

INSPIRATIONneo

Audio Analysis module



User manual

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Product line neo, version 6.x

The described functions can be used with the following ASC products:

INSPIRATIONneo

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1 General information

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2 Introduction

In the Audio Analysis module, you are able to identify audio sessions which meet certain criteria by means of different speech analysis technologies and subsequently analyze them in a target-oriented way. That way, you can obtain valuable information from previously unstructured data. The function *Audio Analysis* must be activated by the system provider during the configuration of the server.



In the Audio Analysis module, only the audio part of the session is assessed.

You can individually define the criteria you would like to search for in the sessions. The defined criteria are stored in audio analysis jobs. You can define audio analysis jobs as periodical, single or real-time jobs.

- *Periodical:*
A periodical job analyzes sessions that have been recorded after the job has been activated. The job is executed in regular intervals from its start time on and analyzes all new recordings.
- *Single:*
A single job analyzes recordings from a period of time that can be defined arbitrarily. If the period of time is in the future, then the job will be executed once the period has been reached. The job is executed exactly once and only during the defined period of time.
- *Real time*
A real-time job analyzes call while they are recorded. The job is being executed as long as it is active.

The following speech analysis methods are available:

- Keyword spotting, see [chapter "Keyword spotting", p. 7](#)
- Transcription, see [chapter "Transcription", p. 7](#)
- Emotion detection, see [chapter "Emotion detection", p. 8](#)

To be able to use the speech analysis methods Keyword spotting and Transcription, the corresponding software must have been installed.

Once a job has been activated, it collects sessions according to the previously defined criteria and sends them to the speech analysis software to be analyzed.

With the speech analysis method keyword spotting, 40 hours of audio recordings can be analyzed within 24 hours; this equals an analysis speed of 0.6 times real time. A higher analysis speed is not recommended as it compromises the quality of the analyses.

With the speech analysis method transcription, 24 hours of audio recordings can be analyzed within 24 hours; this equals real time. For better results, an analysis speed of 3 times real time is recommended; this equals an analysis time of 3 minutes for an audio recording of 1 minute.

Open the Audio Analysis module by clicking on the menu item *Audio Analysis* in the navigation bar.



Basic information about using the application INSPIRATION_{neo} can be found in the user manual *INSPIRATIONneo - General information*.

3 Speech analysis methods

3.1 Keyword spotting

By means of keyword spotting, you can filter for certain topics or categorize the sessions. To this end, you compile all expressions and phrases (keywords) which describe a topic in an analysis list. The defined keywords will then be searched automatically in the sessions.

Since this approach is limited to detecting individual words and phrases, sessions can be searched quickly. Since you have to define the expressions which are supposed to be searched for in advance, this approach especially serves to identify already known topics which frequently come up again.

The Audio Analysis module differentiates between different kinds of word lists which are used to administrate keywords which are to be searched:

- White list:

This list either contains allowed keywords for speech analysis purposes or expressions which are explicitly not supposed to be used. If you add a keyword which has been saved in the white list to a keyword list, then the system recognizes this and automatically applies the status saved in the white list.

Administrate white list, see [chapter "Administrate white list", p. 59](#).

- Analysis lists:

Analysis lists contain all keywords of a certain search topic, e. g. all keywords to filter for complaint calls.

Administrate analysis list, see [chapter "Administrate keyword lists", p. 63](#).

- Synonym lists:

A synonym list contains all synonyms for a keyword, e. g. keywords which express anger. It thus serves to compile a pool of words revolving about a certain topic. When creating analysis lists you can fall back on synonym lists and apply an entire synonym list or individual elements to the analysis list.

Administrate synonym list, see [chapter "Administrate keyword lists", p. 63](#).



In this context the software and the manual use the term *keyword lists* as an umbrella term for *analysis lists* and *synonym lists*.

3.2 Transcription

Transcription is based on the LVCSR technology (large vocabulary continuous speech recognition).

The transcription converts audio recordings into text which is then available for analysis. To be able to recognize all words, dictionaries are uploaded to look up the audio data in. As each separate word must be recognized and converted into text, this approach initially requires more time than keyword spotting. But on the other hand, transcription makes the entire audio recording available as text so that any word can be found via full-text search.

The result (text) is entered in the INSPIRATION^{neo} database via an XML interface.

An advantage of full-text searches is that the search terms can be displayed in context. This excludes misunderstandings, e. g. in the event of ambiguities. The texts are available for additional analyses and can be transferred to other systems to do so.

There is no upper limit for the length of the audio, however it must have a minimum length of 200 milliseconds to be processed.

Full-text search with Solr offers the possibility to define two words which appear in certain proximity of each other.



For information about full-text search refer to the user manual INSPIRATIONneo - Sessions module.



ASC recommends using stereo calls for transcription.

Transcription for mono calls is possible but not advisable.

As all call participants are merged in one track in mono calls, the results would be associated with one participant. The audio analysis engine is not able to properly separate cross-talk occurring when participants speak at the same time; as a result, the quality of the transcription decreases.

3.3

Emotion detection

Emotion detection serves to search calls for emotions. There are two types of emotion detection:

- Linguistic emotion detection:

Emotions are detected based on the diction of the speaker. To be able to do so, keywords are saved in the system which characterize certain emotions. If swearwords are used, it can be presumed that the call contain the emotion “anger”.

For information about using keywords refer see [chapter "Keyword spotting", p. 7](#).

- Acoustic emotion detection:

Emotions are detected based on typical characteristics in the voice of the speaker such as high volume or cross talk.

Both approaches have their advantages and disadvantages: There are speaker who continue to select their words carefully which only their voice indicates an emotion and vice versa.

Audio analysis jobs with the method *emotion detection* are based on acoustic emotion detection.

The functionality *emotion detection* must be activated by the system provider while configuration the server.

In the main view, all saved audio analysis jobs are displayed.



If conversation rules (view filters) apply for the logged-in user, then the main view only contains those entries which comply with these conversation rules.




















Name	Job Status	Analysis Direction	Analysis Type	Analyzed Sessions	Sessions with Hits	Hits
Transcription_Periodisch				0		
KWS_Einmalig				10082	10082	90680
KWS_Periodisch				4014	4014	36074

Fig. 1: Main view audio analysis

Depending on the configuration of the columns, the following information is displayed in the main view:

Name	Name of the audio analysis job.
Job Status	Shows the release status of the job.  = Deactivated  = Running  = invalid configuration  = Finished A description of the possible statuses can be found under chapter "Tab Details", p. 14 . NOTICE! A deactivated job cannot be started.
Analysis Direction	Shows the analysis direction of the job.  = Periodical Sessions that have been recorded after the job has been activated are analyzed. The job is executed in regular intervals from its start time on and analyzes all new recordings.  = Once Sessions from a defined period of time are analyzed. The job is executed exactly once and only during the defined period of time.  = Real time Calls that have been recorded after the job has been activated are analyzed which being recorded.. The job is being executed as long as it is active.
Analysis Type	Shows the analysis type of the job.  = Keyword spotting  = Emotion detection

	 = Transcription For information about the different analysis types see chapter "Speech analysis methods", p. 7.
Analyzed sessions	Number of the analyzed sessions.
Sessions with hits	Number of sessions with hits.
Hits	Number of hits from all analyzed sessions.
Created By	Name of the user who has created the audio analysis job.
Running Since	Date on which the audio analysis job was started.
Creation Date	Date on which the audio analysis job was created.
Updated	Date on which the audio analysis job was updated for the last time.








4.1

Toolbar

The toolbar offers the following functions.



Fig. 2: Toolbar Audio Analysis module

	Refresh	Refreshes the main view.
	Search	Opens the window of the search function. The search function allows searching systematically for sets of data which meet certain criteria (see chapter "Search", p. 11).
		The icon  (<i>Search</i>) is displayed whenever the search has been adjusted by means of a filter.
	Reset Search	Resets all manually entered search criteria. The search is started without manual filter settings.
	Create	Creates a new job. See chapter "Create audio analysis job", p. 34.
	Delete	Deletes the selected job or the job results. See chapter "Delete audio analysis job", p. 36.
Audio Analysis	Sessions	Opens the session view for the selected job. See chapter "Display sessions", p. 37. NOTICE! This function is only available for jobs which have been finished.
	Administrate White List	Opens a window which allows administrating the white list. See chapter "Administrate white list", p. 59. This function is only available if the software for the keyword search has been installed and configured correctly.
	Administrate Keyword Lists	Opens a window which allows administrating the analysis lists and the synonym lists. See chapter "Administrate keyword lists", p. 63.
	Running Analyses	Opens a window which allows viewing and resetting running analyses. See chapter "Running Analyses", p. 75.

	<i>Continue Job</i>	Continues a previously paused job or activates a job with an invalid configuration. Subsequently, the job sends accumulated requests to the analysis machine and resumes operation.
	<i>Pause Job</i>	<p>Pauses a running audio analysis job. In this state, the analysis job does not send new analysis to the analysis machine anymore but continues to accept new tasks, e. g. when new calls to be analyzed are coming in.</p> <p>This state allows partially reconfiguring the audio analysis job; some settings are excluded, though. NOTICE! Keep in mind that when changing the configuration of an already running job, the analysis results may not be consistent anymore and may contradict the original intention, depending on the changed settings.</p>
<i>General</i>	<i>Print</i>	Prints the table of the main view.
	<i>Adjust Table</i>	<p>Opens a window in which you can adjust the following settings for the main view:</p> <ul style="list-style-type: none"> • Displayed information • Order of the displayed columns • Number of rows per page.
	<i>General Help</i>	Via the menu item <i>General Help</i> , a description of the application you are currently viewing is opened.
	<i>Module Help</i>	Via the menu item <i>Module Help</i> , a description of the module you are currently viewing is opened.





In the user manual *INSPIRATIONneo - General information*, you find detailed descriptions of the default functions such as *Print*, *Adjust table* or *Help* if required.

4.1.1

Search

The search function allows searching systematically for sets of data which meet certain criteria.

1. In the toolbar, click on the icon  or  (*Search*).
⇒ The window *Search Criteria* appears.

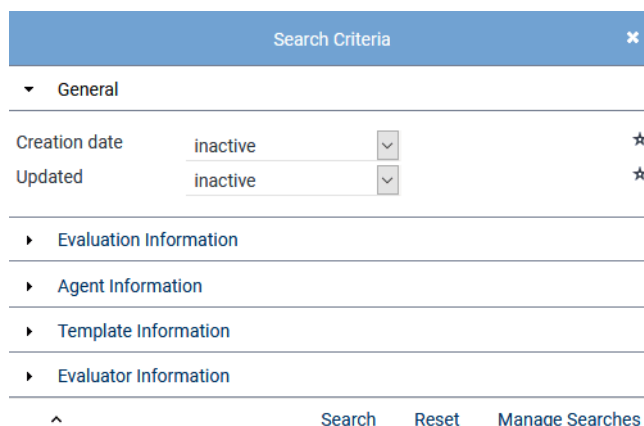



Fig. 3: Window Search Criteria (example)

2. Set the respective search criteria.
NOTICE! It depends on the respective module which search criteria are available.
3. To start the search, click on the button *Search*.
To reset all manually entered search criteria, click on the button *Reset*.

⇒ After running the search, only those sets of data are displayed in the main view which meet the set search criteria.

4. To display all original sets of data in the main view again, i. e. to reset the manually entered search criteria, click on the icon  (*Reset search*) in the toolbar.

By clicking on the button *Manage Searches*, you can save the defined search criteria under an unambiguous name, load saved search criteria or delete them.

By clicking on the icon ★, you can tag the search criterion as favorite. Criteria tagged as favorite are displayed additionally in the upper area of the window *Search Criteria* and marked with the icon ★.

If conversation rules (view filters) apply for the logged-in user, then predefined search settings are displayed in the search criteria of the following modules which comply with the filter settings of the conversation rules:



- Sessions module
- Calibrations module
- Audio Analysis module

You cannot delete these user-specific filter settings or search settings: however, you can add new ones and thus additionally filter the displayed entries in the main view.



A detailed description of the search function can be found in the user manual *INSPIRATIONneo - General information*.

5

Detail view

The detail view contains additional information about and functions of the audio analysis job.

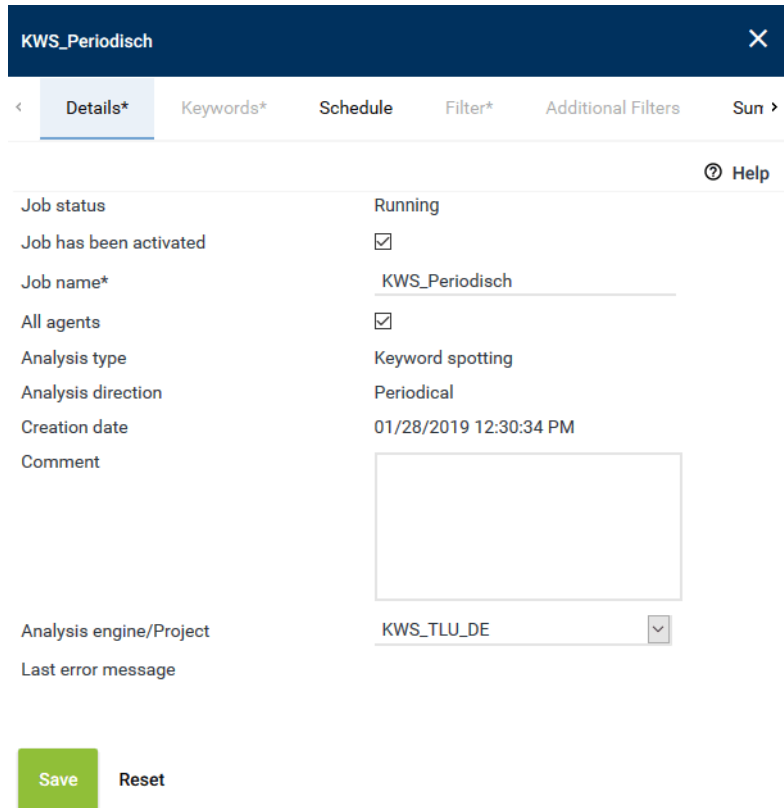


Fig. 4: Detail view audio analysis (example)



It depends on the job type and the analysis direction which tabs are available.

The detail view consists of the following tabs:

- *Details*
Here, you can display and edit basic information about the selected audio analysis job.
See [chapter "Tab Details", p. 14.](#)
- *Keywords*
Here, you can adjust the settings of the keywords.
See [chapter "Tab Keywords", p. 15.](#)
- *Transcription*
Here, you can adjust the settings for the export of a transcribed session.
See [chapter "Tab Transcription", p. 17.](#)
- *Emotions*
Here, you can change the settings of the emotion detection.
See [chapter "Tab Emotions", p. 21.](#)
- *Schedule*
Here, you can change the settings of the schedule.
See [chapter "Tab Schedule", p. 24.](#)
- *Filter*
Here, you can change the filter settings.

See [chapter "Tab Filter", p. 26](#).

- *Additional Filters*

Here, you can configure advanced filter settings.

See [chapter "Tab Additional Filters", p. 30](#)

- *Summary*

Here, you can see the summary of the settings of the audio analysis job.

See [chapter "Tab Summary", p. 31](#).

- *Statistics*

Here, you can see the statistics of the results of the audio analysis job.

See [chapter "Tab Statistics", p. 32](#).

- *Preview*

Here, you can see the information about the preview of the audio analysis.

See [chapter "Tab Preview", p. 33](#).

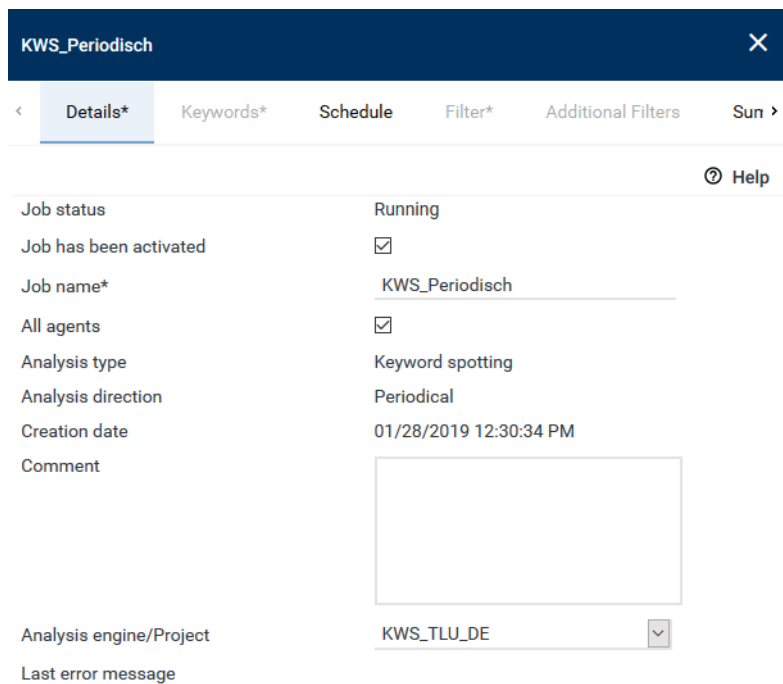
5.1

Tab Details

Here, you can display and edit basic information about the selected audio analysis job.



It depends on the job type which options are displayed in the tab.



The screenshot shows a window titled 'KWS_Periodisch' with a close button (X). Below the title bar is a tabbed interface with tabs: '< Details* Keywords* Schedule Filter* Additional Filters Sun >'. The 'Details*' tab is active. On the right side of the tab bar is a 'Help' icon and text. The main content area displays the following fields and values:

Job status	Running
Job has been activated	<input checked="" type="checkbox"/>
Job name*	KWS_Periodisch
All agents	<input checked="" type="checkbox"/>
Analysis type	Keyword spotting
Analysis direction	Periodical
Creation date	01/28/2019 12:30:34 PM
Comment	<div></div>
Analysis engine/Project	KWS_TLU_DE
Last error message	

Fig. 5: Tab Details

Job status

Current status of the job.

- *Deactivated* = The job release has been deactivated. The job is not active.
- *Running* = The job is active. The found sessions are analyzed.
- *Invalid configuration* = While executing the job, an error occurred which prevented the job from being continued.
- *Finished* = The job has been finished.

<i>Job has been activated</i>	<p>Select whether the job configuration is supposed to be activated.</p> <p><input checked="" type="checkbox"/> = Job has been activated. The job configuration has been released.</p> <p><input type="checkbox"/> = Job has been deactivated. The job configuration has not been released.</p> <p>NOTICE! A deactivated job cannot be started.</p> <p>NOTICE! If the job had been activated and job results have been found, the job results remain even if the job is deactivated.</p>
<i>Job name</i>	Name of the audio analysis job.
<i>All agents</i>	<p>Select whether the job is supposed to consider the sessions of all of the tenant's agents configured in the system for analysis.</p> <p><input checked="" type="checkbox"/> = All agents of the tenant are considered in the analysis.</p> <p><input type="checkbox"/> = Not all agents of the tenant are considered in the analysis.</p> <p>If only certain agents are supposed to be considered in the analysis, you can select them in the tab <i>Filter</i> in the group field <i>Organization Settings</i>, see chapter "Group field Organization Settings", p. 26.</p>
<i>Analysis type</i>	<p>Type of the audio analysis job.</p> <ul style="list-style-type: none"> • <i>Keyword spotting</i> • <i>Emotion detection</i> • <i>Transcription</i> <p>For information about the different analysis types see chapter "Speech analysis methods", p. 7.</p>
<i>Analysis direction</i>	<p>Analysis direction of the job.</p> <ul style="list-style-type: none"> • <i>Periodical</i> <p>Sessions that have been recorded after the job has been activated are analyzed. The job is executed in regular intervals from its start time on and analyzes all new recordings.</p> • <i>Once</i> <p>Recordings from a defined period of time are analyzed. The job is executed exactly once and only during the defined period of time.</p> • <i>Real time</i> <p>Calls that have been recorded after the job has been activated are analyzed which being recorded.. The job is being executed as long as it is active.</p>
<i>Creation date</i>	Date on which the audio analysis job was created.
<i>Comment</i>	Here, you can enter a comment for the audio analysis job.
<i>Analysis machine/Project</i>	<p>Select the audio analysis machine/project on basis of which you would like to execute the audio analysis.</p> <p>Select the audio analysis machine/project from the drop-down list.</p>
<i>Last error message</i>	Subject of the last error message.

5.2 Tab Keywords

Here, you can adjust the settings of the keywords.

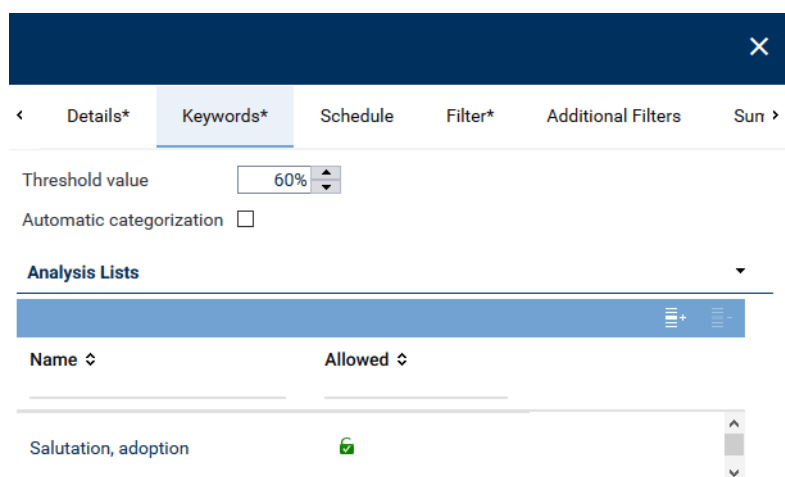




Fig. 6: Tab Keywords

Threshold value	<p>Enter the threshold value for the required accuracy of the hits.</p> <p>This threshold value equals the minimal accuracy of the words which are accepted as hits. Only words which match a keyword to the extent of the entered percentage value are accepted as hits and used for the analysis. All other words brought up as results by the speech analysis software are ignored.</p> <p>Click on one of the arrows to increase or decrease the value or enter the value via the keyboard.</p> <p>You can enter a value from 1 to 100.</p>
Automatic categorization	<p>Select whether analyzed sessions are supposed to be sorted into a category automatically based on the found keywords.</p> <p><input checked="" type="checkbox"/> = Sessions are categorized automatically. If a certain number of keywords defined by the user is found while assessing the analysis result, then the session is automatically sorted into the corresponding category.</p> <p><input type="checkbox"/> = Sessions are not categorized automatically.</p> <p>NOTICE! Activating this option only has any impact if keywords have been sorted into at least one category. If there is no category with corresponding keywords in the system, this option is ignored when the analysis results are assessed.</p> <p>For information about managing categories refer to the user manual <i>INSPIRATIONneo - Usage Sessions module</i>.</p>

Group field Analysis Lists

In the group field *Analysis Lists*, you can assign already created analysis lists to the job. The job searches for all keywords in the assigned analysis lists.

You have to assign at least 1 analysis list so that the job can be saved and the audio analysis executed. The assigned analysis lists have to contain at least 1 allowed keyword.

	Add	Opens a window in which you can select and add analysis lists (see chapter "Add analysis list", p. 17).
	Delete	Deletes the selected entry from the assigned analysis list.



Information about the maintenance of keyword lists (analysis lists and synonym lists) can be found in [chapter "Administrate keyword lists", p. 63](#).

5.2.1 Add analysis list

1. In the list *Analysis Lists*, click on the icon  (*Add*).

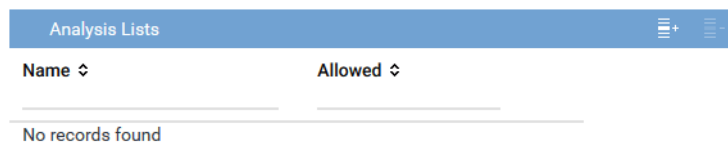


Fig. 7: Add analysis list

In the following window, all created analysis lists are listed.

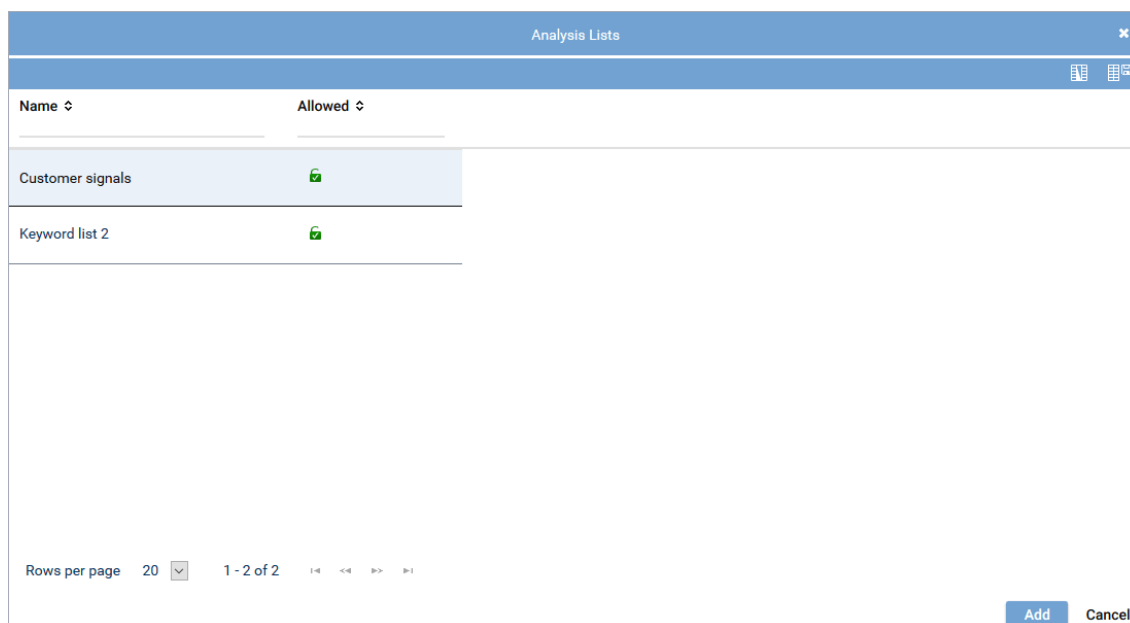


Fig. 8: Add analysis lists

2. Select 1 or several analysis lists.
To select several analysis lists or to revoke the selection, click on the respective line while holding the [Ctrl] key down.
3. To add the selected analysis lists, click on the button *Add*.
To discard the selection and close the window, click on the button *Cancel*.

5.3 Tab Transcription

Here, you can adjust the settings for the export of a transcribed session.

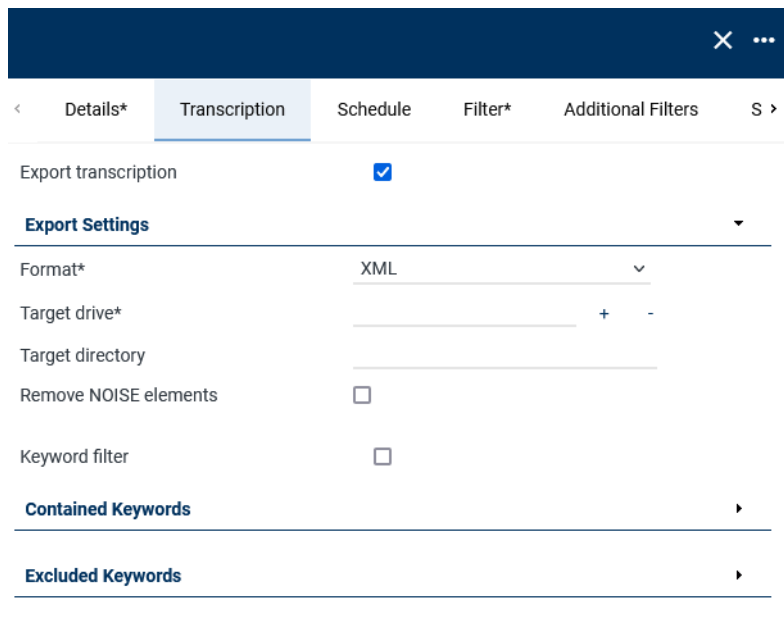


Fig. 9: Tab Transcription

<i>Export transcription</i>	<p>Select whether the transcription is supposed to be exported.</p> <p><input checked="" type="checkbox"/> = Transcription is exported.</p> <p><input type="checkbox"/> = Transcription is not exported.</p>
-----------------------------	--

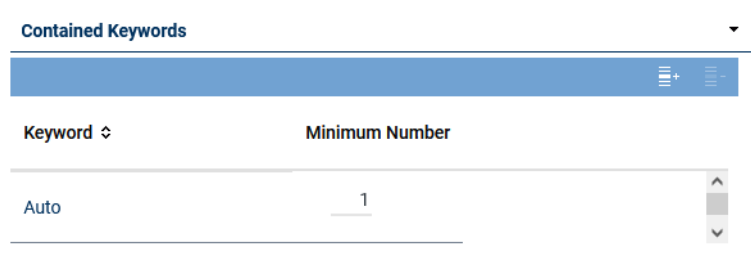
Group field Export Settings

<i>Format</i>	<p>From the drop-down list, select the format in which you would like to export the transcribed session. The following formats are available:</p> <ul style="list-style-type: none"> • TXT • XML
<i>Target drive</i>	<p>Add the drive to which you would like to export the transcribed session. The target drive must have been created previously and released for the tenant planning to use audio analysis in the application System Configuration in the Drives module, see administration manual <i>ASC System Configuration - Configuration drives</i>.</p> <p>Add drive, see chapter "Add drive", p. 19.</p>
<i>Target directory</i>	<p>In the entry field, enter the target directory into which the transcribed session is supposed to be exported. The target directory is created by the <i>ASC FileMan</i> automatically once the first transcription has been completed.</p>
<i>Remove NOISE elements</i>	<p>Select whether the NOISE elements are supposed to be removed. NOISE elements appear in the transcription where no known word could be recognized; removing NOISE elements increases the readability of the transcription.</p> <p><input checked="" type="checkbox"/> = NOISE elements are removed.</p> <p><input type="checkbox"/> = NOISE elements are not removed.</p>
<i>Keyword filter</i>	<p>Select whether a keyword filter is supposed to be activated.</p> <p><input checked="" type="checkbox"/> = Keyword filter has been activated. In the group fields <i>Contained Keywords</i> and <i>Excluded Keywords</i>, you can specify parameters.</p>

☐ = Keyword filter has been deactivated. In the group fields *Contained Keywords* and *Excluded Keywords*, you cannot specify parameters.



Group field Contained Keywords

Add keywords that you would like to define as contained keywords.





Keyword ↕	Minimum Number
Auto	1

Fig. 10: Group field Contained Keywords

	<i>Add</i>	Opens a window in which you can select and add keywords, see chapter "Add keywords", p. 20).
	<i>Remove</i>	Removes the selected keyword from the list.

Group field Excluded Keywords

Add keywords that you would like to define as excluded keywords.

	<i>Add</i>	Opens a window in which you can select and add keywords, see chapter "Add keywords", p. 20).
	<i>Remove</i>	Removes the selected keyword from the list.

5.3.1

Add drive

1. Click on the button **+** behind the entry field *Target drive*.

_____ + -

Fig. 11: Add drive


2. Select the respective drive from the list.

Drive				
Device Type ↕	Name ↕	Path ↕	Free Disk Space ↕	Server ↕
NAS	KWS_NEO	EML_NEO_134	<div style="width: 100%; height: 10px; background-color: green;"></div>	Audio-Analysis
DVD-ROM	DVD-ROM drive	F:\		Audio-Analysis
<div> Rows per page 20 1 - 2 of 2 </div>				
				Add Cancel

Fig. 12: Select drive

- Click on the button *Add*, to add the selected drive.
To discard the selection and close the window, click on the button *Cancel*.

5.3.2 Add keywords

- To add keywords, click on the icon  (*Add*) in the lists *Contained Keywords* or *Excluded Keywords*.

Keyword ↕		Minimum Number
No records found		

Fig. 13: Select keyword

In the following window, all created keywords are listed.

Keywords	
Name ↕	
Rente	
Audioanalyse	
Auto	
Gespräch	
Computer	
Add Cancel	

Fig. 14: Add keyword (example)

- Select one or several keywords from the list.
To select several keywords or to revoke the selection, click on the respective line while holding the [Ctrl] key down.

- To add the selected keywords, click on the button *Add*.
To discard the selection and close the window, click on the button *Cancel*.

5.4

Tab Emotions

Here, you can change the settings of the emotion detection.



This tab is only available for emotion detection jobs.

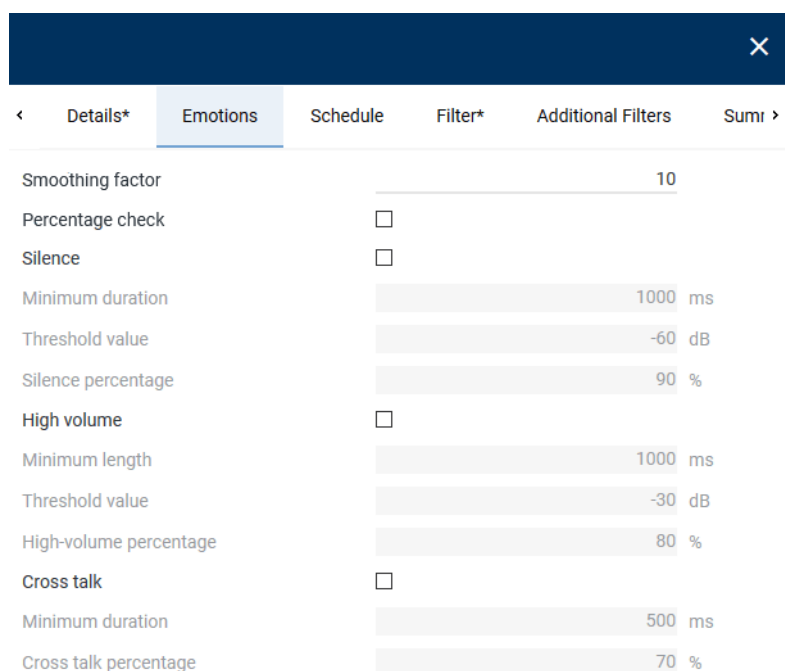


Fig. 15: Tab Emotions

Smoothing factor	<p>Enter the extent to which the audio samples/audio curves are supposed to be smoothed out.</p> <p>Higher values indicate higher smoothing. Higher values may increase the detection rate but not the precision for silence and noise as a higher smoothing removes certain information and silence may be detected falsely, for instance.</p> <p>Enter a value between 0 and 100.</p>
Percentage check	<p>Select whether sessions are supposed to be checked for the percentage of an emotion they contain.</p> <p><input checked="" type="checkbox"/> = Percentage check has been activated. <input type="checkbox"/> = Percentage check has not been activated.</p> <p>Once the emotion detection job has completed the analysis of the session, the results of the percentage check can be searched in the Sessions module.</p>
Silence	<p>Shows whether the configured values have been activated for the criterion <i>Silence</i>.</p> <p><input checked="" type="checkbox"/> = Values have been activated. <input type="checkbox"/> = Values have not been activated.</p>

	<p>Enter a minimum duration (in ms), a threshold value (in -dB), and a silence percentage (in %) in the respective entry field. Conversation sections which last longer than the entered minimum duration and which do not reach the volume defined as threshold are interpreted as silence.</p> <p>Threshold value: 0 dB = maximum level -90 dB = minimum level</p> <p>It depends on the deployed equipment and the environment (e. g. noise, statics, background sound, etc.) where silence starts.</p>
<i>High volume</i>	<p>Shows whether the configured values have been activated for the criterion <i>high volume</i>.</p> <p><input checked="" type="checkbox"/> = Values have been activated. <input type="checkbox"/> = Values have not been activated.</p> <p>Enter a minimum duration (in ms), a threshold value (in -dB), and a high-volume percentage (in %) in the respective entry field. Conversation sections which last longer than the entered minimum duration and which exceed the volume defined as threshold are interpreted as high-volume sections.</p> <p>Threshold value: 0 dB = maximum level -90 dB = minimum level</p> <p>It depends on the deployed equipment and the environment (e. g. statics, background sound, etc.) where high volume starts.</p>
<i>Cross talk</i>	<p>Shows whether the configured value has been activated for the criterion <i>Cross talk</i>.</p> <p><input checked="" type="checkbox"/> = Value has been activated. <input type="checkbox"/> = Value has not been activated.</p> <p>Enter a minimum duration (in ms) and a cross talk percentage (in %) in the respective entry field. Conversation sections in which several participants are talking at the same time and which last longer than the entered minimum duration are interpreted as cross talk.</p>

5.4.1 Determines settings for emotion detection

The possible fields of application for emotion detection are diversified, e. g. police, airport, banks, call centers, etc. To determine the best possible settings of an emotion detection job, proceed as follows:

1. Create a **WAVE** file with a test call containing emotionally charged sections (silence, noise, cross talk) to be analyzed or use an already existing **WAVE** file. Sampling rate of the **WAVE** file must be 8000 Hz.
2. Open the Windows Explorer.
3. Change to the directory *C:\Program Files (x86)\ASC\ASC Product Suite\scripts*.
4. Double-click on the file *EmotionPreview.bat*.
⇒ The window to select the audio file opens.
5. Select the previously created **WAVE** file to be analyzed in the Explorer.
6. Click on the button *Open*.
7. The **WAVE** file is opened in the window *ASC.EmotionDetection*.
⇒ According to the settings, the detected emotions are displayed in the diagram.

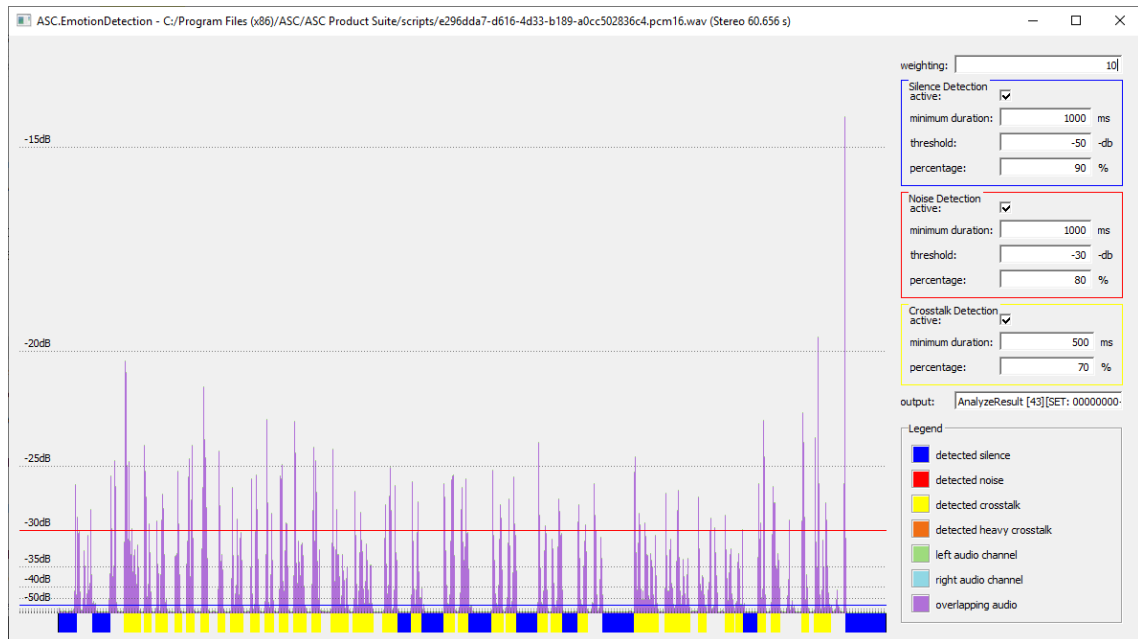


Fig. 16: Window *ASC.EmotionDetection* with loaded WAVE file (example)

8. To determine the ideal emotion detection settings for the [WAVE](#) file, adjust the values for the emotions step by step. The effect of the respective adjustment is displayed in real time in the diagram.

To facilitate assessing the effects on emotion detection in the diagram, we recommend to activate only the criterion for which you would like to determine a value. I. e. if you would like to determine the values for the criterion *Silence*, activate the criterion *Silence Detection active* and deactivate the criteria *Noice Detection active* and *Crosstalk Detection active*. Adjust the values for the criterion *Silence* step by step. The effect of the respective adjustment is displayed in real time in the diagram.

<i>weighting</i>	<p>Enter the extent to which the audio samples/audio curves are supposed to be smoothed out.</p> <p>Higher values indicate higher smoothing. Higher values may increase the detection rate but not the precision for silence and noise as a higher smoothing removes certain information and silence may be detected falsely, for instance.</p> <p>Enter a value between 0 and 100.</p>
<i>Silence Detection active</i>	<p>Shows whether the configured values have been activated for the criterion <i>Silence</i>.</p> <p><input checked="" type="checkbox"/> = Values have been activated. <input type="checkbox"/> = Values have not been activated.</p> <p>In the entry field <i>minimum duration</i>, enter a minimum duration (in ms); in the entry field <i>threshold</i>, enter a threshold value (in -dB); and in the entry field <i>percentage</i>, enter a silence percentage (in %). Conversation sections which last longer than the entered minimum duration and which do not reach the volume defined as threshold are interpreted as silence.</p> <p>Threshold value: 0 dB = maximum level -90 dB = minimum level</p> <p>It depends on the deployed equipment and the environment (e. g. noise, statics, background sound, etc.) where silence starts.</p>

<i>Noice Detection active</i>	<p>Shows whether the configured values have been activated for the criterion <i>high volume</i>.</p> <p><input checked="" type="checkbox"/> = Values have been activated. <input type="checkbox"/> = Values have not been activated.</p> <p>In the entry field <i>minimum duration</i>, enter a minimum duration (in ms); in the entry field <i>threshold</i>, enter a threshold value (in -dB); and in the entry field <i>percentage</i>, enter a noise percentage (in %). Conversation sections which last longer than the entered minimum duration and which exceed the volume defined as threshold are interpreted as high-volume sections.</p> <p>Threshold value: 0 dB = maximum level -90 dB = minimum level</p> <p>It depends on the deployed equipment and the environment (e. g. statics, background sound, etc.) where high volume starts.</p>
<i>Crosstalk Detection active</i>	<p>Shows whether the configured value has been activated for the criterion <i>Cross talk</i>.</p> <p><input checked="" type="checkbox"/> = Value has been activated. <input type="checkbox"/> = Value has not been activated.</p> <p>In the entry field <i>minimum duration</i>, enter a minimum duration (in ms) and in the entry field <i>percentage</i>, enter a cross talk percentage (in %). Conversation sections in which several participants are talking at the same time and which last longer than the entered minimum duration are interpreted as cross talk.</p>
<i>output</i>	<p>Displays the result of the emotion detection in text. The detected emotions are displayed in a list of periods of time including the corresponding emotions.</p>

9. The result should be the ideal emotion values for the analyzed [WAVE](#) file. Transfer the determined values to the emotion detection job, see [chapter "Tab Emotions", p. 21](#).
10. Click on the icon ✕ (*Close*) to close the window.

5.5

Tab Schedule

Here, you can display and edit the settings of the schedule for executing the job.



It depends on the job type and on the analysis direction which group fields and options are displayed in the tab.

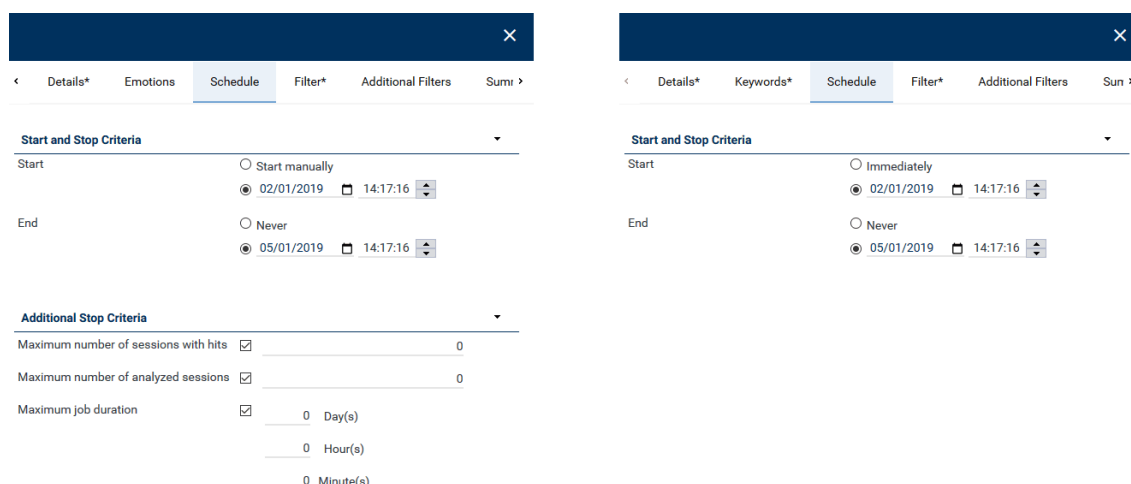


Fig. 17: Tab Schedule (examples)



Group field Start and Stop Criteria

Here, you can define how to start and stop the job. Activate the respective option and enter a value.

- ☒ = Option has been activated.
- ☐ = Option has been deactivated.


Start

Select the way the job is supposed to be used.

- **Start manually**
The job is started manually via the icon  in the main view.
- **Start now**
The job is started immediately.
- **Entered date**
The job is started automatically on the entered date.
Enter the date directly via the keyboard or via the icon .
Enter the time directly via the keyboard or via the arrow keys.

End

Select when the job is supposed to end.

- **Never**
The job never ends.
- **Entered date**
The job ends automatically on the entered date.
Enter the date directly via the keyboard or via the icon .
Enter the time directly via the keyboard or via the arrow keys.

Group field Additional Stop Criteria

Here, you can define additional stop criteria. Activate the respective stop criteria and enter a corresponding value.

- ☒ = Stop criterion has been activated.
- ☐ = Stop criterion has been deactivated.

Maximum number of sessions with hits

Enter after how many sessions with hits the job is supposed to be stopped. Every session with at least one hit is counted.

<i>Maximum number of analyzed sessions</i>	Enter after how many analyzed sessions the job is supposed to be stopped. Every session which has been searched is counted regardless of whether it contains hits.
<i>Maximum job duration</i>	Enter how long the job is supposed to be executed at the maximum. The job is stopped automatically upon reaching the maximum duration.



The job is stopped as soon as an activated stop criterion is met, regardless of whether it is the defined end of the job or an additional stop criterion.

5.6

Tab Filter

Here, you can change the filter settings.



It depends on the job type and the analysis direction which group fields are available.

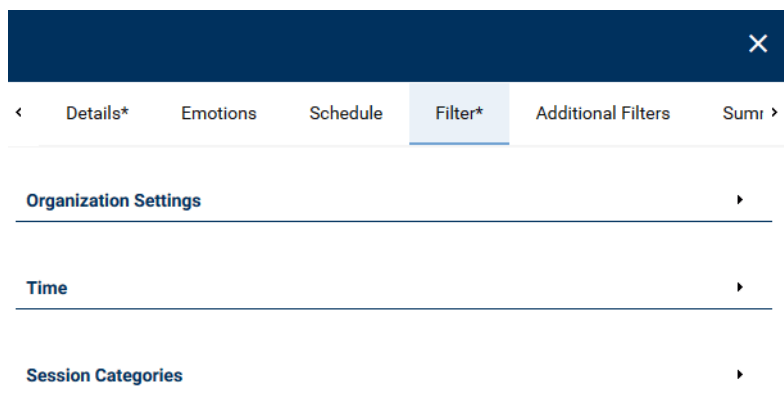


Fig. 18: Tab Filter (example)

5.6.1

Group field Organization Settings

Here, you can select agents for whose sessions the audio analysis job is supposed to be executed.

If a cloud license has been installed in the system, only agents for whom keyword spotting and transcription has been released in the Employees module of the application System Configuration are displayed in the agent selection when creating keyword spotting jobs and transcription jobs.



For information about the configuration of employees refer to the administration manual for tenants *System Configuration - user management*.

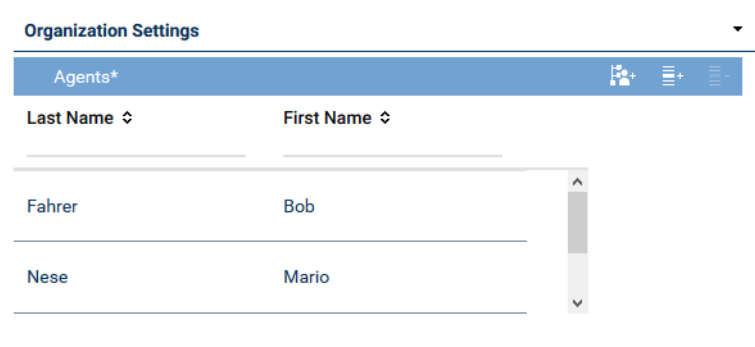





Fig. 19: Group field Organization Settings

	<i>Add from organization structure</i>	Opens a window in which you can select agents from the organization structure, see chapter "Add agents from organization structure", p. 27 .
	<i>Add</i>	Opens a window in which you can select your own agents, see chapter "Add own agents", p. 27 .
	<i>Remove</i>	Deletes the selected agent from the list.

5.6.1.1 Add agents from organization structure


1. To assign agents from the organization structure, click on the icon  (*Add from organization structure*).



Fig. 20: Agents

2. Click on the name of the organization unit in the left window.

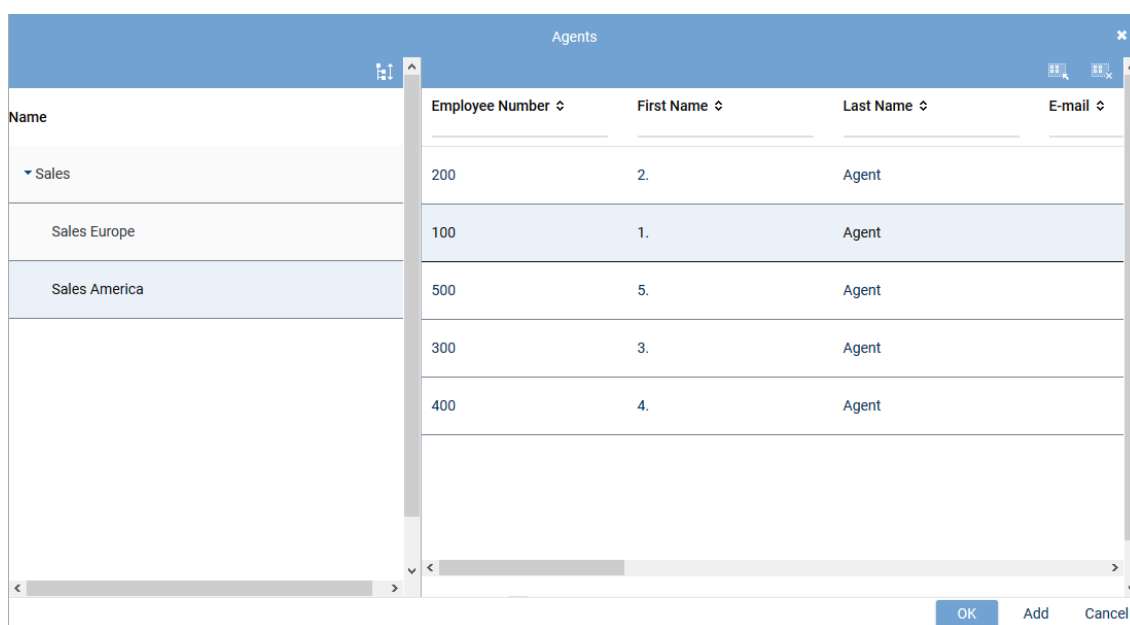




Fig. 21: Add agents from organization structure

3. Select one or several agents from the list in the right window.
To select several agents or to revoke the selection, click on this line while holding the [Ctrl] key down.
To select all agents, click on the icon  (*Select all*).
To deselect all marked agents, click on the icon  (*Deselect all*).
4. To add the selected agents and leave the window open for further adjustments, such as adding more agents from other organization structures, click on the button *Add*.
To add the selected agents and close the window, click on the button *OK*.
To discard the selection and close the window, click on the button *Cancel*.

5.6.1.2 Add own agents



You can only select agents of whose data you have access to.


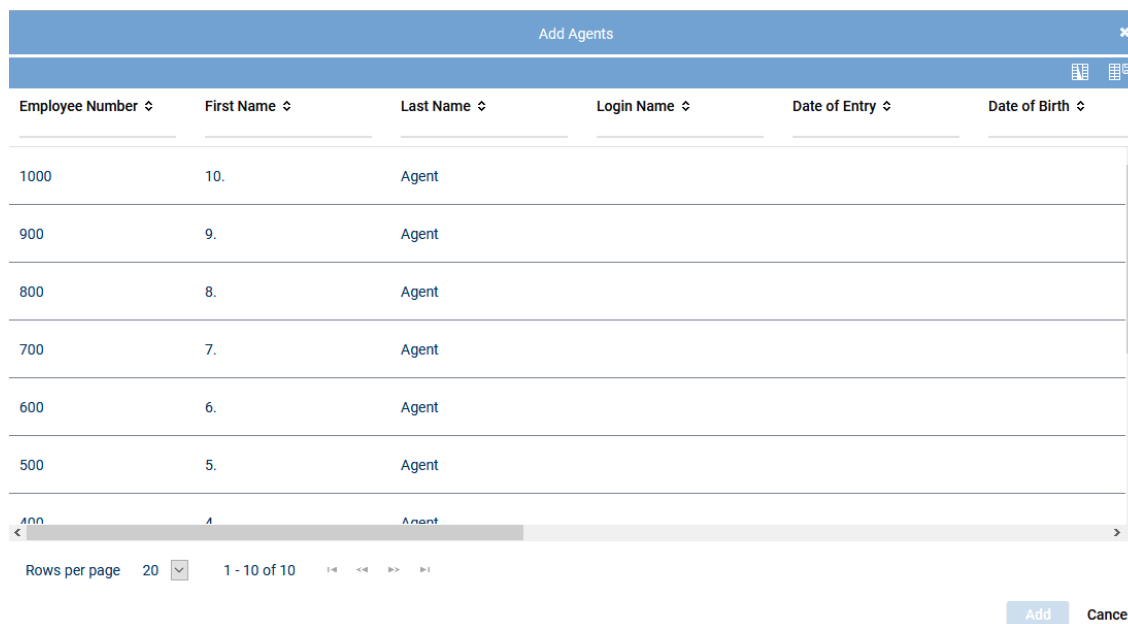
1. To assign an agent, click on the icon  (*Add*).



Fig. 22: Agents (example)

2. Select one or several agents from the list.
To select several agents or to revoke the selection, click on this line while holding the [Ctrl] key down.



Employee Number	First Name	Last Name	Login Name	Date of Entry	Date of Birth
1000	10.	Agent			
900	9.	Agent			
800	8.	Agent			
700	7.	Agent			
600	6.	Agent			
500	5.	Agent			
400	4.	Agent			

Fig. 23: Add own agents



3. To add the selected agents, click on the button *Add*.
To discard the selection and close the window, click on the button *Cancel*.



5.6.2 Group field Time

Here, you can define the time-wise criteria according to which the sessions are supposed to be selected. Only sessions which match these criteria are analyzed.


Time ▼


Period of time ☒

From 02/01/2019  08:00:00 

to 05/01/2019  20:00:00 

Time ☒

From 08:00:00 

to 20:00:00 

Minimum session duration ☒

0 Hour(s)

0 Minute(s)

0 Second(s)

Maximum session duration ☒

0 Hour(s)

0 Minute(s)

0 Second(s)

Fig. 24: Group field Time

To be able to edit a field and to activate the filter option, mark the corresponding check box.

☒ = Filter option has been activated.

☐ = Filter option has not been activated.

<i>Period of time</i>	Enter the start and end date of the period of time which is supposed to be searched for sessions. Only sessions which were started within this time interval are analyzed. NOTICE! This option is only available for single jobs.
<i>Time</i>	Enter a period of time in which the session is supposed to have taken place. Only sessions which were started within the entered time frame are analyzed.
<i>Minimum session duration</i>	Enter the minimum duration of the session here. Only sessions which have at least the entered duration are analyzed.
<i>Maximum session duration</i>	Enter the maximum duration of the session here. Only sessions which have the entered duration at the maximum are analyzed.



5.6.3 Group field Session Categories

Select the session categories you would like to analyze.

Session Categories ▼

Session Categories	
Name ↕	Comment ↕
No records found	

Fig. 25: Group field Session Categories

	<i>Add</i>	Opens a window in which you can select and add session categories, see chapter "Add session category", p. 30 .
	<i>Remove</i>	Removes the selected session category from the list.

5.6.3.1 Add session category

1. To assign session categories, click on the icon  (Add) in the list *Session Categories*.



Fig. 26: Add session category

In the following window, all created session categories are displayed.

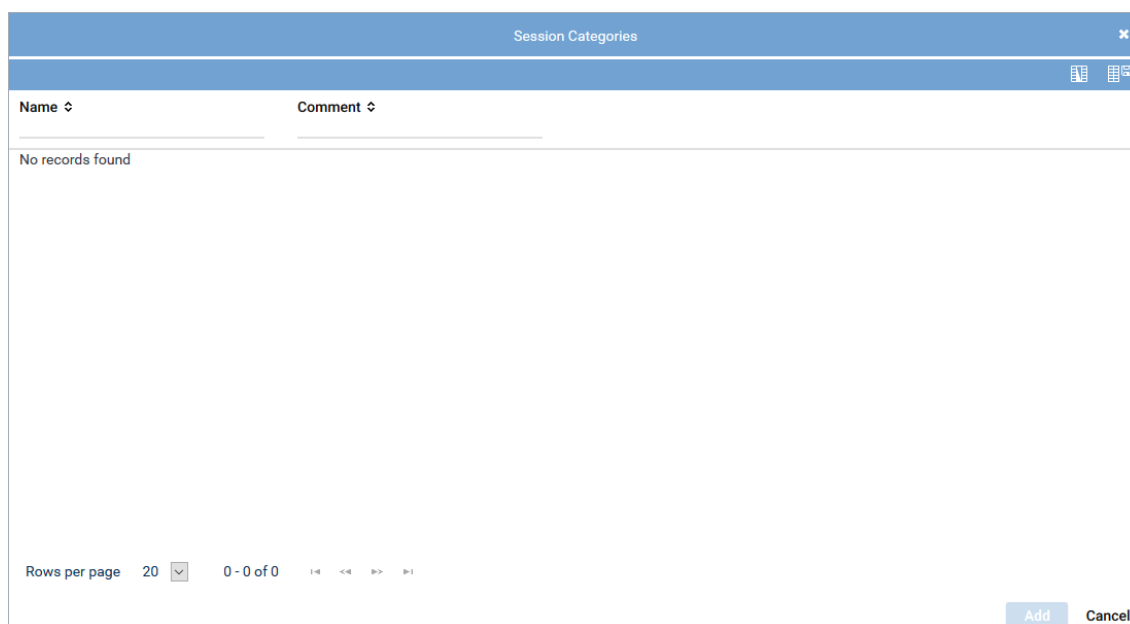


Fig. 27: Select session category



Session categories are created and administrated in the Sessions module, see user manual *INSPIRATIONneo Sessions module*.

2. Select one or several session categories from the list.
To select several session categories or to revoke the selection, click on the respective line while holding the [Ctrl] key down.
3. To add the selected session categories, click on the button *Add*.
To discard the selection and close the window, click on the button *Cancel*.

5.7 Tab Additional Filters

Here, you can configure advanced filter settings.



It depends on the analysis direction which group fields and options are displayed in the tab.

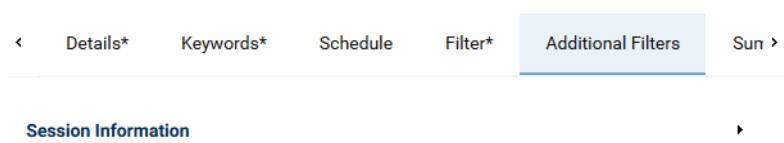


Fig. 28: Tab Additional Filters

5.7.1 Group field Session Information

Here, you can define filter criteria based on the session properties.



Fig. 29: Group field Session Information

To be able to edit a field and to activate the filter option, mark the corresponding check box.

☒ = Filter option has been activated.

☐ = Filter option has not been activated.

The following option is available for **both analysis directions**:

Additional Data	Here, you can filter for certain additional data. Select an additional data type from the drop-down list and enter a value for the filter.
------------------------	---

5.7.2 Edit entry




- To adjust an entry in the list, click on the icon  (*Edit*) in the corresponding line.
⇒ The entry is edited in an entry field.



Fig. 30: Edit entry in the list

- Adjust the entry.
- To save the changes, click on the icon  (*Save*).
To discard the changes, click on the icon  (*Discard*).

5.8 Tab Summary

Here, you can see a summary of all job settings. In the individual group fields, the settings from the different tabs are displayed in a concise way.

< Filter* Additional Filters **Summary** Statistics Preview >

<

Details ▼

General information

Job name	KW Anger
Creation date	02/19/2019 11:57:52 AM
Comment	
Priority	Medium
Language	KWS_TLU_DE

Job settings

Analysis type	Keyword spotting
Analysis direction	Single

Keywords ▶

Schedule ▶

Filter ▶

Additional Filters ▶

Fig. 31: Tab Summary

5.9

Tab Statistics

Here, you see result statistics for the keywords which have been selected for the job in the tab *Keywords*.

< Filter* Additional Filters Summary **Statistics** Preview >

Analyzed sessions 64

Sessions with hits 60

Hits 547

Create statistics

Keywords ↕	Analysis Lists ↕	Hits ↕
Computer	Liste2	2
Crash	Liste2	0

Fig. 32: Tab Statistics

<i>Analyzed sessions</i>	Number of the analyzed sessions.
<i>Sessions with hits</i>	Number of sessions with hits.
<i>Hits</i>	Number of hits from all analyzed sessions.
<i>Create statistics</i>	Creates a result statistic for the keywords of the audio analysis job.

List

<i>Keywords</i>	Keyword that the job searches for.
<i>Analysis Lists</i>	Analysis list which contains the keyword.
<i>Hits</i>	Number of hits for the keyword.

5.10

Tab Preview



This tab is only available for single jobs.

Here, you can see the results of the analysis preview of the job. Results are not displayed before an analysis preview with the function *Start Preview* has been carried out, see [chapter "Toolbar", p. 10](#).

<	Filter*	Additional Filters	Summary	Statistics	Preview	>
Preview status			Finished			
Last start time			19.02.2019 13:46:44			
Finished			19.02.2019 13:46:45			
Sessions to be analyzed			1239			
Runtime of audio material			0 Day(s), 19 Hour(s), 18 Minute(s)			

Fig. 33: Tab Preview

<i>Preview status</i>	Current status of the preview. Here, you can see whether the preview has already been started, just been generated or already finished.
<i>Last start time</i>	Start time of the current preview.
<i>Finished</i>	End time of the analysis for the current preview.
<i>Sessions to be analyzed</i>	Number of sessions which have been analyzed by the job.
<i>Runtime of audio material</i>	Total runtime of the audio material which has been analyzed by the job. The runtime of the audio material tends to be a good indicator how long the job will be running presumably; however, different factors may affect the runtime of the job in certain cases.


6 Create audio analysis job

If you would like to configure a keyword spotting job which searches for keywords in transcriptions, observe the following:



First, a transcription job must be configured and started. To search for keywords, there must be transcriptions.

Then, the keyword spotting job can be configured and started. A real-time keyword spotting job is not supported to search for keywords in transcriptions.

1. Click on the icon  (*Create*) in the toolbar of the main view.

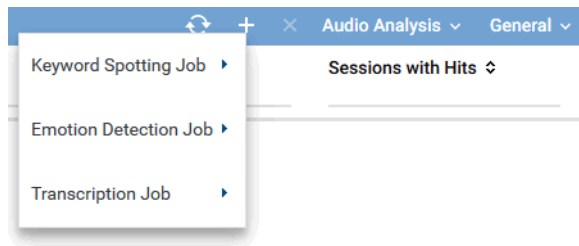


Fig. 34: Create audio analysis job

2. Select one of the following options:



The different options are only displayed if the corresponding speech analysis software has been installed and activated.

Keyword Spotting Job	Creates an audio analysis job which uses the method <i>keyword spotting</i> , see chapter "Keyword spotting", p. 7 .
Emotion Detection Job	Creates an audio analysis job which uses the method <i>emotion detection</i> , see chapter "Emotion detection", p. 8 .
Transcription Job	Creates an audio analysis job which uses the method <i>transcription</i> , see chapter "Transcription", p. 7 .

3. Select the analysis direction:

- **Periodical:**

A periodical job analyzes sessions that have been recorded after the job has been activated. The job is executed in regular intervals from its start time on and analyzes all new recordings.

- **Single:**

A single job analyzes recordings from a period of time that can be defined arbitrarily. If the period of time is in the future, then the job will be executed once the period has been reached. The job is executed exactly once and only during the defined period of time.

- **Real time**

A real-time job analyzes call while they are recorded. The job is being executed as long as it is active.



The possible analysis direction depends on the job type.

4. Adjust all necessary settings in the tabs of the detail view, see [chapter "Detail view", p. 13](#).



It depends on the job type and the analysis direction which tabs are available.

5. To save the settings, click on the button *Save*.
To reset all settings or changes in all tabs, click on the button *Reset*.
To cancel the editing of the job configuration, click on the main view and confirm the security prompt.

7

Delete audio analysis job

1. In the main view, select the audio analysis job you would like to delete.

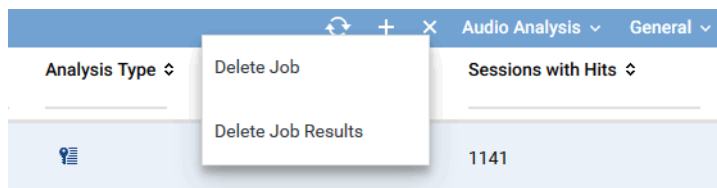



Fig. 35: Delete audio analysis job

2. Click on the icon  (Delete) and select 1 of the following options:

<i>Delete Job</i>	The audio analysis job is deleted.
<i>Delete Job Results</i>	The results of the audio analysis job are deleted.

3. Confirm the security prompt by clicking Yes.



Only deactivated or finished jobs can be deleted.



If the selected job is used as a filter in other jobs, you have to deactivate these jobs before you can delete the selected job.

8

Display sessions

1. Click on the menu item *Audio Analysis > Sessions* in the toolbar of the main view.

⇒ The following window appears:

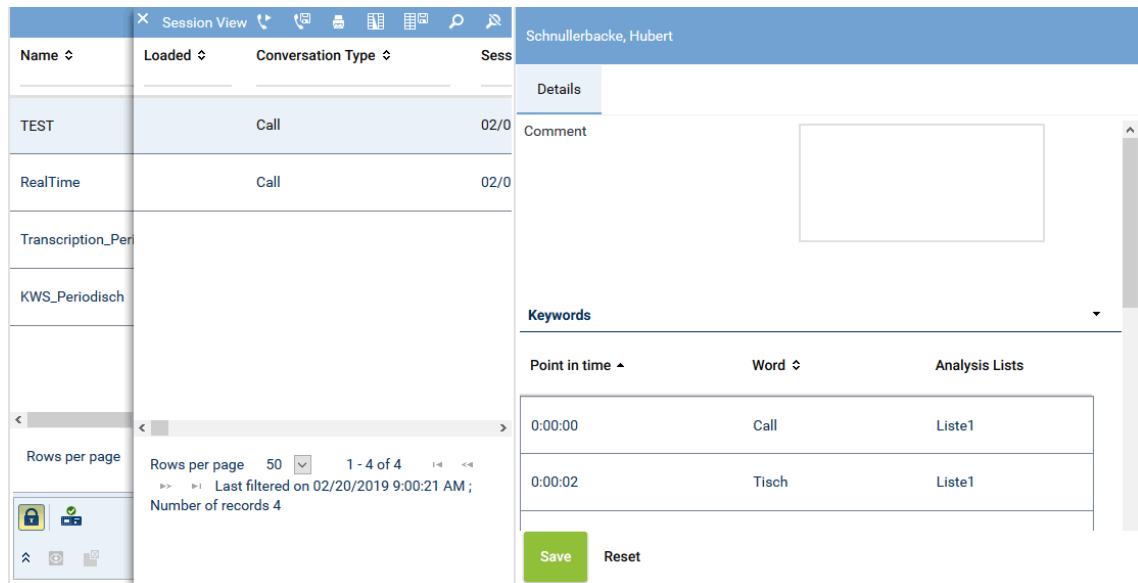









Fig. 36: Session View

In this window, those sessions are displayed in which the job has found exact hits (e. g. keywords). The respective functions in the toolbar of the window allows replaying or exporting these sessions.

The toolbar of this window offers the following functions.


	Load	Loads the selected session into the Replay module for replay (see chapter "Load selected session", p. 38). For information about the functions of the Replay module see chapter "Replay module", p. 39 .
	Export	Exports the selected session (see chapter "Export session", p. 38).
	Print	Prints the table of the session view.
	Adjust columns	Opens a window in which you can adjust the following settings for the session view: <ul style="list-style-type: none"> • Displayed information • Order of the displayed columns • Number of rows per page.
	Save table configuration	Saves the current table configuration of the session view as default view of the user.
	Search	Opens the window of the search function. The search function allows searching systematically for sets of data which meet certain criteria, see chapter "Search", p. 11 .
	Reset search	Resets all search filters so that all data sets are displayed in the session view again.

2. To close the window, click on the icon  in the top left corner of the window.



In the user manual *INSPIRATIONneo - General information*, you find detailed descriptions of the default functions such as *Print*, *Adjust table* or *Help* if required.


8.1 Load selected session

1. Click on the icon  (Load).
2. Select one of the following options:

<i>Replay Voice & Screen</i>	The session including the screen recording is loaded into the Replay module. The screen recording is displayed in the Video Viewer. The option is only active if a screen recording has been saved for the selected session.
<i>Replay Voice</i>	The session is loaded into the Replay module.

3. The session is loaded into the Replay module and can be replayed there.
For information about the functions of the Replay module see [chapter "Replay module", p. 39](#).

8.2 Export session

1. Click on the icon  (Export).
⇒ The following window appears:

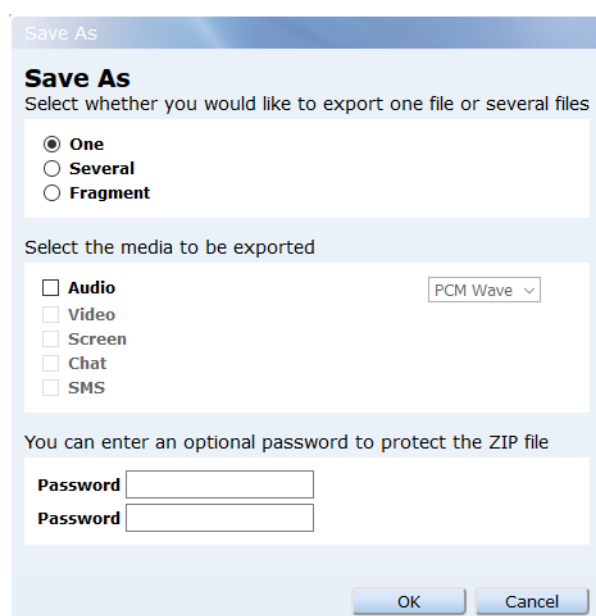


Fig. 37: Save as

2. Select the respective option in the window *Save As*.

<i>Single</i>	Mixes all recordings of one or several conversations in one file. NOTICE! If you select several conversations, the gap between them is filled with silence. Selecting conversations with a large gap between them results in very large WAVE files. Therefore, make sure to only select conversations which are not separated by a large gap.
<i>Several</i>	Creates its own file for each recording to be saved.
<i>Fragment</i>	Only data contained in the set loop are saved. All other data is discarded.
<i>Audio</i>	Saves the audio data. Select the audio format from the drop-down list: <ul style="list-style-type: none"> • <i>PCM Wave</i>

	<p>With PCM, the output file is not compressed and can be replayed by almost any player. This method requires a lot of storage capacity.</p> <ul style="list-style-type: none"> • MP3 <p>With MP3, the output file is compressed and can be replayed by almost any player. When using MP3, less storage space is required for high-quality recordings than when exporting conversations in WAVE format.</p>
Video	<p>Saves the video data.</p> <p>Video is exported in MP4 format with video codec H.264. If the conversation contains more than one stream, only the first stream is exported.</p>
Screen	Saves the screen recordings.
Chat	Saves the chat text.
SMS	Saves the SMS data.
Password	Protects the ZIP file with a password.

- Click on the button **OK**.
⇒ The following window appears:

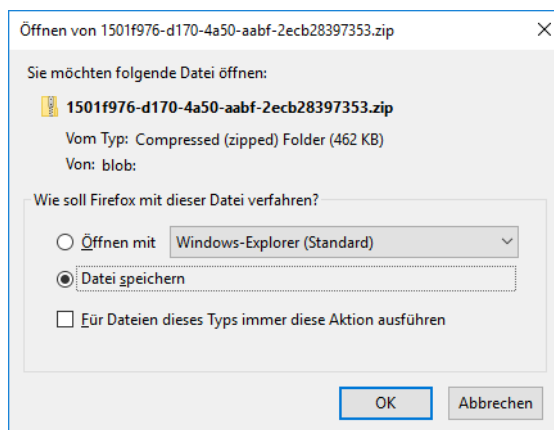


Fig. 38: Save conversations

- Select the option **Save File**.
- Click on the button **OK**.
⇒ The elements are exported to the local download directory in a ZIP file.
The ZIP file contains the following files:
The audio data is saved as **WAVE** or **MP3** file(s).
Audio data and screen recordings are saved as MP4 file(s).
Video data is saved as MP4 file(s).
Screen data is saved as MP4 file(s).
The corresponding meta data is saved in the same directory as CSV file(s) under the same file name.
Chat texts are saved as **XML** file(s).
SMS data is saved as **XML** file(s).

8.3 Replay module

The Replay module serves to replay conversations. Conversations which are supposed to be replayed must be selected in the main view and loaded into the Replay module.

If conversations with screen or camera recordings are loaded into the Replay module, the window of the Video Viewer opens automatically for replaying the **video recording**, see [chapter "Video Viewer", p. 53](#). The replay functions are executed synchronously for the conversation in the Replay module and for the video recording in the Video Viewer.

If conversations with chat texts or text messages (SMS or SDS) are loaded into the Replay module, the window of the Message Viewer opens automatically for displaying the chat texts or the text messages recording, see [chapter "Message Viewer", p. 56](#).

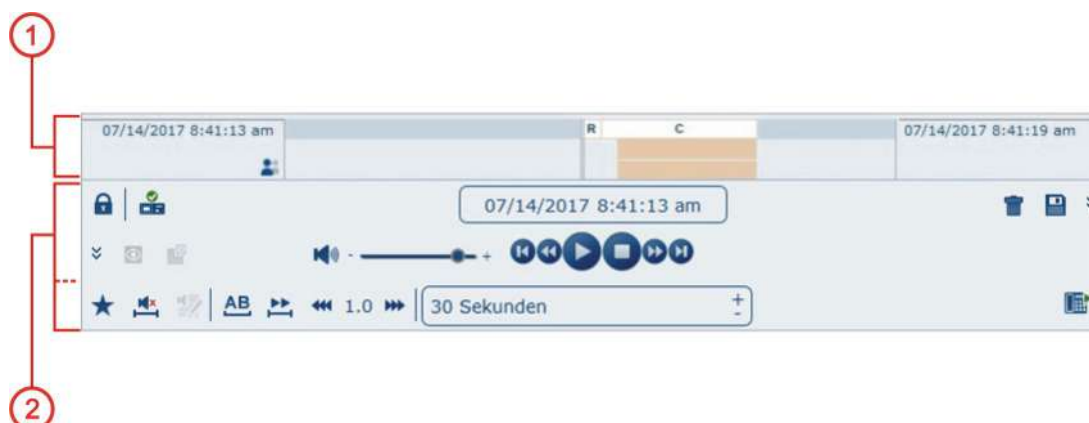


Fig. 39: Welcome screen (example)



1	Replay bar	Shows the loaded conversations, see chapter "Replay bar", p. 40 .
2	Functionality bar	Contains functionalities for the loaded conversations in the replay bar, see chapter "Functionality bar", p. 44 .

The configured settings in the functionality bar of the Replay module such as e. g. *Expanded view*, *Simple view*, *Lock element* etc., are automatically saved for the logged-in user. The settings of the Replay module are also applied when used in other modules or after a logoff/login.

8.3.1

Replay bar

The replay bar shows the loaded conversations.

In the replay bar, there are 2 different views: the full view and the compressed view. To switch the view, go to the functionality bar on the right and click on the icon  (Switch to full view) or  (Switch to compressed view).

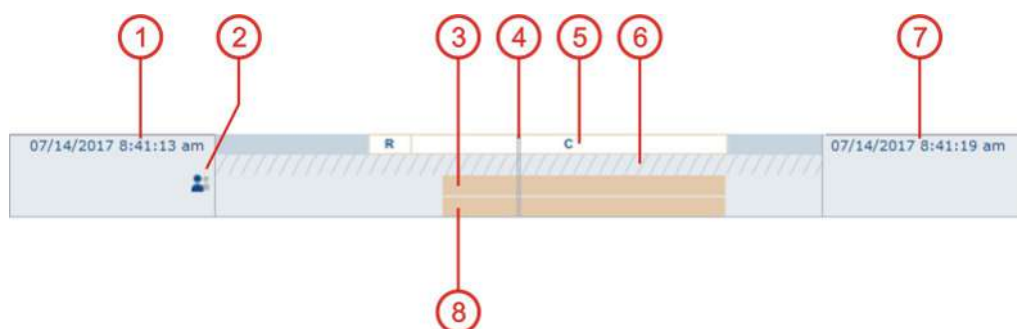


Fig. 40: Replay bar in the full view

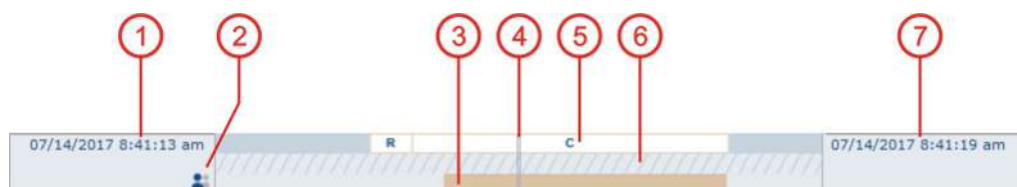







Fig. 41: Replay bar in compressed view

1	Shows the start time of the loaded conversation. If several conversations have been loaded in 1 track, the start time of the earliest conversation is displayed here.
2	Displays information about the conversation participants.

	<p>The information is only visible when the replay bar is displayed in full view.</p> <p> = internal participants</p> <p> = external participants</p> <p> = mixed track with internal and external participants</p> <p> = unknown participants</p> <p> = screen recording</p> <p>To display the phone numbers of the participants in one track, move the mouse cursor across the participants icon.</p>
3	Displays track 1 of a loaded conversation. For further information see chapter "Display of the loading states", p. 42.
4	<p>Shows the replay position.</p> <p>To change the current replay position of the loaded conversation, you have 2 possibilities:</p> <ol style="list-style-type: none"> 1. Click on the respective replay position. 2. Click on a track, hold the mouse key down and drag the cursor to the left or to the right.
5	<p>Shows the sections of the conversation.</p> <p>The following sections are possible:</p> <ul style="list-style-type: none"> • R = Ringing (a connection is being established) • C = Connected (at least 2 participants are calling each other) • H = Hold (a participant is on hold) • Q = Queued (a participant has been queued) • W = Wrap-up (wrap-up time)
6	<p>Shows tagging and audio analysis data (e. g. found keywords).</p> <p>The line is only displayed if information is available.</p>
7	<p>Shows the end time of the loaded conversation.</p> <p>If several conversations have been loaded in 1 track, the end time of the last conversation is displayed here.</p>
8	Displays track 2 of a loaded conversation. For further information see chapter "Display of the loading states", p. 42.

8.3.1.1 Full view

In the full view, all tracks for voice and screen recording which belong to the loaded conversation are displayed in the replay bar of the Replay module.

When replaying stereo recordings with several internal participants, an echo effect occurs because the voices of some participants have been recorded several times. To avoid the echo effect, tracks with double recording have to be muted.

8.3.1.2 Compressed view

In the compressed view, no individual tracks for voice and screen recording are displayed in the replay bar of the Replay module. All recordings of a loaded conversation are combined in one group within one track.

In the compressed view, double recordings are suppressed automatically to avoid echo effects. If errors occur during recording, display the replay bar in full view and mute the single tracks manually.

8.3.1.3 Display of the loading states

The loaded conversation is assigned a basic color from a defined color palette.

The replay bar of the conversation shows its loading state. In the following, you find a description of the possible loading states.

1. Basis color (e. g. light brown) = Meta data loaded completely.

⇒ The conversation can be replayed.

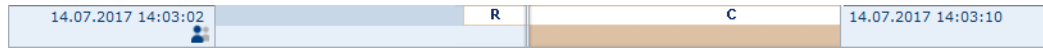


Fig. 42: Meta data loaded completely

2. Empty = Meta data for the recording are missing.

⇒ The conversation cannot be replayed.



Fig. 43: Meta data for the recording is missing

3. Red striped basic color (only in full view) = Audio data of the recording is defective.

⇒ The conversation cannot be replayed.



Fig. 44: Defective packet in the meta data of the recording (full view)

4. Red dotted basic color (only in full view) = Packet in the meta data of the recording is missing.

⇒ The conversation cannot be replayed.



Fig. 45: Missing packet in the meta data of the recording (full view)

5. Red exclamation mark (only in compressed view) = Audio data of the recording is defective or packet in the meta data of the recording is missing.

For a more precise specification of the diagram change to the full view.

⇒ The conversation cannot be replayed.



Fig. 46: Defective or missing packet in the meta data of the recording (compressed view)

6. Basic color, light (e. g. ocher, light) = Data buffer empty.

Basic color (e. g. ocher) = Data buffer loaded.

⇒ The conversation can be replayed. An empty data buffer is reloaded automatically. If the server connection is slow, the replay may stop. As soon as the data buffer has been reloaded, the replay continues.

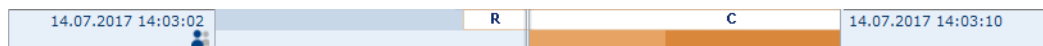


Fig. 47: Data buffer empty/loaded

7. Red = Data buffer not loaded completely.

⇒ The conversation is defective and cannot be replayed.

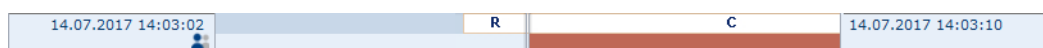


Fig. 48: Data buffer not loaded completely

8. Basis color (e. g. light brown) = Meta data loaded completely.

Red = Data buffer not loaded completely.

- ⇒ In the basic color section, the conversation can be replayed.
- ⇒ In the red section, the conversation is defective and cannot be replayed.

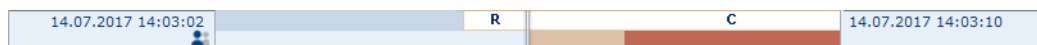


Fig. 49: Data buffer not loaded completely

9. Purple = Packet is muted during the recording.

- ⇒ The conversation can be replayed. There is nothing to be heard since no audio data has been recorded. Packets which have once been muted are muted permanently and cannot be changed afterwards.

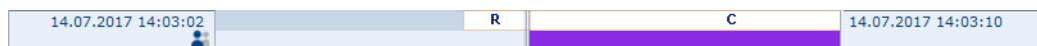


Fig. 50: Packet is muted during the recording

10. Basis color (e. g. light brown) = Meta data loaded completely.

Purple, light = Conversation section muted

- ⇒ The conversation can be replayed. In the muted conversation section, silence is replayed. The muted conversation section can be deleted so that the audio data can be replayed.



Fig. 51: Conversation section muted

11. Gray = The recording contains data which is not supported.

- ⇒ The conversation cannot be replayed.



Fig. 52: The recording contains data which is not supported.

8.3.1.4 Display of detected emotions

If an emotion detection job has found emotions in the conversation, they are displayed in the loaded conversation with color markings. The position and length of the color markings mirror the occurrence and duration of the sentiment in the conversation.



Fig. 53: Emotions detected in a conversation (example)

In the following, you find a description of the possible color markings:

- Light blue indicates sections of silence.
- Red indicates high-volume sections.
- Yellow indicates sections of cross talk or of massive cross talk.
- Green indicates unsuspicious audio sections.

8.3.1.5 Displaying spotted keywords

If a keyword spotting job has found keywords in the conversation, they are displayed in the loaded conversation as black triangles. The position and length of the triangles mirror the occurrence and duration of the keyword in the conversation.



Fig. 54: Spotted keywords in a conversation (example)

If the replay reaches the triangle, a replay information with the details of the spotted keyword is displayed.













Fig. 55: Replay information with details of spotted keyword (example)

















8.3.2 Functionality bar











The functionality bar contains functionalities for the loaded conversations in the replay bar.

8.3.2.1 Icons



In the following, you find a description of the icons.

	<i>Play/ Pause</i>	Starts the replay. If several conversations have been loaded into the Replay module, the conversations may be replayed in parallel if the recording times overlap.
		Pauses the replay.
	<i>Stop</i>	Stops the replay.
	<i>Rewind</i>	Jumps back 5 seconds from the current replay position.
	<i>Back</i>	Jumps to the start of the current or of the previous conversation.
	<i>Fast-forward</i>	Jumps ahead 5 seconds from the current replay position.
	<i>Next</i>	Jumps to the start of the next conversation.
	<i>Lock element</i>	Shows that the lock for the Replay module has been deactivated. As a result, several conversations can be loaded into the Replay module. Note: In principle, you can load several video recordings into the Video Viewer. However, you can only replay one of them at any given moment.
		Shows that the lock for the Replay module has been activated. As a result, only one conversation can be loaded into the Replay module.
	<i>Reconnect to the replay component</i>	Refreshes the server connection.


	<i>Display video window</i>	Shows the Video Viewer in the main view of the application.
	<i>Hide video window</i>	Shows the main view of the application. The Video Viewer integrated into the main view is hidden.
	<i>Detach Video Viewer</i>	Displays the Video Viewer in its own window.
	<i>Attach Video Viewer</i>	Closes the window of the Video Viewer.
	<i>Unmute/Mute</i>	Shows that the speaker for the conversation has been activated.
		Shows that the speaker for the conversation has been deactivated.
	<i>Volume</i>	Adjusts the general replay volume. To change the volume, click on the slider, hold the mouse key down and move the slider to the left or to the right.
	<i>Clear playlist</i>	Removes all loaded conversations from the Replay module.
	<i>Export all loaded elements</i>	Saves the audio data of the loaded conversations as WAVE or MP3 file and the corresponding additional conversation data as CSV file on the hard disk of your computer, see chapter "Export all loaded elements", p. 47 .
	<i>Create new bookmark</i>	Sets a bookmark or marks the beginning of a conversation section at the current replay position, see chapter "Create new bookmark", p. 48 .
		Sets a bookmark or marks the end of a conversation section at the current replay position. You can enter a comment for the marked area between the 2 associated bookmarks, see chapter "Create new bookmark", p. 48 .
	<i>Create new mute notification</i>	Marks the beginning of a conversation section at the current replay position in order to mute selected participants, see chapter "Create new mute notification", p. 51 .
		Marks the end of a conversation section at the current replay position in order to mute selected participants, see chapter "Create new mute notification", p. 51 .
	<i>Loop</i>	Marks the beginning of a replay loop at the current replay position, see chapter "Mark replay loop", p. 53 .
		Marks the end of a replay loop at the current replay position, see chapter "Mark replay loop", p. 53 .
		Removes the taggings of the replay loop, see chapter "Mark replay loop", p. 53 .

	<i>Skip silence</i>	Shows that the automatic skipping of times of silence sections in a conversation and of mute sections between individual conversations has been deactivated.
		Shows that the automatic skipping of times of silence sections in a conversation and of mute sections between individual conversations has been activated. The silence sections found by an emotion detection job are skipped during the reply of the conversation. If several conversations are loaded into the Replay module, then the mute sections between the individual conversations are skipped during replay, too.
		Shows the current replay speed. The replay speed can be adjusted between 0.5 and 2.0. To reduce the replay speed, click on the icon  <i>Reduce replay speed</i> . To increase the replay speed, click on the icon  <i>Increase replay speed</i> .
	<i>Replay via phone</i>	Shows that the conversation replay via phone has been deactivated.
		Shows that the conversation replay via phone has been activated. To replay loaded conversations, click on the icon  (Play).
		Shows the time window for the loaded conversations. You can enter the time window in 25 steps from 1 second to 14 days. There are 2 possibilities to change the time window: 1. On the right in the time window, click on + or -. 2. Turn the mouse wheel while the mouse cursor is located above the replay track.
		Shows the current replay position. Click into the display field to switch from absolute to relative time display and vice versa. The absolute time display shows the date and the time of the current replay position. The relative time display shows the replayed time until the current replay position in HH:MM:SS.

Icons in the functionality bar on the right

	Expanded view	Switches the replay bar to full view.
	Simple view	Switches the replay bar to compressed view.

Icons in the functionality bar on the left

	Display toolbar	Shows all icons in the functionality bar
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	Hide toolbar	Partly hides the icons in the functionality bar.
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Not all described icons exist in every module and application.

8.3.2.2 Export all loaded elements

- Click on the icon  (*Export all loaded elements*).
⇒ The following window appears:

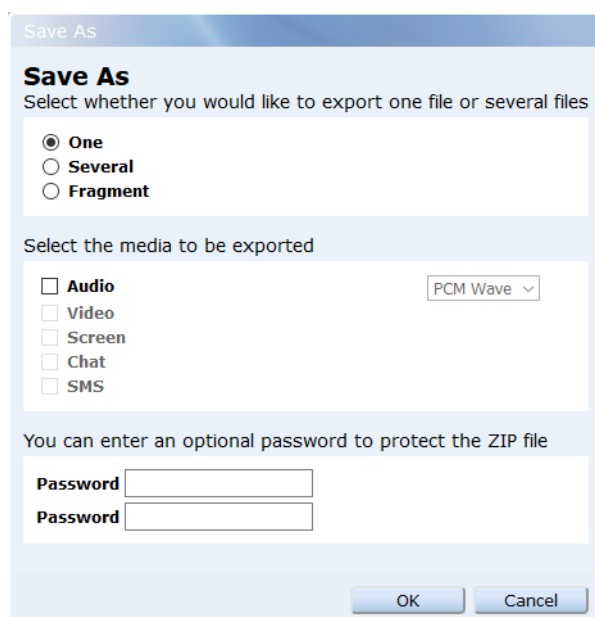


Fig. 56: Save as

- Select the respective option in the window *Save As*.

<i>Single</i>	<p>Mixes all recordings of one or several conversations in one file.</p> <p>NOTICE! If you select several conversations, the gap between them is filled with silence. Selecting conversations with a large gap between them results in very large WAVE files. Therefore, make sure to only select conversations which are not separated by a large gap.</p>
<i>Several</i>	Creates its own file for each recording to be saved.
<i>Fragment</i>	Only data contained in the set loop are saved. All other data is discarded.
<i>Audio</i>	<p>Saves the audio data.</p> <p>Select the audio format from the drop-down list:</p> <ul style="list-style-type: none"> PCM Wave <p>With PCM, the output file is not compressed and can be replayed by almost any player. This method requires a lot of storage capacity.</p> MP3 <p>With MP3, the output file is compressed and can be replayed by almost any player. When using MP3, less storage space is required for high-quality recordings than when exporting conversations in WAVE format.</p>
<i>Video</i>	<p>Saves the video data.</p> <p>Video is exported in MP4 format with video codec H.264. If the conversation contains more than one stream, only the first stream is exported.</p>
<i>Screen</i>	Saves the screen recordings.

<i>Chat</i>	Saves the chat text.
<i>SMS</i>	Saves the SMS data.
<i>Password</i>	Protects the ZIP file with a password.

- Click on the button **OK**.
⇒ The following window appears:

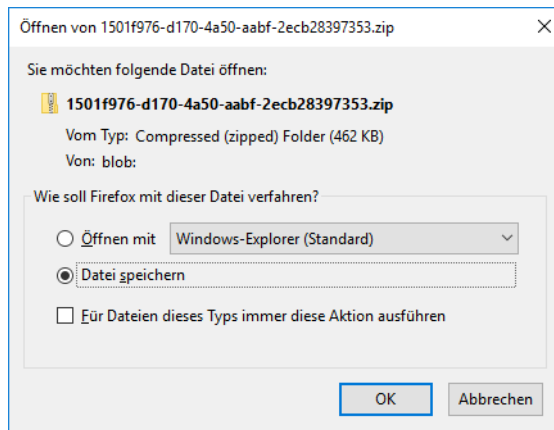


Fig. 57: Save conversations

- Select the option *Save File*.
- Click on the button **OK**.
⇒ The elements are exported to the local download directory in a ZIP file.
The ZIP file contains the following files:
The audio data is saved as **WAVE** or **MP3** file(s).
Audio data and screen recordings are saved as MP4 file(s).
Video data is saved as MP4 file(s).
Screen data is saved as MP4 file(s).
The corresponding meta data is saved in the same directory as CSV file(s) under the same file name.
Chat texts are saved as **XML** file(s).
SMS data is saved as **XML** file(s).

8.3.2.3 Create new bookmark

The intention is not to create only one single bookmark. The beginning and the end of a conversation section have to be marked with a new bookmark. You can enter a replay comment for this tagged conversation section between 2 bookmarks.

In a conversation, several conversation sections can be marked with bookmarks and commented.





It is not possible to delete only 1 bookmark from a tagged conversation section.

8.3.2.3.1 Create bookmarks with replay comment



The current replay position has to be located within the conversation.

- To mark the beginning of a conversation section for a replay comment, click on the icon  (*Create new bookmark*).
- To mark the end of a conversation section for a replay comment, click on the icon  (*Create new bookmark*).
⇒ The following window appears:

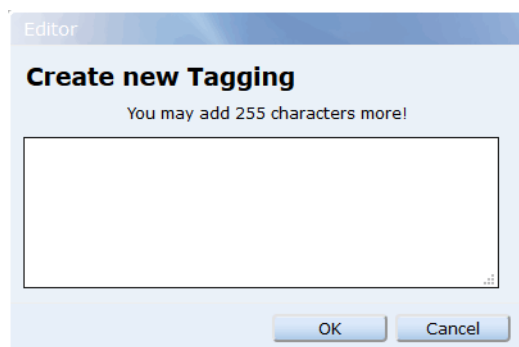


Fig. 58: Tagging editor

OK	Saves the entries and closes the window.
Cancel	Discards the entries and closes the window.

3. Enter a comment for the conversation in the entry field.



Fig. 59: Tagging editor with entered comment (example)

4. To save the entries, click on the button **OK**.
 - ⇒ The tagged conversation section is displayed in other color above the replay bar.
 - ⇒ When replaying the conversation, the information details are displayed in the area of the tagging.



Fig. 60: Conversation with tagged conversation section (example)

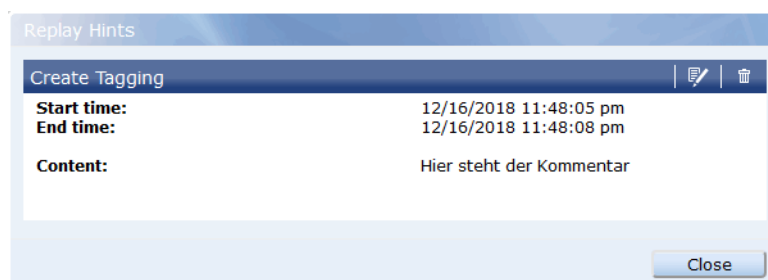


Fig. 61: Displayed information details (example)

8.3.2.3.2 Edit bookmarks with replay comment

1. As soon as the tagged conversation section with the replay comment is located above the replay position, the following window appears:

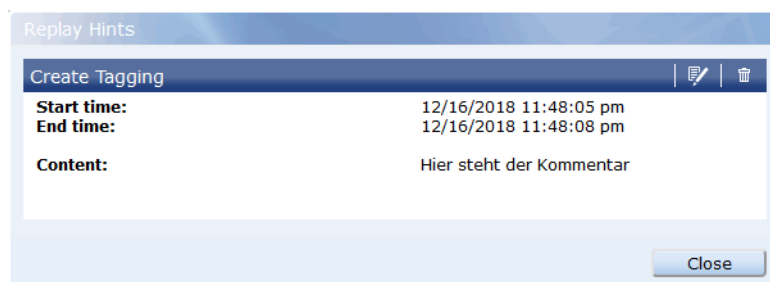



Fig. 62: Displayed information details (example)

2. Click on the icon  (Edit).
⇒ The following window appears:

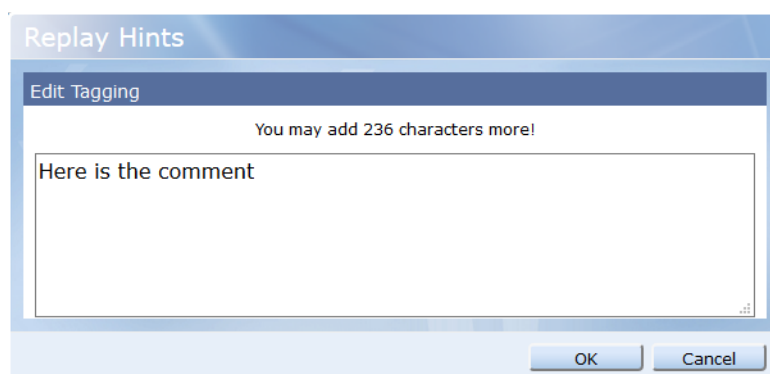
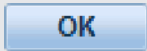



Fig. 63: Edit tagging (example)

	Saves the entries and closes the window.
	Discards the entries and closes the window.

3. Edit the replay comment.
4. To save the entries, click on the button **OK**.

8.3.2.3.3 Delete bookmarks with replay comment

1. As soon as the tagged conversation section with the replay comment is located above the replay position, the following window appears:

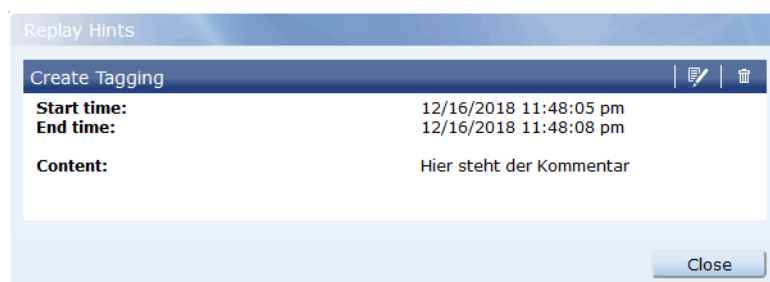



Fig. 64: Displayed information details (example)

2. Click on the icon  (Delete).
To delete the tagged conversation area with the replay comment, confirm the security prompt.

8.3.2.4 Create new mute notification

The intention is not to create only one single mute notification. The beginning and the end of a conversation section have to be marked with a new mute notification. This tagged conversation section between 2 mute notifications can be muted for selected participants.

In a conversation, several conversation sections can be marked with mute notifications and selected participants can be muted.





It is not possible to delete only one mute notification from a tagged conversation section which marks the beginning or the end.

8.3.2.4.1 Mute conversation section



The current replay position has to be located within the conversation.

1. To mark the beginning of a conversation section for the muting of selected participants, click on the icon  (*Create new mute notification*).
2. To mark the end of a conversation section for the muting of selected participants, click on the icon  (*Create new mute notification*).
⇒ The following window appears:

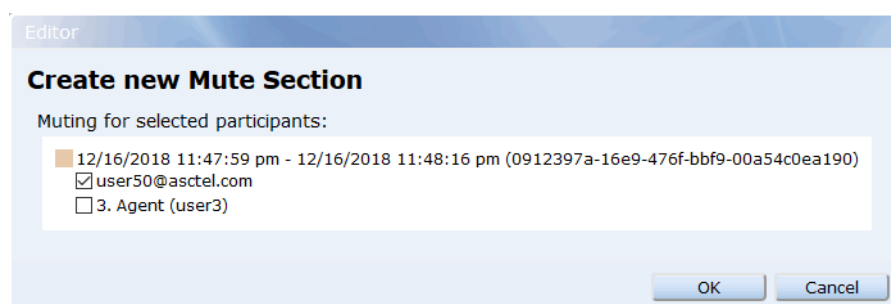
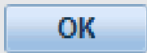



Fig. 65: Muting for selected participants (example)

	Saves the entries and closes the window.
	Discards the entries and closes the window.

3. Select the participants for whom the conversation section is supposed to be muted. At least 1 participant has to be muted.
☒ = Conversation muted for participant
☐ = Conversation not muted for participant
4. To save the entries, click on the button **OK**.
 ⇒ The muted conversation section is displayed as a gray area in the replay bar.
 ⇒ When replaying the conversation, the mute section details are displayed in the area of the muting.

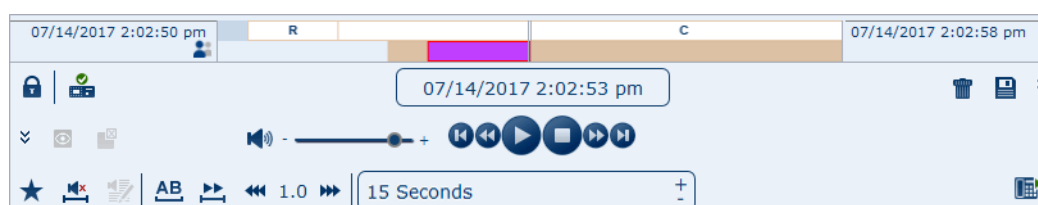


Fig. 66: Conversation with muted conversation section (example)

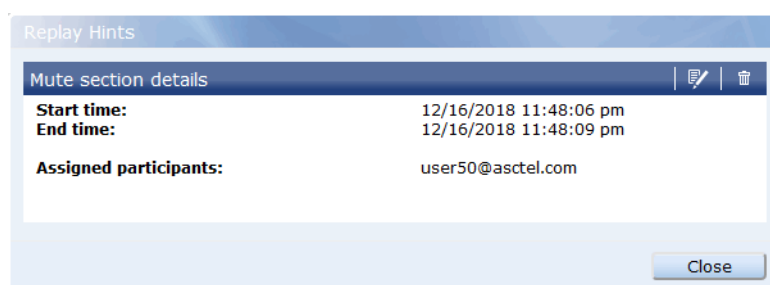


Fig. 67: Displayed mute section details (example)

8.3.2.4.2 Edit muted conversation section

1. As soon as the muted conversation section is located above the replay position, the following window appears:

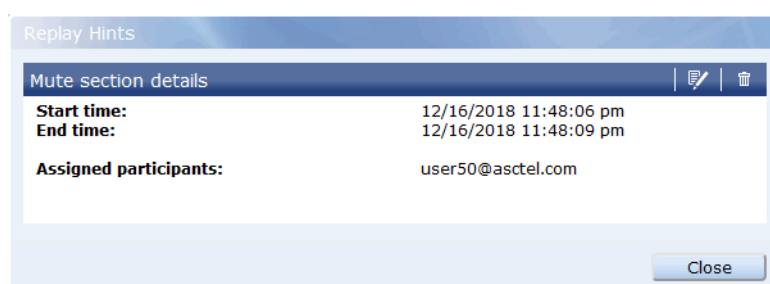



Fig. 68: Mute Section Details (example)

2. Click on the icon  (Edit).
⇒ The following window appears:

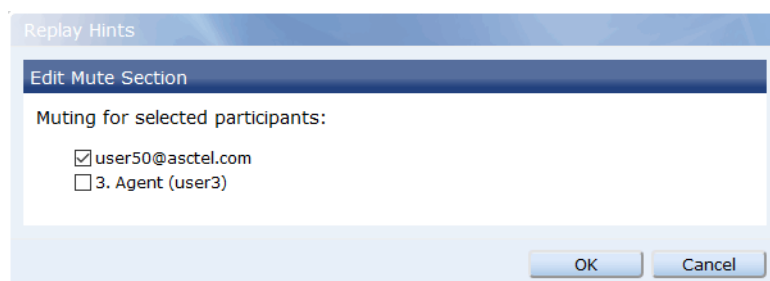
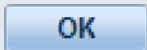



Fig. 69: Edit mute section (example)

	Saves the entries and closes the window.
	Discards the entries and closes the window.

3. Select the participants for whom the conversation section is supposed to be muted. At least 1 participant has to be muted.
☒ = Conversation muted for participant
☐ = Conversation not muted for participant
4. To save the entries, click on the button **OK**.

8.3.2.4.3 Delete muted conversation section

1. As soon as the muted conversation section is located above the replay position, the following window appears:

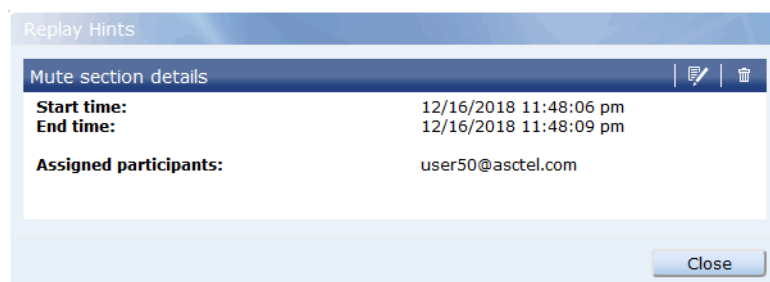






Fig. 70: Mute Section Details (example)

2. Click on the icon  (*Delete*).
To delete the mute section, confirm the security prompt.

8.3.2.5 Mark replay loop

1. To mark the beginning of a replay loop at the current replay position, click on the icon  (*Loop*).
2. To mark the end of a replay loop at the current replay position, click on the icon  (*Loop*).
⇒ When the replay is started, the area between the marks is replayed in an endless loop.
3. To remove the marks of the replay loop, click on the icon  (*Loop*).

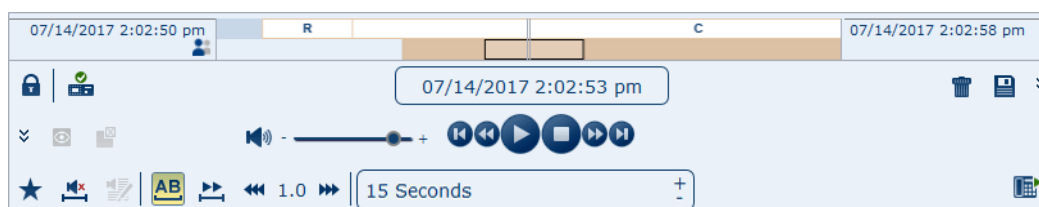


Fig. 71: Conversation with replay loop

8.3.3 Video Viewer




The Video Viewer serves to replay screen and camera recordings (video recordings).




In principle, you can load several video recordings into the Video Viewer. However, you can only replay one at any given moment.



Fig. 72: Video Viewer (example)

1	Option bar	Contains settings for displaying video recordings, see chapter "Option bar", p. 55 .
2	Main view	Shows the Video recording .
3	Replay bar	Shows the loaded video recordings, see chapter "Replay bar", p. 55 .
4	Functionality bar	Contains functionalities for the loaded conversations in the replay bar, see chapter "Icons", p. 44 . In the Video Viewer, not all icons of the Replay module are available.
5	 (Minimize)	Minimizes the on-screen display to the program icon in the taskbar.
6	 (Maximize)	Maximizes the on-screen display to full-screen size.
	 (Reconstruct)	Reduces the on-screen display to the most recently selected reduced window size.

- 7  Closes the window of the Video Viewer.
(Close)

8.3.3.1 Option bar

The option bar contains settings for displaying video recordings.



Fig. 73: Option bar

In the following, you find a description of the settings.

Aspect ratio	<p>This option is only active if <i>Adjust to Window</i> has been activated upon setting the video size. When setting the video size to <i>Original</i> and <i>User-Defined</i>, the setting <i>Aspect ratio</i> is deactivated.</p> <ul style="list-style-type: none"> • <i>Keep</i> The original aspect ratio of the video recording remains unchanged in the window of the main view of the Video Viewer. • <i>Ignore</i> The display of the video recording is adjusted to the window size of the main view of the Video Viewer. The aspect ratio is ignored, i. e. the display may be distorted. • <i>Original</i> The video recording is displayed in its original size in the main view of the Video Viewer.
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8.3.3.2 Replay bar

The replay bar shows the loaded video recordings.



Fig. 74: Replay bar

1	Shows the track of a loaded video recording .
2	Shows the start time of the loaded conversation. If several conversations have been loaded in 1 track, the start time of the earliest conversation is displayed here.
3	Shows that this is the track of a video recording .
4	Shows the replay position. To change the current replay position of the loaded conversation, you have 2 possibilities: <ul style="list-style-type: none"> 1. Click on the respective replay position. 2. Click on a track, hold the mouse key down and drag the cursor to the left or to the right.
5	Shows the sections of the conversation. The following sections are possible: <ul style="list-style-type: none"> • R = Ringing (a connection is being established)

	<ul style="list-style-type: none"> • C = Connected (at least 2 participants are calling each other) • H = Hold (a participant is on hold) • Q = Queued (a participant has been queued) • W = Wrap-up (wrap-up time)
6	Shows tagging and audio analysis data (e. g. found keywords). The line is only displayed if information is available.
7	Shows the conversation. For further information see chapter "Display of the loading states", p. 42.
8	Shows the end time of the loaded conversation. If several conversations have been loaded in 1 track, the end time of the last conversation is displayed here.

8.3.4 Message Viewer

The Message Viewer serves to display chat texts or text messages (SMS or SDS).

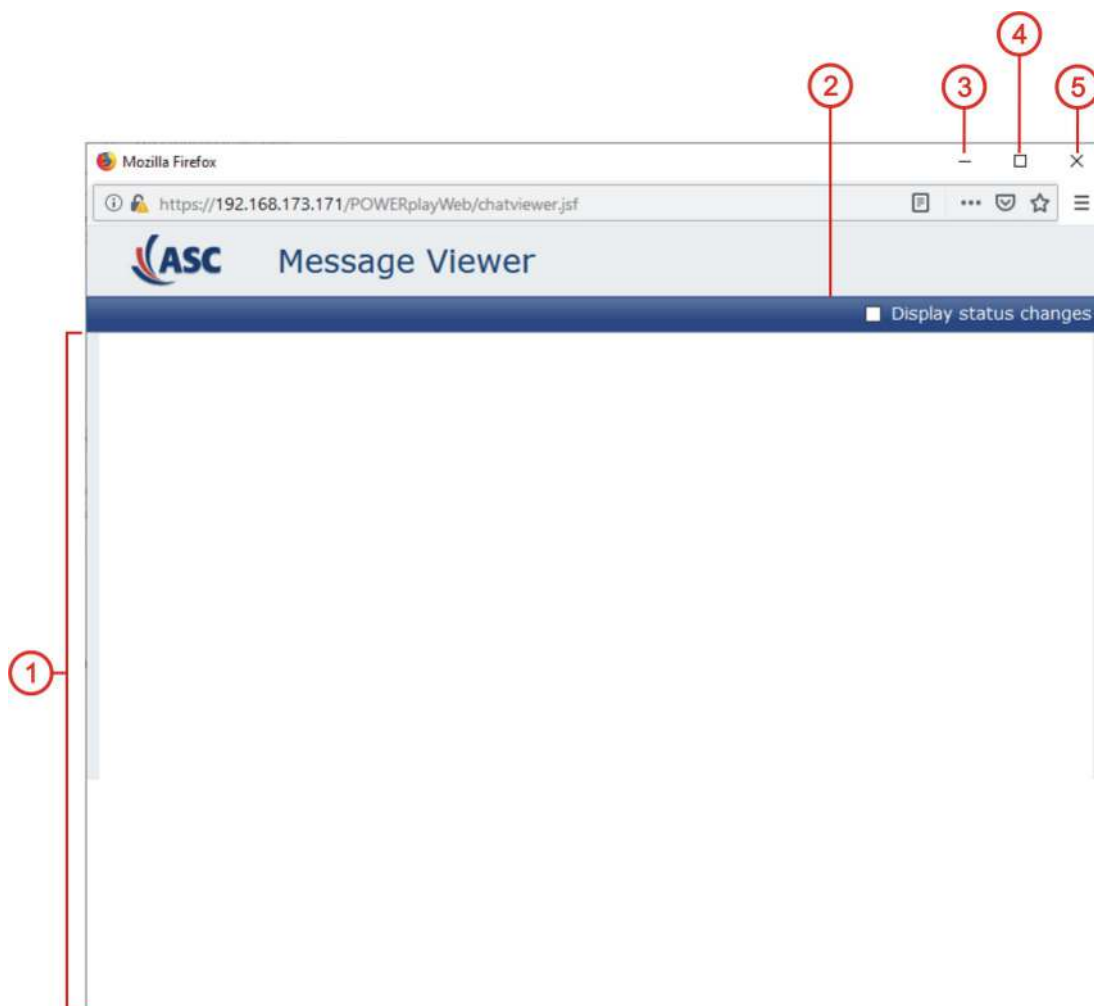






Fig. 75: Message Viewer

1	Main view	Displayed chat texts or text messages. See chapter "Main view", p. 57.
2	<i>Display status changes</i>	<input checked="" type="checkbox"/> = Displays the status changes. <input type="checkbox"/> = Does not displays the status changes.
3		Minimizes the on-screen display to the program icon in the taskbar.

	(Minimize)	
4		Maximizes the on-screen display to full-screen size.
	(Maximize)	
		Reduces the on-screen display to the most recently selected reduced window size.
	(Reconstruct)	
5		Closes the window of the Message Viewer.
	(Close)	

8.3.4.1 Main view

The main view displays chat texts or text messages.

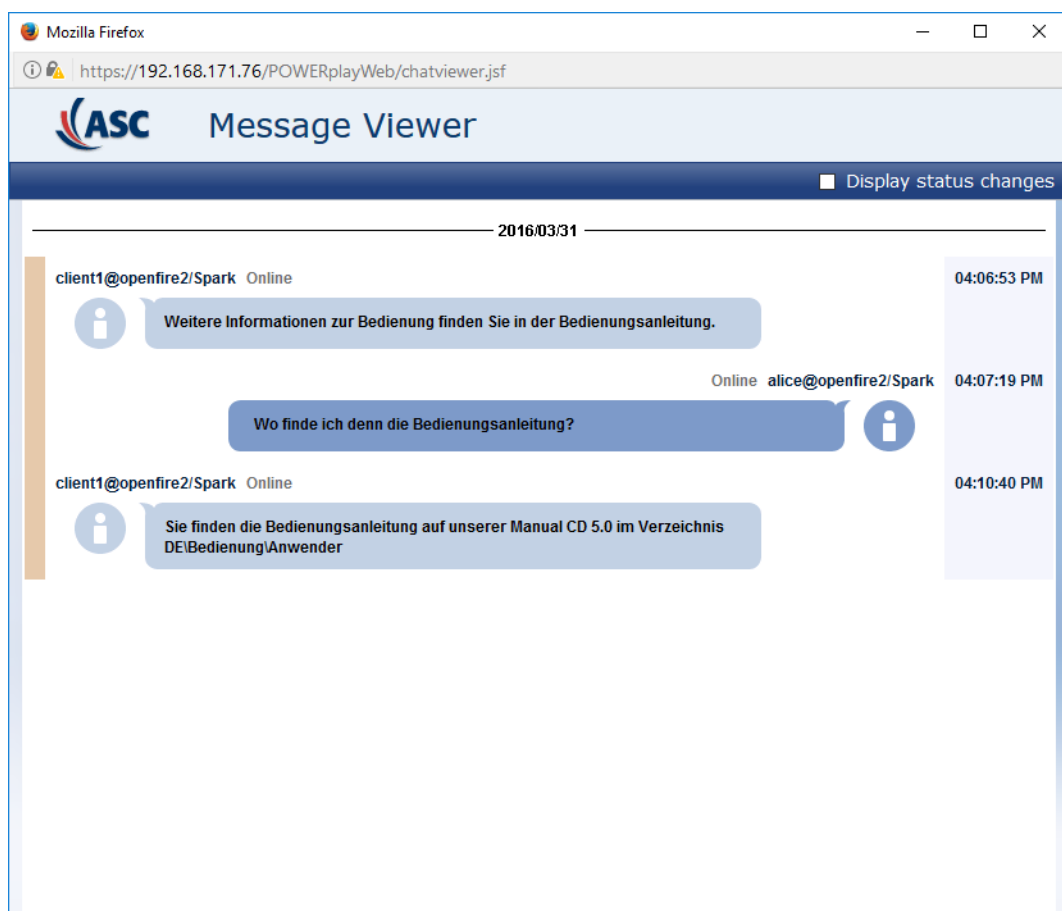


Fig. 76: Message Viewer without the display of the status changes (example)

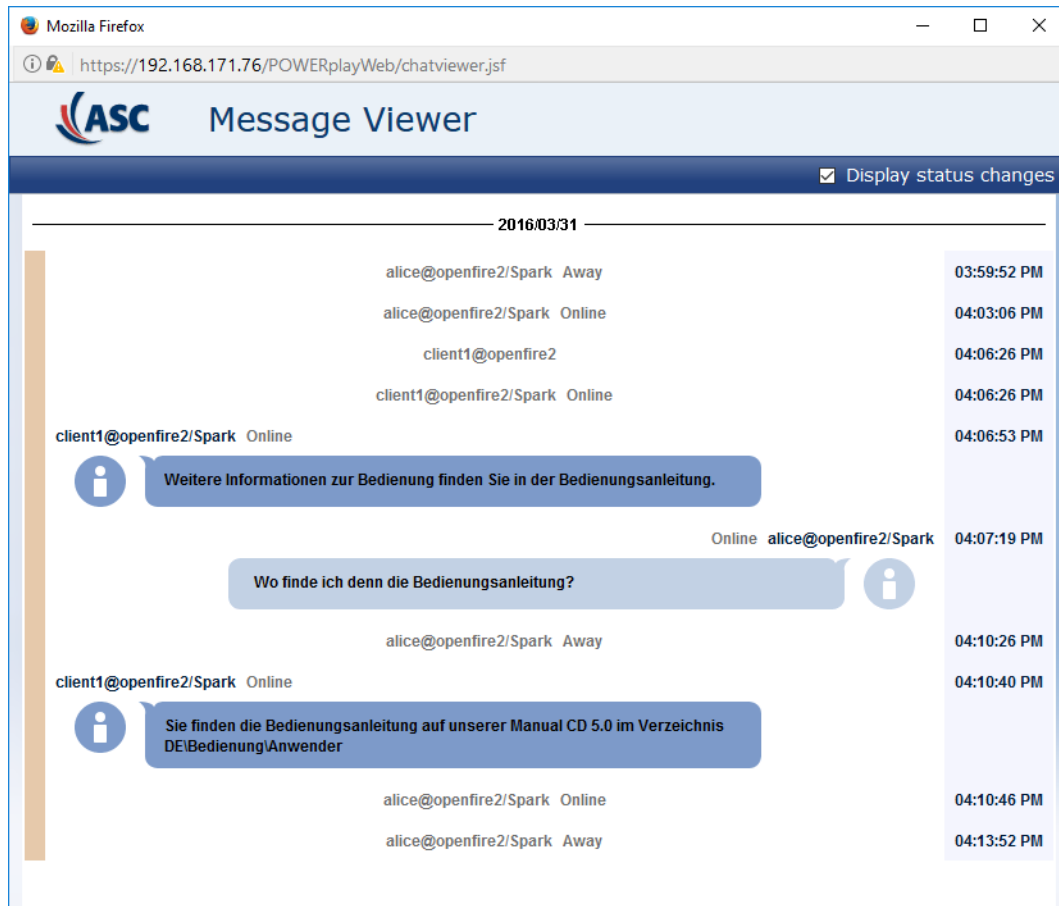


Fig. 77: Message Viewer with the display of the status changes (example)

The chat texts or text messages are displayed sorted by date and time. The most recent message is displayed at the bottom.

On the left of the main view, the basic color of the conversation is displayed. If several conversations have been loaded, the basic colors on the left indicate which chat texts or text messages belong together.

Administrate white list

This function allows administrating the white list. You can create, import or delete keywords and define whether a keyword is allowed or not.

1. Click on the menu item *Audio Analysis > Administrate White List* in the toolbar of the main view.

⇒ The following window appears:

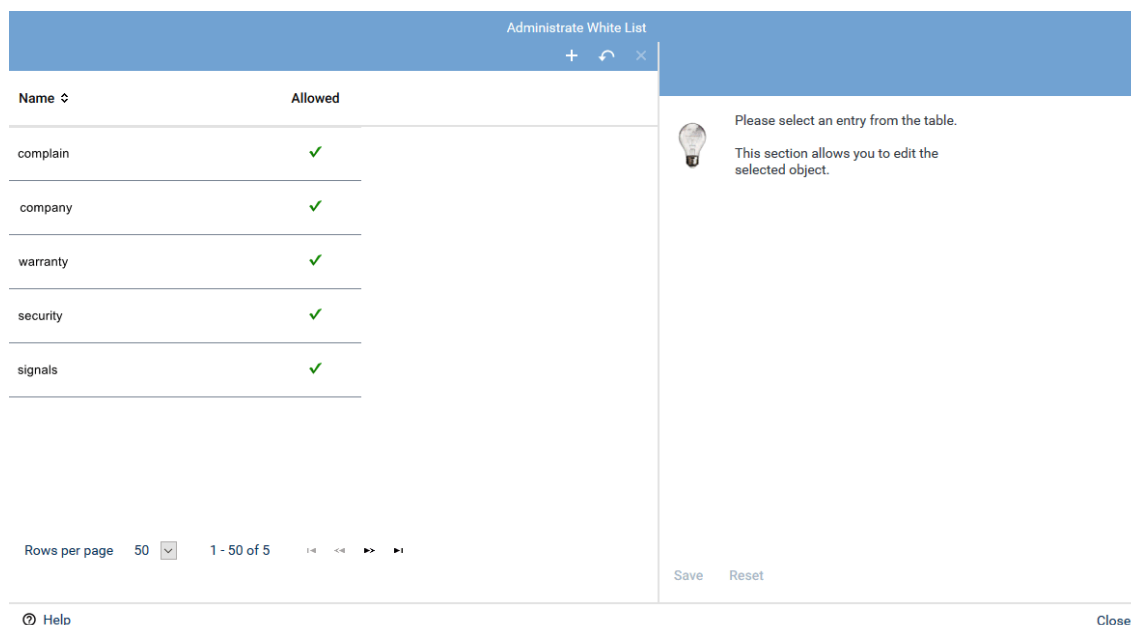





Fig. 78: Administrate white list


The following options are available:

	Create	Creates a new keyword (see chapter "Create keyword", p. 59).
	Import	Imports keywords (see chapter "Import keywords", p. 68).
	Delete	Deletes the keyword.

2. To save changes, click on the button *Save*.
To discard changes, click on the button *Reset*.
3. After editing, close the window by clicking on the button *Close*.

9.1

Create keyword

1. In the window *Administrate White List*, click on the icon  (*Create*).
⇒ The tab *Details* becomes active.

Details*

Name*

Allowed

☒

Sounds Like...

Name	Allowed
No records found	

Add

Delete

Save

Reset

Fig. 79: Create white list

- Complete all fields for the new keyword:

<i>Name</i>	Enter the keyword.
<i>Allowed</i>	Define whether it is allowed in the analysis job to search for the word if it is included in an analysis list or synonym list. <input checked="" type="checkbox"/> = Searching for the word is allowed. <input type="checkbox"/> = Searching for the word is not allowed.
<i>Sounds Like...</i>	Enter phonetic variants for the keyword (see chapter "Edit phonetic variants", p. 62).

- To save changes, click on the button *Save*.
To discard changes, click on the button *Reset*.


9.1.1 Import keywords

This function allows you to import keywords and the corresponding phonetic variants from an external list in CSV format.

The CSV file has to consist of two columns. The first column headline must be called *keyword*; the second column headline must be called *soundslike*. The phonetic variants of a keyword must be separated by commas.

Example of the layout of a CSV file:

keyword	soundslike
idiot	
incompetent	inconsequent
incapable	
anger	
dissatisfied	disqualified, misapplied

- In the window *Administrate White List*, click on the icon  (*Import*).
- Click on the button *Choose File*.

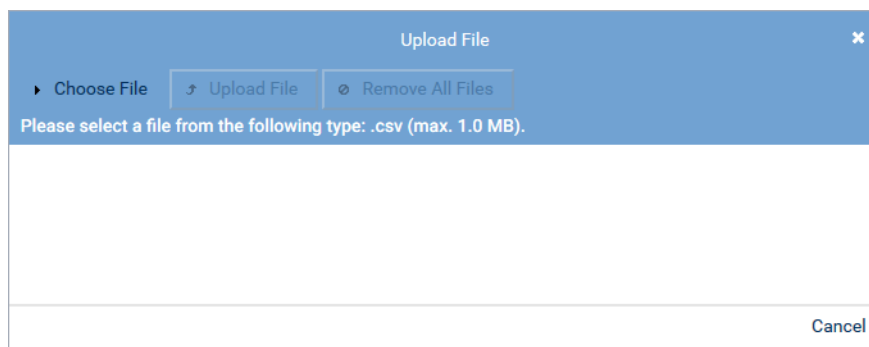


Fig. 80: Import keywords

3. Select the respective file via the Explorer and click on the button *Open*.

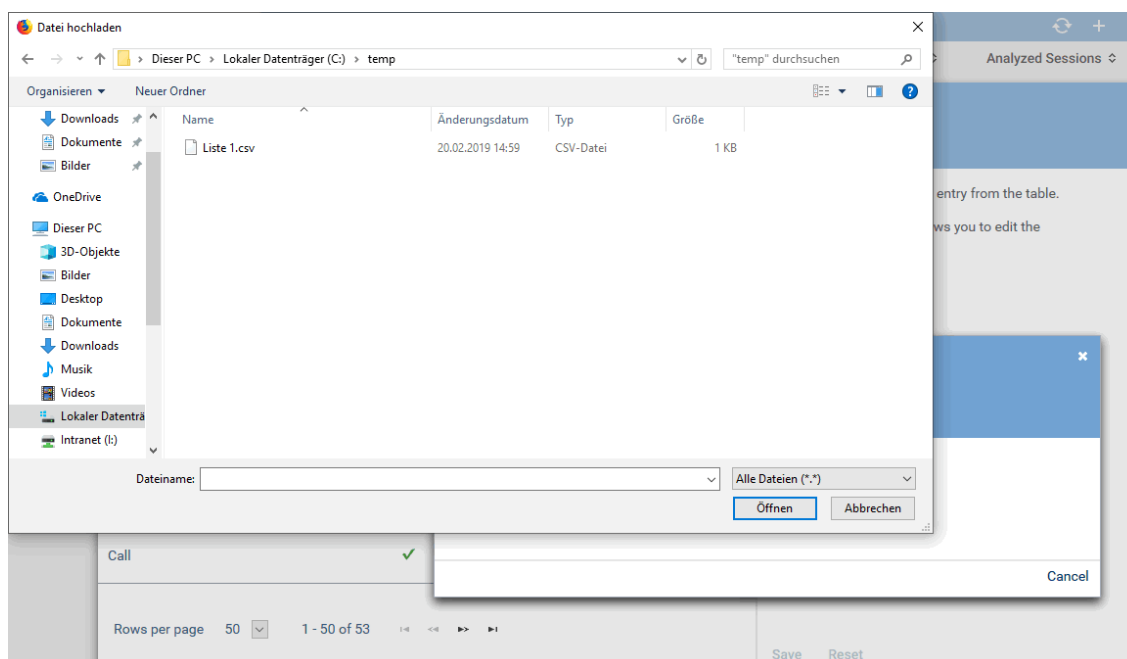



Fig. 81: Open file

4. If you would like to remove the selected file and select a different file, click on the button  next to the selected file.
To upload the file, click on the button *Upload File*.
⇒ The words are imported into the list.

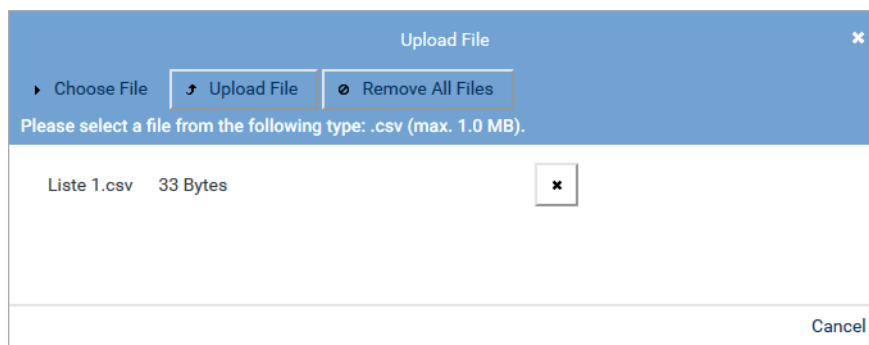


Fig. 82: Upload File

- ⇒ A window appears displaying how many words have been imported successfully and how many words have not been imported.

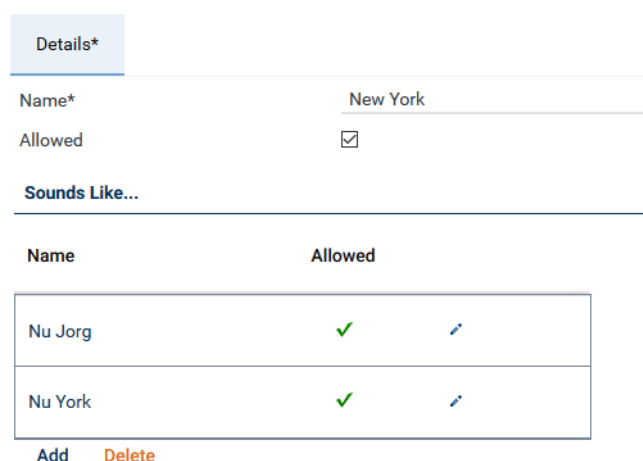
9.1.2 Edit phonetic variants

By entering phonetic variants, the keyword can be detected even if pronounced differently. If you enter phonetic variants for a keyword, then the keyword itself is not considered in the keyword search anymore. Only the entered versions of the phonetic variants are considered then.

Example:

The keyword is "INSPIRATIONneo". Enter "INSPARATIONneo" and "INSPAIRATIONneo" as phonetic variants. That way, the keyword search will only search for the phonetic variants "INSPARATIONneo" and "INSPAIRATIONneo", but not for INSPIRATIONneo.

If you would like to have the keyword in its original pronunciation considered, you have to enter the keyword as phonetic variant, too.





Details*

Name* New York


Allowed ☒


Sounds Like...

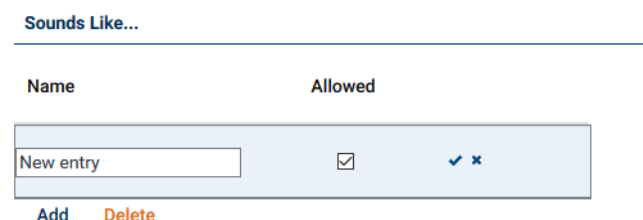
Name	Allowed	
Nu Jorg	✓	
Nu York	✓	

Add Delete

Fig. 83: Edit phonetic variants



Add	Adds a new entry to the list.
Delete	Deletes the selected entry from the list.
	Opens the selected entry for editing.

1. To add a new phonetic variant, click on the button *Add* in the list.
2. To adjust the entry in the list, click on the icon  (*Edit*) in the corresponding line.
⇒ The entry is edited in an entry field.





Sounds Like...

Name Allowed

New entry ☒  

Add Delete

Fig. 84: Edit entry in the list

3. Enter the phonetic variant.
4. Select whether the word is supposed to be allowed or not.
☒ = Word is allowed.
☐ = Word is not allowed.
5. To save the changes, click on the icon  (*Save*).
To discard the changes, click on the icon  (*Discard*).

Administrate keyword lists

This function allows administrating analysis lists and synonym lists.

For keyword spotting, emotion detection or linguistic emotion detection you have to create keyword lists.

Analysis lists

Audio analysis lists serve as the basis for jobs of the type *Keyword spotting*. If you would like to check sessions for certain keywords, you can collect the respective words in an analysis list. If you assign this analysis list to a job, the job checks the selected sessions for all keywords that the analysis list contains.

Synonym lists

Synonym lists are used to provide the keywords in a more structured way and build up a database of keywords. When creating analysis lists, you can fall back on previously created synonym lists. In the style of a standard dictionary with different categories you can create different synonym lists to be able to speed up filling the analysis lists with keywords.

List administration

- To open the window for administrating the keyword lists, click on the menu item *Audio Analysis > Administrate Keyword Lists* in the toolbar of the main view.

⇒ The following window appears:

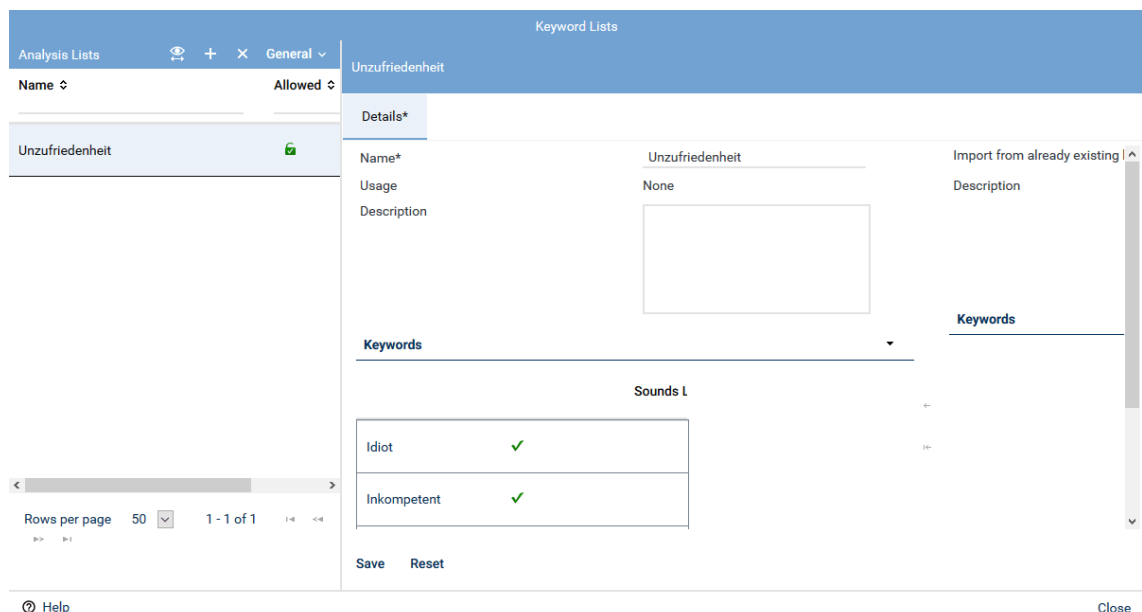







Fig. 85: Administrate keyword lists (view Analysis lists)

On the **left side** in the window, you see all analysis lists and synonym lists which have already been created:

<i>Name</i>	Shows the name of the list.
<i>Allowed</i>	Shows whether all entries in the list have been allowed according to the settings of the white list.  = All entries are allowed.  = The list contains entries which are not allowed.
<i>Creation Date</i>	Shows the date on which the list was created.
<i>Updated</i>	Shows the date on which the list was updated for the last time.

The following functions are available:

	<i>Change to synonym lists /</i> <i>Change to analysis lists</i>	By clicking on this icon, you can switch between the views <i>Analysis lists</i> and <i>Synonym lists</i> .
	<i>Create</i>	Creates a new keyword list for the analysis list or for the synonym list, see chapter "Create new keyword list", p. 65 .
	<i>Delete</i>	Deletes the selected list. Lists which are used in active jobs cannot be deleted.
<i>General</i>	<i>Adjust Table</i>	Opens a window in which you can adjust the following settings for the table of the analysis or synonym lists: <ul style="list-style-type: none"> • Displayed information • Order of the displayed columns • Number of rows per page.

On the **right side** in the window, details of the analysis list or synonym list selected on the left side are displayed.

<i>Usage</i>	<p><i>None</i> The selected list has not been assigned to any job. The selected list can be edited and deleted.</p> <p><i>Inactive</i> The selected list has been assigned to an inactive job. The selected list can be edited but not deleted.</p> <p><i>Active</i> The selected list has been assigned to an active job. The selected list can neither be edited nor deleted.</p>
--------------	---

Here, you can edit the selected list:

Add	Adds new keywords to the list. Options: <ul style="list-style-type: none"> • <i>Add keyword</i> (see chapter "Enter keyword", p. 65). • <i>Import from file</i> (see chapter "Import keywords", p. 68).
Edit	Opens a window in which you can edit the selected keyword (see chapter "Edit keyword", p. 71).
Delete	Deletes the selected keyword.
Export List	Exports the selected list, see chapter "Export keyword list", p. 73 .

In addition, you can transfer keywords from an already existing keyword list (analysis or synonym list) to the selected list, see [chapter "Transfer keywords from list", p. 67](#).



Upon entering a new keyword in the keyword list, it automatically receives the status saved in the white list. If a new keyword is not yet contained in the white list, it is automatically transferred to the white list and receives the status *Allowed*. A status can only be changed in the white list.



You cannot edit keyword lists which are currently used for active audio analysis jobs.

- To save changes, click on the button *Save*.
To discard the changes, click on the button *Reset*.
- After editing, close the window by clicking on the button *Close*.

10.1 Create new keyword list

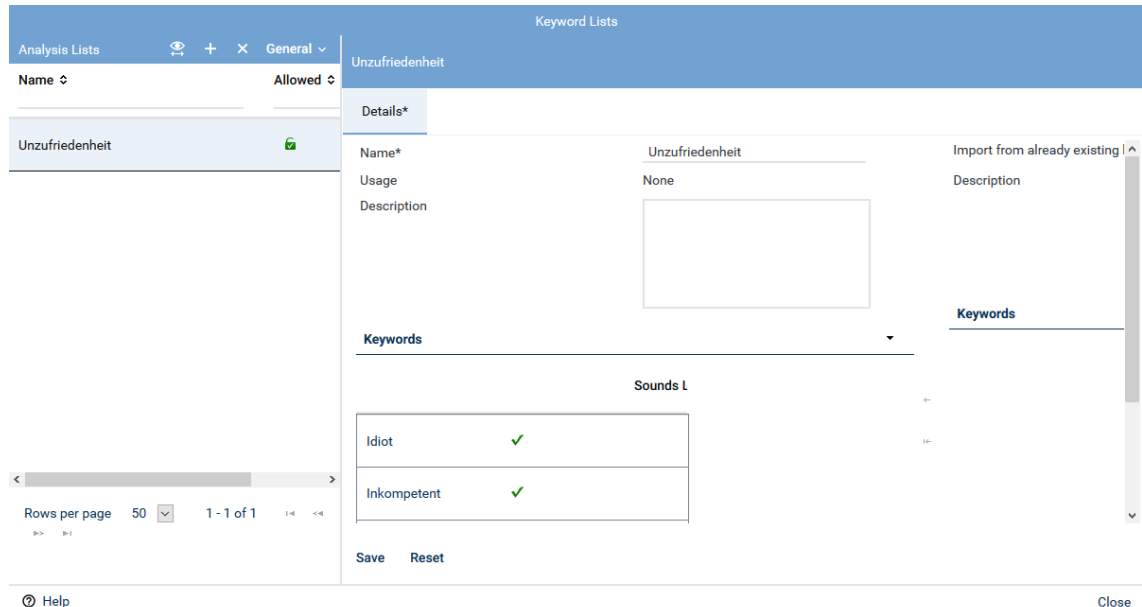



Fig. 86: Administrate keyword lists (view Analysis lists)

- Click on the icon  (*Create*) on the left of the window.
- Enter the name of the new list in the field *Name* on the right side of the window.
- If required, enter additional information about the list in the field *Description* below.
- Below that, in the group field *Keywords*, enter all keywords you would like to include in the list. The columns *Allowed* and *Locked* show whether the entries are allowed or locked according to the white list.
You have 3 options to add keywords to the list:
 - Apply keyword from existing list, see [chapter "Transfer keywords from list", p. 67](#)
 - Enter keywords manually, see [chapter "Enter keyword", p. 65](#)
 - Import keywords, see [chapter "Import keywords", p. 68](#)
- To save changes, click on the button *Save*.
To discard changes, click on the button *Reset*.
- After editing, close the window by clicking on the button *Close*.

10.1.1 Enter keyword

This function allows entering keywords and corresponding sounds-likes manually.

Name*	Unzufriedenheit
Usage	None
Description	<div></div>

Keywords ▼

Sounds L

Idiot	✓
Inkompetent	✓

[Add](#)
[Edit](#)
[Delete](#)


Fig. 87: Enter keywords

1. In the left group field *Keywords* click on the button *Add*.
 2. Select the option *Add keyword*.
- ⇒ The following window appears:

Edit Keyword +

Name	Allowed
No records found	

Rows per page 50 ▼ 0 - 0 of 0 ◀ << >> ▶



Please select an entry from the table.

This section allows you to edit the selected object.

[Save](#) [Reset](#)

[Save](#) [Cancel](#)

Fig. 88: Edit keyword

3. Click on the icon + (*Create*).
- ⇒ The tab *Details* becomes active.

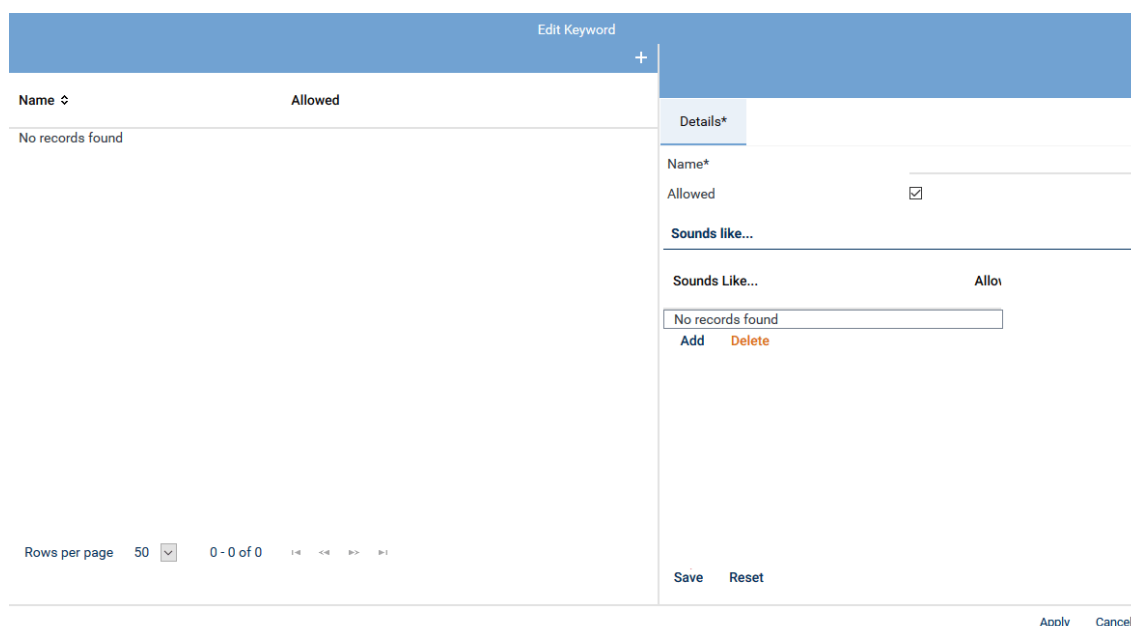


Fig. 89: Edit keyword

- Complete the fields for the new keyword:

Name	Enter the keyword.
Allowed	Define whether it is allowed in the analysis job to search for the word if it is included in an analysis list or synonym list. <input checked="" type="checkbox"/> = Searching for the word is allowed. <input type="checkbox"/> = Searching for the word is not allowed.
Sounds Like...	Enter phonetic variants for the keyword, see chapter "Add and edit phonetic variants", p. 72.

- To save the entries of the selected keyword, click on the button *Save* in the detail view. To discard the entries of the selected keyword, click on the button *Reset* in the detail view.
- If you would like to enter another keyword, repeat the last 3 steps.
- To save all changes and close the window, click on the button *Apply*.



Upon entering a new keyword in the keyword list, it automatically receives the status saved in the white list. If a new keyword is not yet contained in the white list, it is automatically transferred to the white list and receives the status *Allowed*. A status can only be changed in the white list.

10.1.2 Transfer keywords from list

This function allows transferring keywords and the corresponding phonetic variants from an already existing keyword list (analysis list or synonym list).

Details*

Name*

Customer signals

Usage

None

Description

Import from already existing keyword list

complaints

Description

Keywords

Sounds Like...

Service	✓
Superior	✓

Add Edit Delete

Keywords

Sounds Like...



mistake	✓
urgent	✓

Save

Reset

Close

Fig. 90: Transfer keywords from list

- In the field *Import from already existing keyword list*, enter the name of an existing analysis list or synonym list.
Upon entering the first letters, a list of all autocompleted analysis list or synonym lists beginning with these letters is displayed. You can choose to enter the name of the list by selecting it from the list or by continuing to enter it manually.
⇒ The content of the analysis list or the synonym list is displayed in the group field *Keywords* on the right.
- To transfer an individual keyword from the list, select the keyword (right group field *Keywords*) and click on the icon .
To transfer all keywords from this list, click on the icon .

10.1.3 Import keywords

This function allows you to import keywords and the corresponding phonetic variants from an external list in CSV format.

The CSV file has to consist of two columns. The first column headline must be called *keyword*; the second column headline must be called *soundslike*. The phonetic variants of a keyword must be separated by commas.

Example of the layout of a CSV file:

keyword	soundslike
idiot	
incompetent	inconsequent
incapable	
anger	
dissatisfied	disqualified, misapplied

Name*	Unzufriedenheit
Usage	None
Description	<div></div>

Keywords ▼

Sounds L

Idiot	✓
Inkompetent	✓

[Add](#) [Edit](#) [Delete](#)

Fig. 91: Import keywords

1. In the left group field *Keywords*, click on the button *Add*.
2. Select the option *Import from file*.
3. Click on the button *Choose File*.

Upload File

Choose File

Upload File

Remove All Files

Please select a file from the following type: .csv (max. 1.0 MB).

Cancel

Fig. 92: Import keywords

4. Select the respective file via the Explorer and click on the button *Open*.

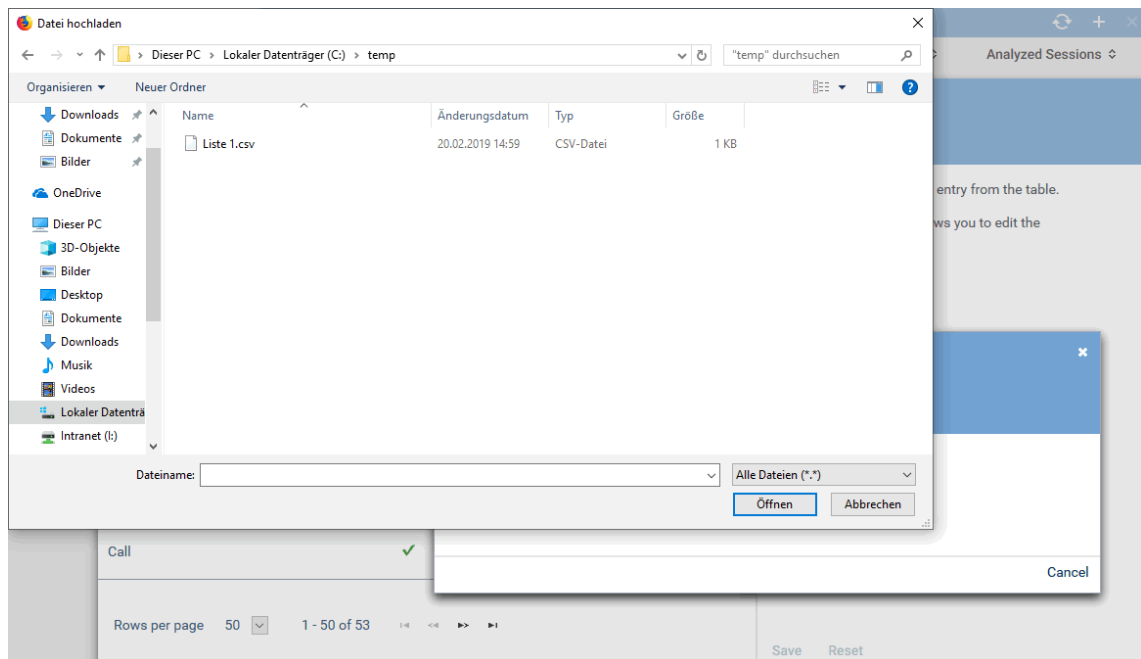



Fig. 93: Open file

5. If you would like to remove the selected file and select a different file, click on the button  next to the selected file.
To upload the file, click on the button *Upload File*.
⇒ The words are imported into the list.

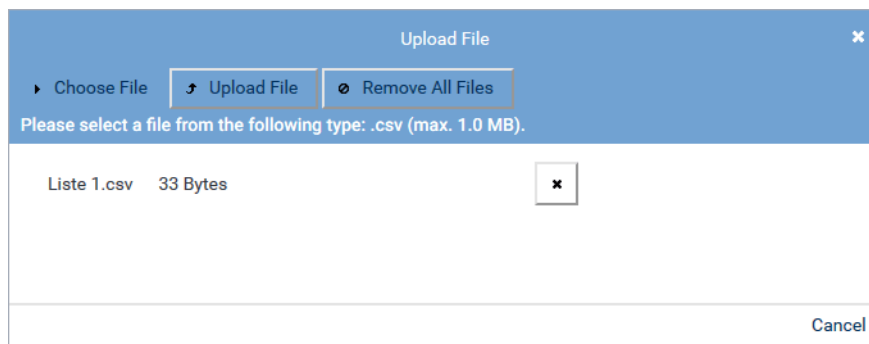


Fig. 94: Upload File

- ⇒ A window appears displaying how many words have been imported successfully and how many words have not been imported.



Upon entering a new keyword in the keyword list, it automatically receives the status saved in the white list. If a new keyword is not yet contained in the white list, it is automatically transferred to the white list and receives the status *Allowed*. A status can only be changed in the white list.

10.2 Edit keyword

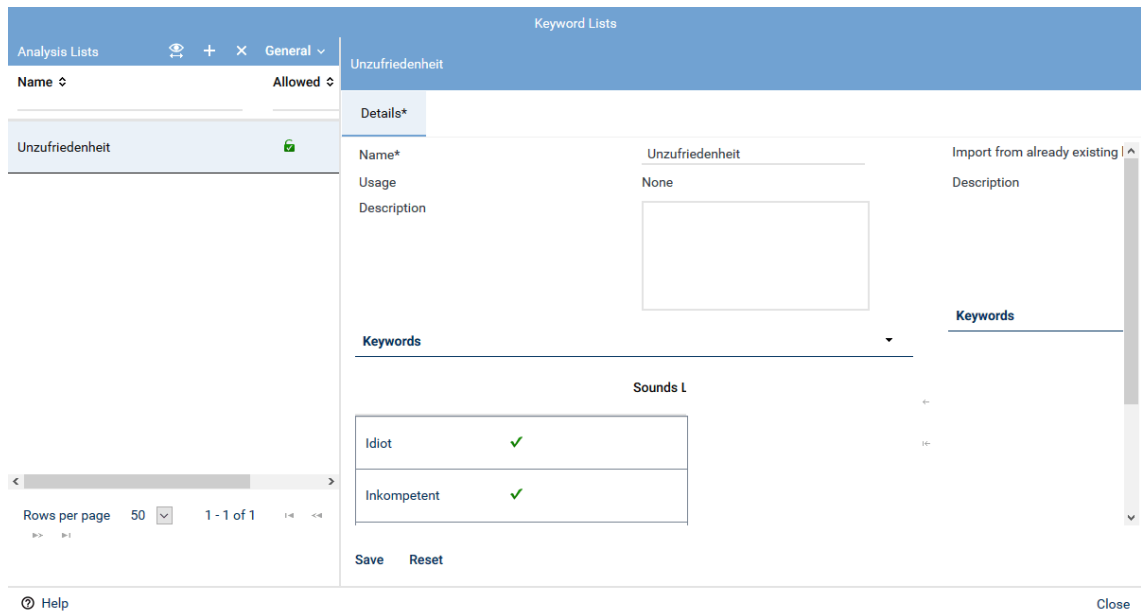


Fig. 95: Edit keyword lists (view analysis lists)

1. On the left of the window, click on the keyword list you would like to edit.
2. On the right of the window, in the left group field *Keywords*, select the keyword you would like to edit.

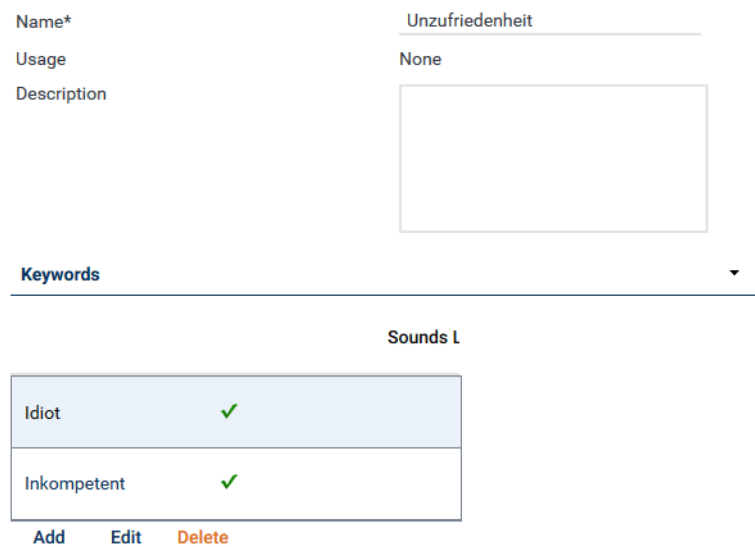


Fig. 96: Edit keyword

3. Click on the button *Edit*.
⇒ The following window appears:

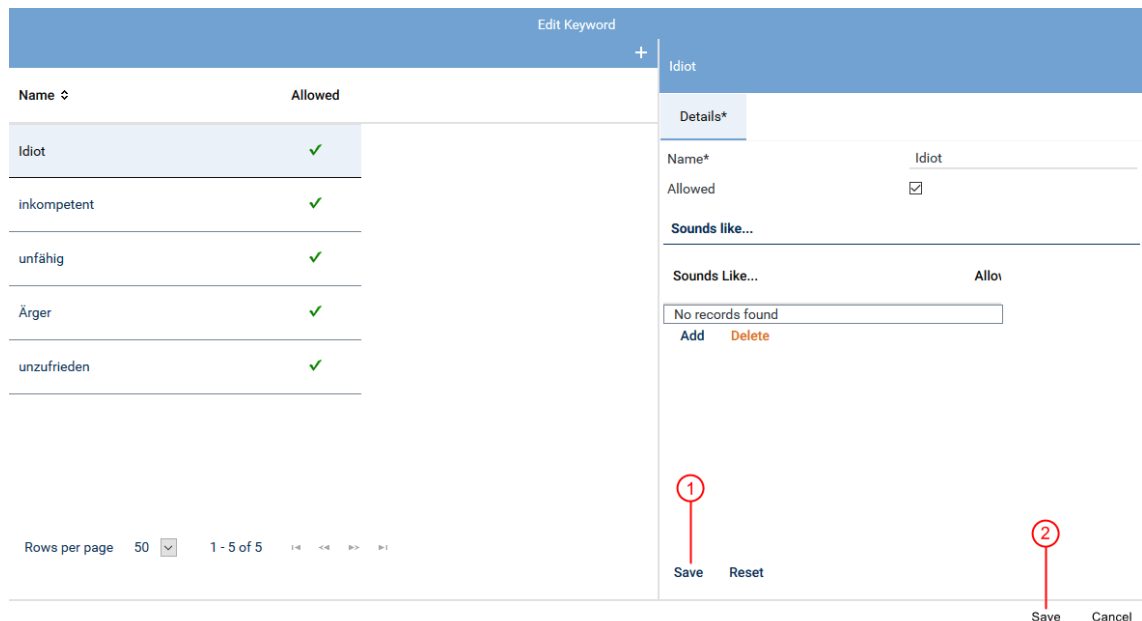


Fig. 97: Edit keyword

4. Enter the changes. You can make the following changes:
 - correct the keyword
 - change the phonetic variants, see [chapter "Add and edit phonetic variants", p. 72](#)
5. To save the entries for the selected keyword, click on the button *Save* in the detail view (1). To discard the entries for the selected keyword, click on the button *Reset* in the detail view.
6. If you would like to edit another keyword, select the keyword you would like to edit in the main view and repeat the last two steps.
7. To save all changes and close the window, click on the button *Save* (2).

10.2.1 Add and edit phonetic variants

By entering phonetic variants, the keyword can be detected even if pronounced differently. If you enter phonetic variants for a keyword, then the keyword itself is not considered in the keyword search anymore. Only the entered versions of the phonetic variants are considered then.

Example:

The keyword is "INSPIRATIONneo". Enter "INSPARATIONneo" and "INSPAIRATIONneo" as phonetic variants. That way, the keyword search will only search for the phonetic variants "INSPARATIONneo" and "INSPAIRATIONneo", but not for INSPIRATIONneo.

If you would like to have the keyword in its original pronunciation considered, you have to enter the keyword as phonetic variant, too.

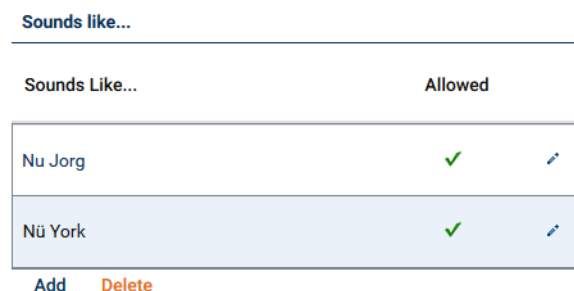
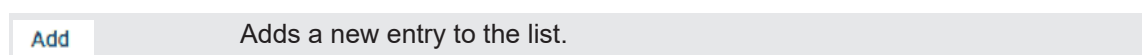




Fig. 98: Edit phonetic variants



Delete	Deletes the selected entry from the list.
	Opens the selected entry for editing.

1. To add a new phonetic variant, click on the button *Add* in the list.
2. To adjust the entry in the list, click on the icon  (*Edit*) in the corresponding line.
⇒ The entry is edited in an entry field.

Sounds like...

Sounds Like... Allowed

New entry	<input checked="" type="checkbox"/>	<input checked="" type="button" value="✓"/> <input type="button" value="✕"/>
-----------	-------------------------------------	--

Add Delete

Fig. 99: Edit entry in the list

3. Enter the phonetic variant.
4. Select whether the word is supposed to be allowed or not.
☒ = Word is allowed.
☐ = Word is not allowed.
5. To save the changes, click on the icon (*Save*).
To discard the changes, click on the icon (*Discard*).
6. To save the entries for the selected keyword, click on the button *Save* in the detail view (1).
To discard the entries for the selected keyword, click on the button *Reset* in the detail view.

Edit Keyword

Name ↕	Allowed
Idiot	✓
inkompetent	✓
unfähig	✓
Ärger	✓
unzufrieden	✓

Rows per page 50 1 - 5 of 5 < << >> >

Idiot

Details*

Name* Idiot

Allowed ☒

Sounds like...

Sounds Like... Allowed

No records found

Add Delete

1 **Save** **Reset**

2 **Save** **Cancel**

Fig. 100: Edit keyword

7. To save all changes and close the window, click on the button *Save* (2).

10.3 Export keyword list

1. In the window on the right in the group field *Keywords*, click on the button *Export List*.

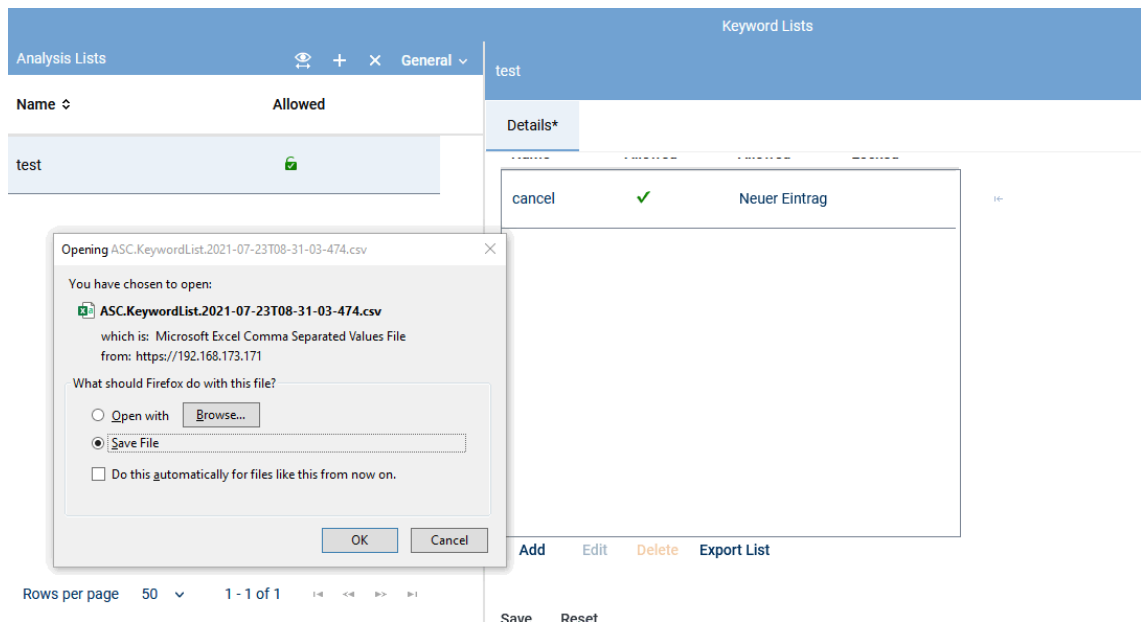


Fig. 101: Export keyword list (example)

2. To open the keyword list, select the option *Open with*.
To save the keyword list, select the option *Save file*.
3. Click on the button *OK*.
⇒ The file is opened or saved in the local download directory.
To cancel the export, click on the button *Cancel*.
4. After editing, close the window by clicking on the button *Close*.

1. In the main view, select the audio analysis job for which you would like to see or reset the running analyses.
2. Click on the menu item *Audio Analysis > Running Analyses* in the toolbar of the main view.
⇒ The window *Running Analyses*.

Running Analyses					
Task ID	Session ID	Conversation ID	Status	Recordings in Progress	Last Update
4aa810bf-7b7a-4418-8cbc-f6b2c7b62285	Ced833b6-9c65-42ba-8f0c-519d3ceb1d39	3f8989f3-d56f-47c2-adc8-ff72062a2b3	EXPORTING	[e00bc46c-319e-4abc-b563-91ff3f293cec, 1d17e2d33-c0a9-4a40-9f65-72a7414f7ce9]	03/03/2020 12:54:56 PM
bc4979c4-6da5-46c5-a7d2-d355b96aed27	b1d06739-cd6e-41ea-9a1d-b4d1b40ea94e	68320b24-062c-4308-8675-9bb8082a9800	EXPORTING	[75e1febb-8ed5-472f-a4a6-202084264ae9, 216f9347-e706-4de4-8f98-96bd01769902]	03/03/2020 12:54:56 PM
5ddb0316-720f-4115-b689-2c4191430c02	830c942f-cae0-4554-98c0-4b7f1d0a0fc4	d1d2bae1-c8fe-4d69-a094-d0bf25c1846b	EXPORTING	[d2deaa95-b971-470d-be9e-1ff887c30d49, 6a931597-03bd-4e99-8374-39446140cc05]	03/03/2020 12:54:56 PM
22c5a31e-6c3d-4d39-6759-b653a26da675	f88bd15-bc55-4aeb-8790-03006c46c52c	0e234235-496a-4c37-b349-ffd1740660b6	EXPORTING	[30ca3c17-5c33-4390-9aa1-16917ec283d8, 63913286-42c8-4575-a40f-cd158f02295e]	03/03/2020 12:54:56 PM
fe2ae673-896d-4357-0b3e-b41b5af01db7	6ad19c01-0899-40fa-a91c-c5d9c42ae1b8	d516be7a-edb5-46d7-9906-6b450367f6a3	EXPORTING	[c9f44ed6-687c-48c5-8297-76994b90037c, 7748e7eb-ae45-4e61-9b58-0ab9a222f6d2]	03/03/2020 12:54:56 PM
9386aaa7-5b43-4225-b276-9b1dda929cb6	543068de-60f8-4a4a-ac99-83d806600e45	2330c481-0284-4b29-b723-d9f64d6e3284	EXPORTING	[1911a2dc-c04e-48e8-8192-2dd84ae07217, e5c4f369-23cc-4cb0-b0be-5dd45ac19018]	03/03/2020 12:54:56 PM
600d3fde-af44-4097-aac1-3ee07fd944ff	9267466f-59ca-47fd-a076-496c7664c8a8	bc36b2a4-c22e-4382-0862-680a51883f01	EXPORTING	[cc902798-4f22-435d-98dd-978abb5298b6, c4d0cb9e-cdad-40e0-bcdc-45d6d2706e99]	03/03/2020 12:54:56 PM
19ee49dc-6620-48ad-a056-25432f1c7725	ee2a1932-2000-45a3-a6f9-c8b6374bb5fc	c3c82ed8-fffa-4cd4-912d-bc757fca4adf	EXPORTING	[9f9175db-eeae-4f89-a55d-3da045474131, 9183a9f0-c0b0-4576-be53-13ff1a3bbee5]	03/03/2020 12:54:56 PM
773bf7e6-16c7-47e0-8e90-b73fabc83e9	371d2c55-7e14-4255-ad40-f687d0cta468	8d4a608e-2492-4b84-ac79-ea9f496b23e2	EXPORTING	[327f0f3-965e-4ab3-828f-59f530ca8879, be5087fb-1c10-4a77-ac11-9f9220c6325c]	03/03/2020 12:54:56 PM
c8f12ccf-b082-d116-8ab5-356c1c232a48	7a81115c-08d4-4b63-bbca-4d5778307709	b53f6f85-4613-470a-4a5e-ba46013bkh14	EXPORTING	[80614785-d449-4ba5-ab80-a0770c680038, 6a45b28f-1ab6-449a-b08e-	03/03/2020

Fig. 102: Running Analyses

The window displays the following information:

Task ID	Shows the task ID.
Session ID	Shows the session ID.
Conversation ID	Shows the conversation ID.
Status	Shows the status of the session. <i>EXPORTING</i> = The session is exported for analysis. <i>ANALYZING</i> = The session is being analyzed.
Recordings in Progress	Shows the recording IDs of a session which await processing before having been processed completely.
Last Update	Shows the date and time of the last update.

In the window, the following functions are available:

Update	Updates the list of running analyses.
Reset Task	Resets the audio analyses for the selected sessions. The reset sessions will be analyzed again at a later moment. See chapter "Reset running analyses", p. 75 .
Cancel	Closes the window <i>Running Analyses</i> .

11.1

Reset running analyses

1. To reset a session from the list of running analyses, click on the respective line.
To select several sessions, click on the respective line while holding the [Ctrl] key down.
2. Click the button *Reset Task*.
⇒ The audio analysis is reset for the selected session. The reset sessions will be analyzed again at a later moment.

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Glossary

MP3

Description of the digitally saved audio data. MP3 compression works by reducing (or approximating) the accuracy of certain components of sound that are considered (by psychoacoustic analysis) to be beyond the hearing capabilities of most humans. The remaining audio information is then recorded in a space-efficient manner. (Source: Wikipedia 9th July 2020)

MP4

MP4 is a video container format. MP4 file format is based on Apple QuickTime file format. MP4 files allow saving multimedia content as several audio and video tracks as well as subtitles, 2D and 3D graphics. This content may be replayed locally with a dedicated software or streamed via a network. (Source: Wikipedia 07.02.2020)

PCM

Pulse Code Modulation is an uncompressed pulse modulation method which transforms a time- and value-continuous analog signal into a time- and value-discrete digital signal. It is used in audio technology, for example in the context of the G.711 standard and in video technology for digital video signals in compliance with the ITU-R BT 601 standard. (Source: Wikipedia 12th June 2018)

Video data

Video data can either consist of camera recordings of a video call or of screen recordings.

Video recording

A video recording can consist either of a screen video or of any other video.

WAVE

WAVE file format is a container format to digitally save audio data and is based on the Resource Interchange File Format (RIFF) defined by Microsoft for Windows. (Source: Wikipedia 23rd February 2021)

XML

Extensible Markup Language is a human-readable and machine-readable language which defines a set of rules for encoding documents.