.Flex or T.Rodon. This feature allows you to know the exact time of user's login and logout.

5. INDIVIDUAL (DIRECT) AND GROUPS CALLS RECORDING.

It is available for T.Recorder users to track and save on PC every individual (direct) and group call. The call data is also available - time, duration, channel data, login and alias. This data can be provided by both calling user and accepting user.

6. MESSAGES RECORDING

The ability to view data about all written communication on a server. Thus T.Recorder user can not only view the sender and recipient information but read the text of each message as well. All emergency messages are highlighted in red, to respond quickly to alarms. One can also save the text message or transferred file to a local drive.

7. EMERGENCY CALLS RECORDING

With the function of tracking and recording every emergency call, all the emergency calls will be processed correctly. Emergency Calls Tab displays the data for each call with a possibility to save it.

8. EVENTS TIMESCALE VIEW

The ability to view, sort by type of call, play and save the call records from the timescale.

9. EVENTS ON MAP

An ability to view the current event on the map with reference to a timescale view.

In addition to all of the above, T.Recorder has the ability to export all data in CSV format.

• EASY TO USE

The cell phone tracker application is designed to be user-friendly. You will be able to navigate through the software's web-based control panel and find what you need without any problems. The software is set up to make monitoring and collecting data easy for anyone who uses the recorder, so you do not have to be tech savvy. Everyone will benefit with the fact that these apps are designed to suit the consumer's needs with ease.

• QUICK TO INSTALL

Installing the software will also be completed without complications. Most installations only take minutes to complete. Once the software is installed and the user is authorized, monitoring will begin immediately.

3

OPERATING ENVIRONMENTS

T.Recorder requires Java 8 to be installed on your device.

Recommended components:

Components	Recommended
Operating system	Windows 7 32/64, Windows 8 32/64, Windows 10 32/64
Processor	Processor with minimum 2 GHz clock frequency
System memory	4 GB RAM
Hard Drive	300 GB and more
Display	Standard color display
Network / Data	Standard network card
Positioning	GPS, A-GPS, GLONASS
Audio	Audio interfaces for Loudspeakers and Microphone



NOTE: There are two main data formats that T.Recorder can use to export the data – CSV and WAV.

You can choose the place for exporting the data to your hard drive by clicking the button EXPORT.

CSV file format is intended for exporting the data from tabs – GPS, Channel's changes, Names, Connection stats, Individual and Group calls, Messages and Emergency calls. All this data exports in tabular form. CSV file format requires a relatively small disk space.

WAV file format is used for exporting audio recordings. The file size is about 10 Mb for a minute of a recording.

Please calculate the size of the disk according to this information and your specific needs.

4

INSTALLATION AND START

Install T.Recorder by unzipping provided archive to the appropriate user directory.

The recommended location to unzipping T.Recorder - C:\Program files\TASSTA2\TASSTA Recorder

Simply double click on T.Recorder.exe to start the application.

5 AUTHORIZATION

Start using the T.Recorder App with SERVER window. There are four options (buttons) to interact at the bottom of the current window.

CONNECT	Connect to the selected server
ADD	Add a new user
EDIT	Edit the entry data
REMOVE	Delete the previously created server

To add a server simply click onto ADD button and then go to ADD SERVER window.

T.RECORDER

This tab contains an information for connecting to T.Recorder server. This form contains three fields:

SERVER	Enter server
SERVER PORT	Enter server port
KEY	Enter a unique authentication key

KEY: get in the settings of T.Commander - Settings - Tools - Recorder Settings - right mouse click on the server and in the option window select Copy Profile Key to Clipboard.

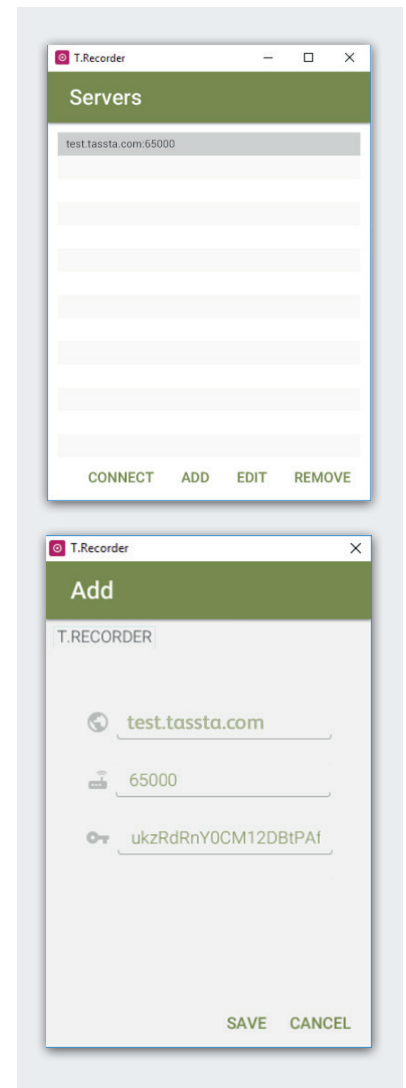
Also this key must be entered in the field: T.Commander - a required server - Server settings - Miscellaneous - Recorder server key. Do not forget to check the "Recorder server" field. It must contain a valid URI.

The recording will not start if there are incorrect server, port or Key.

Click on SAVE. The entered parameters are saved. re-entry is not required on the next launch.

CANCEL button cancels the changes and closes the dialog box.

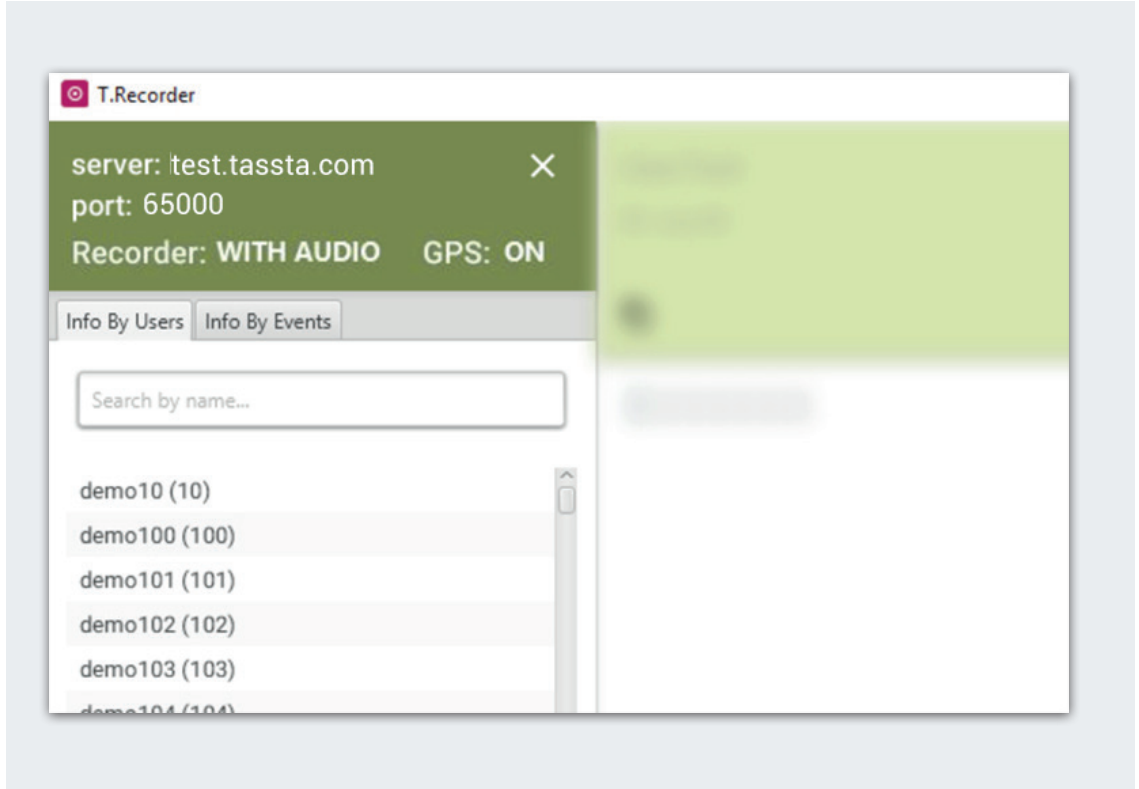
Double click with the left mouse button on the line with the name of the server and the user to establish a connection or simply click on CONNECT button. After that T.Recorder checks the version of server. If your server is too old for this T.Recorder - there will be displayed a notification message. All connection between T.Recorder and server is only by HTTPS to secure your data.



6 MAIN MENU

The main application window displays after logging in.

The server address and port number are shown in the upper left corner. Below there are recording and GPS status.



There are two tabs: Info By Users and Info By Events.

By default, the Info By User tab is active.

This tab includes the search box and the users list that are registered on the server.

All the records in T.Recorder are correspond to user name configured in T.Commander.

In order to view the records you have to select the desired user in the user list.

6.1 REC ON/OFF, GPS ON/OFF



In order to start recording open T.Commander - Settings - Recorder Settings - required Server - Recorder mode and set a recording mode. Record Call History only mode records events without media content. Record Call History and Media mode records events with media content, respectively.

To activate the GPS coordinates record, follow the following path: T.Commander - Settings - Nodes - required Node - Record GPS - ON.

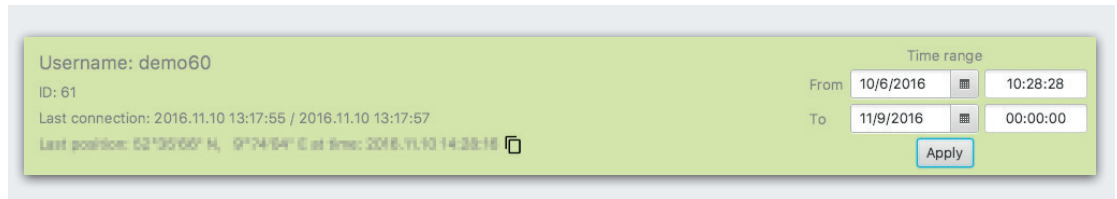
The user is displayed online in the parent channel. T.Recorder does not affect any user operation. When active recording after you close the application, recording doesn't stops and the user continues to be online.

6.2 INFO BY NAME

After selecting a user, the application window on the right side is active.

The following information is shown in the upper part of it:

1. Username
2. User ID
3. Last connection
4. Last position



To display data for a predetermined period of time there is a filter TIME RANGE on the upper right corner. Simply select desired time period and click on APPLY.

All the records are available on the main interface screen of the T.RECORDER. The following information can be obtained from the records:

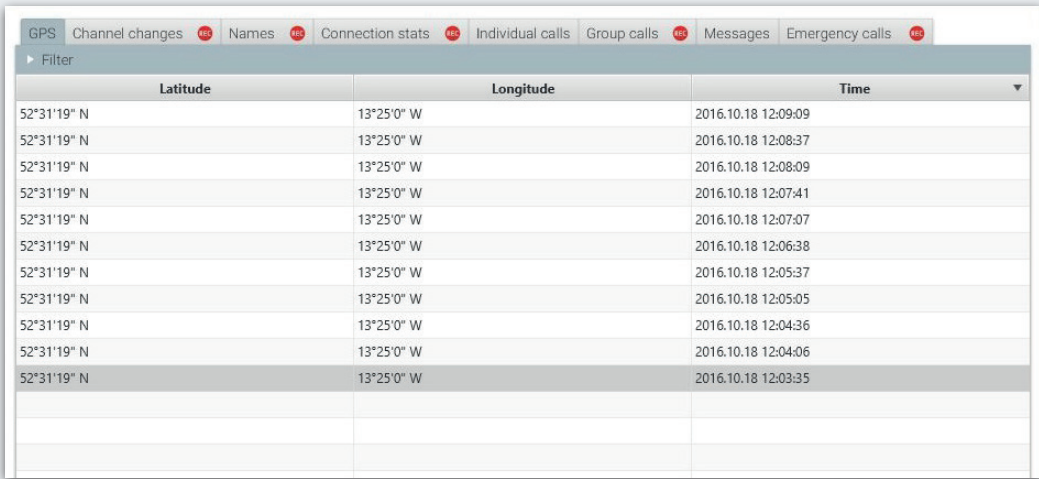
1. **GPS** - the ability to quickly access to the movement history of the selected user.
2. **CHANNELS CHANGES** - the ability to view the user's movements through the channels. This feature allows you to track the user's actions, the titles and time of the visited channels.
3. **NAMES CHANGES** - the ability to view the history of login changes. This feature allows you to keep track of what point in time the user data has been modified.
4. **CONNECTION STATS** - the ability to view login history of the TASSTA's products - T.FLEX or T.RODON. This feature allows you to know the exact time of user's login and logout.
5. **INDIVIDUAL CALLS** - the ability to view a variety of information about Individual (Direct) Calls and download them.
6. **GROUP CALLS** - the ability to view a variety of information about group calls and download them.
7. **MESSAGES RECORDING** - the ability to view data about all written communication on a server. All emergency messages are highlighted in red, to respond quickly to alarms.
8. **EMERGENCY CALLS RECORDING** - displays the data for each emergency call with a possibility to save it.

Each item has its own tab and each tab allow to save information for this item in *.CSV format.

6.2.1 GPS HISTORY

Open GPS tab to see user movements.

There are three columns - the longitude, latitude and time by which you can determine the user's location and the time he stayed in a specified point.

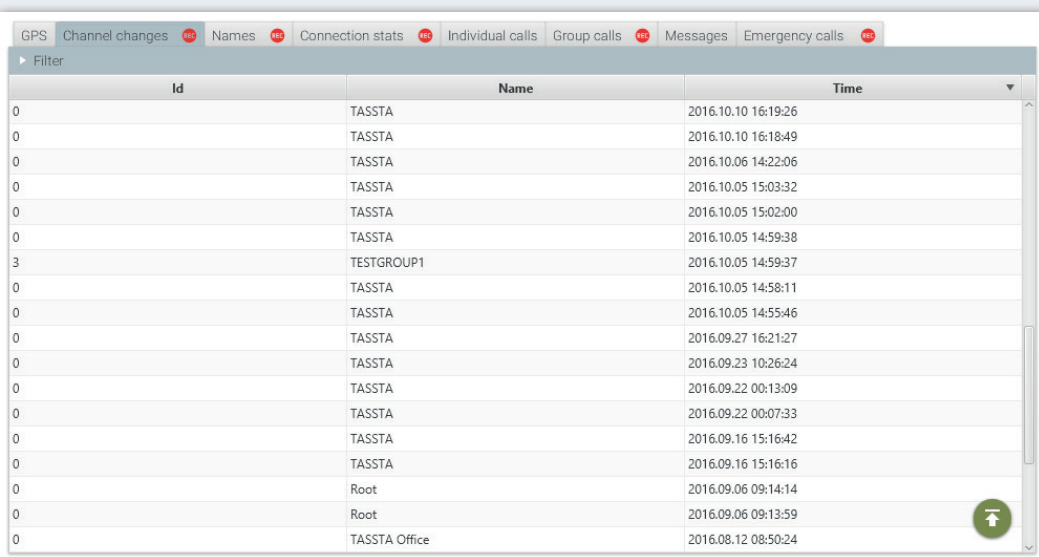


Latitude	Longitude	Time
52°31'19" N	13°25'0" W	2016.10.18 12:09:09
52°31'19" N	13°25'0" W	2016.10.18 12:08:37
52°31'19" N	13°25'0" W	2016.10.18 12:08:09
52°31'19" N	13°25'0" W	2016.10.18 12:07:41
52°31'19" N	13°25'0" W	2016.10.18 12:07:07
52°31'19" N	13°25'0" W	2016.10.18 12:06:38
52°31'19" N	13°25'0" W	2016.10.18 12:05:37
52°31'19" N	13°25'0" W	2016.10.18 12:05:05
52°31'19" N	13°25'0" W	2016.10.18 12:04:36
52°31'19" N	13°25'0" W	2016.10.18 12:04:06
52°31'19" N	13°25'0" W	2016.10.18 12:03:35

6.2.2 CHANNEL CHANGES

This tab displays the history of the user's movements between different channels. When user switches the channel, the new record takes place on action.

ID	Channel ID
Name	Name of the channel
Time	Time of transition into the channel



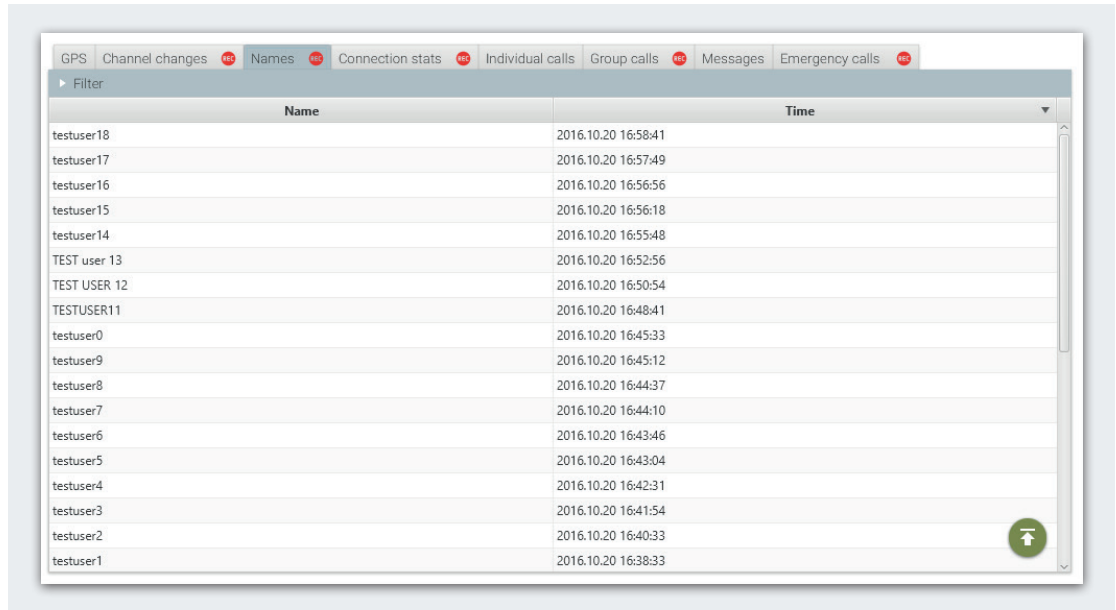
Id	Name	Time
0	TASSTA	2016.10.10 16:19:26
0	TASSTA	2016.10.10 16:18:49
0	TASSTA	2016.10.06 14:22:06
0	TASSTA	2016.10.05 15:03:32
0	TASSTA	2016.10.05 15:02:00
0	TASSTA	2016.10.05 14:59:38
3	TESTGROUP1	2016.10.05 14:59:37
0	TASSTA	2016.10.05 14:58:11
0	TASSTA	2016.10.05 14:55:46
0	TASSTA	2016.09.27 16:21:27
0	TASSTA	2016.09.23 10:26:24
0	TASSTA	2016.09.22 00:13:09
0	TASSTA	2016.09.22 00:07:33
0	TASSTA	2016.09.16 15:16:42
0	TASSTA	2016.09.16 15:16:16
0	Root	2016.09.06 09:14:14
0	Root	2016.09.06 09:13:59
0	TASSTA Office	2016.08.12 08:50:24

6.2.3 NAME CHANGES

This tab displays the history of changes of the user’s logins.

If a user name has not changed, there will be written “No content in table” on the tab.

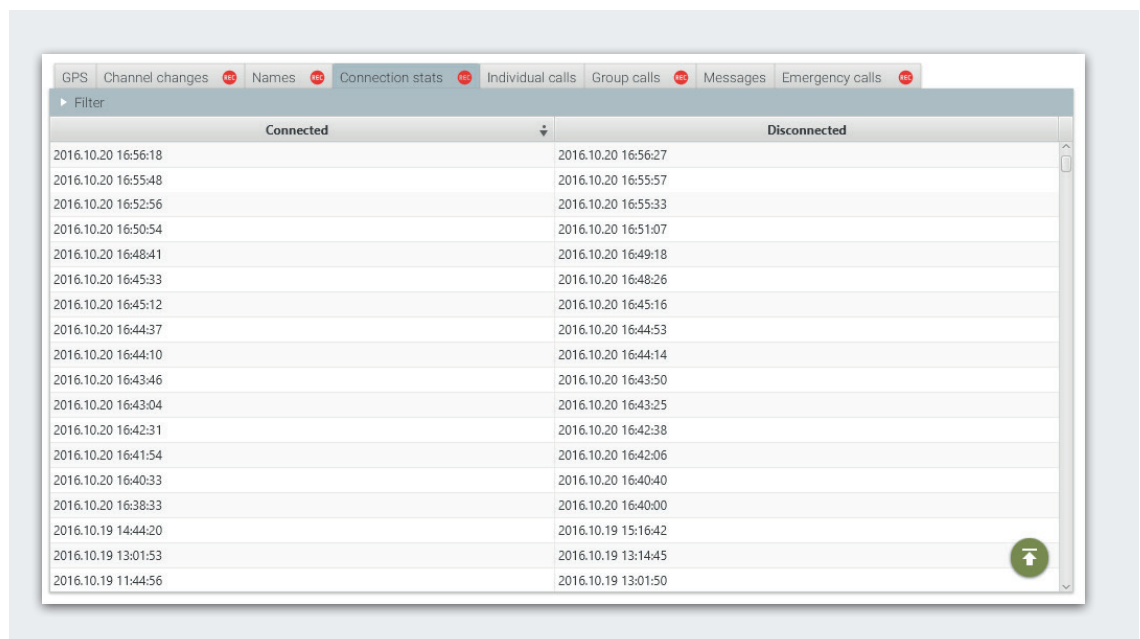
Name	New user login
Time	At what time the user login was changed



6.2.4 CONNECTION STATS

This tab shows statistics for connections and disconnections from the server for each session.

Connected	Date and time of the connection to the server
Disconnected	Date and time disconnected from the server.

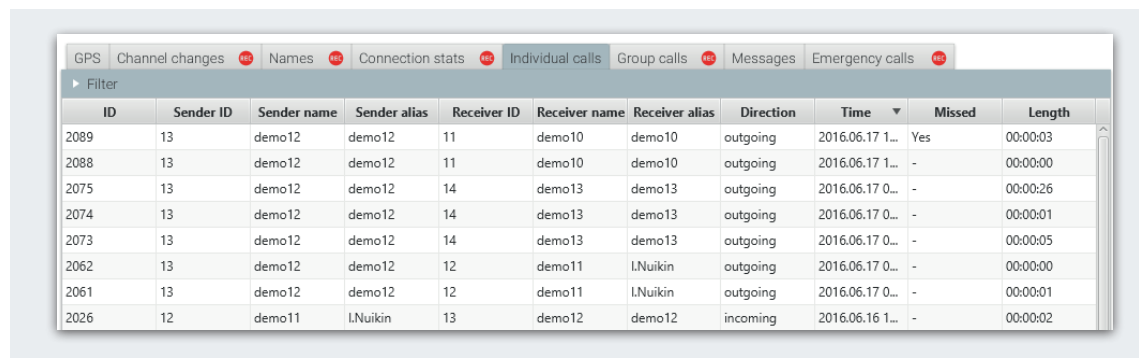


6.2.5 INDIVIDUAL (DIRECT) CALLS

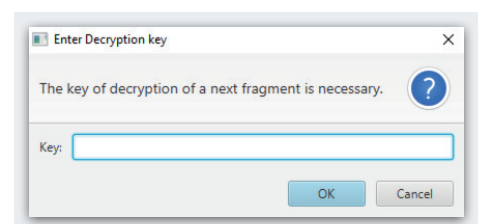
This tab displays the history of the individual calls of the selected user.

ID	Call number ID
Sender ID	ID number of a user initiated a call
Sender name	Name of a user initiated a call
Sender alias	Alias of a user initiated a call
Receiver ID	User ID that received a call
Receiver name	User name that received a call
Receiver alias	Alias of a user that received a call
Direction	Direction of the call - incoming or outgoing call.
Time	Date and time of call
Missed	Shows received / missed call
Length	Duration of the call

Double-click anywhere on the line with the call to save the current call to a local drive in .wav file format.



≡ *Note: for Encrypted records: If the call was encrypted with the E2EE function, you need a decryption key for listening. If there were several encrypted parts during the call, then you need to enter encryption key for each part of the recording.*



6.2.6 GROUP CALLS

This tab displayed history of group calls.

ID	ID call number
Group ID	ID number of the group where the group call was initiated
Group name	Name of the channel, in which there was a conversation
Started	Beginning of the call
Ended	Ending of the call
Length	Duration of the call

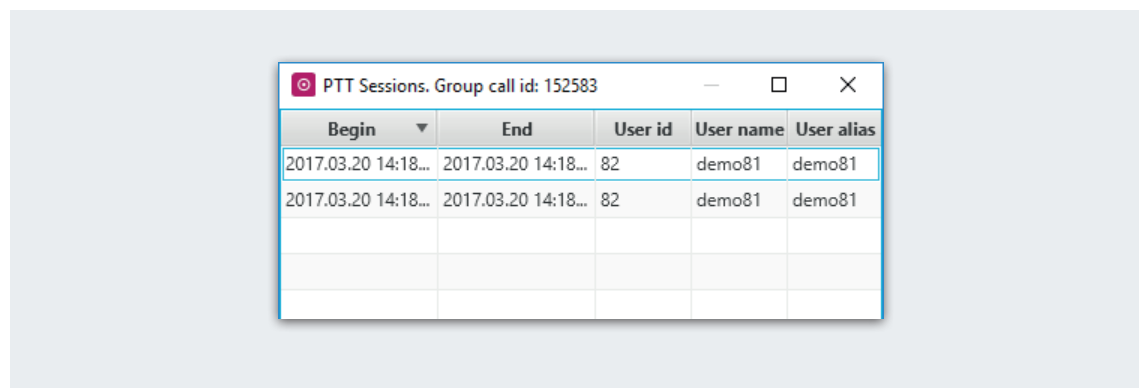
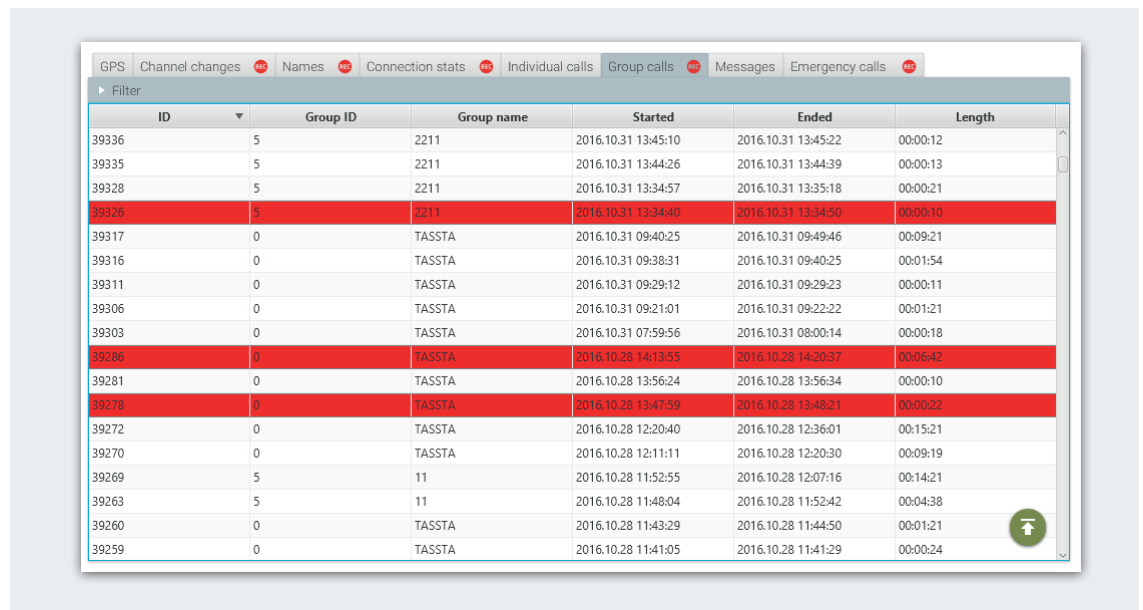
Emergency messages are highlighted in red.

Double-click anywhere on the line with the call to save the current call to a local drive in .wav file format.

Also you have the ability to see who pressed PTT during the call. It is convenient in case if more than two users participate in the call and it is necessary to find out which of the users was saying certain words.

To do this you need to right click on the desired call and select PTT Session.

After this you will see the window with information about the call: begin and end of PTT, user ID, username and user alias.



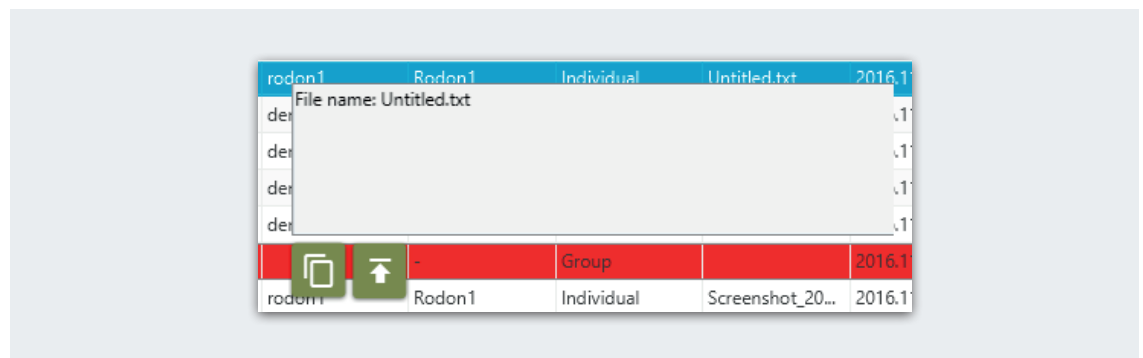
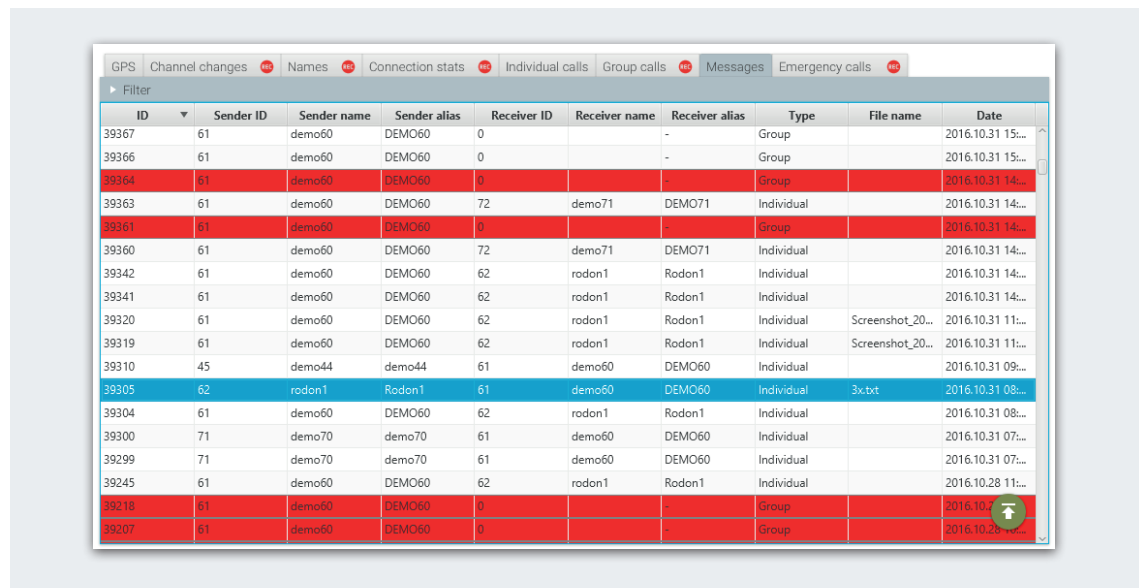
6.2.7 MESSAGES

The tab displays a message history between the current user and others.

ID	ID of the message
Sender ID	ID number of a user that sent a message
Sender name	Name of a user that sent a message
Sender alias	Alias of a user that sent a message
Receiver ID	ID of a user that received a message
Receiver name	Name of a user that received a message
Receiver alias	Alias of a user that received a message
Type	Type of message - group or individual
Subtype	Subtype of an emergency message - type of emergency event
Text	text of a message
File name	Name of attached file, if it is available
Date	Date and time of message

Emergency message is highlighted in red in the message list.

Double-click on the line with the message to open a subtab. It displays text of message or name of transmitted file (if it is available) and buttons for download message / file.



6.2.8 EMERGENCY CALLS

The Emergency calls tab only shows emergency calls and includes the following columns:

ID	Sender ID	Sender name	Sender alias	Channel ID	Channel name	Begin	End	GPS
379	64	zte	ZTE	4	Emergency 4: zte	2016.09.22 00:21...	2016.09.22 00:22...	52°35'19" N, 13°...
577	64	zte	ZTE	4	Emergency 4: zte	2016.09.22 00:21...	2016.09.22 00:21...	52°35'19" N, 13°...
575	64	zte	ZTE	4	Emergency 4: zte	2016.09.22 00:19...	2016.09.22 00:19...	52°35'19" N, 13°...
574	64	zte	ZTE	4	Emergency 4: zte	2016.09.22 00:18...	2016.09.22 00:18...	52°35'19" N, 13°...
330	64	zte	ZTE	4	Emergency 4: zte	2016.09.15 14:58...	-	-
323	64	zte	ZTE	5	Emergency 5: zte	2016.09.15 00:17...	2016.09.15 00:17...	-
316	64	zte	ZTE	4	Emergency 4: zte	2016.08.14 10:33...	2016.08.14 10:33...	-
196	64	zte	ZTE	4		2016.08.24 16:35...	2016.08.24 16:35...	-
155	64	zte	ZTE	4		2016.08.24 16:34...	2016.08.24 16:34...	-
154	64	zte	ZTE	4		2016.08.24 16:05...	2016.08.24 16:05...	-
153	64	zte	ZTE	4		2016.08.24 15:55...	2016.08.24 15:55...	-
152	64	zte	ZTE	4		2016.08.24 15:54...	2016.08.24 15:54...	-
151	64	zte	ZTE	4		2016.08.24 15:53...	2016.08.24 15:53...	-
150	64	zte	ZTE	4		2016.08.24 15:53...	2016.08.24 15:53...	-
145	64	zte	ZTE	4		2016.08.19 09:21...	2016.08.19 09:21...	-
139	64	zte	ZTE	4		2016.08.18 13:03...	2016.08.18 13:04...	-
138	64	zte	ZTE	4		2016.08.18 13:02...	2016.08.18 13:02...	-
126	64	zte	ZTE	4		2016.08.17 00:19...	2016.08.17 00:19...	-

ID	Emergency ID
Sender ID	ID number of a user who needs help
Sender name	Name of a user who needs help
Sender alias	Alias of a user who needs help
Channel ID	ID of a channel
Channel name	Name of a channel
Begin	Time when an emergency call was initiated
End	Time when an emergency call was ended
GPS	GPS coordinates of the location where the emergency call happened

By double clicking on user line, you can open a subtab. It displays additional details of emergency record listed in the table below:

ID	Group ID	Group name	Started	Ended	Length
32740	4	Emergency ...	2016.09.15 ...	2016.09.15 ...	00:00:09

ID	ID of an emergency call
Group ID	ID of a group where an emergency call happened
Group name	Name of a group where an emergency call happened
Started	Time when an emergency call was initiated
Ended	Time when an emergency call was ended
Length	Duration of an emergency call

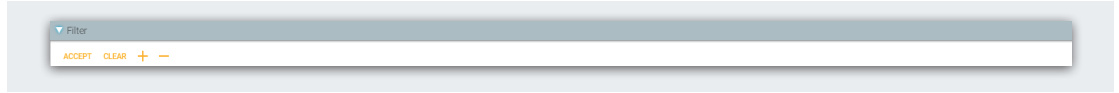
Emergency Call is highlighted in red in the message list

Double-click anywhere on the line with the call to save the current call to a local drive in .wav file format.

6.2.9 FILTERS

T.RECORDER has extensive filtering capabilities for records and the ability to use several filters at the same time.

Click on the strip with the title FILTER and open a menu where you can add and/or change filters.



+ button	adds filter
– button	deletes all filters
ACCEPT	applies a specified filter to the data tab
CLEAR	clears all filters
– button on the right side of each filter	removes the current filter

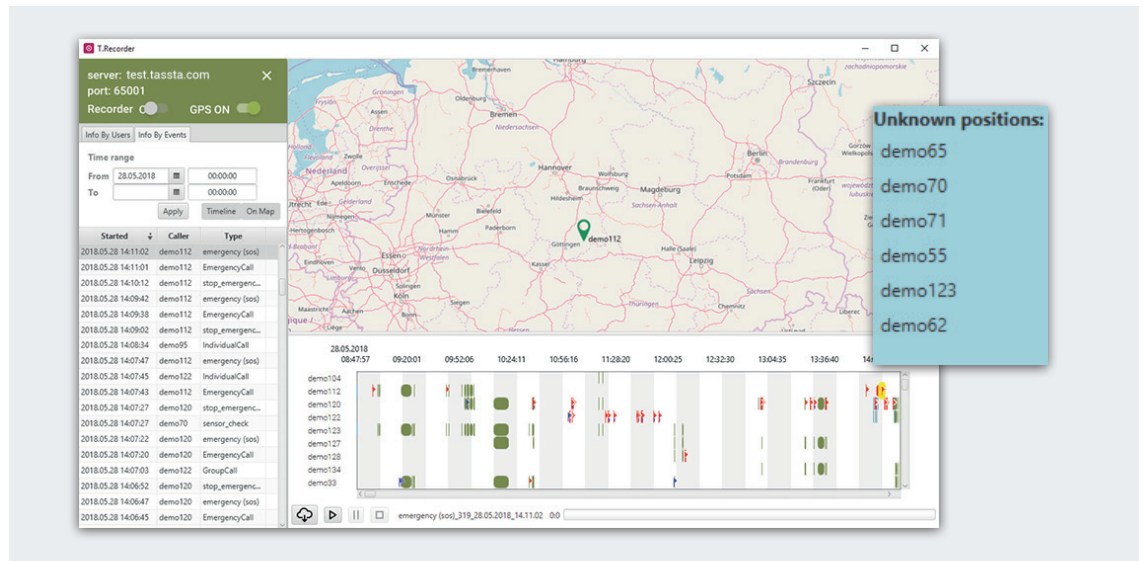
If you add several filters, filtering works by strictly match the specified filtering parameters. Several filters are working as AND.

ID	Sender ID	Sender name	Sender alias	Receiver ID	Receiver na...	Receiver alias	Direction	Time	Missed	Length
38151	62	rodondell	Rodon DELL	61	htc	HTC	incoming	2016.10.12 1...	-	00:00:04
38022	62	rodondell	Rodon DELL	61	htc	HTC	incoming	2016.10.11 0...	-	00:00:00
37838	72	demo71	SuperDEMO...	61	htc	HTC	incoming	2016.10.10 1...	Yes	00:00:04
36038	63	sonim	Sonim XP7700	61	htc	HTC	incoming	2016.09.30 1...	-	00:00:11
32438	64	zte	ZTE GH650	61	htc	HTC	incoming	2016.09.15 1...	-	00:00:03
32388	64	zte	ZTE GH650	61	htc	HTC	incoming	2016.09.15 0...	-	00:00:03

6.3 INFO BY EVENTS

After clicking on INFO BY EVENTS you will have the ability to search for information about the conversation by event.

At first, you need to enter the time range and press APPLY to save the changes, also click on Buttons: Timeline and Map. Then, you will see the time scale for the time with the preconfigured Sections that match the calls made. And from a map that shows the participants in the conversation (Their location during the call, Users who participated in the conversation but did not transmit their coordinates will not be displayed on the map. They will be displayed in a separate list named "Unknown positions").

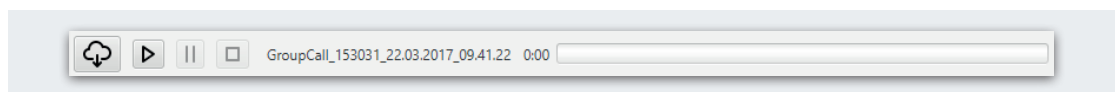


There are three types of segments that correspond to the three types of calls in the time scale:

- GREEN - Group Call
- BLUE - Individual Call (Direct Call)
- RED - Emergency Call.

To view information about the call simply click on any segment in the time scale. The selected call will be highlighted in the table and you will get the opportunity to play this record.

The playback bar locates on the bottom part of the application.



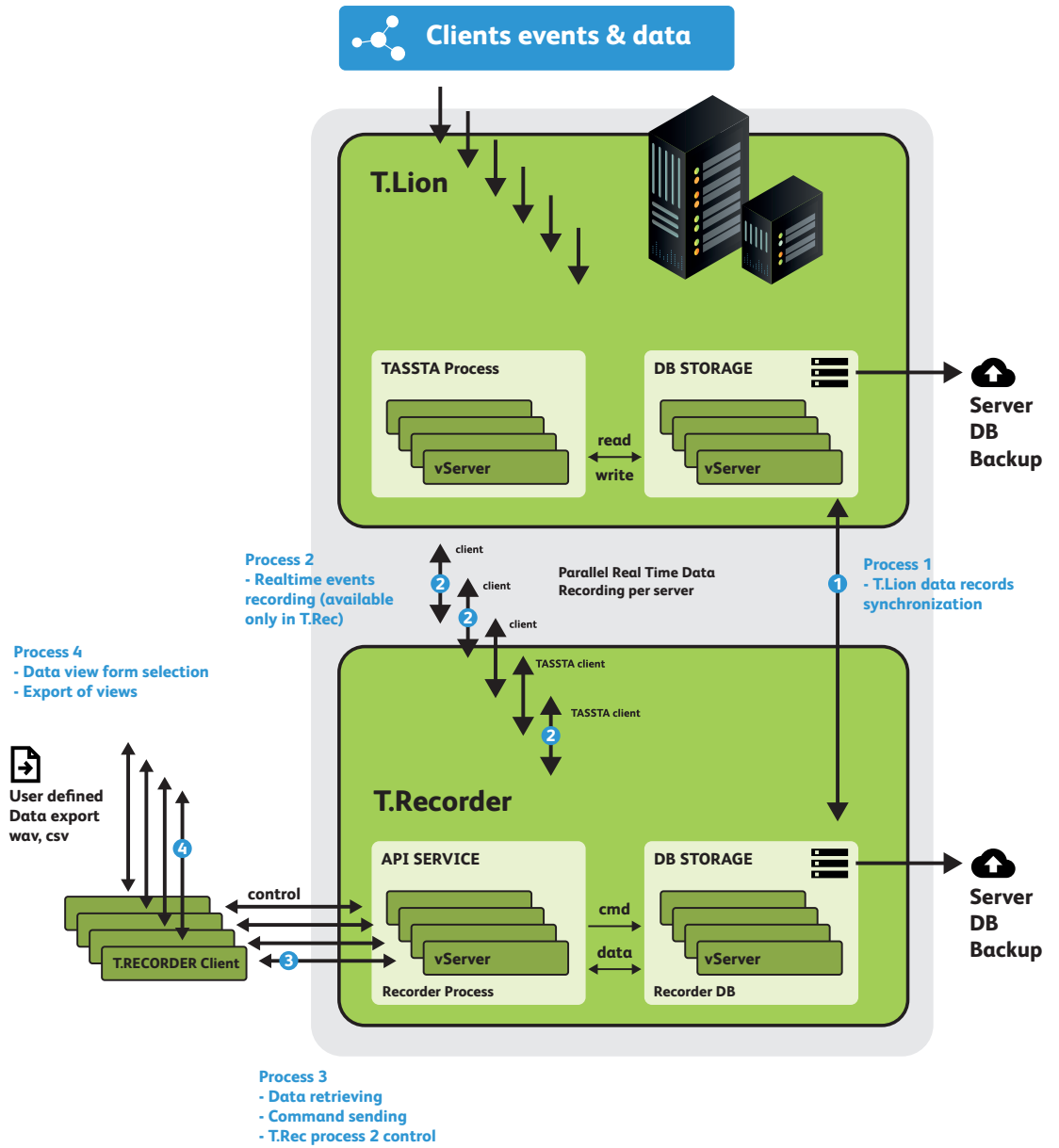
It includes the following options:

- download button
- control buttons (PLAY, PAUSE and STOP),
- name of record
- progress bar

The records save in *.WAV format. To save the record simply click on the button with the cloud and select a folder to save.

7

STANDALONE T.RECORDER SERVER CONFIGURATION





TASSTA

SIMPLY PROFESSIONAL