ALTO Studio
Audio Dialogue Tool

User Manual (version 4.0)

Introduction 3

Project Launcher 4

Creating a new project 5
- Creating a project from a folder 6
- Creating a project from an Excel file 9
- Importing an ADX2 project 10
- Importing a Fabric project 11
- Importing an FMOD project 12
- Importing a Wwise project 13
- General notes about importing projects 14
- Project information 15
- Editing a Project later 16

Main window 17
- Command panel 17
- Project tree 18
- Main view 19

Main workflow 21
- Single-language workflow 21
- Multi-language workflow 23

Analysis 25
- Settings for single-language analysis 26
- Settings for multi-language comparison 29
- Running the analysis 33

Reports view 34
- Details 34
- Statistics 36

Publishing..... 37

Correction..... 39
Settings for single-language correction..... 39
Settings for multi-language conformity..... 41
Two correction modes..... 43
Running the correction..... 44

Exporting a project..... 45
Exporting to ADX2..... 46
Exporting to Wwise..... 48
Exporting to Excel..... 50

Tools..... 51
Program Settings..... 51
Find Files..... 54
Edit source project in tool..... 56
Synchronize with source project..... 56
Remove Files..... 57
Quick Check..... 58
Interactive Dialogue Tester..... 60
Speech Synthesizer..... 63
Batch Renamer..... 67
Loudness Equalizer..... 71
ID Generator..... 73
Batch Processing with AudioBot™..... 75
LipSync with FaceFX™..... 77
VoiceFX..... 78

Integration..... 80
Importer Plug-ins..... 80
Exporter Plug-ins..... 81
Tool Plug-ins..... 82
Command line version..... 83

Support..... 85

Annex 1: Keyboard Shortcuts..... 86

Introduction

As games grow bigger and become more complex, the amount of dialogue they require increases dramatically. Once localized, it is not rare for a game to ship with thousands or tens of thousands of voice lines.

How to make sure that all these files are in the right format, at the right level and that nothing is missing, in all languages? Checking thousands of recordings manually is time-consuming and error-prone, when not impossible.

Meet Alto Studio. Whatever your naming convention or file hierarchy is, Alto Studio analyzes your dialogue files and if needed compares them with a reference language, reporting any errors it finds and even correcting them. Alto Studio can also import the lines from an Excel sheet, or synchronize with game audio projects from middleware such as Wwise, FMOD, ADX2 and Fabric.

Not only does Alto Studio check for missing or misnamed files, but it will also make sure that the audio format of each file is correct (sample rate, bit depth, number of channels), compare the average and peak loudness, the duration, leading or trailing silence of the files, and even the timbre of the voices!

Alto Studio generates complete error reports and statistics (in XML, HTML, PDF or Excel format) that you can then give to your client or manager.

Finally, Alto Studio is packed with very useful tools such as an audio batch renamer, a loudness equalizer, an interactive dialogue tester, a placeholder speech synthesizer and a vocal effect processor (VoiceFX) to mention just a few. It also integrates seamlessly with FaceFX™ from OC3 Entertainment for lipsync and Tsugi's own AudioBot™ for audio batch processing.

All these features, coupled with a rock-solid workflow and a smooth and intuitive user interface make Alto an indispensable tool for anyone dealing with audio dialogue in games or movies.

Project Launcher

The Project Launcher is the first thing you see when you start Alto Studio. It displays information about the latest version and notifies you if you need to update.

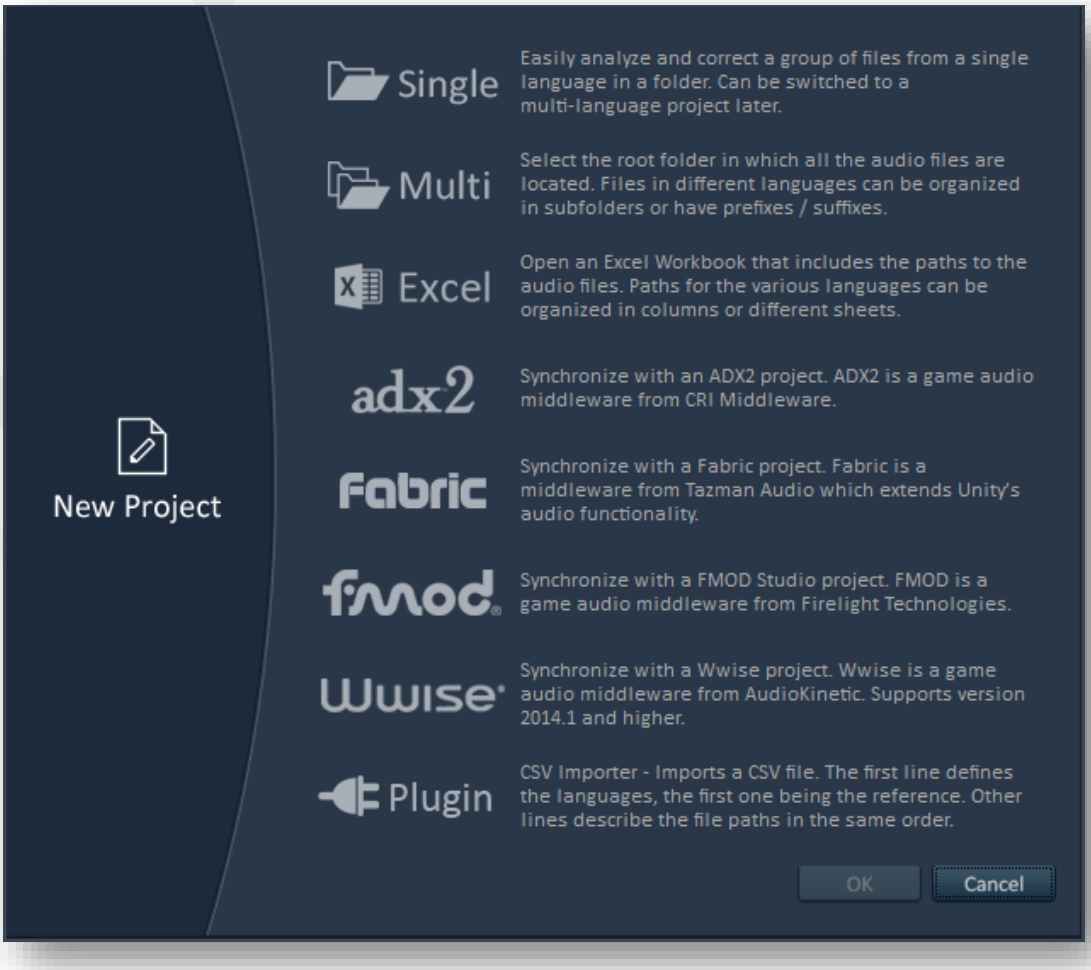
The Projects Launcher also displays the list of the most recently open projects so that you can easily choose and load the right project. To do it, either select a project and click on open or double-click on the project's name. From the same window, you can also create a new project or browse to an older or non-listed project.

Note: You can disable the Project Launcher (to start faster or to automatically load the latest Alto Studio project you worked on) in the Settings window.

Creating a new project

Creating a project in Alto Studio consists in telling the software what are the reference and localized languages and where to find the corresponding audio assets (analysis settings will also be saved in an Alto project file).

After pressing the “New Project” button, Alto Studio will propose you several options to get your dialogue files into the project. You can reference audio assets which are on your hard drive directly, or open an Excel sheet which contains the paths for all the files. You can also import the dialogue files from a game audio project automatically. If you build importer plug-ins they will also appear in this window.



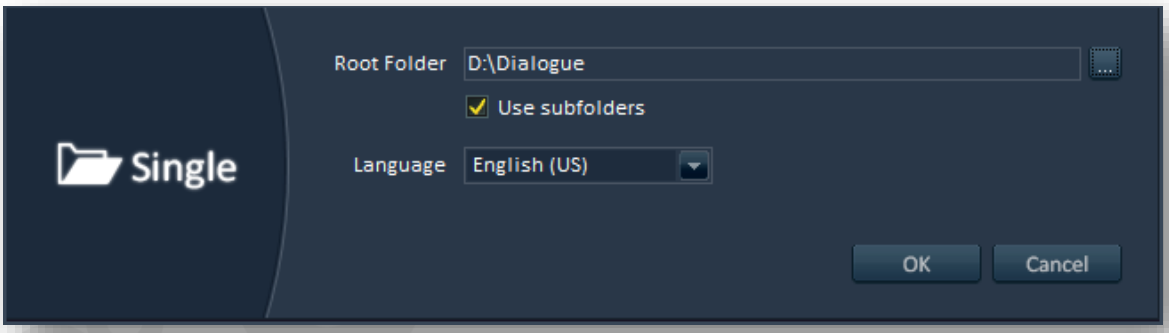
<u>Note</u>: It is also possible to create the right type of Alto Studio project automatically by dragging and dropping an ADX2, Fabric, FMOD or Wwise project or an Excel worksheet from Windows Explorer onto Alto Studio’s main window.

Creating a project from a folder

Single-language project

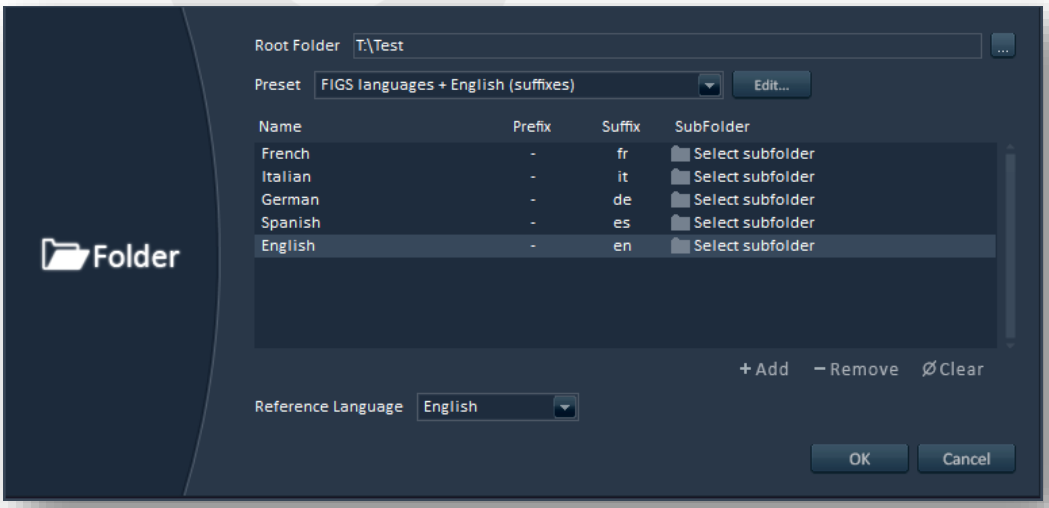
This is the simplest type of Alto Studio project. Select this option if you only want to check or process a set of audio files in a single language. You will be able to specify the root folder in which the files are located and if you want to check the subfolders as well (if there are any).

You can switch from a single-language project to a multi-language project at any time by selecting the “Edit Project…” command of the “File” menu. For example, you can start with a single-language project at the beginning of the development of a game and then add new languages as the project grows and they become available.

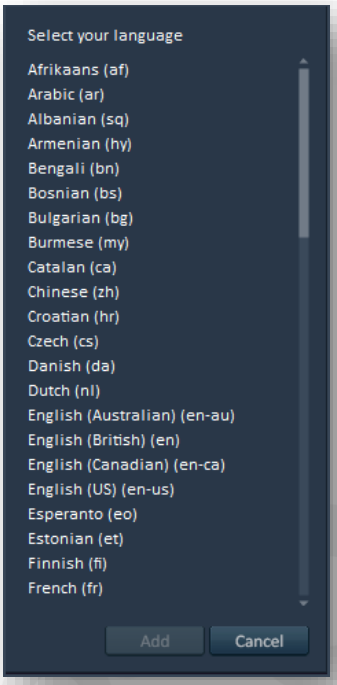


Multi-language project

Like for the single-language project, this option allows you to reference the audio files directly by selecting in what folder they are. Because the naming schemes and the ways to organize dialogue files can vary from one company to another and even between projects, Alto Studio lets you specify an optional suffix, prefix and subfolder per language.



First you will need to select the root folder of your project (the common folder under which all the assets can be found). Note that if your assets are in very different folders on your machine, you can also simply select the drive or partition for the root folder.

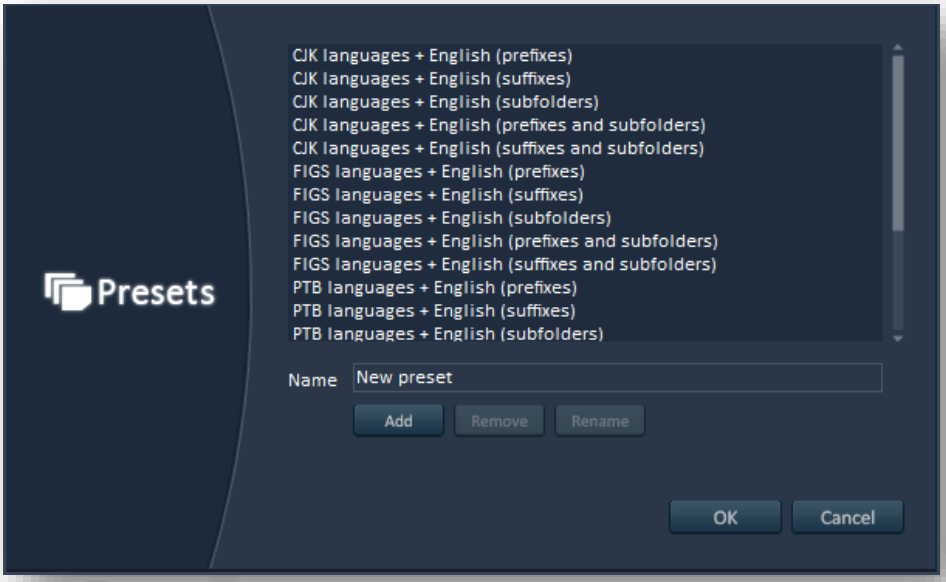


Then you can add the languages you will work with. The files for each language can have a prefix (i.e. a group of characters that will be added at the beginning of the file names), a suffix (a group of characters added at the end), or even both.

For example, maybe your files in Italian have the same names than your English files (which may be your reference) but are prefixed with "IT_". You can also specify a subfolder. The naming convention and location of the files can be different for each language. Italian is using a prefix but maybe French dialogue lines are coming from another translator and they have "_Fr" suffix, and files in Spanish have the same names than the reference files but are located in another folder.

<u>Note</u>: a language can only be added once and each language must have a unique way to be recognized from the others. This means than two languages cannot have the exact same combination of prefix, suffix and subfolder.

Adding languages and editing their properties can quickly become cumbersome if you have to do it for every project. Fortunately, when you select the root folder of your project, if subfolders are detected, languages can be automatically added for each one of them. Alto Studio also provides you with a way to save and recall presets. That way, if you always use the same set of languages and the same suffixes or prefixes, or the same subfolders hierarchy, you will only have to define them once.



Selecting a preset will replace the list of languages (after a confirmation message). Moreover, if you press the "Edit…" button, a new window will appear, allowing you to create a preset from the current settings, to remove a preset from the list, or to rename it.

Alto Studio comes with useful presets for the sets of languages commonly used in localization: FIGS (French, Italian, German and Spanish), CJK (Chinese, Japanese and Korean), ZPHR (Czech, Polish, Hungarian and Russian) and PTB (Brazilian Portuguese).

Note: Alto Studio can read and analyze audio assets in the following formats: Wave, Aiff, Flac, Ogg Vorbis and MP3.

Creating a project from an Excel file

Many game, localization and recording studios use Excel sheets to keep track of the files to localize. Alto Studio lets you import and analyze the files referenced in Excel sheets.

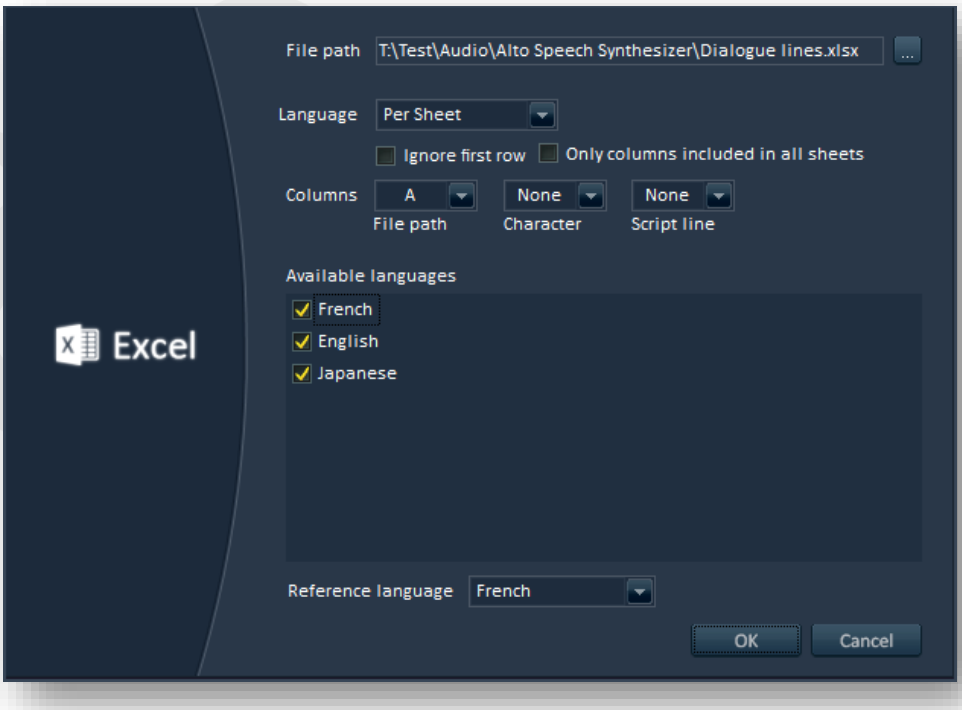
First, you will have to specify the Excel document and then indicate how the Excel workbook is organized. It is possible to choose between two modes of organization:

- A single sheet with one language per column.

- Multiple sheets (one per language). In that case, extra combo boxes will allow you to select the columns in which the file paths are indicated, as well as the character names and script lines (optional).

It is also possible to only consider the columns which are available on each sheet.

For both modes of organization, the first row of a sheet can be ignored (in case it is simply a header).

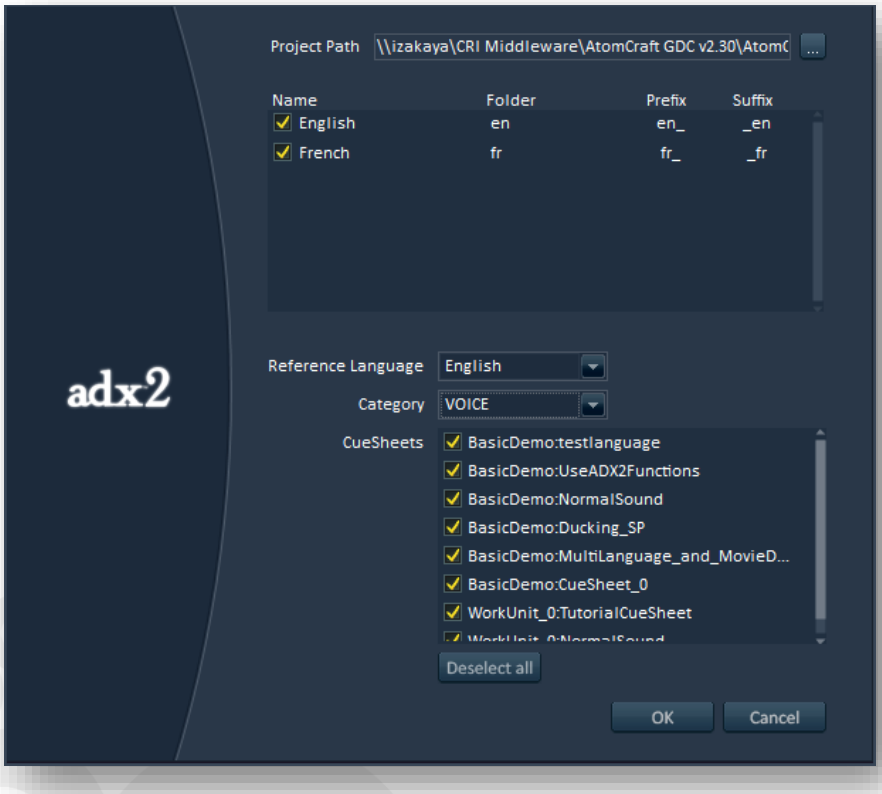


All columns - or sheets, depending on the mode you chose - will appear in the list of languages. If some of them contain a different type of information, simply uncheck them in the list to avoid taking them into account.

Note: if only relative paths are provided in the worksheet, Alto Studio will look for the files in the same folder than the Excel workbook.

Importing an ADX2 project

It is possible to create an Alto Studio project by importing dialogue files directly from the ADX2 game audio middleware from CRI Middleware (please note that ADX LE, the light edition, is not supported by Alto Studio).



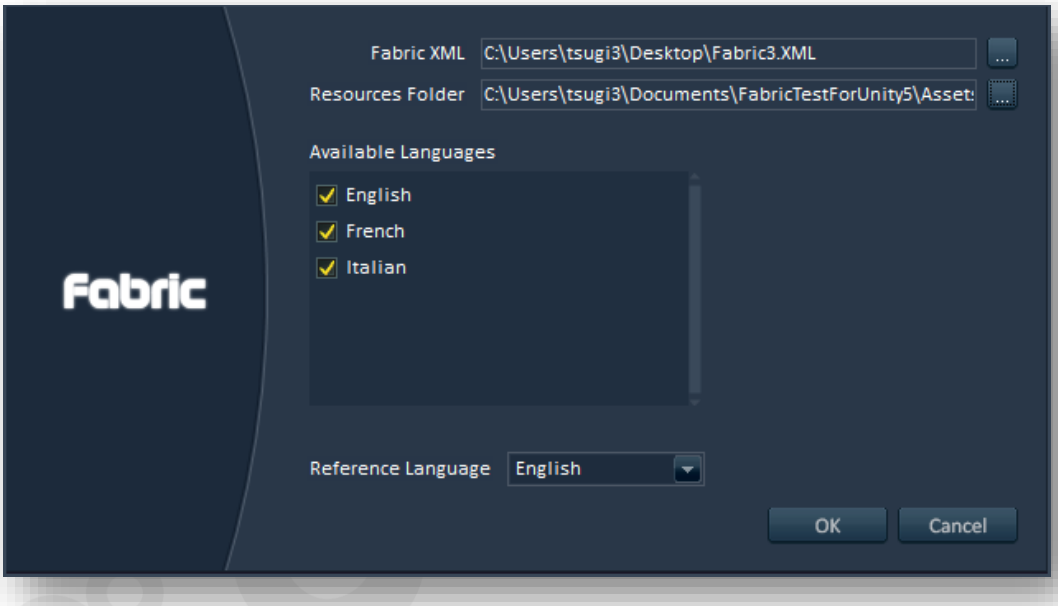
First, you will have to select your ADX2 project file (it will have the .atmcproject extension). Alto Studio will analyze it and display all the available languages, as well as their corresponding subfolder names, suffixes, and prefixes (as defined in the Language Settings in the AtomCraft authoring tool). You can then choose the languages to import as well as the reference language.

To simplify the configuration, Alto Studio will assume that you have assigned the same category to all your dialogue assets (in addition of being good practice, it is very useful, for example to implement automatic ducking with the REACT feature in AtomCraft when a character speaks).

You can select this category and only the waveforms used in cues assigned to that category will be imported and checked by Alto Studio. If all your dialogue assets are grouped in one or several cue sheets, you can ignore the category (set it to “Any”) and only select the cue sheets from which you wish to import the data.

Importing a Fabric project

Fabric is a game middleware from Tazman-Audio which extends Unity's audio functionality. Since its version 2.2, the parameters of the Fabric audio components can be exported in XML format, which makes it possible for Alto Studio to synchronize with Fabric.



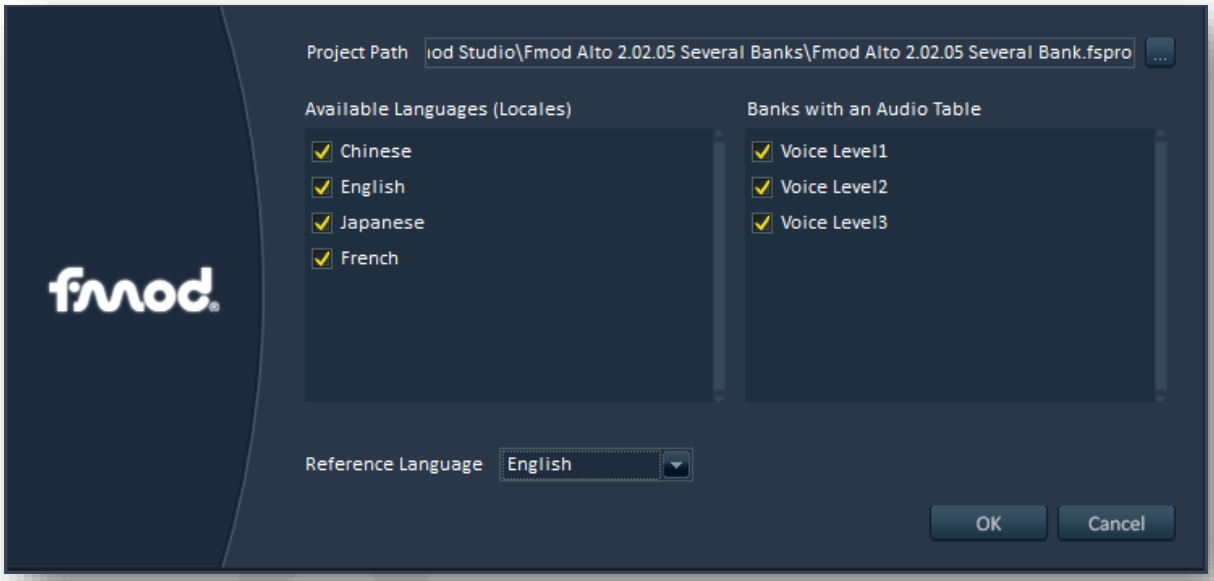
First, the path to the Fabric XML file must be selected. This file stores information about the languages used in the project (such as their name, prefix and subfolder). It also includes the paths to the audio files referenced by the Dialogue component of Fabric. These paths are relative to the Unity project resources folder, so you need to indicate it as well.

Once these two paths have been specified, the list of languages in the projects will appear. At this point you can decide to keep them all or to remove some of them if you know that they are already bug-free.

Finally, you need to select the reference language before pressing OK. When this is done, the project tree of Alto Studio will be populated with dialogue files from the reference language.

Importing an FMOD project

Alto Studio can import projects from FMOD Studio from Firefly Technologies (previous versions of Alto supported FMOD Designer, an older version of FMOD Studio).



Like for the other game audio middleware, the first step is to select your project. In the case of FMOD Studio, this will be a .fspro file. The list of locales (i.e., languages) defined in this project will be displayed. After choosing the languages of interest, you can select the reference language. Note that if no locale was defined in the project, a “Default” language will be created and selected as the reference language.

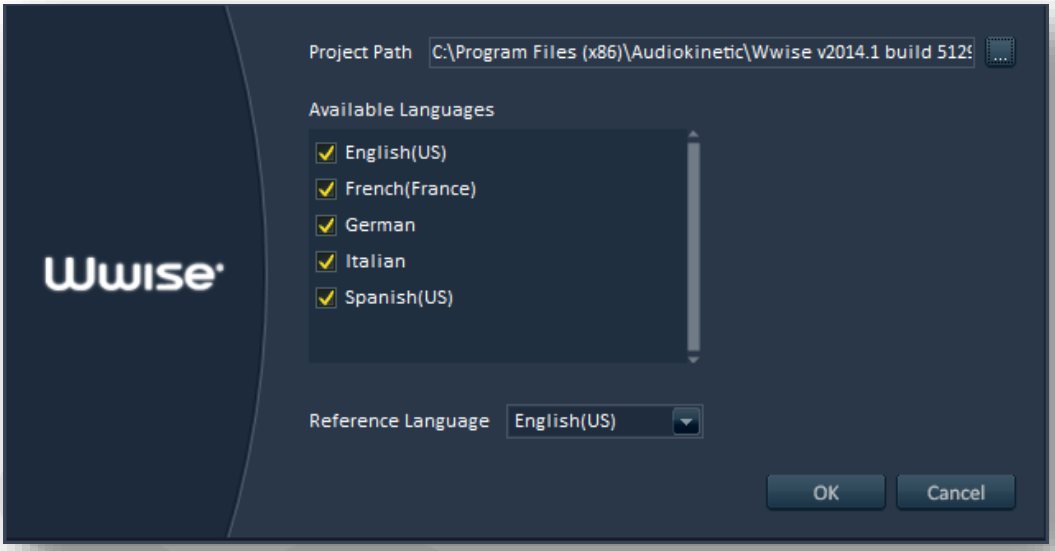
FMOD Studio manages localization via localized audio tables. A sound bank can include an localized audio table that points to a specific folder. In this folder, there are subfolders for the files in each locale. This makes it easy to point to a different audio file for each language.

Therefore, Alto Studio will first look for banks that have a localized audio table in the FMOD Studio project and display them, allowing you to select which ones you want to import. If no bank with a localized audio table could be found, it may be that there is only one language in your project: all banks with a regular audio table will then be displayed, and you will be able to select the ones from which you want to import the audio files.

Importing a Wwise project

Wwise is a game audio middleware from Audiokinetic. Because dialogue files are treated a bit differently than regular sound effects in Wwise (and therefore can be recognized automatically), synchronizing with a Wwise project is very easy.

You only need to select the Wwise project (the file with the .wproj extension), choose the localized languages you want to keep and indicate the reference language (the default value will be read from the Wwise project as well). Alto Studio will find all the files automatically. There is no need to select a category to which all dialogue files would belong to.



Note: The Wwise authoring tool keeps all the files you import in its project folders, even when they are not referenced anymore. To avoid processing these files unnecessarily, you can use the File Manager tool within Wwise to remove them, or you can exclude them in the analysis and correction settings windows of Alto Studio.

General notes about importing projects

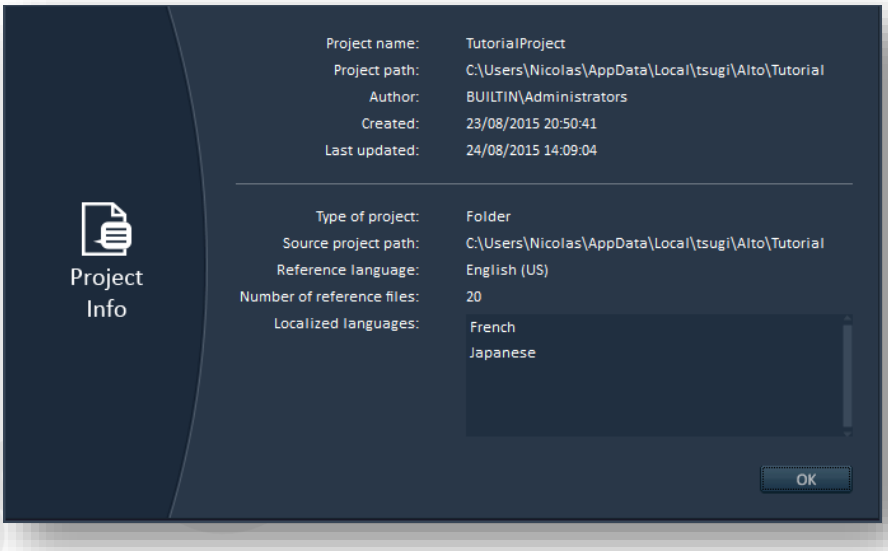
All these project types allow you to select the languages you want. We recommend that you keep all the languages, which is why they are all selected by default. Later, when you set the analysis parameters, you will be able to ignore some of them if needed. Examples of cases where you may not want to keep a language in a project are:

- If you are a localization company and you are only dealing with a subset of the languages.
- If some languages have already been delivered and you are certain that you will not need to test them.

During the course of a localization project, new files will be added and existing files may be updated or removed. If the project is modified while Alto Studio is running, you can press the “Synchronize” button from the control panel (or use the corresponding command in the “Tools” menu) to get the latest versions of the files.

Project Information

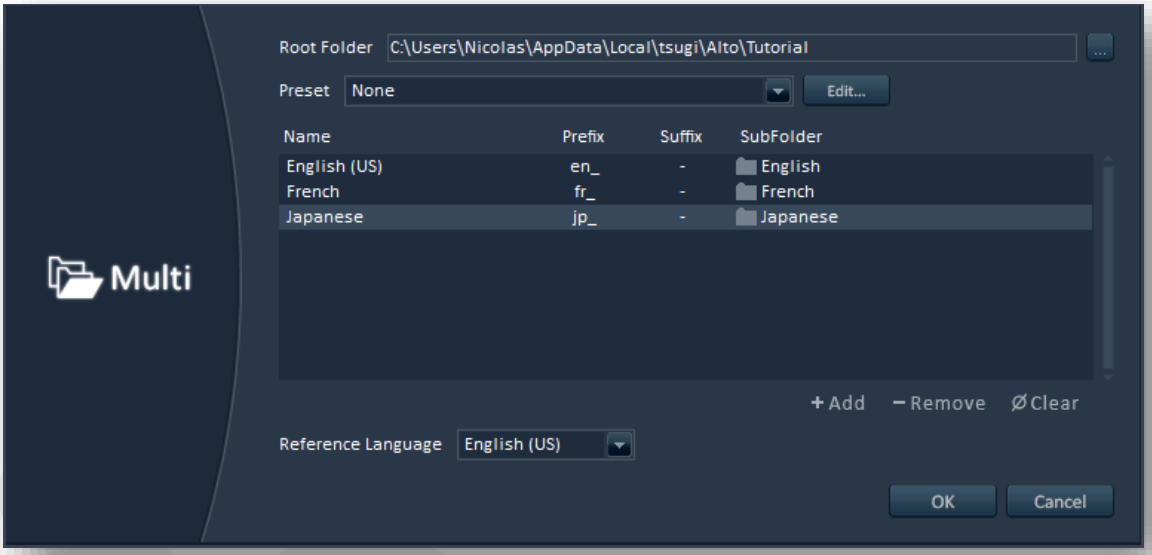
You can display the details of the current project at any time. Simply go the “File” menu and select the “Project Information…” command. A window will appear that displays details about the Alto Studio project itself (such as its name, its path, its file version, the dates of creation and last modification and its author) as well as information about its data: was it imported from a game audio middleware project, an Excel sheet, a plug-in etc…, what is the reference language, how many files does it have, and what are the localized languages.



Editing a Project later

If you created a single-language or a multi-language project, you can add, remove or edit the languages by selecting the “Edit Project…” command from the “File” menu. For example, this allows you to switch from a single-language project to a multi-language one as your project evolves from the prototype phase to the production phase.

The editing window is similar to the one you use when creating a multi-language project so please refer to the corresponding section of this documentation for further details.



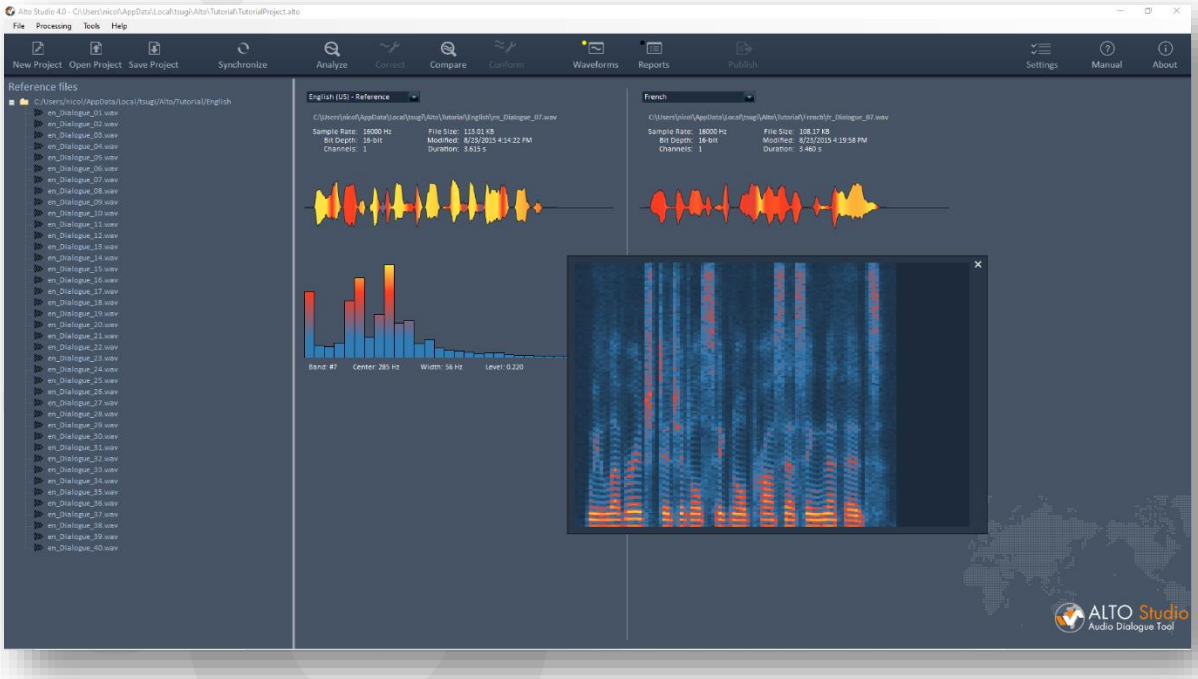
Note: The list of languages in the other types of projects depends on the settings entered in external authoring tools. If you create an Alto Studio project for ADX2, Fabric, FMOD, or Wwise for example, the “Edit Project…” command will be unavailable.

If you need to add a language to a game audio project, do it in the game audio middleware’s authoring tool and reimport the project or use the “Synchronize” button from Alto Studio’s command panel (this function is also available in the “Tools” menu under “ Synchronize with Source Project” or by using the Ctrl+K key shortcut).

Main window

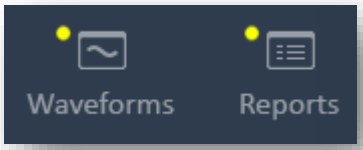
The main window is divided in three areas:

- At the top, the command panel offers a convenient way to access the most commonly used functions of the tool.
- On the left, the project tree displays the list of the audio assets in the reference language.
- Finally, the main view allows the visualization of the selected audio file and its localized counterparts, as well as the display of the error reports and statistics after an analysis.



Command Panel

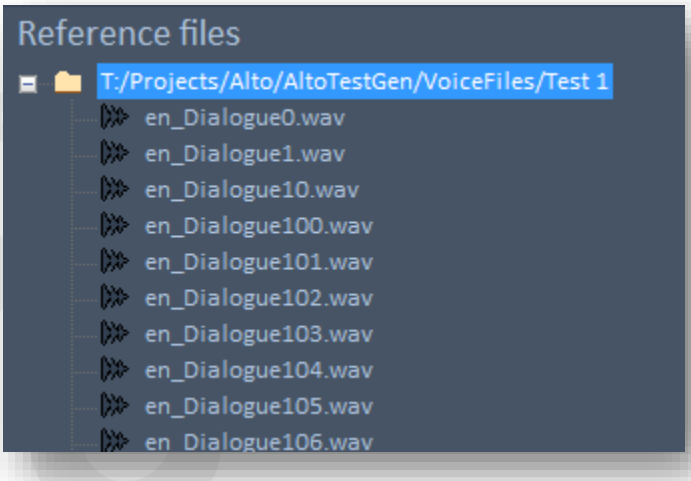
The most useful functions of the menu are duplicated on the command panel for easy access. It is also where we can switch between the two modes of the main view: “waveforms” and “reports”.



Project Tree

Once you created a new project or loaded an existing one, you will be placed in the "waveforms" mode.

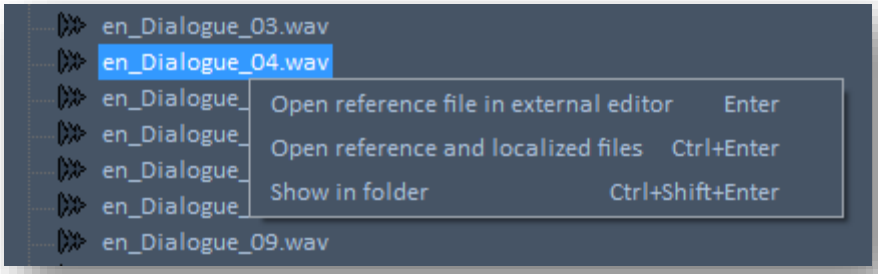
In this mode, the "project tree" is located on the left side and the "waveforms view" on the right. The project tree displays all the files from the reference language, as they are organized on disk (i.e., in folders and subfolders).



In the project tree, it is possible to play the selected file by pressing Space, and the localized file in the language currently selected by pressing Ctrl + Space.

Pressing Enter will open that same reference file in the default sound editor. The path to that editor can be specified in the Settings window. Control + Enter will open not only the reference file but also all the localized files in the default sound editor.

Finally, Control + Shift + Enter will open Window Explorer and show the reference file in its folder. These functions are also available via the project tree's context menu when right-clicking on a reference file.



Main View

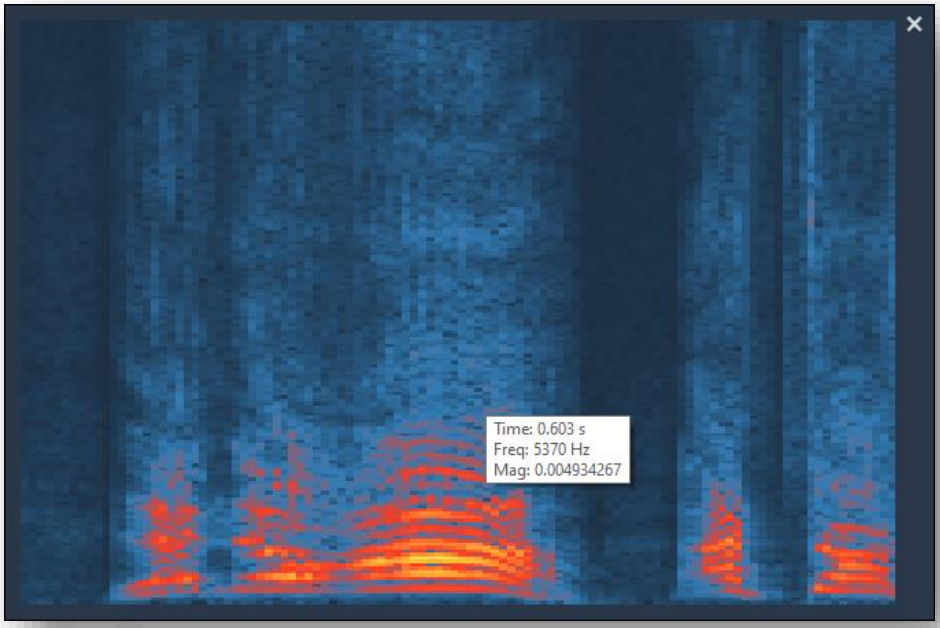
By default, when the user clicks on a reference dialogue file in the project tree, its waveform is displayed on the right in the waveforms view, side by side with a localized waveform, which makes it easy to compare them visually.

However, the languages of the dialogue files displayed can be chosen with a combo box on the top of the waveforms view. It is therefore possible to compare two localized dialogue lines in different languages.

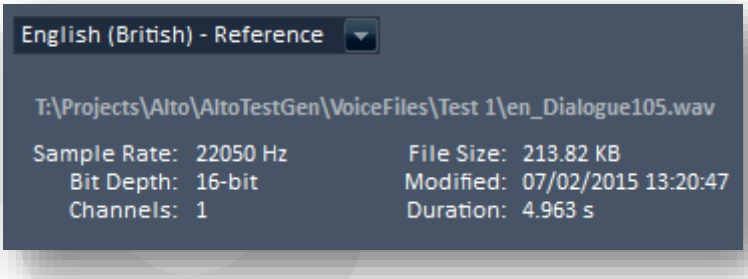
The color of a waveform follows the pitch of the voice (from blue for bass, to orange for middle, and then yellow for treble). This makes it easy to quickly compare two voices. A male voice and a female voice will have largely different colors, making it obvious that the gender is different. A more subtle overall difference will mean that the voices are not in the same range. Local variations will make it easier to spot differences in intonation (although this may be inherent to the languages being compared).

Clicking on a waveform will play the corresponding dialogue file. In addition to the waveform, the spectral representation of a dialogue line is also displayed. It corresponds to the average spectrum, allowing you to distinguish between two qualities of voices. To see the evolution of the spectrum over time, click on the bars. This will display a sonogram, with frequencies being on the vertical axis, the time on the horizontal axis, and the color corresponding to the amplitude.

While hovering the mouse over the spectrogram, the exact values for the frequency, time and amplitude are displayed, as shown in the picture below.



In the main view, the properties of the sound files are also indicated: sample rates, bit depths, numbers of channels, durations, file sizes, and their last modification time and date.



If the file is associated with a script line and a character name, they are displayed as well.

If the file is missing in the selected language, of course none of that will be displayed (only the name of the missing file will be indicated).

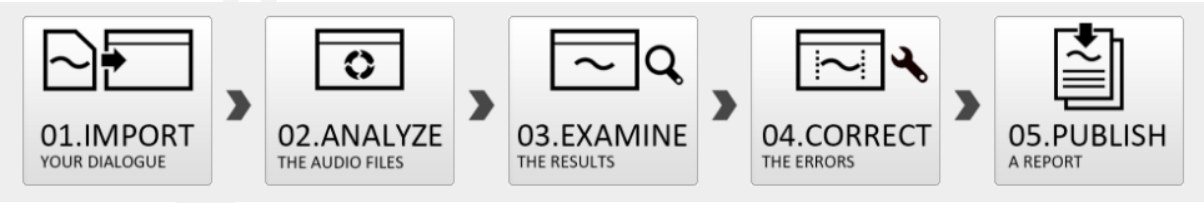
In addition to the waveforms of the audio files, the main view can also display the results of the analyses. There is a full section of this documentation dedicated to the Report View.

Main Workflow

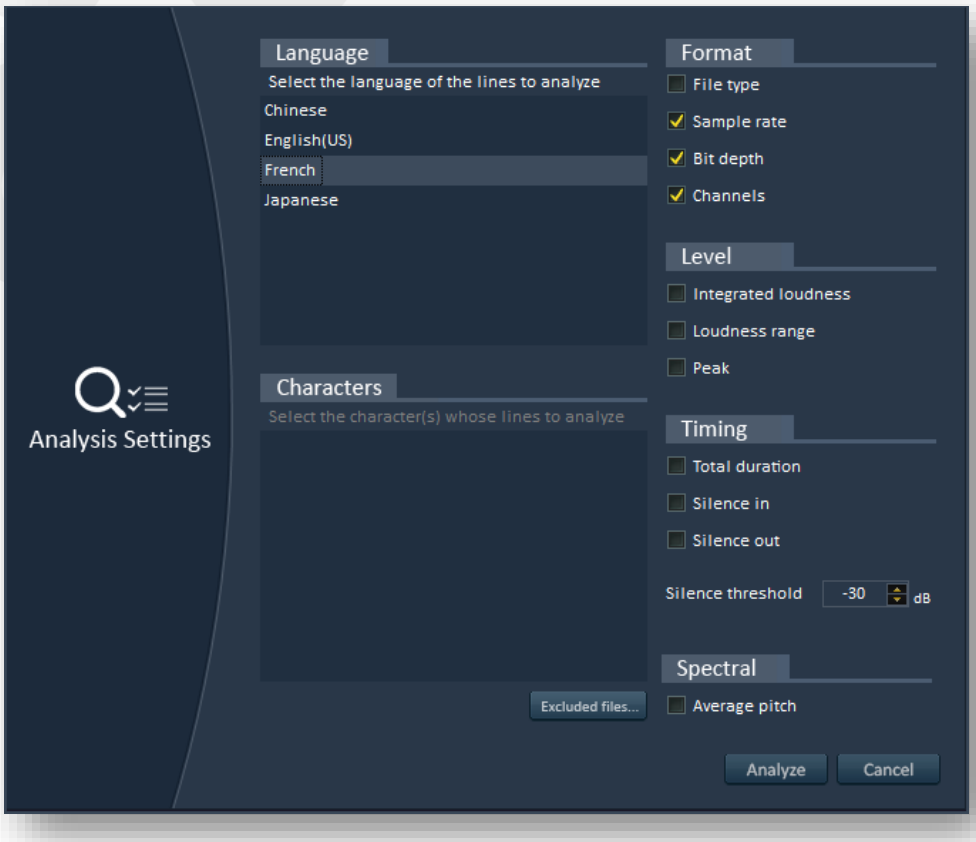
Although Alto Studio offers many audio tools that can be used at any time, the central workflow revolves around the analysis and correction of dialogue files.

This workflow is slightly different based on whether you are working with a single-language or with a multi-language project.

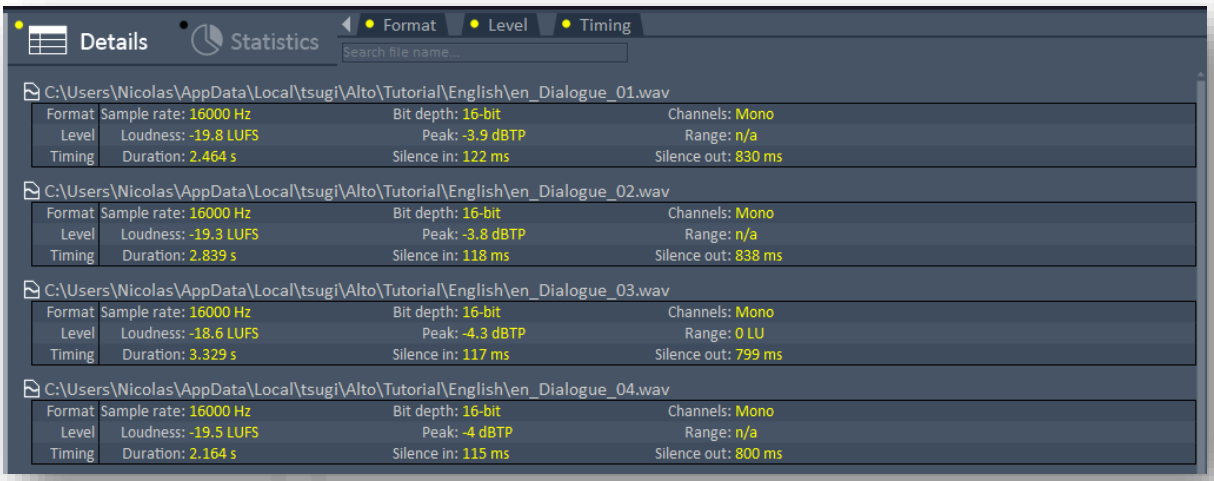
Single-language workflow



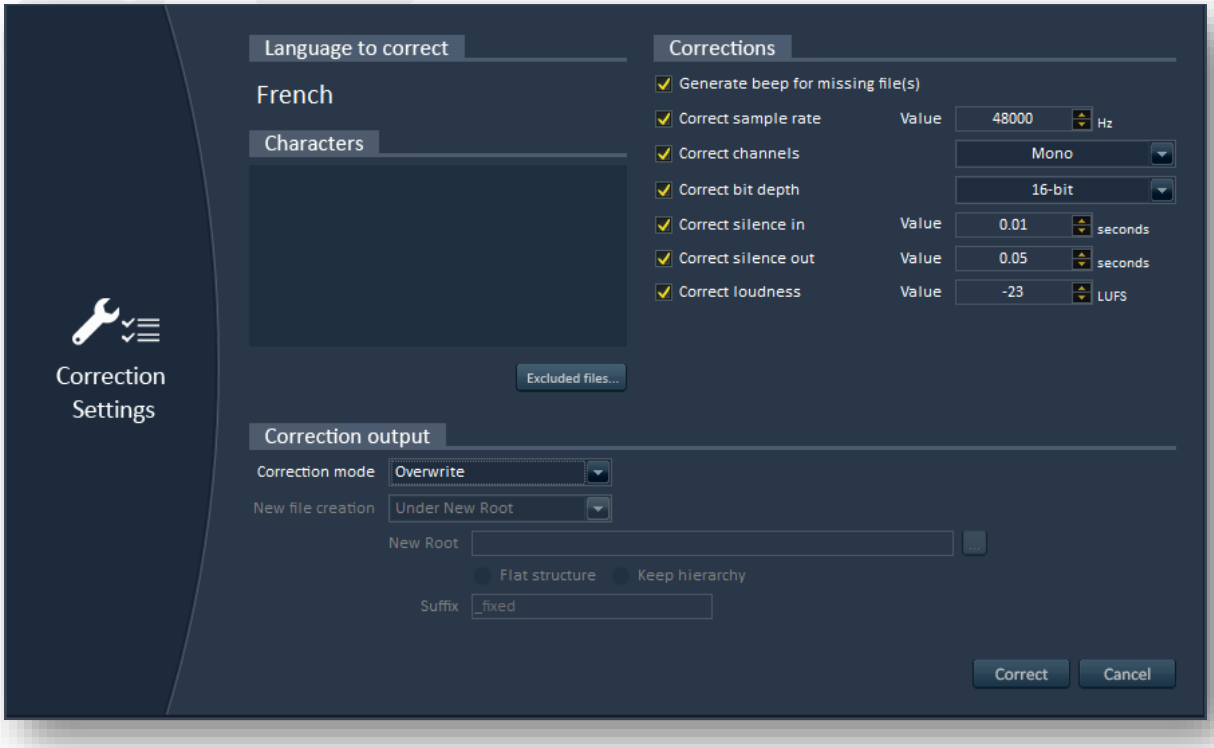
In the case of a single language project, the analysis settings only let the user select what audio features to check. There is no margin of error to define as there is no comparison and therefore no reference.



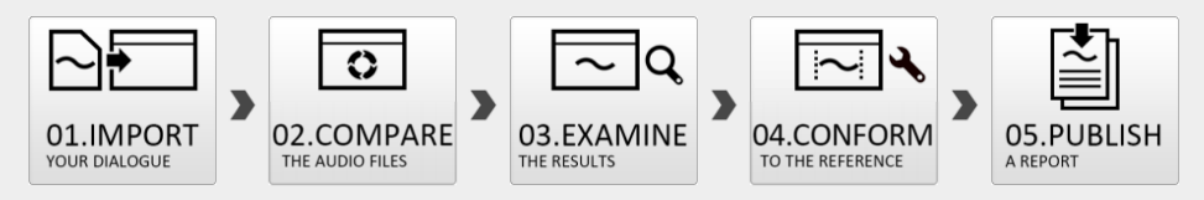
In the same manner, the reports can only display the exact values found during the analysis step and no variation from a reference value.



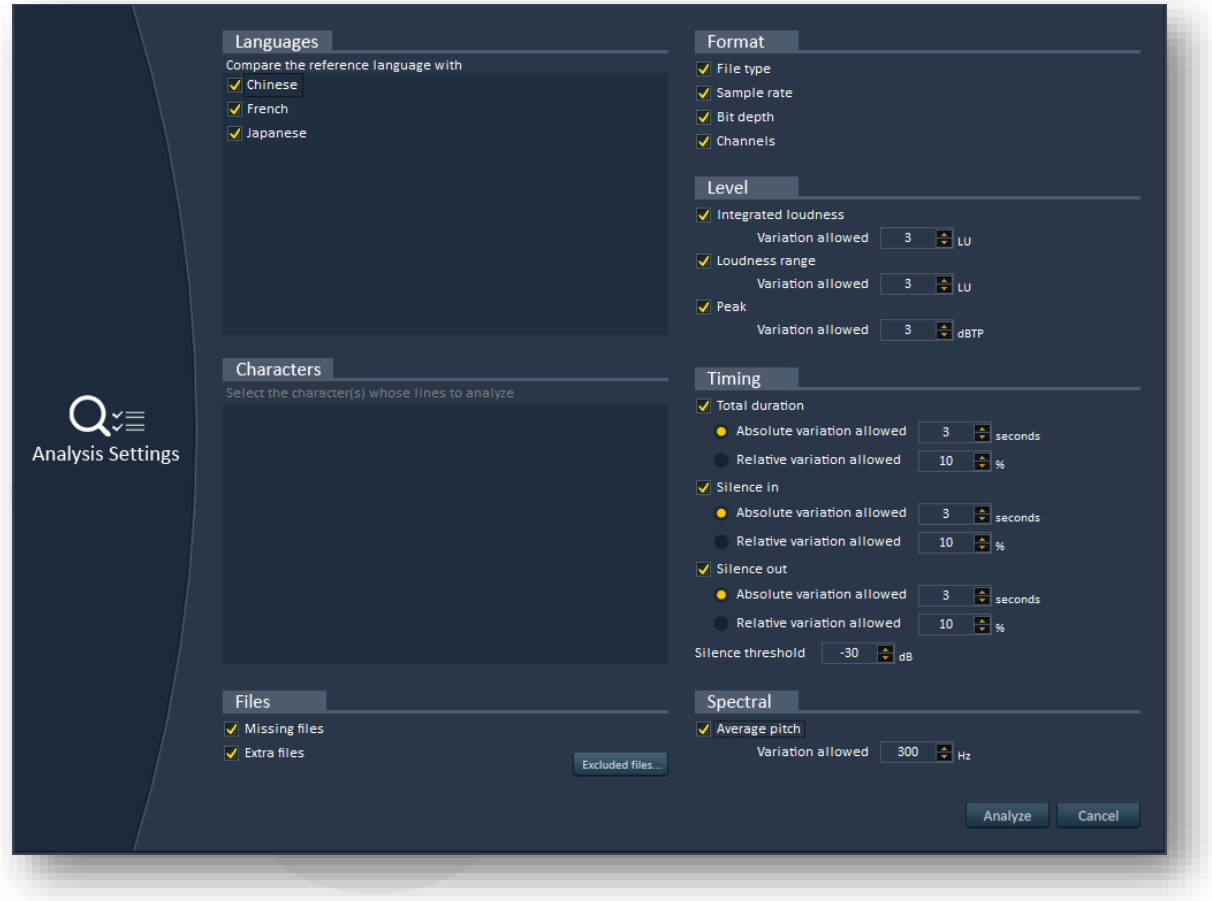
Finally, the correction step requires the specification of target values since there is are no references. The correction settings therefore allow you to specify values for the sample rate, the number of channels, the bit depth, the leading / trailing silences and the average loudness, as depicted below.



Multi-language workflow



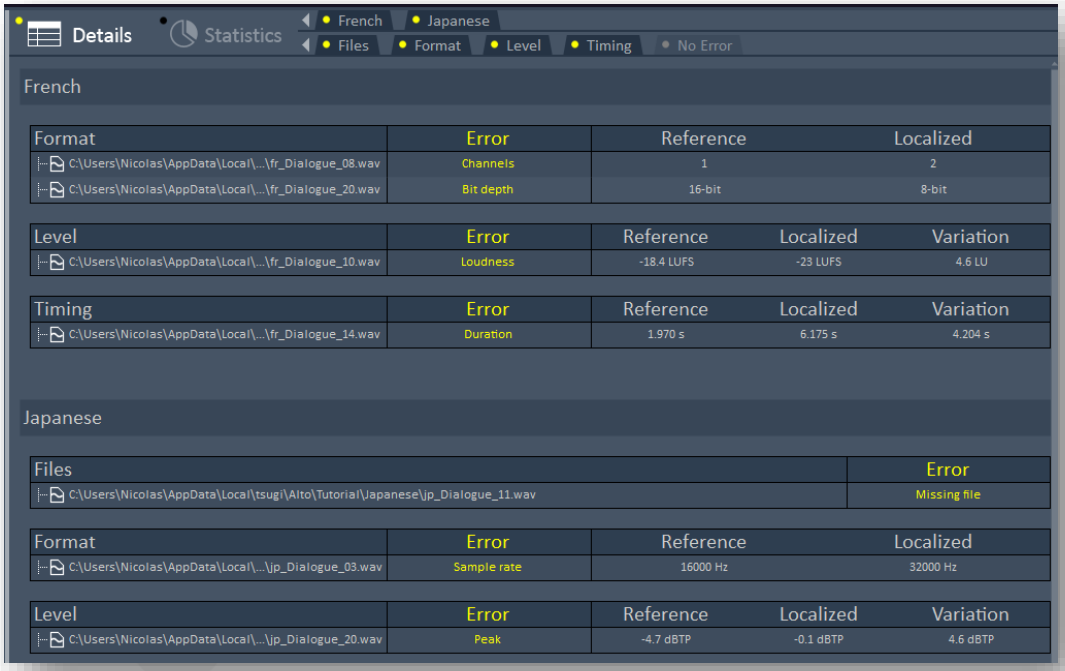
In the case of a multi-language project, the analysis becomes a comparison and the correction makes the localized files conform to the reference ones.



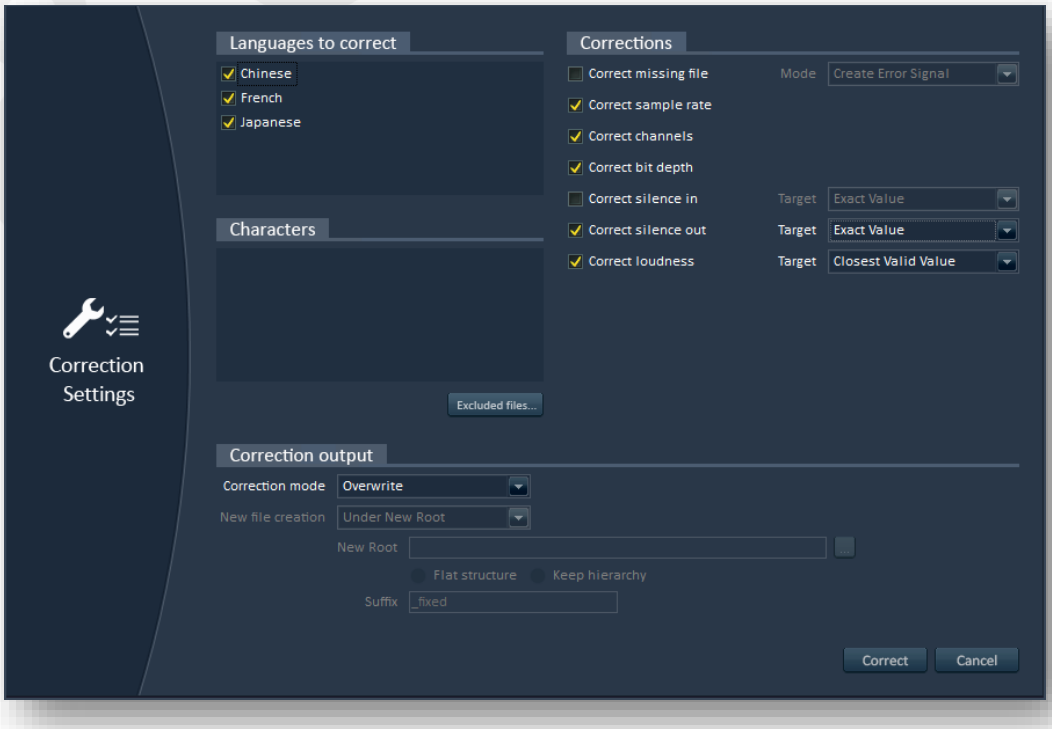
The comparison settings allow you to define the allowed variation from the reference language, either in absolute or in relative terms. For example, the margin of error for the duration of the trailing silence could be 2 seconds (absolute) or +/- 10% (relative).

The goal of the comparison in a multi-language project is to find errors between dialogue lines in different languages, while the analysis in a single-language project simply returns information about the files.

The picture below shows that the report for a multi-language project not only shows the characteristics of the audio files examined, but also the characteristics of the reference files and the variation.



The conformity settings do not require target values as there already is a reference file to match. However, it is possible to choose a more or less accurate correction (“exact value” or “closest valid value”) to avoid processing the original file too much.



The analysis and correction settings as well as the report views for both single-language and multiple-language projects will be detailed in the next sections of this documentation.

Analysis

After creating a project and importing audio assets, the next step is to analyze or compare them.

To start a single-language analysis, select the “Single-Language Analysis…” command of the “Processing” menu or press Ctrl+Shift+A. You can also press on the “Analyze” button from the command panel.

To start a multi-language comparison, select the “Multi-Language Comparison…” command of the “Processing” menu or press Ctrl + A. You can also press on the “Compare” button from the command panel.

In both cases, a settings window will appear, allowing for the specification of the analysis and comparison parameters. In this window, it is possible to select the language(s) for which you want to perform the analysis and to activate / deactivate the different audio properties you want to check.

Please note that not all analysis operations take the same time. Some operations are very fast, such as checking if a file is present or not, some take a bit more time as the file is open and its header checked (e.g. for bit depth, sample rate or channel number) and others require the audio data to be processed. Spectral-based operations such as the average pitch are the most CPU-intensive as they involve the computation of a Fast Fourier Transform among other things.

However, Alto Studio is well optimized and the analysis is always very fast when you consider the number of operations it performs (actually you can check the total number of assets and the total duration of dialogue analyzed in the statistics). Alto also supports multi-core processing, which means that the more cores your machine has, the faster the analysis and the processing will be. The Alto Studio FAQ, available on our web site, provides some benchmarks for reference.

Settings for single-language analysis

When starting a new analysis, the analysis settings window appears.

Language

The list of languages in your project is displayed. You can select the one you want to analyze. You can run a single-language analysis on any type of project. It does not have to be a single-language project.

Characters

If your project includes character names (e.g. if you imported an Excel worksheet), you can also select what characters' dialogue lines to take into account.

Excluded files…

This button opens a new window, in which it is possible to specify the files that should be excluded from the analysis, for example if they are already known to be fine or, on contrary, to be temporary assets.

Format

The format section checks the audio characteristics of the files (but not the audio data itself).

File type

If this option is checked, the analysis will report the file type (wave, aiff, flac, ogg or mp3)

Sample rate

If this option is checked, the analysis will report the sample rate of the audio file (e.g. 44.1 kHz).

Bit depth

If this option is checked, the analysis will report the bit depth of the audio file (e.g. 16-bit).

Channels

If this option is checked, the analysis will report the number of channels of the audio file (e.g. 2 for stereo).

Level

Integrated Loudness

If this option is checked, the integrated - or program - loudness of the audio file will be calculated in LUFS. (Please note that if the sound is shorter than 400 ms, the integrated loudness is not available (as defined in the EBU R 128 specifications).

Loudness Range

If this option is checked, the loudness range of the audio file will be calculated in LU. Please note that if the sound is shorter than 3000 ms, the loudness range is not available (as defined in the EBU R 128 specifications).

Peak

If this option is checked, the peak loudness (i.e. the maximum instantaneous loudness) of the audio file will be calculated. This value is also calculated in accordance with the EBU R 128 specifications.

Timing

Total Duration

If this option is checked, the total duration of the audio file is reported (in seconds).

Silence In

If this option is checked, the duration of silence at the beginning of the audio file is reported (in seconds).

Silence Out

If this option is checked, the duration of silence at the end of the audio file reported (in seconds).

Silence Threshold

The Silence In and Silence Out analyses need to know from what level a signal is considered as silent. The silence threshold corresponds to that value and is expressed in decibels (dB).

Spectral

Average Pitch

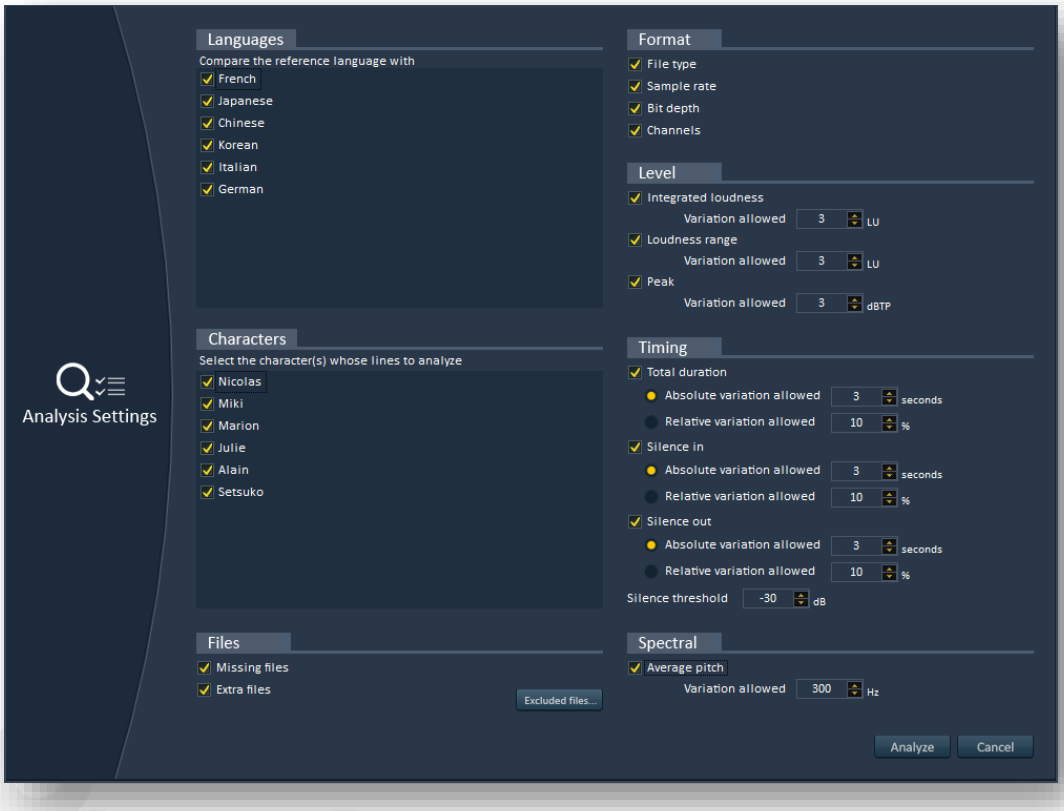
If this option is checked, the average pitch of the audio file is calculated. Please note that this calculation can be time-consuming as it includes the computation of a FFT (Fast Fourier Transform). The pitch is expressed in Hz and indicates how low or high the voice is.

Note: you can activate / deactivate all the analyses of a group (format, level, timing or spectral) by clicking on its header. For example to activate all the level analyses, simply click on the "Level" header. Click again to deactivate all the analyses of that group.

Note: you can of course use Alto Studio's analysis feature on non-dialogue audio files. This is very useful to check that all your sound effects are at the same sample rate or have the same bit-depth for example.

Settings for multi-language comparison

When starting a new comparison, the comparison settings window appears.



Languages

The list of the localized languages in your project is displayed. You can select the ones you want to compare to the reference.

Characters

If your project includes character names (e.g. if you imported an Excel worksheet), you can also select what characters' dialogue lines to take into account.

Files

This section checks the presence or absence of files and detects extra or misnamed files.

Missing files

They correspond to the files which are present in the reference language but missing in a localized language.

Extra files

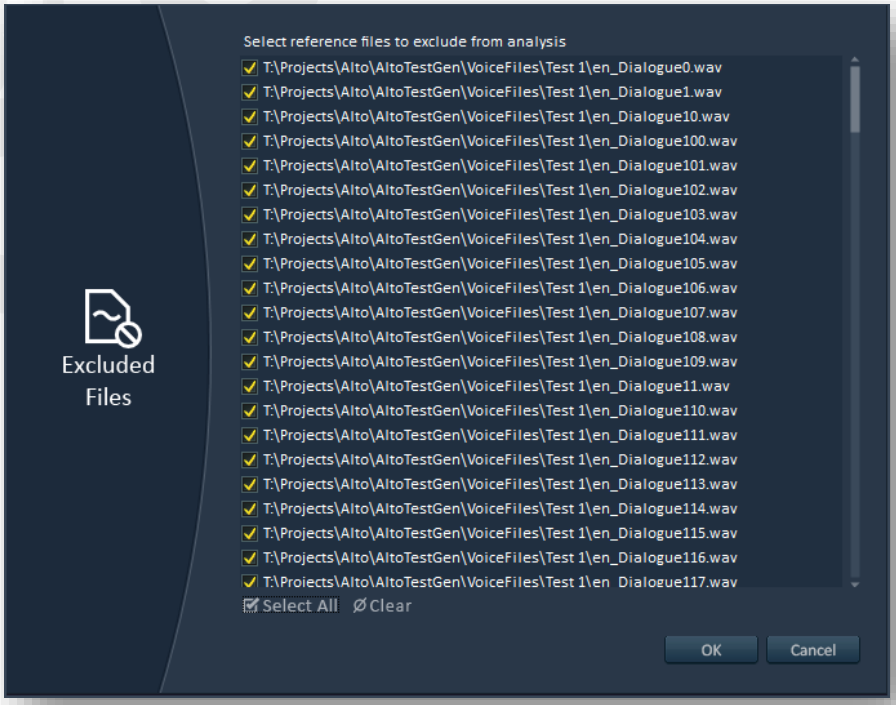
They correspond to the files which are present in a localized languages but have no equivalent in the reference language. This could be some extra data that has been mistakenly copied in a folder, or it could be a misnamed file (in which case you will most likely see two errors: a missing file and an extra file with the wrong name).

The filename comparison in Alto Studio is case-insensitive. Therefore, the files “dialogue_01.wav” and “DIALOGUE_01.WAV” will be considered as having the same name.

Note: As this is a comparison, Alto Studio only reports files that follow the naming/location convention of the project (e.g., if the files for the French language are supposed to have a fr_ prefix and to be in the 'French' subfolder, it will only report files starting with fr_ in that subfolder that have no equivalent in the reference language). To find and remove non-audio files, you can use the Remove Files feature of the Tools menu.

Excluded files…

This button opens a new window, in which it is possible to specify the files that should be excluded from the analysis, for example if they are already known to be fine or, on contrary, to be temporary assets.



Format

The format section checks the audio characteristics of the files (but not the audio data itself).

File type

If this option is checked, the analysis will report any file type difference. For example, if a file in the reference language is in WAVE format and the corresponding file in a localized language is in AIFF format, an error will be reported.

Sample rate

If this option is checked, the analysis will report any sample rate difference. For example if the file in the reference language has been recorded at 48 kHz and the file in the localized language has a sample rate of 44.1 kHz, an error will be reported.

Bit depth

If this option is checked, the analysis will report bit depth differences. For example, if a file in the reference language has been recorded in 24-bit and the file in the localized language has a bit depth of 16-bit, an error will be reported.

Channels

If this option is checked, the analysis will report differences in the number of channels. For example, if the file in the reference language has been recorded in mono and the file in the localized language is stereo, an error will be reported.

Level

The parameters in this section allow us to ensure that the levels are coherent between the reference and the localized languages.

Integrated Loudness

If this option is checked, the integrated - or program - loudness of the dialogue lines will be calculated in LUFS (or LKFS, which is the same). If the integrated loudness from the localized file differs from the one of the reference file by more than the variation allowed, an error will be reported. Please note that if the sound is shorter than 400 ms, the integrated loudness is not available (as defined in the EBU R 128 specifications).

Loudness Range

If this option is checked, the loudness range of the dialogue lines will be calculated in LU. If the loudness range from the localized file differs from the one of the reference file by more

than the variation allowed, an error will be reported. Please note that if the sound is shorter than 3000 ms, the loudness range is not available (as defined in the EBU R 128 specifications).

Peak

If this option is checked, the peak loudness (i.e. the maximum instantaneous loudness) of a dialogue line will be calculated. If the peak loudness (expressed in dBTP or dB True Peak) of the localized file differs from the peak loudness of the reference file by more than the variation allowed, an error will be reported. This value is also calculated in accordance with the EBU R 128 specifications.

Timing

Total Duration

If this option is checked, the total duration of the reference file is compared to the total duration of the localized file. If it differs by more than the variation allowed, an error will be reported. For all the timing analyses, acceptable error margins can be indicated either in absolute or in relative terms. For example it is possible to set the allowed variation to +/- 5 seconds (which is an absolute duration) or to +/-10% of the duration of the reference file (which is a relative duration).

Silence In

If this option is checked, the duration of silence at the beginning of the reference file is compared to the one at the beginning of the localized file. If it differs by more than the variation allowed, an error will be reported. The variation can be absolute (in seconds) or relative (in %).

Silence Out

If this option is checked, the duration of silence at the end of the reference file is compared to the one at the end of the localized file. If it differs by more than the variation allowed, an error will be reported. The variation can be absolute (in seconds) or relative (in %).

Silence Threshold

The Silence In and Silence Out analyses need to know from what level a signal is considered as silent. The silence threshold corresponds to that value and is expressed in decibels (dB).

Spectral

The spectral section focuses on the pitch and timbre of the voice and is more of a qualitative analysis.

Average Pitch

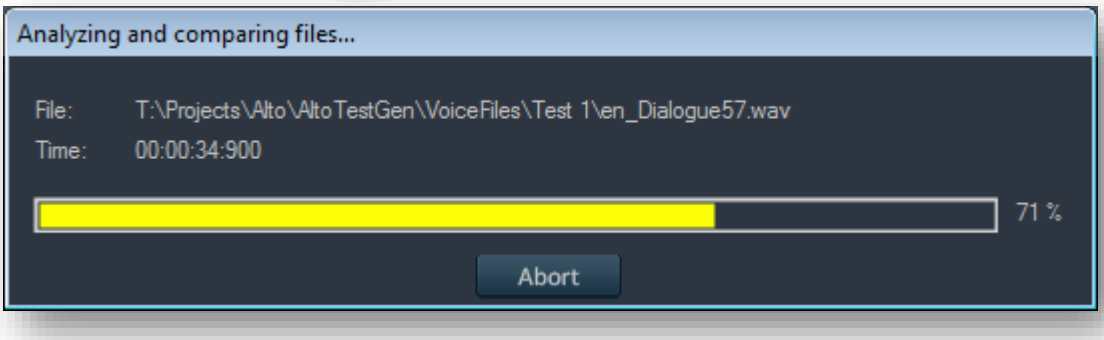
If this option is checked, the average pitch of each dialogue line is calculated. Please note that this calculation can be time-consuming as it includes the computation of a FFT (Fast Fourier Transform). If the average pitch from the localized file differs from the one of the reference file by more than the variation allowed, an error will be reported. The pitch is expressed in Hz and indicates how low or high the voice is. Therefore, it is useful to determine if the files have been recorded by the right voice actor. Some effects may also alter pitch so it is a good way to detect if a file has been processed when it should not have.

Note: Alto Studio shows units which are commonly used by audio professional but may be less familiar to some members of the localization staff for example. The default values should work well in most cases and represent a good first choice. For instance, a value of 10% for the duration variation is usual. It is recommended to start with these default values and progressively modify them if needed.

Running the Analysis

Once your analysis parameters are set, simply press on "Analyze" to analyze or compare your audio dialogue files. During the analysis, a progress window is displayed that indicates the percentage of completion, the file which is currently being processed and the time elapsed.

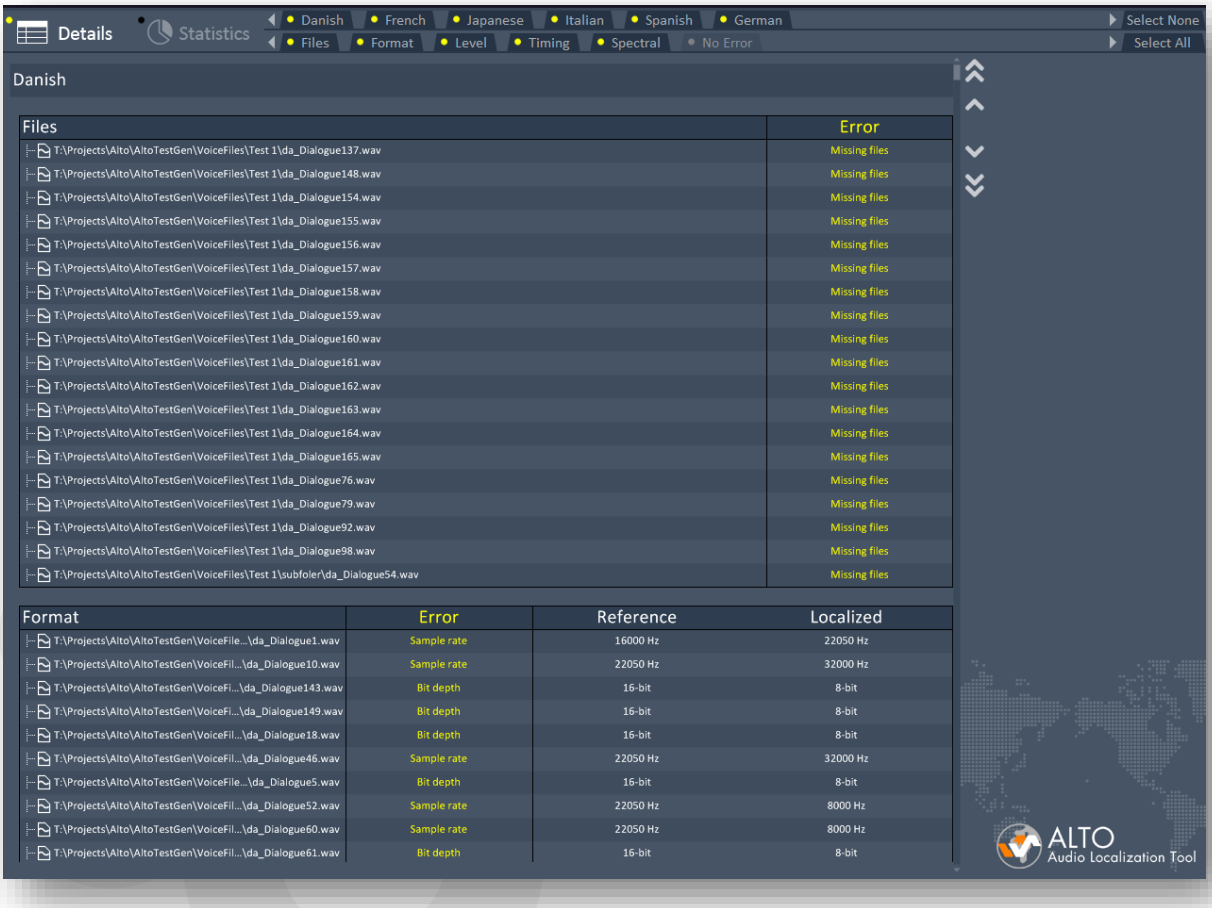
It is possible to abort the analysis at any time.



Alto Studio leverages the multi-core architecture of your machine to allow for faster analyses.

Reports View

After running an analysis, Alto Studio switches to the reports view, in which you can see the details for each type of error, as well as global statistics about the project.



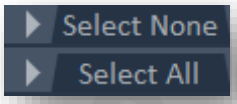
Details

At the top of the report view, two lines of switches let the user specify what type of errors he wants to see and for what languages. It is therefore very easy to create a customized report with only the information of interest. For example, a report could be generated only for the format errors detected, and only for the French and Italian languages.

The options for the errors are the 5 main categories: Files, Format, Level, Timing and Spectral. All types of errors in these categories will be reported. This means that for example if “Level” is selected, all errors of type “Integrated Loudness”, “Loudness Range” and “Peak” will be reported.

An extra switch labelled “No Error” allows the display of information about the files for which no error was detected. It makes it possible for example to see what the variation between the reference and the localized languages was and if it was close to the error margin.

If the project includes many languages, the small triangular arrows on the left and on the right of the switch rows can be used to navigate between them.



On the right, the dual “Select All” / “Select None” buttons offer a quick way to select all the error types and all the languages, or none. Another way to quickly select/unselect a tab is to use the Tab key to navigate and press the Space bar.

It is possible double-click on the name of a file in the error report to instantly switch back to waveforms mode, where the erroneous localized file and its reference file will be displayed side by side for comparison. It is possible to do the same by pressing Ctrl + Tab.

A couple of other useful keyboard shortcuts are available when a file is selected in the error report: pressing space will play the localized file and control-space will play the reference file, while pressing Enter will open the localized file in the default sound editor specified in the settings window.

To navigate quickly between the different languages and types of errors, a set of buttons are available on the right of the error report.

Jumps to the previous language

Jumps to the previous type of error

Jumps to the next type of error

Jumps to the next localized language

Statistics

The “statistics” button displays statistics, both global and per language. Pie charts and bar graphs are available for a quicker visualization of the results.

Global statistics show the percentages of errors per type and per language. Then statistics for each language can be consulted to check the details, as depicted below.

Publishing

The analysis reports can be published in various formats. In all cases, both the “Details” and the “Statistics” pages are exported.

XML

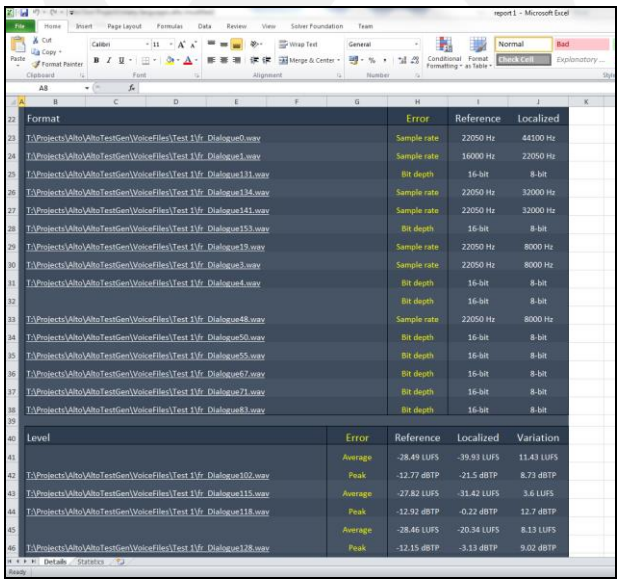
XML is a text-based file format that could for example be read by a third party tool. One can imagine a game audio tool that would read the results of the Alto Studio analysis and mark the assets as final or not.

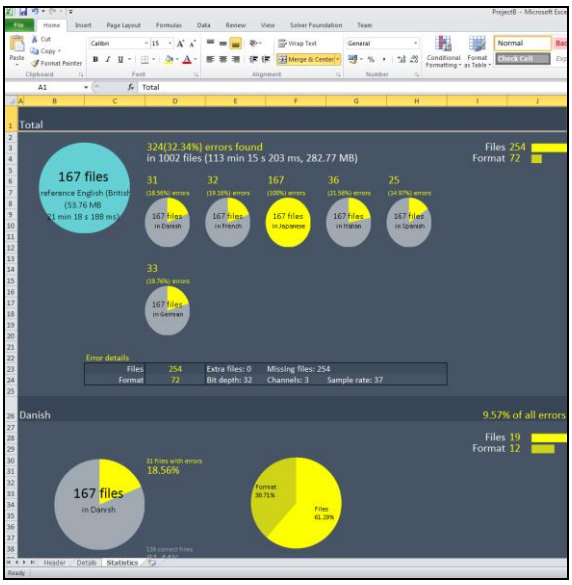
HTML

Publishing the analysis report in HTML allows it to be interactive and easy to integrate on a company’s intranet for example. Clicking on the name of the files will open another window and play them.

Excel

Alto Studio can generate Excel sheets that will look exactly like the reports in the software. They could be used to make extra calculations for example, or to integrate the results with other reports. As for the HTML reports, clicking on the name of the files will open another window and play them.

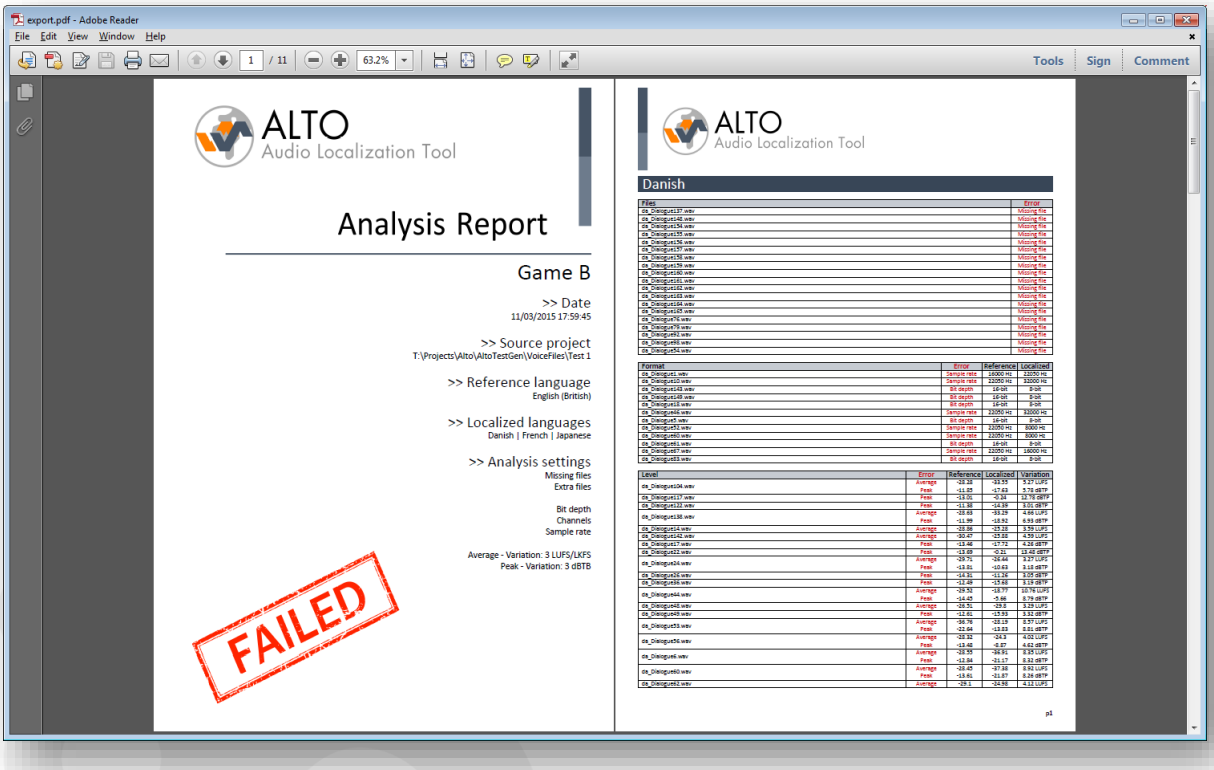




tsugi
Koshimura building, 3-5-8 Yoneyama
Chuo-ku, 950-0916 Niigata City, Japan
www.tsugi-studio.com

PDF

Publishing the report in PDF allows for a better quality when zooming and printing. The PDF document contains an extra header and displays a “Failed” or “Passed” stamp. This is the ideal type of document for a localization company to give to a client while delivering localized audio assets, as a gage of quality.

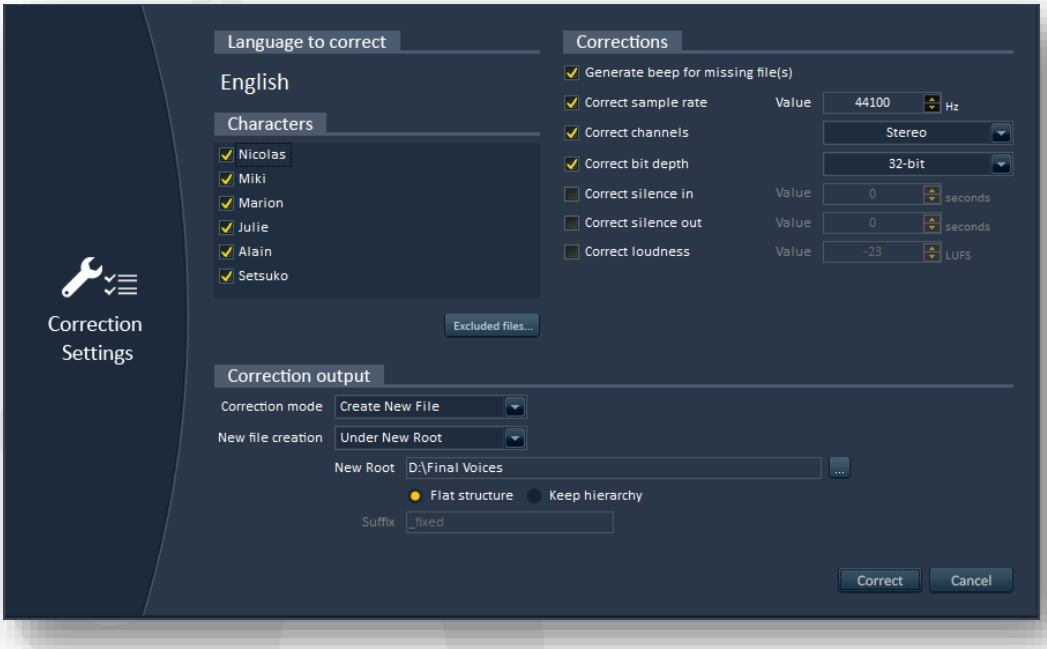


Correction Settings

Once an analysis has been performed, it is possible to correct the errors that have been found. The correction settings window can be used to select which types of errors you want to correct, for what language, and where to put the corrected files.

Single-language correction

The correction settings window for a single language is depicted below.



Characters

If your project's dialogue lines are associated with character names, you can specify for which character you want to perform the correction.

Generate beep for missing file

Although the correction is based on a single-language analysis, in some cases Alto Studio can still determine that a file is missing (for example if it was referenced by an Excel sheet or a game audio middleware). If this option is checked, Alto Studio will generate a 1-second long sine wave file at 44100 Hz in mono to replace missing files.

Correct sample rate

If this option is checked, Alto Studio will resample the audio file (if needed) so that it matches the sample rate specified by the user.

Correct channels

If this option is checked, Alto Studio will convert the number of channels of the audio file.

Correct bit depth

If this option is checked, Alto Studio will convert the bit-depth of the audio file so that it matches the bit-depth specified by the user.

Correct silence in

If this option is checked, Alto Studio will add or remove silence at the beginning of the audio file to match the silence duration specified by the user.

Correct silence out

If this option is checked, Alto Studio will add or remove silence at the end of the audio file to match the silence duration specified by the user.

Correct loudness

If this option is checked, Alto Studio will adjust the loudness of the audio file to match the loudness specified by the user.

Finally, the last section of the correction settings window lets you control how the corrected sounds are saved. Here, you can decide if you want to overwrite the existing files or if you want to create new files.

If you opt for the creation of new files, you can either save them in the same folder (while adding a suffix to the original name), or you can save them with their original name but under a different root folder. Both the suffix and the new root folder are user-definable.

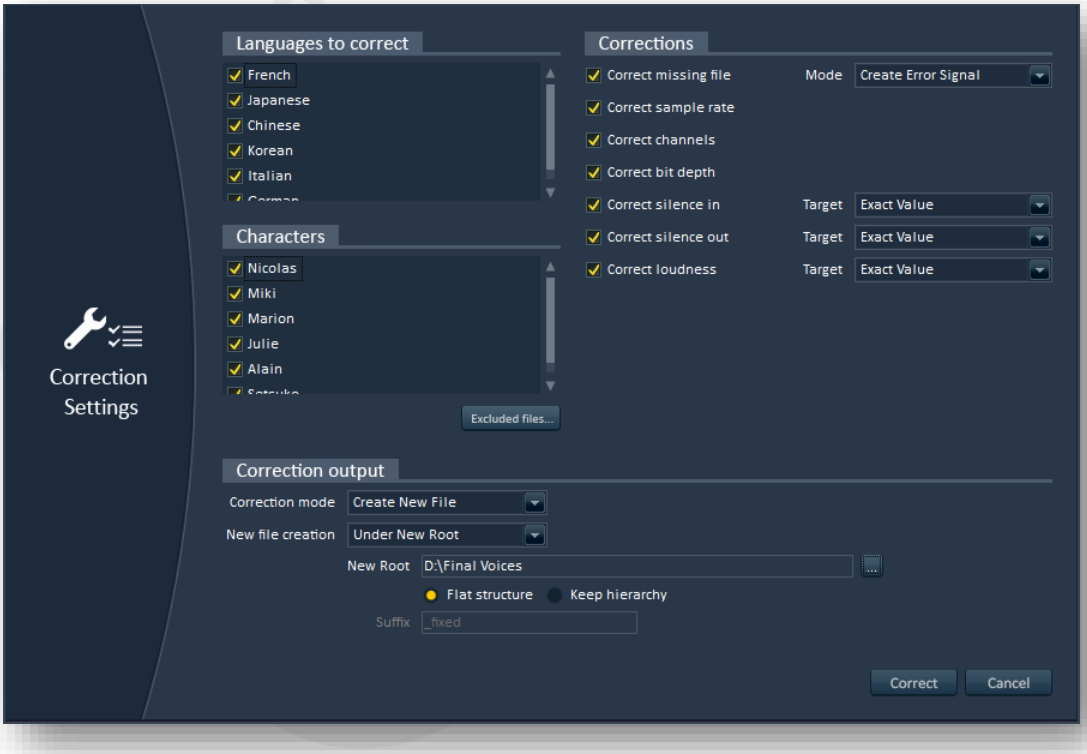
Note: When you choose to save the corrected files in a new folder, you can either recreate the whole hierarchy or save them in a flat folder (i.e. no subfolders are created). In the latter case, if several files share the same name, they will be overwritten. Alto Studio will detect that case and ask you to change the output option first.

Multi-language correction

With the multi-language project correction, the first step is to select what language files we want to correct. The list of the project languages is displayed. You simply have to check the boxes of the languages of interest. If you don't want to correct some specific files, press on the "Excluded files…" button. However, please note that the files you will exclude in the window that opens are reference files, which means that all their localized versions will be excluded.

Note: the files for which no error was detected during the analysis will not be processed, so you don't have to manually exclude them from the correction.

If your project's dialogue lines are associated with character names, you can also specify for which character you want to perform the correction.



The second step is to select the errors you want to fix. Only errors reported by an analysis can be corrected. This means that if you didn't analyze the integrated loudness of the files for example, it will be disabled in the correction settings window.

Correct missing file

Obviously Alto Studio cannot recreate the missing files. However, it can generate an error signal (a sine wave at 440 Hz) of the same duration than the reference file. For example, this may prevent a game from crashing due to the missing asset while making it obvious to the tester that this dialogue line has a problem. Alternatively, Alto Studio can also replace the

missing localized file by the reference file. Again, the game will not crash but hearing a dialogue line in the wrong language will alert the tester that something is not right.

Correct sample rate

Alto Studio will resample the audio file at the correct sample rate.

Correct channels

Alto Studio will increase or decrease the number of channels. Note that when increasing the number of channels, silent channels are added.

Wrong bit depth

Alto Studio will save the file with the right bit depth, although it will not be able to make up for the lost accuracy due to a localized file being recording at a lower bit depth.

Correct silence in

Alto Studio will either add or suppress silence at the beginning of a localized audio file to match the reference file.

Correct silence out

Alto Studio will either add or suppress silence at the end of a localized audio file to match the reference file.

Correct loudness

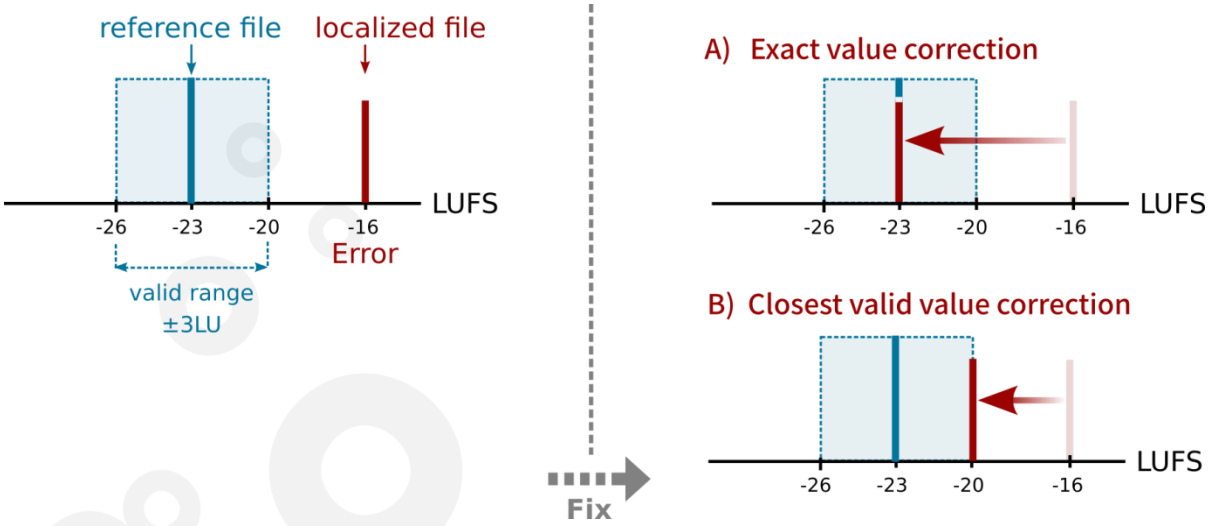
Alto Studio will process the localized file so that it has the same average loudness than the reference file.

Finally, the last section of the correction settings window lets you control how the corrected sounds are saved. Here, you can decide if you want to overwrite the existing files or if you want to create new files. If you opt for the creation of new files, you can either save them in the same folder (while adding a suffix to the original name), or you can save them with their original name but under a different root folder. Both the suffix and the new root folder are user-definable.

Note: When you choose to save the corrected files in a new folder, you can either recreate the whole hierarchy or save them in a flat folder (i.e. no subfolders are created). In the latter case, if several files share the same name, they will be overwritten. Alto Studio will detect that case and ask you to change the output option first.

Two correction modes

When an audio parameter accepts a margin of error during the analysis, it is possible to choose between two modes of correction. In the “exact value” mode, the localized file is corrected so that the audio property matches exactly the one in the reference file. In the “closest valid value” mode, the audio property is assigned the value within the margin of error which will minimize the modification of the localized file.

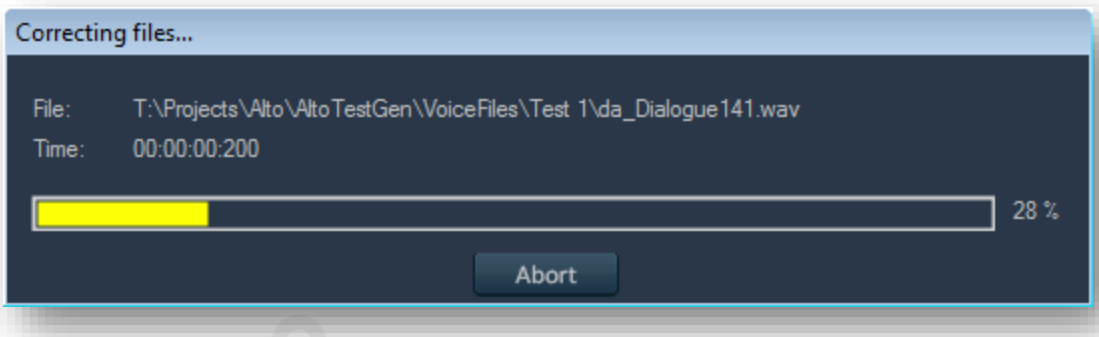


For example, let’s take the case where the reference file has an integrated loudness of -23 LUFS, the authorized range during analysis being -26 LUFS to -20 LUFS (+/- 3 LU), and the localized file has an integrated loudness of -16 LUFS. Since -16 LUFS is outside the valid loudness range, an error was reported by the analysis.

If you select the “exact value” mode, the localized file will be processed to match -23 LUFS exactly. However, if you select “closest valid value”, then the localized file will be processed to match a -20 LUFS integrated loudness, which is the closest value in the valid range, and therefore minimizes the amount of correction needed.

Running the Correction

The correction can be started from the command panel at the top of Alto Studio's main window. It will first display the correction settings described in the previous section and then let you run the correction. The following window will be displayed.



Only the files which have an error will be processed, and only if that error needs to be corrected (as set in the correction settings window). It is possible to abort the correction at any time.

The correction can also be run from the "Processing" menu.

Exporting a project

It is possible to export an Alto Studio project by using the “Export Project…” command of the “File” menu. A window will appear allowing you to select the right exporter.

At this time, a project can be exported as an Excel worksheet or towards ADX2 and Wwise. Alto Studio’s exporters to game audio middleware are regularly updated to support the latest versions of these tools.

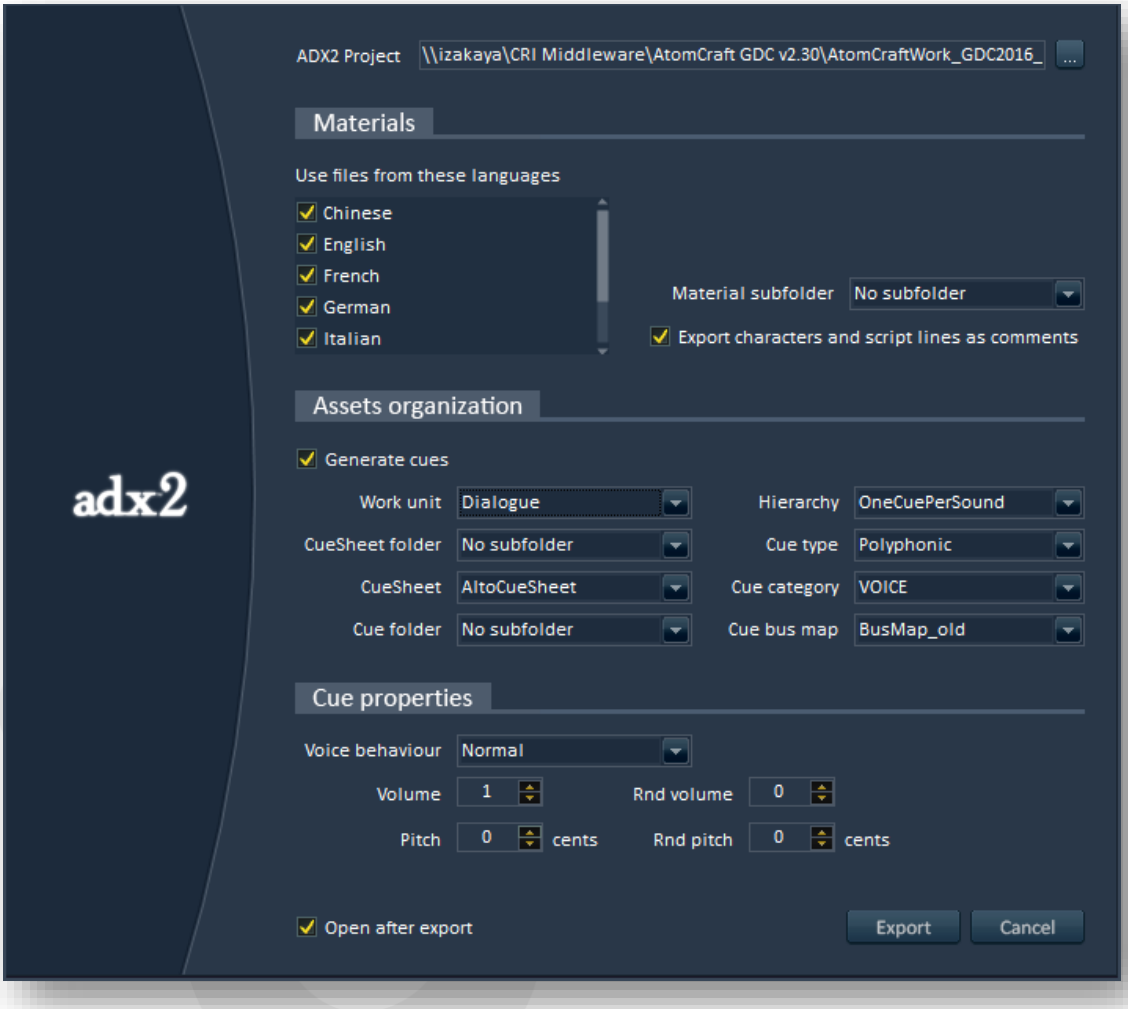
You can also develop your own Alto Studio exporter as a plug-in. A simple XML exporter plug-in is provided as an example.

For more information about this, please refer to the Alto Studio Integration Notes or contact us to get a download link for the full Alto Studio SDK.

Note: these exporters are provided to quickly add a lot of dialogue files to a project. They are not for iterative work: using them to replace existing files, cues or work units in a project may lead to some conflicts.

Export to ADX2

To export to ADX2 (or rather AtomCraft, ADX2's authoring tool), you must first select the target project at the top of the window.



Then you can customize your export. First, you can choose the languages from which the files be exported as Materials in the AtomCraft project, and if they should be put in a subfolder.

If your Alto Studio project includes script lines and character names, you can also select the *Export characters and script lines as comments* option to add them as comments of the Materials.

If you also want to generate Cues, make sure the "*Generate cues*" option is selected. You will then be able to configure the following settings.

Work unit: the existing or new work unit in which you want to add the dialogue.

CueSheet folder: an optional CueSheet folder (existing or new) in which the CueSheet will be added.

CueSheet: the name of the CueSheet (existing or new) in which the Cues will be created.

Cue folder: an optional Cue folder (existing or new) in which the Cues will be added.

Hierarchy: the hierarchy of the data created. Two types of hierarchies are available: one cue for all sounds, and one cue per sound.

Cue type: the type of Cues to be created. All the types of Cues from ADX2 are available: Polyphonic, Sequential, Shuffle, Random, RandomNoRepeat, Switch, and ComboSequential.

Cue category: if needed, you can select a category for the Cues that will be created.

Cue bus map: this is the bus map you want to send the audio dialogue through.

Finally, you can specify a few default values for the Cue parameters:

Voice behaviour: indicates the way a voice of that Cue behaves when it becomes silent, as defined in AtomCraft: Normal, Voice Stop, Voice Virtual, and Voice Virtual Retrigger.

Volume: a value between 0 and 1 that represents the volume of a voice from the Cue.

Random volume: a random range for the volume, between 0 and 1.

Pitch: a detuning value between -1200 and +1200 cents (i.e. between -1 octave and +1 octave). 0 means no change in pitch.

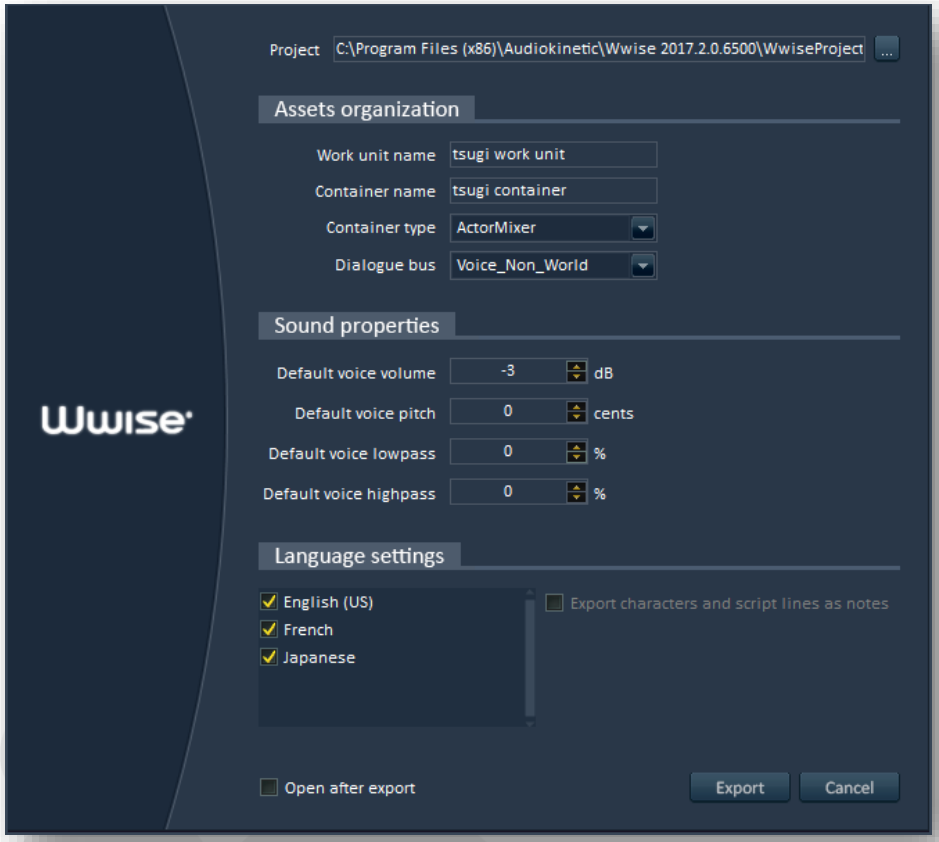
Random pitch: a random range for the pitch, between 0 and 1200 cents.

Once your press OK, the exporter will copy all the dialogue files in the right folders in the Materials folder of your AtomCraft project and update the material info file. It will also generate the Work Unit, CueSheet folder (optional), CueSheet, Cue folder (optional) and finally the Cues. It will also apply the parameters you specified to all the Cues.

If you click on the *Open after export* checkbox, AtomCraft will be launched and your project loaded once the export is completed, and you will be able to check the results.

Export to Wwise

To export to Wwise, you must first select the target project at the top of the window.



Then you can customize your export. First you can define how the dialogue assets will be organized within the Wwise project with following settings:

Work unit name: this is the name of the work unit you want to create for your dialogue in the Wwise project. At this time, the Wwise exporter will always create (or overwrite) a work unit. It is not possible to add files to an existing work unit.

Container name: this is the name of the container that will be created in the work unit to contain the sounds.

Container type: this is the type of the container. All Wwise container types are available: None, Folder, ActorMixer, RandomContainer, SequenceContainer, SwitchContainer, and BlendContainer.

Dialogue Bus: this is the bus you want to send the audio dialogue through. Alto Studio gets the list of the busses from the Wwise project.

You can also specify the default properties of the Sound Voice objects that will be automatically created.

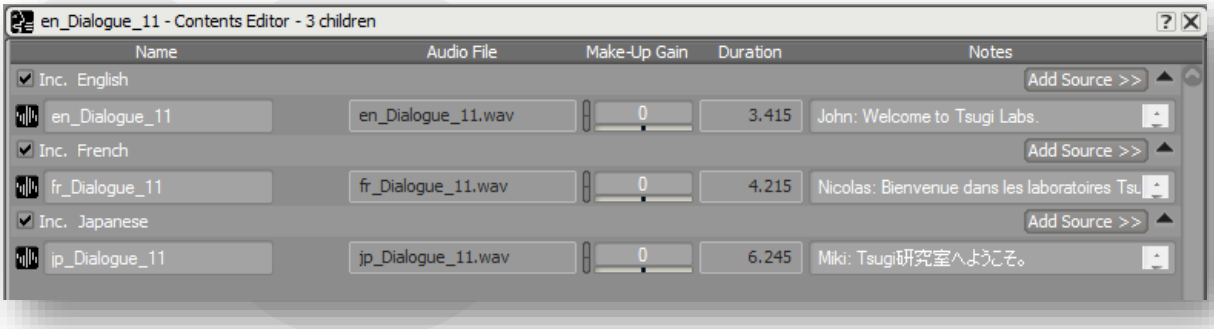
Default voice volume: this is the default volume (or rather scaling) of the voice. It is expressed in decibels (dB). The valid range goes from -96 to +12, with 0 corresponding to no change.

Default voice pitch: this is the default pitch (or rather detune) of the voice. It is expressed in cents. The valid range goes from -2400 to 2400, which corresponds to -2 octaves to +2 octaves, with 0 being no change.

Default voice lowpass: this percentage corresponds to the amount of lowpass filtering applied to the voice.

Default voice highpass: this percentage corresponds to the amount of highpass filtering applied to the voice.

Finally you can specify from what languages the files will be exported. If your project includes script lines and / or character names, it is also possible to attach them to the Sound Voices as notes, as shown below. Simply select the *Export characters and script lines as notes* option.

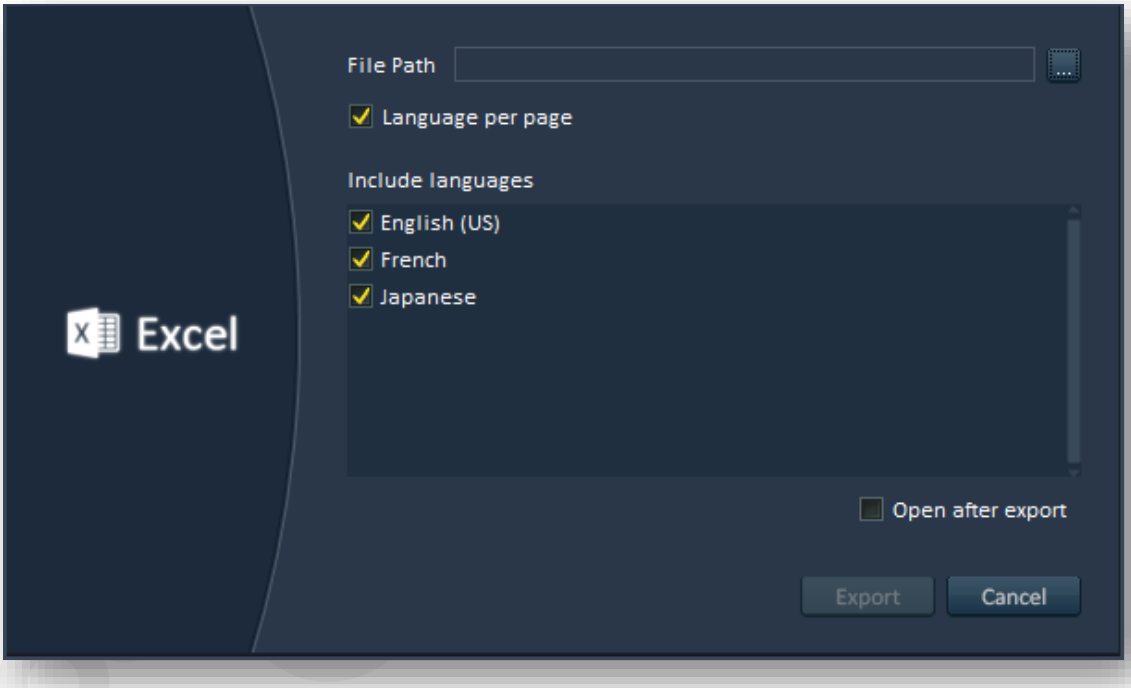


Once your press OK, the exporter will copy all the dialogue files in the right language subfolders in the “Originals/Voices” folder of your Wwise project. It will also generate the work unit, container and all the sound voice objects, applying the parameters you specified.

If you click on the *Open after export* checkbox, Wwise will be launched and your project loaded once the export is completed, and you will be able to check the results.

Export to Excel

It is possible to export towards Excel. You can select what languages you want to export and the Excel exporter lets you also choose if you want all the files on the same sheet or if you want to have a sheet per language.



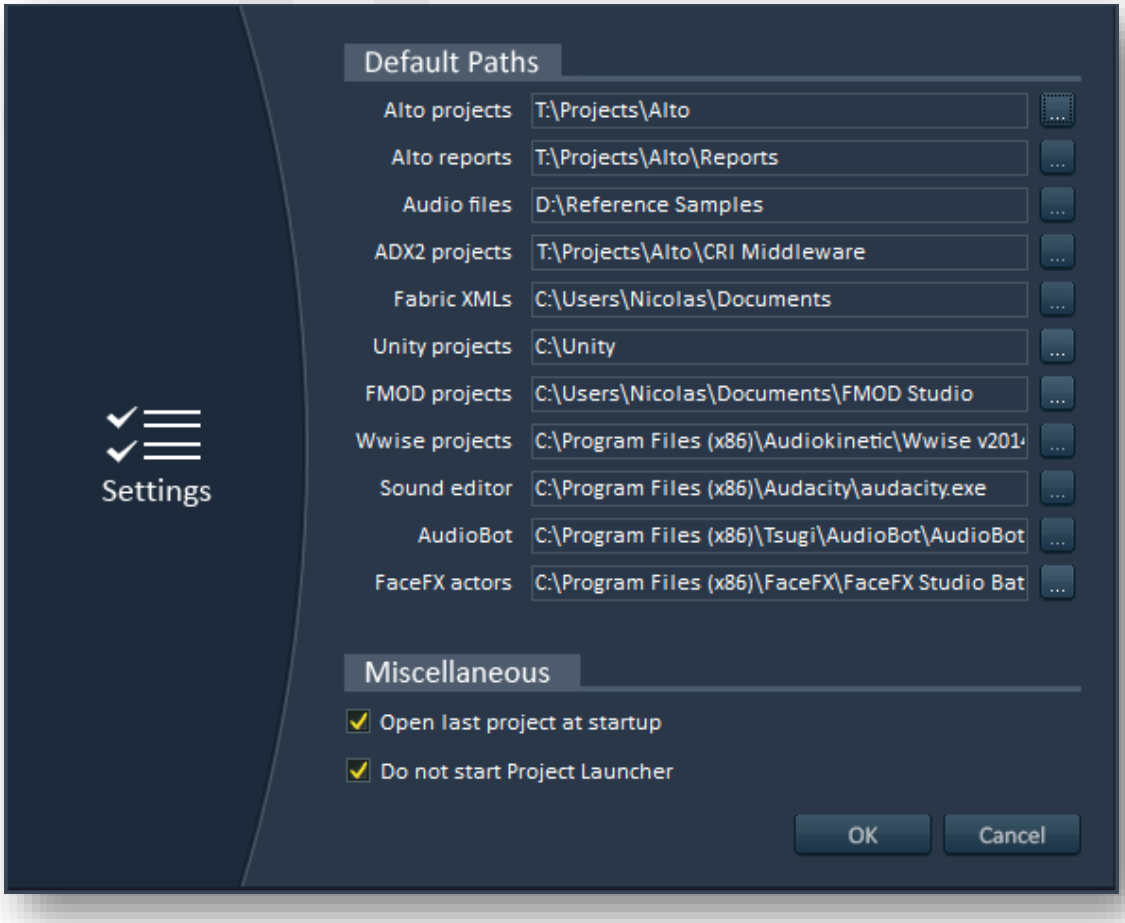
Tools

The Tools menu gives access to commands that facilitate audio localization in general and the use of Alto Studio in particular. This menu will grow regularly: new commands are already in development at Tsugi to help the audio localization team in its work, such as a generator for placeholder dialogue files or a function for automatic adjustment of the loudness of all files.

Note: In the free trial version of Alto Studio, some tools are disabled and some have limited features.

Settings

Here we describe the various parameters available in the main program settings. These parameters are not associated with a specific project but dictate the general behavior of the Alto Studio tool.



Default Paths

Alto projects
This is the default folder where Alto Studio will look for project files. The Alto Studio project files are XML files with the extension ".alto".

Alto reports
This is the default folder where Alto Studio will publish reports (either in XML, HTML, PDF or as Excel files).

Audio files
This is the default folder where Alto Studio will look for audio files (.wav,.aif,.mp3,.ogg and .flc).

ADX2 projects
This is the default folder where Alto Studio will look for ADX2 project files. The ADX2 project files are XML / Orca files with the extension ".atmcproject".

Fabric XMLs
This is the default folder where Alto Studio will look for XML files exported by Fabric.

Unity projects
This is the default folder where Alto Studio will look for Unity projects. For example, the Fabric importer needs to know the path to the resource files of a Unity project.

FMOD projects
This is the default folder where Alto Studio will look for FMOD Studio project files. The FMOD Studio project files are text files based on XML with the extension ".fspro".

Wwise projects
This is the default folder where Alto Studio will look for Wwise project files. The Wwise project files are XML files with the extension ".wproj".

Sound editor
In some cases, Alto Studio allows you to select a sound file and to edit it in an external sound editor, for example to fix an error. This is the path of the executable that will be launched to edit the sound files.

AudioBot
This is the path to the AudioBot executable. AudioBot is Tsugi's audio batch processing tool. It can be called from the "Tools" menu to process Alto Studio's dialogue lines automatically.

FaceFX actors
This is the default folder where Alto Studio will look for models to generate LipSync data with FaceFX.

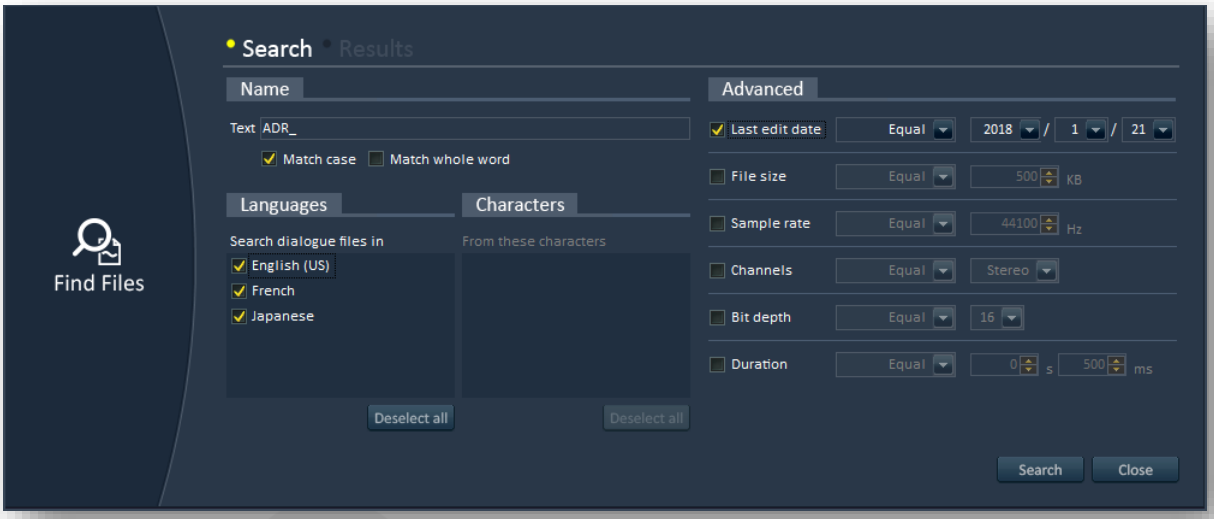
Miscellaneous

Open last project at startup
If this box is checked, Alto Studio will attempt to open the last project edited the next time the program is started. If the project cannot be loaded - either because it has been moved / deleted or because the user does not have access rights - the program will start normally with options to create a new project or to load an existing one.
This option is only taken into account when the Project Launcher is disabled (see below).

Do not start the Project Launcher
By default, when Alto Studio is started, the Project Launcher is displayed. It shows the highlights of the latest version and notifies you if you are not up-to-date. The Project Launcher also displays the list of the most recent Alto Studio projects you worked on, so that you can choose the right one and load it easily.
However, if you want to skip this step – and maybe also automatically load the latest project you have been working on (see the option above) – you can check this box to disable the Project Launcher.

Find Files

Projects can contain thousands or even tens of thousands of dialogue files. This function makes it easy to find specific files, not only based on their names but also on their audio characteristics, their language or the date they were last edited.



The “Find Files” window has two tabs: one to configure the search and another to look at the results.

The “Search” tab lets you select the characteristics you want to take into account when looking for files. You can of course check the name of the file, i.e. if it contains a specific string (options are available to match the case and the whole world if needed).

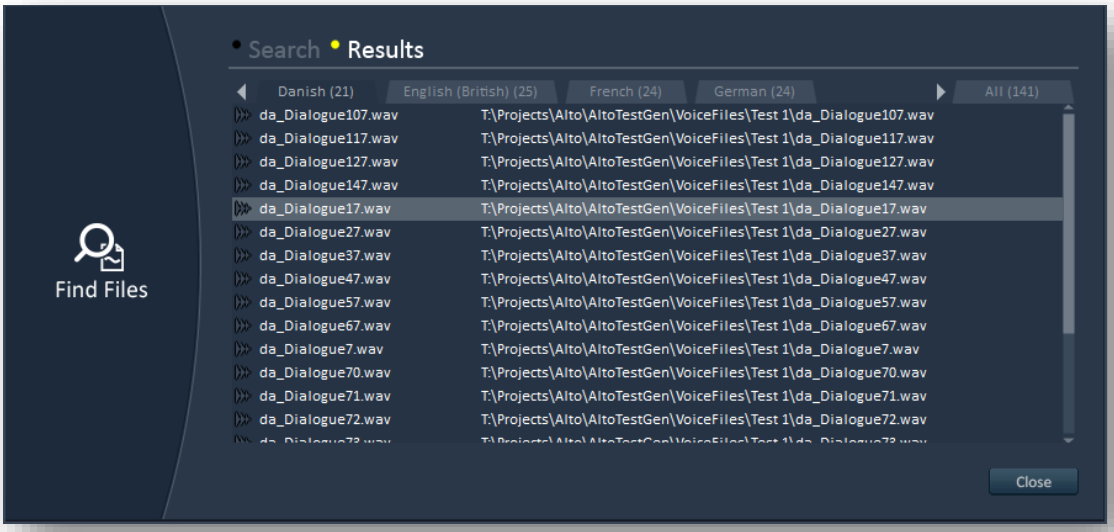
You can also select in what languages you want to search for the files. If the dialogue lines are associated with character names (e.g. if you imported an Excel worksheet), you can use the character name as a filter too.

Finally, some advanced features are available to find files based on their last modification date, their size, their sample rate, their number of channels, their bit depth or their duration. In each case, you can enter the parameter value, and say if you want to get a file with this exact value, a different value, a greater one or a smaller one.

This allows you to create quite complex requests. For example, you could search for all the dialogue files whose name contains “creature”, which are either in French or in Spanish, have been edited during the last week, have a sample rate of 44.1 kHz but are not stereo and are shorter than 10 seconds.

Once you click on the “Search” button, Alto Studio will look for these files and display them in the “Results” tab. It is possible to quickly adjust the search parameters by switching between the two tabs. In the “Results” tab, the files are displayed per language but a global list can also be shown.

By double-clicking on a file it is possible to visualize it in the main window without closing the Find Files window. You can also play the selected file by pressing on the Space bar or open it in the default sound editor by pressing Enter.



Edit Source Project in Tool

This function opens the source project, for example to edit it or to check its data.

- In the case of a game audio middleware, this means that the authoring tool (Wwise, FMOD Designer, or AtomCraft for ADX2) will be started and the game audio project automatically loaded.

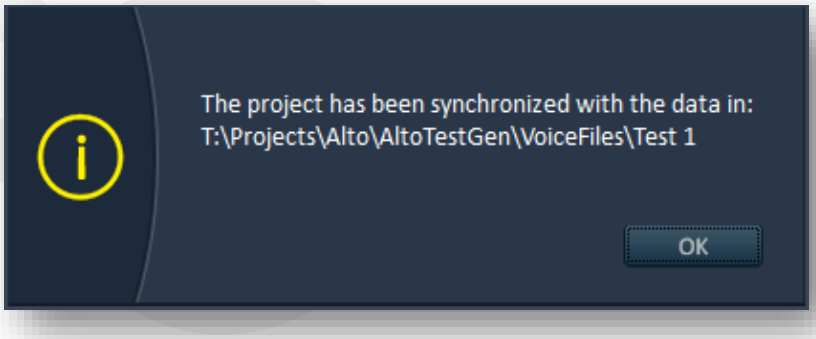
- In the case of an Excel-based project, Excel will be started and the workbook will be loaded.

- Finally, in the case of a project directly based on a set of files on your hard drive, Windows Explorer will be started and will display the root folder of the source project.

Synchronize with Source Project

This tool updates the reference and localized files, either by synchronizing the project with the game audio middleware, by reading the Excel file again, or by scanning the root folder for files.

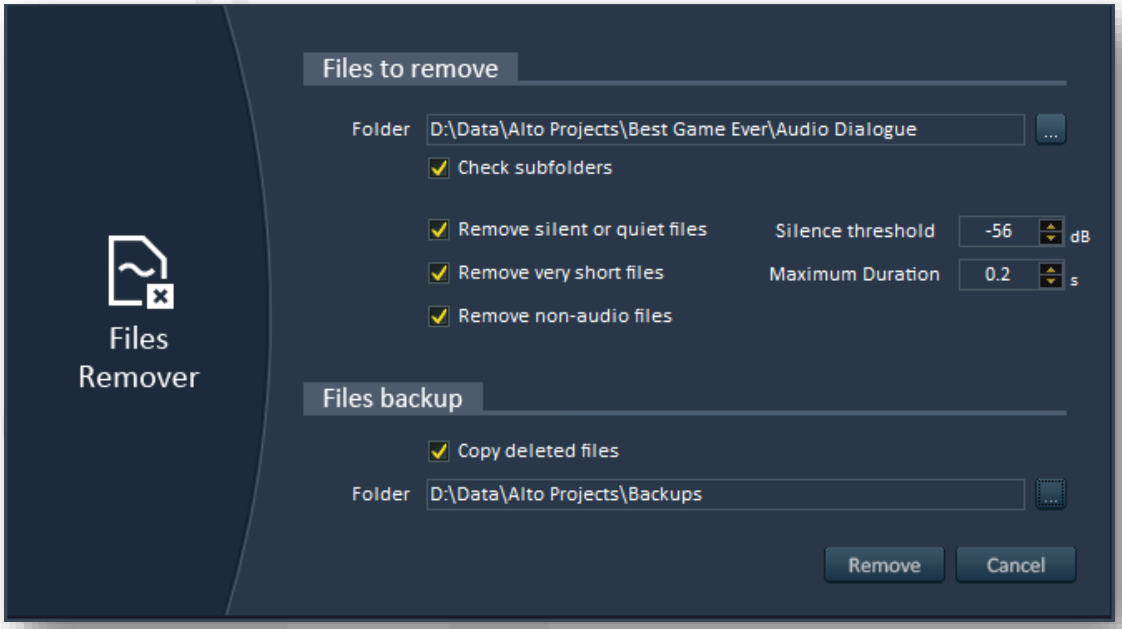
Because many files may be added, removed or updated, the last analysis report is deactivated and the analysis must be run again.



Remove Files

This tool allows for the removal of unnecessary files from a folder. For example, you may want to remove certain files because they are silent or very quiet sounds (under a threshold specified in dB), or because they are empty or very short (under a duration specified in seconds). You may also want to remove any file that is not an audio file to keep your folder clean.

Note: when checking for quiet sounds, the tool looks for any peak over the specified threshold. If one is found, the file will not be removed. The threshold does not correspond to an average level value.



The files remover function will look in the folder indicated and, optionally, in its subfolders. If the tool detects that some of the files to remove are part of the current Alto Studio project (if there is one loaded), the "Synchronize with Source Project" function described in the previous section will be called, in order to ensure the validity of the project.

Note: if the current Alto Studio project has been imported from a game audio middleware (such as Wwise, FMOD Studio, ADX2, etc..), removing audio files will most likely break references to these files in the native project.

Since deleting files is irreversible and can potentially lead to some issues, an option allows for a backup of the files in a separate folder (which cannot be a subfolder of the folder being processed). The hierarchy of the files will be conserved, and subfolders will be created as needed.

Once the processing is finished, the number of files deleted by the tool will be displayed.

Quick Check

The Quick Check function of Alto Studio can be used to easily check that a group of files are present and that they have the expected audio characteristics (sample rate, bit depth and number of channels). This can be useful for example to ensure that the reference files are correct before launching a full analysis and comparing them with the localized files.

There are two ways to use this function. You can select a source folder, specify the values the audio parameters should have and press “Check”. Alto will then check all the files in that folder (including its subfolders).

You can also provide an Excel file, select the right worksheet and specify which columns correspond to the audio format settings and to the file paths. Since the paths to the files to

be checked are in the Excel worksheet, this function will also report any missing files. If the paths are relative, the files will be looked for in the Excel workbook folder.

Since version 4.0 of Alto Studio, the Quick Check function can also analyze the content of an audio file, in addition to simply decoding its header. Therefore, the following audio features can also be checked: average loudness, loudness range, peak, duration, leading silence, and trailing silence. For each of them, the allowed range can be specified. Since this may take some time to configure, it is now also possible to load and save the analysis settings for the Quick Check function as a .qcs file.

Once the analysis done, an Excel worksheet is generated. If a file was missing or its parameters have the wrong values, the corresponding cells will have a red background.

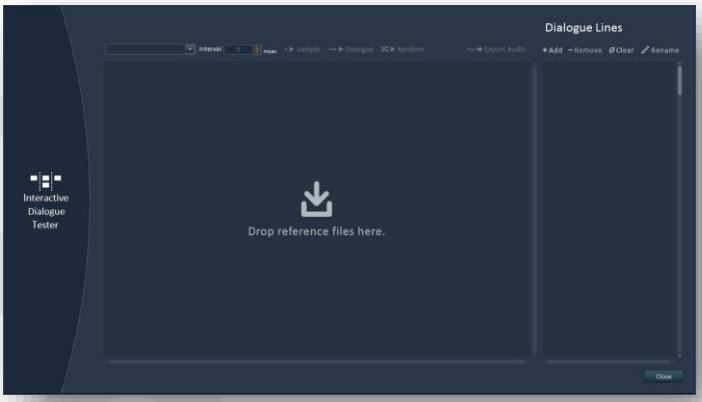
Finally, an option allows you to automatically open the Excel file generated after the verification.

Interactive Dialogue Tester

The interactive dialogue tester allows you to check that concatenated dialogue lines will sound as natural in the localized languages as they do in the reference one.

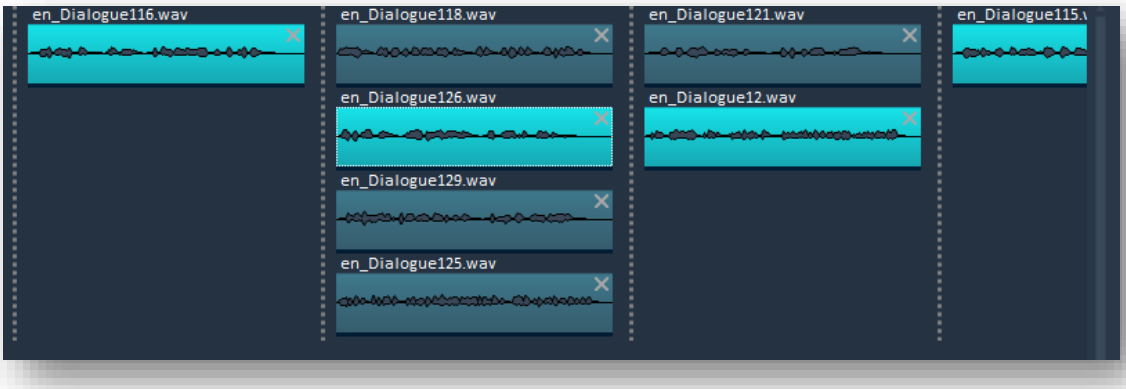
Creating dialogue lines

When you select this tool the following window appears:



It is possible to drag reference files from Alto Studio's project tree and drop them on the window to build sequences of waveforms, i.e. interactive dialogue lines.
It is very easy to create and edit these dialogue lines: to insert a new waveform in an existing dialogue line, drop it at the beginning, at the end, or between two existing waveforms. To replace a waveform, drop the new one on the top on the old one. To remove the selected waveform, press the Delete key or click on the cross at the top of its representation.

By dropping waveforms right below existing ones, you can add variations to the dialogue line. This makes it possible to test interactive dialogue like in a game, where different samples are concatenated together at run-time depending on the game context, to create the final dialogue line.

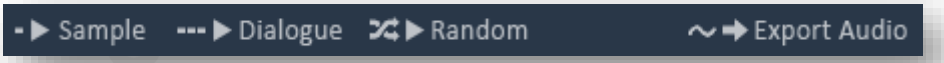


The picture above shows a dialogue line built from 4 waveforms. Although the beginning and the end of the sentence are always the same, the middle can change: there are 4 options for the second waveform, and 2 options for the third one.

The waveforms displayed in light blue correspond to the variations currently selected for this dialogue line.

Playing dialogue lines

At the top of the window are a group of playback buttons.



If you click on the "Sample" play button (or press Space), the current waveform will be played back. The current waveform is the one you selected last and it appears with a dotted white border.

If you click on the "Dialogue" button or press Ctrl + Space, Alto Studio will play the dialogue line you built starting from the left and going to the right. The current dialogue line is built from the waveforms which are displayed in light blue in each column (you just need to click on a waveform to make it the selected variation for its column).

Finally, if you click on the "Random" button or press Shift + Space, the dialogue line will be played using randomly picked variations. The dialogue line will never be the same twice in a row (as long as you added variations).

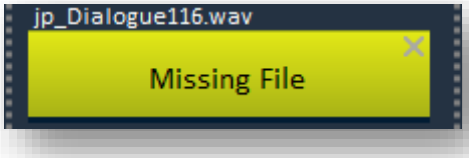
During the playback, a silent gap can be inserted between the samples. The duration of this silence can be chosen at the top of the window, from 0 to 1000 ms).

Checking localized languages

Once you have built a dialogue line in the reference language, you can check it in the localized languages. To do so, simply choose a language in the combo box at the top of the window.

You can now play the interactive dialogue line you built in the localized language and it is very easy to verify that the timing is correct, that the levels of the different parts match and that the dialogue line sounds natural.

If some files are missing in the localized language, they will appear in yellow with the "Missing File" label, like this:

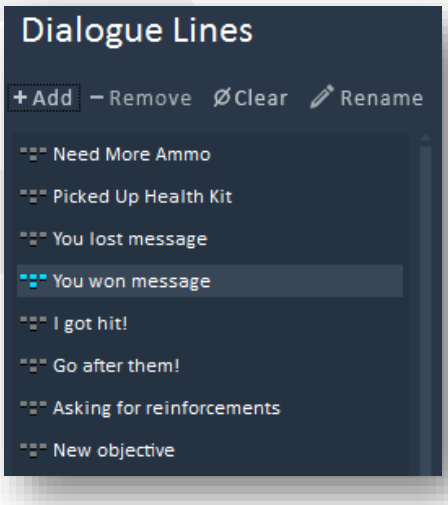


During playback, missing files will be replaced by a 1-second sine tone at 440 Hz.

If you noticed that something is wrong with the dialogue line in a localized language, you can save it as a wave file by pressing on the "Export Audio" button (located to the right of the playback buttons) and share it with your team. It is also possible to switch back to the waveform view to get more information about the selected waveform by pressing Ctrl + Tab.

Managing dialogue lines

Several interactive dialogue lines can be created and they are saved with the Alto Studio project. Dialogue lines are managed on the right side of the window. It is possible to add new ones, to rename them or to remove them.



Speech Synthesizer

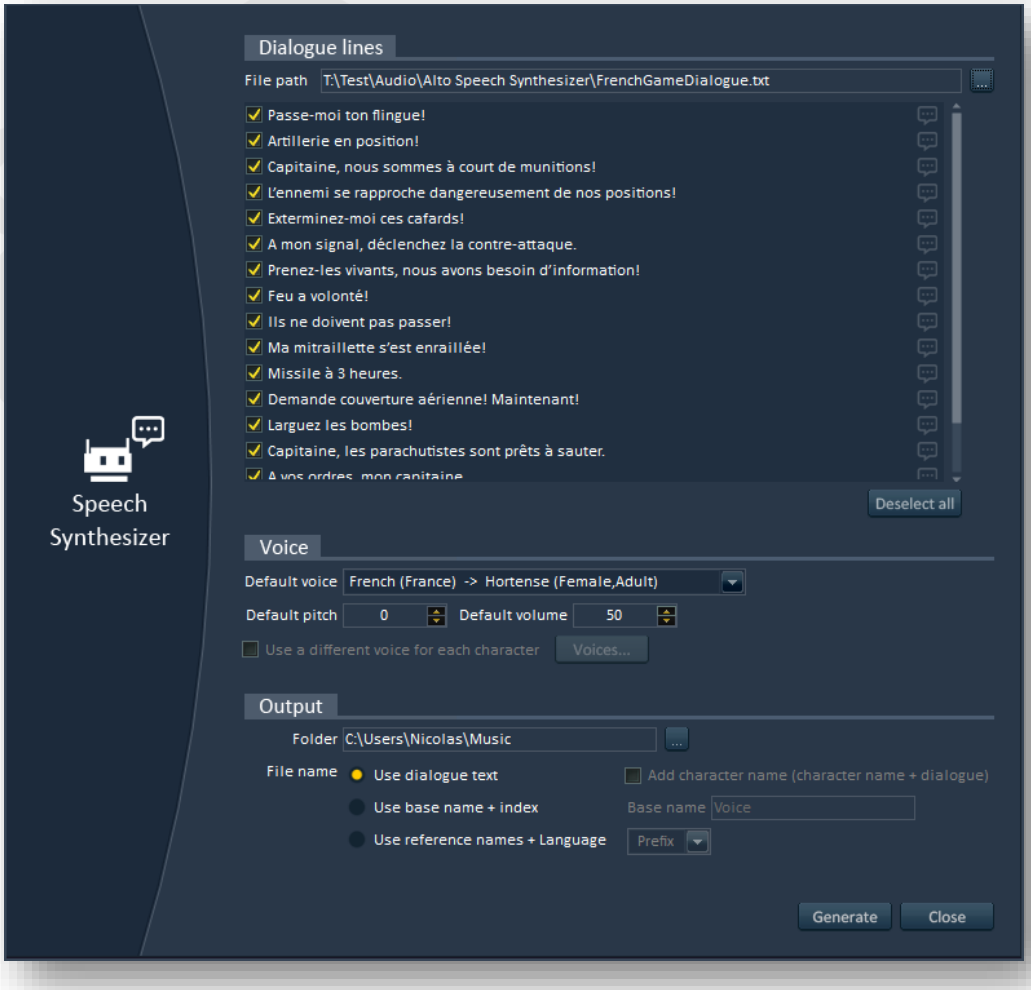
The speech synthesizer tool offers a convenient way to generate placeholder dialogue by using the Microsoft Speech Synthesizer.

In order to use this tool, you need to have the Microsoft Speech Synthesizer installed on your machine. If it is not, Alto Studio will display an error message. You can download it from here:
https://www.microsoft.com/en-us/download/details.aspx?id=27225

The Microsoft Speech Synthesizer uses character "voices". More can be downloaded here:
https://www.microsoft.com/en-us/download/details.aspx?id=27224

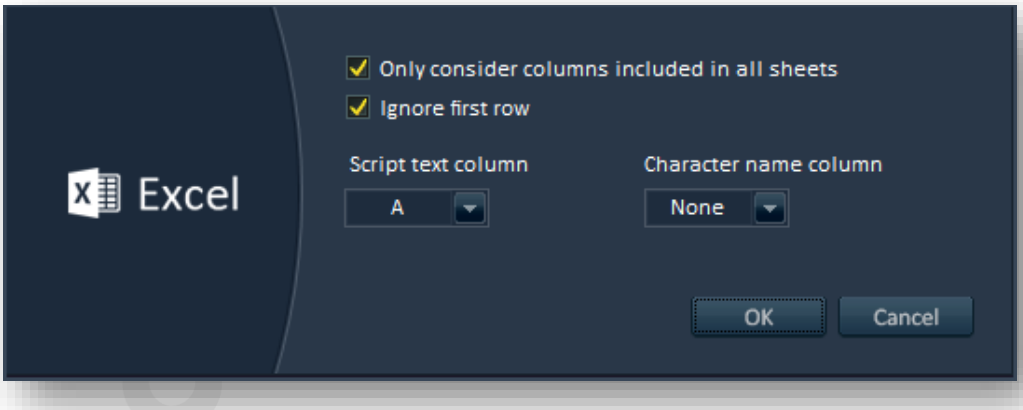
It is important to ensure that the version of the "voice" files correspond to the version of the Microsoft Speech Synthesizer you have installed, otherwise they will not be usable.

The window of the Speech Synthesizer tool in Alto Studio is divided in 3 sections, as shown below: Dialogue lines, Voice and Output.



The first section is used to select the dialogue lines you want to generate, by importing a text file (.txt), an Excel workbook (.xlsx), a comma-separated values file (.csv), or a Final Draft script (either as a .fdx project or a .txt tabulated dialogue file).

When importing an Excel file, you will be able to select what column is used for the script as well as an optional column for the name of the character speaking that text.

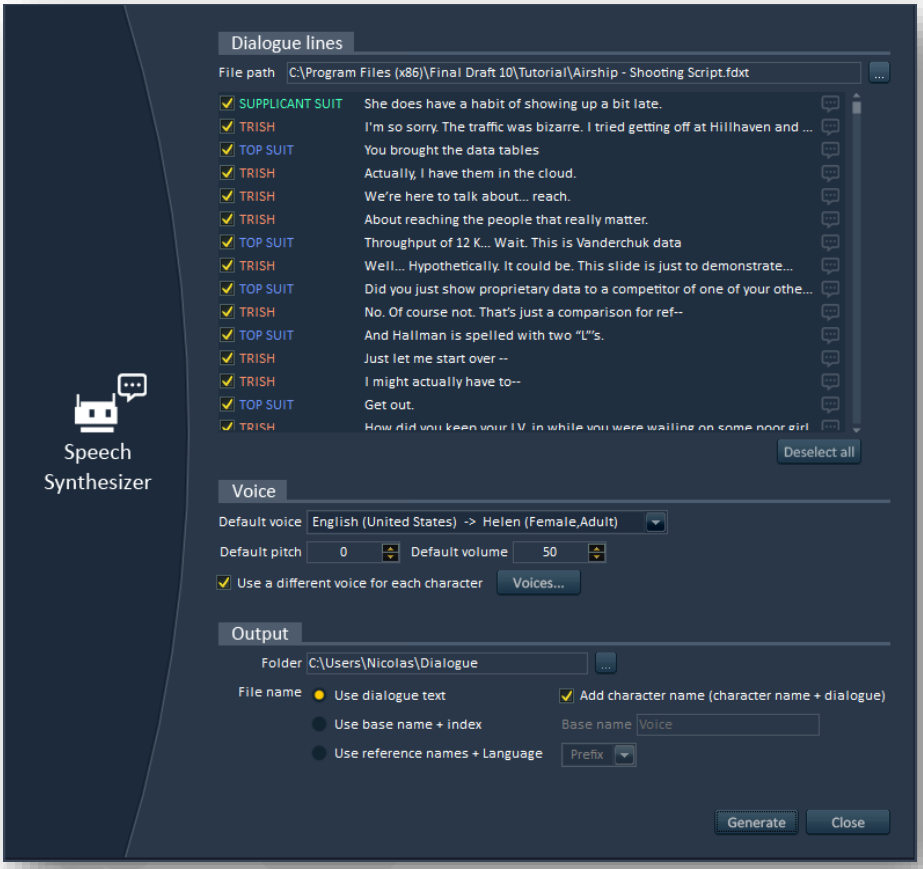


Each line of these text files - except for empty ones - will be considered as a potential dialogue line and will be displayed in the list. By default all are selected which means they all will be synthesized. However, you can uncheck the ones you don't need to generate. At the bottom of the list, there are also two buttons to select or unselect all the lines at once.

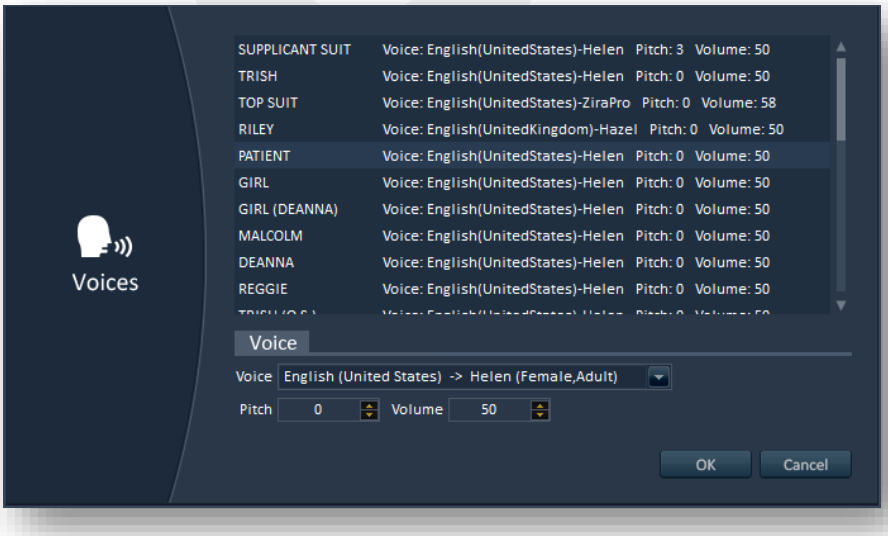
Note: If you want to generate many dialogue files, it might be more convenient to only select one line and adjust the voice parameters to your liking by trial and error, and only when you are satisfied with the results, select all the lines again and synthesize them.

The second section lets you select the voice you want to use. Voices are available for many languages and can be male or female. Some companies also sell character voices to complement the ones provided for free by Microsoft. In this section, it is also possible to adjust the rate at which the dialogue lines will be spoken, as well as their volume.

If you imported a file that associates a character name with each line of dialogue (for example a Final Draft script), you should be able to see the names of the characters in front of the lines, each character having a different color.



In that case, you can also associate different voice settings to each character. To do that, simply select the *Use a different voice for each character* option and click on the *Voices…* button. A window similar to the one depicted below will appear, allowing you to edit the voice parameters.



The third and last section lets you specify where you want to save the dialogue lines generated by Alto Studio. To that effect, you can select a destination folder and choose how the files will be named. Three options are available to generate the names of the files:

- Using the dialogue line text as the file name (up to 255 characters including the path). Optionally, you can prepend the file name with the character name if there is one.

- Using a common base name followed by a number (starting at 00001).

- Using the name of the reference files (if an Alto Studio project is currently open). Optionally, the name of the language can be used as a prefix or a suffix.

In all cases, the files will be saved in the Wave format and will therefore have a .wav extension.

Once everything is set, press on the “Generate” button to synthesize the dialogue lines.

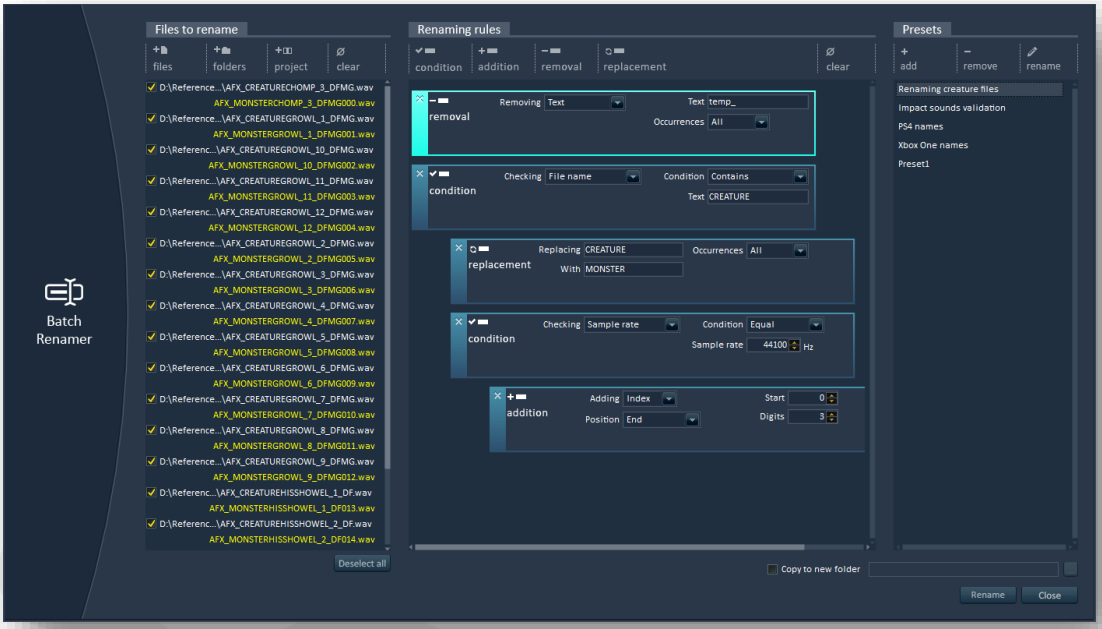
You will notice that the little speech bubbles on the right of the selected lines in the list become brighter. It indicates that these lines have been synthesized. By pressing on the speech bubble icon, you can play them.

If a speech bubble stays darker, it means that the dialogue line could not be synthesized. It may happen if there is an invalid character in the text that the Microsoft Speech Synthesizer does not recognize.

Batch Renamer

Thanks to its versatile rule system, the batch renamer allows you to rename groups of audio file based on complex conditions. It does not require for an Alto Studio project to have been created beforehand and therefore can be used independently, on any type of audio file.

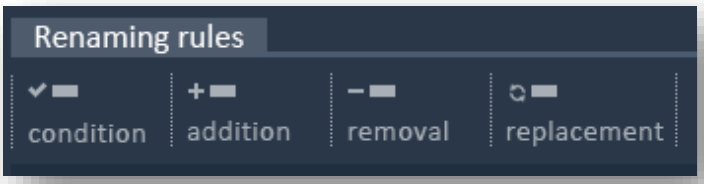
The batch renamer window is divided into three main sections. On the left is the list of the files to rename, in the center are the renaming rules, and on the right are the presets.



To add the files to rename to the list, simply click on the “Add Files”, “Add Folders” or “Add Languages” buttons at the top of the list. You can also remove all the files from the list by pressing “Clear”. Note than when adding folders, the subfolders are also added recursively.

If an Alto project is currently open, press the “Project” button to add all the files from one or several languages in this project. It is also possible to select only dialogue lines spoken by a given character. Finally, you can add files by dragging them from the Windows Explorer onto the files list.

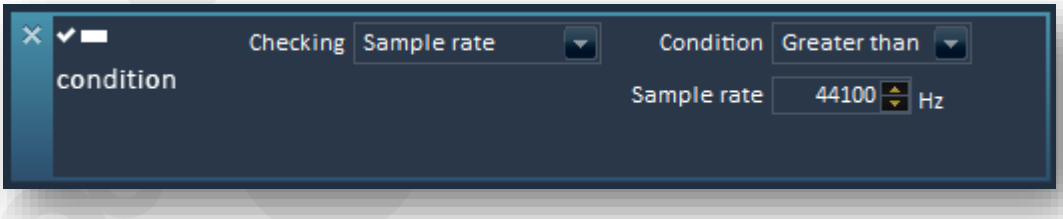
Each file added has a checkbox and will only be renamed if it is selected. This allows you to quickly apply a different renaming scheme to a particular file or group of files. All files can be selected / deselected at once with the button located at the bottom of the list.



Four types of rules enable you to define how you want to rename your files. While the rules are being edited, the new file names are displayed in yellow just below the current names, making it easy to see the result of a potential renaming operation. The real renaming, however, will not happen until the “Rename” button at the bottom of the window is pressed. During the renaming operation, if the abort button is pressed, the files will be renamed to their original name. If the “Copy to new folder” option is selected, it is possible to specify a root folder where all the renamed files will be copied, in order to not change the original files.

Condition rule

The condition rule allows you to check an attribute of the file and rename it based on this information. Conditions can be nested or placed at the same level, allowing to simulate “and” and “or” operations as well as more complex behaviors. Simply drag the condition rule (or other rules) left, right, up and down to modify the logic of your renaming preset.



Many file parameters can be tested. The first obvious one is the file name. It is possible to check if it contains or not a specific text, or if it starts or ends with it.

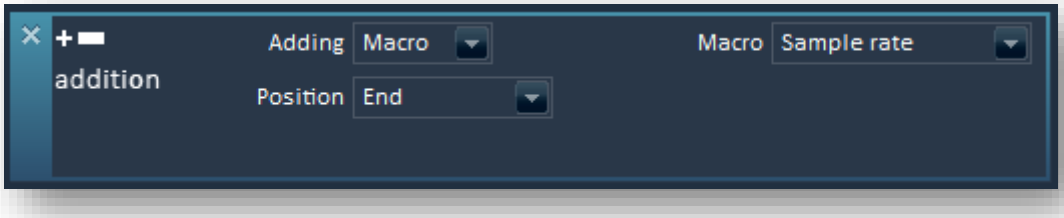
Other tests are numerical; they include the file name length (for example if it is too long, you may want to rename the file), the file size and the date of creation or of last modification of the file. For example, you could decide to rename all the files from last month.

In addition, the Batch Renamer can examine the audio header of a file and make renaming decisions based on its sample rate, number of channels, bit depth or duration. For example you may decide to add the suffix “HighQuality” to all files with a sample rate greater than 44100 Hz.

For all these numerical tests, it is possible to check if the file parameter is equal, different, greater than or lesser than a specified value.

Addition rule

Using an addition rule, three types of texts can be added to the name of a file: a regular string of character, a numerical index and a text generated by a macro.



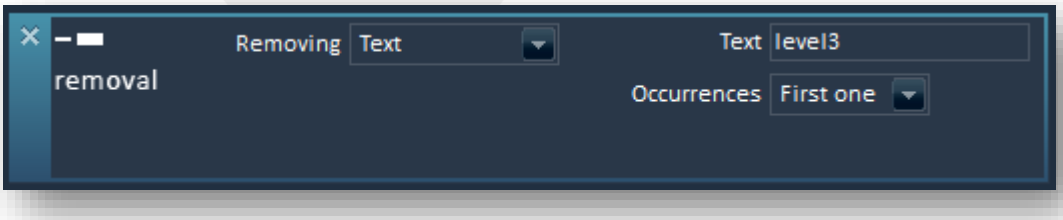
The text can be added at the position of your choice: at the beginning of the file name, at the end, at a fixed position (e.g. from the 4th character), or after a given text if it is found in the file name (e.g. after the text "voice"). In that last case, it is also possible to specify if you want to add the new text for each occurrence of the text found, for the first occurrence only, or for the last one.

When adding an index, it is possible to specify the number of digits the number should have, as well as its starting value.

Several macros can be added. For example, it is possible to insert the time or the date automatically in the file name, as well as the current user, the name of the current Alto project, or the name of one of its languages. Audio characteristics such as the sample rate, the number of channels or the bit depth can also be added. Therefore, with just one addition rule, it is possible to add "mono" at the end of all the mono files and "stereo" at the end of all stereo files.

Removal rule

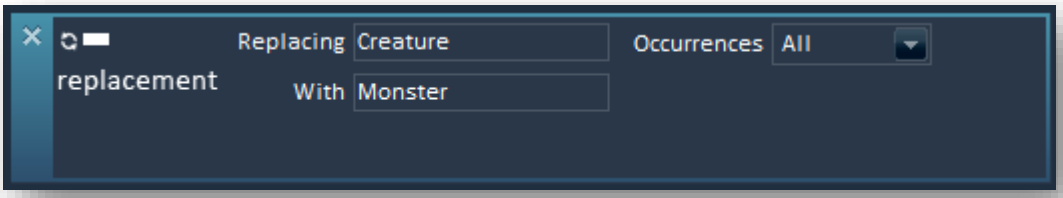
This rule makes it possible to remove a part of the current file name. You can specify the text to remove and if each occurrence should be removed or only the first one or the last one. For example you could remove the "temp" text from the file name, or all the space characters because they are invalid for your target application.



You can also remove a part of the file name independently of the text it contains, simply by specifying a position. For example you can remove all the text after the 10th character, or all the characters from the 3rd to the 7th.

Replacement rule

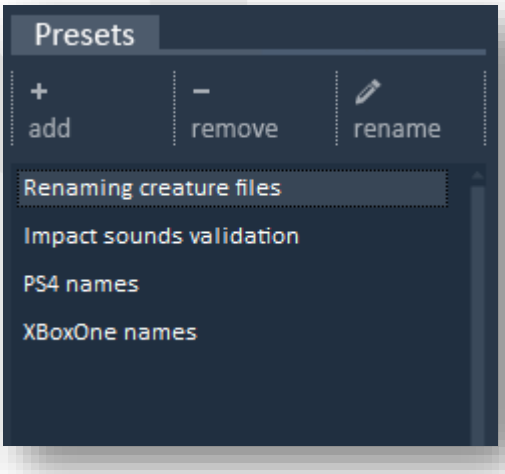
The replacement rule replaces a part of the file name with another text. You can specify what text you want to replace, by what, and how often (in all cases, or only the first time or the last time). For example, you may want to replace “creature” per “monster” the first (and probably only) time you see it, or you may want to replace all the “-“ characters by “_”.



It is possible to move individual rules by dragging and dropping them, either vertically to change their execution order, or horizontally to make them part of a condition or to put them out of it. When dragging a rule, a blue line will be displayed where you can drop it. Rules which are to be executed when a condition is met will appear indented.

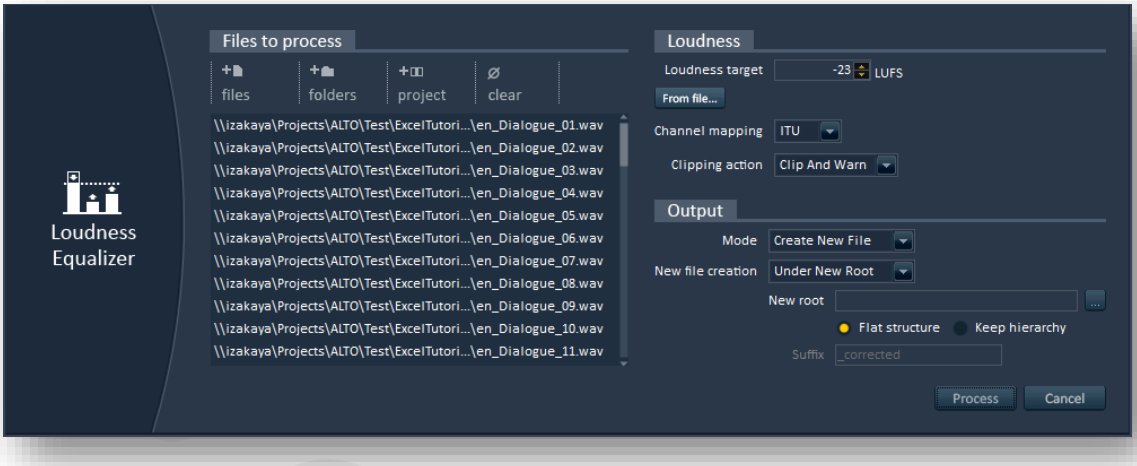
Presets

Alto will automatically remember the previous renaming rules you edited as “Presets”. This is convenient if you are often re-using the same rules, or at least the same templates with some minor modifications. On the right side of the Batch Renamer window, you can create as many renaming rules or “presets” as you want per session, remove some of them or rename them.



Loudness Equalizer

The Loudness Equalizer allows you to select groups of files and process them so that they all have the same average loudness. This tool is available even if no Alto Studio project has been created.



The left part of the window is where you select the files you want to process. You can add files or full folders to the list (the content of the subfolders is added as well). To do that, either use the command buttons or drag the files directly from the Windows Explorer onto the list.

If an Alto Studio project is currently open, you can also add all the files from one or several languages in the project at once by clicking on the “Project” button. It is also possible to select only dialogue lines spoken by a given character. If you made a mistake or want to process a new group of files, simply press on the “Clear” button.

In the right part of the window you can specify the target loudness (i.e. the loudness you want all your files to match). This is the program loudness, also called integrated loudness. It is calculated for a whole file and it is expressed in LUFS.

Note: LUFS calculations require an audio signal to be at least 400 ms long. To be able to process very short vocal sound effects such has grunts etc…, we ensure that any file is at least 400 ms by looping it (this is better than padding with silence, which would lead to a lower LUFS value).

You can either specify the target value directly or select an audio file whose loudness you want your files to match. In that case, click on the “From file…” button. You will be able to select a sound file, which will then be analysed and its loudness will be set as the target value.

LUFS calculations are sensitive to channel ordering. If you are planning on processing surround sounds, you should select the right channel mapping. Three choices are available: DTS, ITU (default) or Film.

The channel mappings for these 3 modes are:
DTS: L R Ls Rs C LFE
ITU: L R C LFE Ls Rs
Film: L C R Ls Rs LFE

Usually though, when working with dialogue or sound effects, most of the files will be mono or stereo and you won't have to worry about this option.

The clipping action parameter lets you select the behaviour of the loudness equalizer when the level goes over 0. Three options are available: clip (the level is brought back to its maximum value), clip and warn (in addition, a message is displayed to let you know that clipping occurred) or abort (select this if you don't want any clipping to happen and prefer to adjust your settings).

Finally, the last section of the window lets you control how the processed sounds are saved. Here you can decide if you want to overwrite the existing files or if you want to create new files. If you opt for the creation of new files, you can either save them in the same folder (while adding a suffix to the original name) or save them with their original name but under a different root folder. Both the suffix and the new root folder are user-definable.

Note: When you choose to save the corrected files in a new folder, you can either recreate the whole hierarchy or save them in a flat folder (i.e. no subfolders are created). In the latter case, if several files share the same name, they will be overwritten. Alto Studio will detect that possibility and ask you to change the output option first.

ID Generator

If you are not using a game audio middleware, this tool can help you generate unique IDs for all your dialogue lines in order to reference them at run-time.

Three types of IDs can be generated: GUIDs, hash codes and indices.

GUIDs are the typical Microsoft GUIDs and have this form:
`{ 0x54f8adb6, 0xbe78, 0x4c95, { 0xa0, 0xb4, 0xc2, 0xbf, 0x70, 0xfd, 0x9d, 0x76 } };`
They are generated based on the file path so a file will always be assigned the same GUID.

Hash codes are unique 32-bit numbers, also generated from the path of a dialogue file.

Finally, indices are 32-bit numbers corresponding to the positions of the files in the Alto Studio project. If the "Language mask" option is selected, the higher bits are used to code the language. For example, the 8th reference file will be coded as 0x00000008 and the index of the corresponding file in the 3rd localized language will be 0x03000008.

Note that both hash codes and indices can be generated either as decimal or hexadecimal values.

Once the IDs are generated, they can be exported in different ways:
- in a .cs file to use in C# (for example with Unity)
- in a C++ header file (.h)
- in an XML file that a third-party tool can read
- in an Excel worksheet (with columns for the name of the ID, its value, and the original file path)

It is possible to generate a file per language or to group all the IDs in a single file.

In the case of an ID naming conflict (for example *English/Level01/Alan_Voice_01* and *English/Level02/Alan_Voice_01*), the name of the ID can be prepended with the parent folder. In that case, the 2 IDs generated would be Level01_Alan_Voice_01 and Level02_Alan_Voice_01. They can also be encapsulated in a subclass or a namespace.

A last option instructs Alto Studio to open the generated files automatically.

Batch Processing with AudioBot™

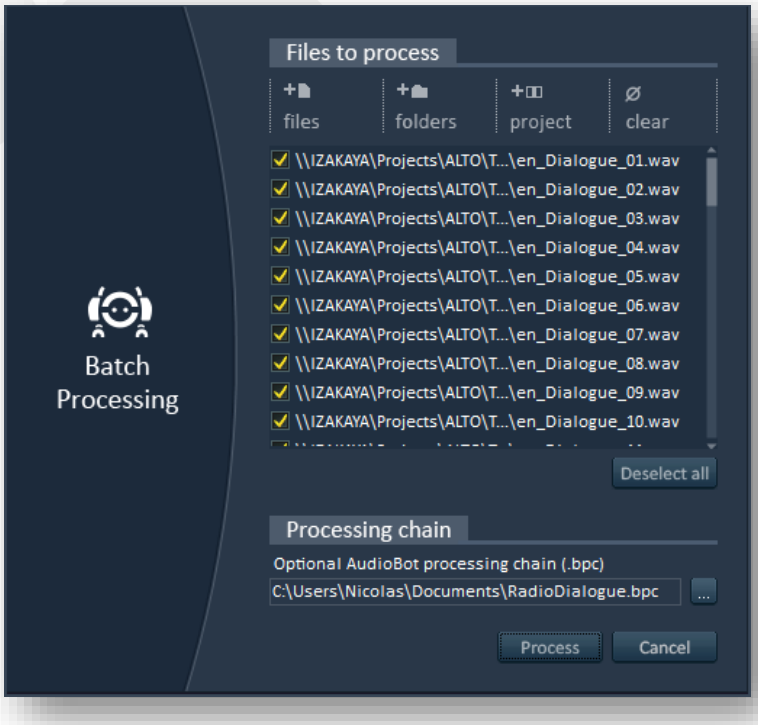
AudioBot is the powerful audio batch processor from Tsugi. It includes many advanced features to process and organize large numbers of audio files. If you are not using it yet, you can get more information and download a free trial version here:

http://www.tsugi-studio.com/web/en/products-audiobot.html

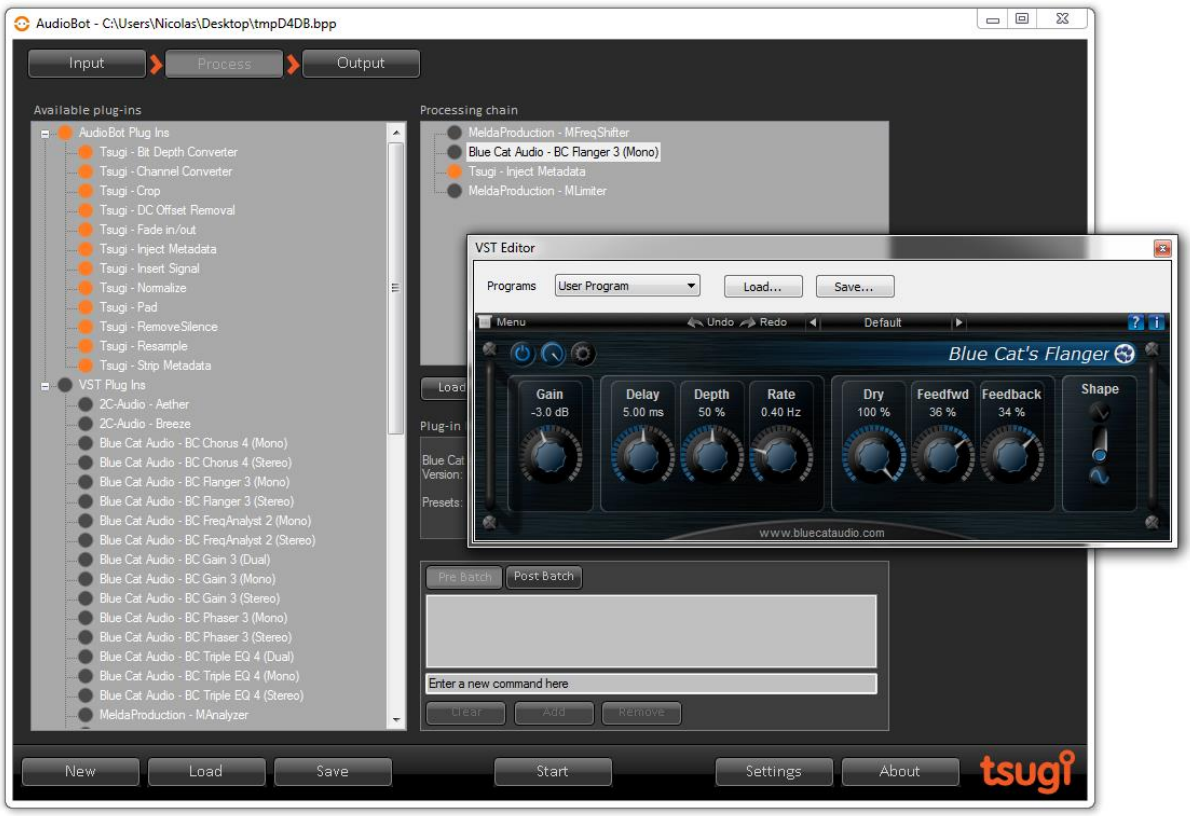
Alto Studio provides an option to batch-process the dialogue files by leveraging AudioBot's power. Whenever you call the "Batch Process with AudioBot" command, Alto Studio generates an AudioBot project referencing the dialogue lines you want to process, starts AudioBot and load the project.

The files you want to process must be specified in the left section of the window, which is similar to the Loudness Equalizer: you can add files or full folders to the list (the content of the subfolders is added as well) and if an Alto Studio project is currently open, you can also add all the files from one or several languages in the project at once by clicking on the "Project" button. It is also possible to select only dialogue lines spoken by a given character. If you made a mistake or want to process a new group of files, simply press on the "Clear" button.

AudioBot can host VST, Vamp and Tsugi plug-ins. If you previously saved a plug-in chain in AudioBot (a .bpc file) you can specify it here too. Then, once AudioBot is automatically started, you can do some final adjustments if needed and press the "Start" button to process all your dialogue lines.



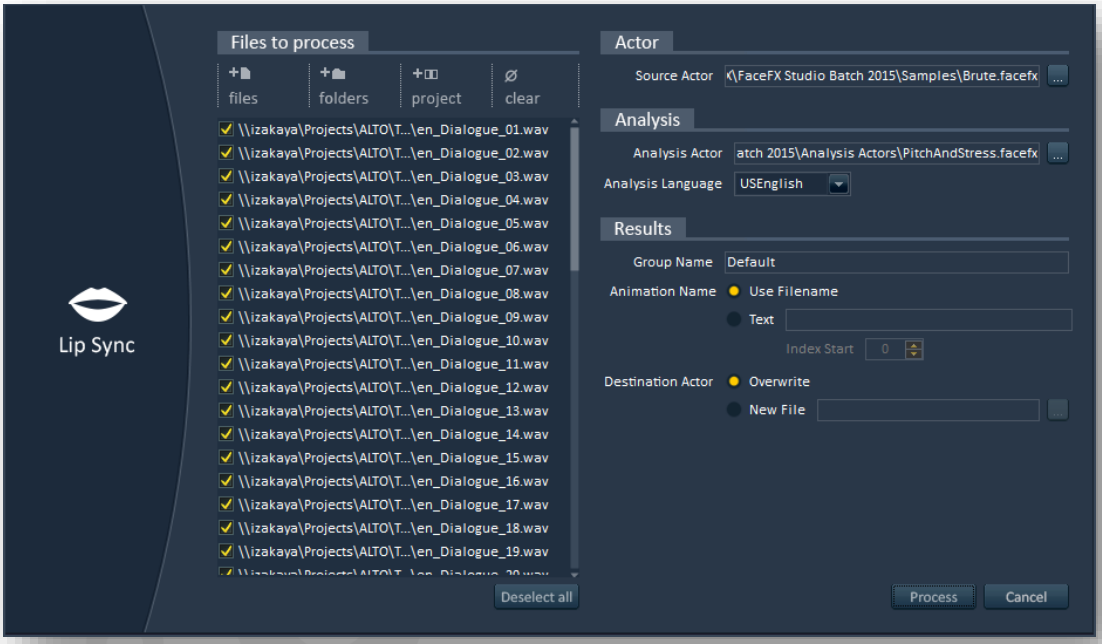
This seamless integration between Alto Studio and AudioBot is very useful if you want to apply the same “Walkie-Talkie” effect to a large number of your dialogue lines for example.



<u>Note</u>: for this feature to work, AudioBot version 1.1 or higher is required. Please visit our web site to download the latest free AudioBot update.

LipSync with FaceFX™

Alto Studio interfaces with FaceFX from OC3 Entertainment, providing an easy way to automatically generate lipsync data and create an animation for many audio files at once.



Similarly to the Loudness Equalizer or the Batch Processor tools, the left section of the window allows you to specify the dialogue files you want to process.

You can add files or full folders (including subfolders if needed) and, if an Alto Studio project is currently open, you can also add all the files from one or several languages in the project at once by clicking on the “Project” button. It is also possible to select only dialogue lines spoken by a given character. If you made a mistake or want to process a new group of files, simply press on the “Clear” button.

On the right side of the window, you can choose the source actor, i.e. the .facefx file that contains the character you want to add lip-synched animations to. Next, you can select the analysis settings: the actor and the language to use.

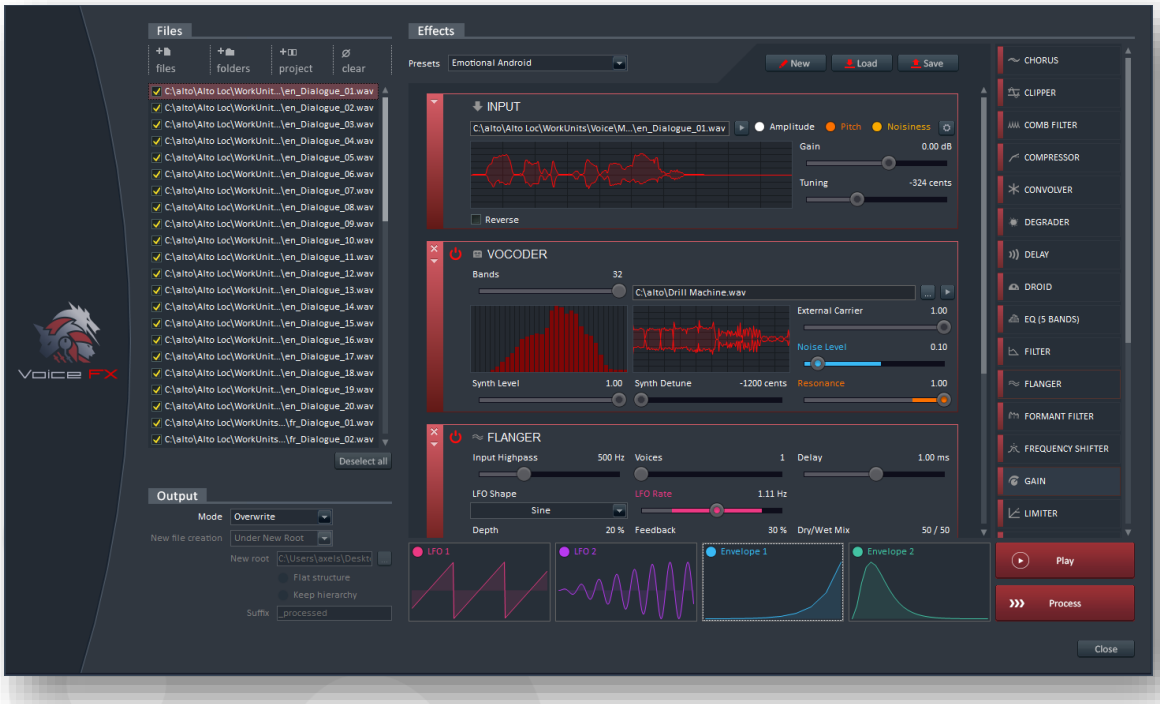
Finally, you specify in what group the animations will be created and what name they should have. They can either use the name of the associated audio files or a base name with an index. The original .facefx actor file can be overwritten or a new one can be created.

Note: this feature requires FaceFX™ Studio version or higher.

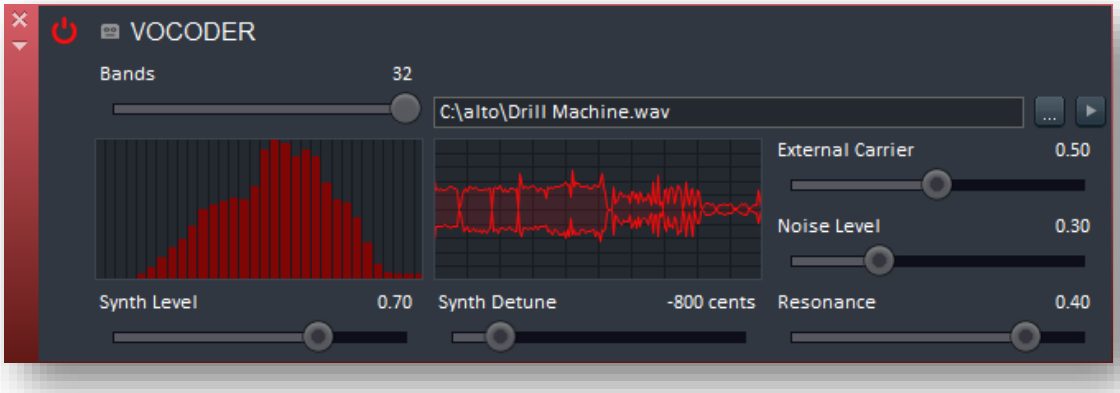
VoiceFX

Alto Studio includes VoiceFX, Tsugi's technology for vocal processing. VoiceFX makes it possible to easily create robot, alien or monster voices and to simulate other effects such as radio transmissions or stadium announces.

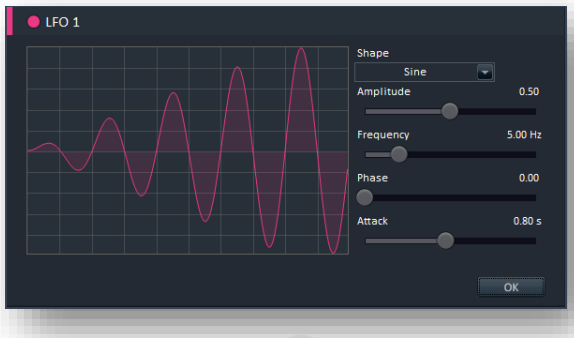
Of course, since everything is done in Alto Studio, all the dialog lines of a project can be quickly batch-processed, or only the lines in a given language, the ones spoken by a specific character etc.



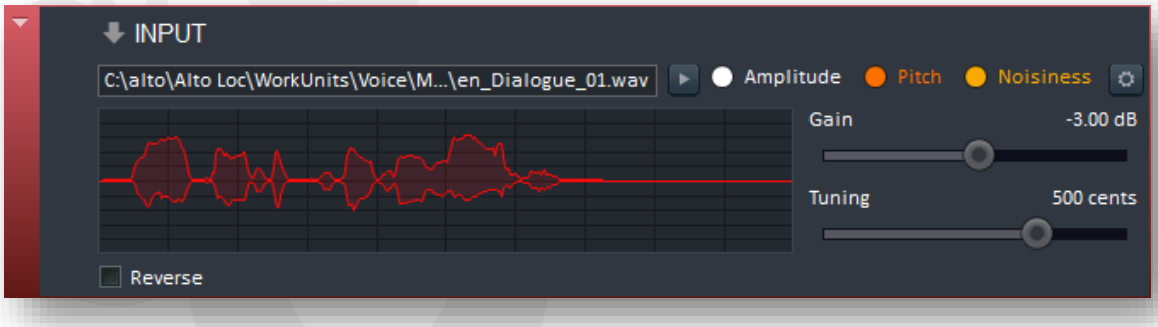
Sound designers can build VoiceFX processing chains intuitively by stacking effect racks. Among the effects available are: chorus, clipper, comb filter, compressor, convolver, degrader, delay, droid, graphic equalizer, filter, flanger, formant filter, frequency shifter, gain, limiter, mixer, pitch shifter, resonator, reverb, ring modulator, saturator, spectral delay, stutter, tube, and vocoder (depicted below).



The parameters of these effect racks can be modulated by envelopes and low frequency oscillators (LFOs).



The audio files being processed can be analysed and their amplitude, pitch and noisiness curves used as modulation sources as well, allowing for the creation of rich and evolving timbres.



For detailed information about all the effect racks and features of VoiceFX, please refer to the separate VoiceFX User Manual that has been installed with Alto Studio 4.0.

Integration

There are several ways to expand Alto Studio and to integrate it into your current tool chain.

Importer plug-ins

The Alto Studio SDK allows you to develop plug-ins to extend Alto Studio's capabilities. These plug-ins can be written very quickly and easily in C#. The whole user interface will be generated for you automatically by Alto Studio.

The first type of plug-in is the importer plug-in. It allows you to get dialogue lines from your proprietary tool or database into Alto Studio. Importer plug-ins will appear in the "New Project' window. An example of such plug-in is shipped with Alto Studio: it is the CSV importer plug-in. This plug-in imports a CSV (Comma-Separated Values) file. The first line defines the languages, the first one being the reference. Other lines describe the paths to the files in the various languages, in the same order.

Importer plug-ins will automatically have controls to select the path of the project, to choose the available languages in the project and to define the reference language. The CSV importer plug-in is quite simple and only has these controls.

However, if you want to add other settings you can provide parameter definitions. Alto Studio will detect them and automatically create the right interface for your plug-in.

Exporter plug-ins

The Alto Studio SDK also allows you to develop exporter plug-ins. in C#.

Exporter plug-ins are displayed in the window that appears after selecting the “Export Project…” command from the “File” menu.

Alto Studio comes with a simple example of exporter plug-in. The XML Exporter plug-in allows the user to save the paths of all the reference and localized files in the project in a unique XML file. It can be used to exchange the structure of an Alto Studio project with a third-party tool.

The XML file first contains the name of the reference language, then a list of the names of the localization languages.

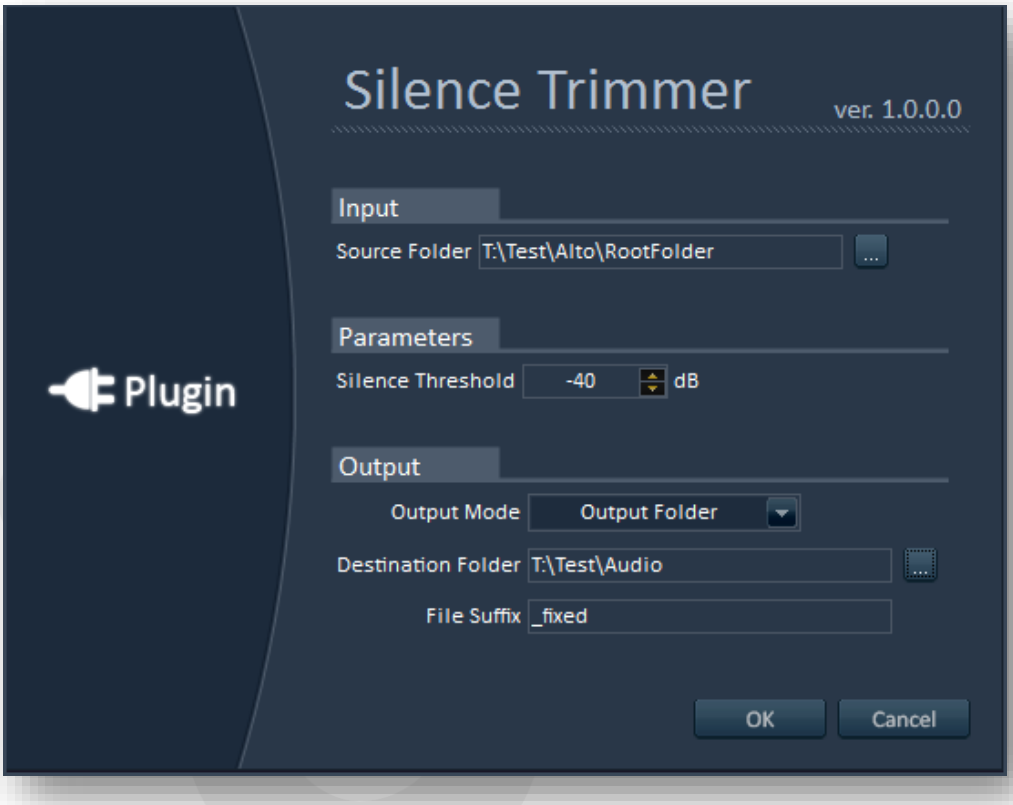
Finally, the paths of the files in the Alto Studio project are written. The path of each reference file is followed by the paths of its localized versions.

Tool plug-ins

In addition to the importer and exporter plug-ins, Alto Studio supports tool plug-ins. These plug-ins allow you to add new features to Alto Studio. They will logically appear in the “Tools” menu.

Similarly to the importer plug-ins, tool plug-ins can expose many parameters, for which an editor will be automatically created by Alto Studio.

Alto Studio comes with an example of tool plug-in: the Silence Trimmer.

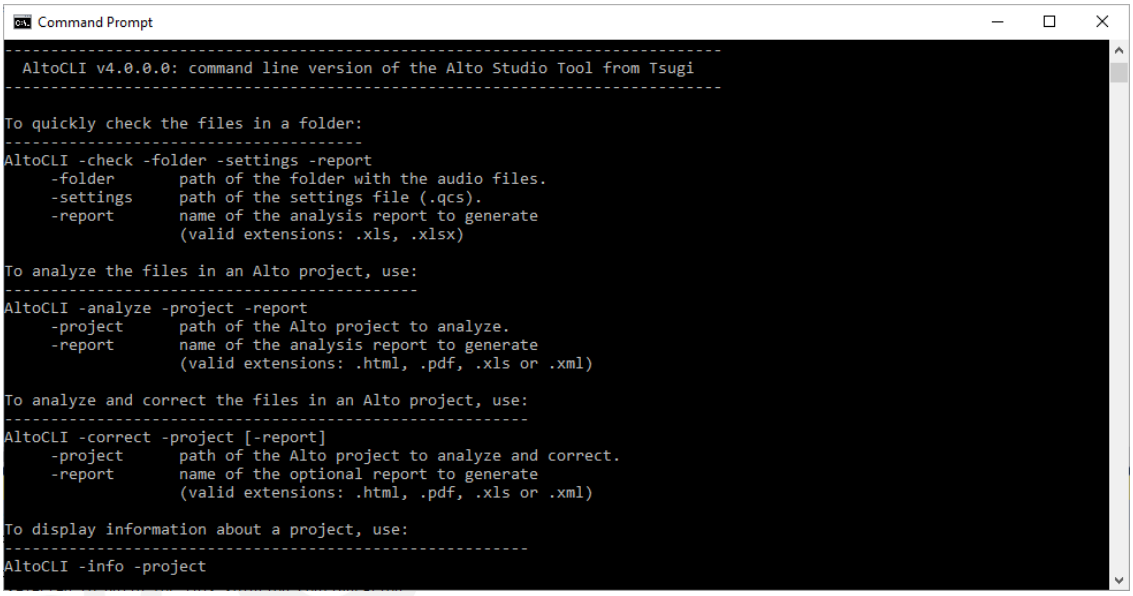


The Silence Trimmer plug-in lets you remove the silence at the beginning and at the end of a dialogue file. First, you have to select the folder where the files to process are located. Then, the silence threshold (in dB) must be chosen. This is the level under which the signal is considered as silent. Finally, you can specify how the corrected files must be saved: either with the same name in a different folder, or in the same folder but with a suffix, such as “_fixed” for example.

Tool plug-ins also offer access to Alto Studio’s internal DSP functions. When you write a tool plug-in, it is possible to call functions to calculate the loudness (LKFS), the loudness range (LRA), true peaks (dBTP), the root mean square (RMS), the loudness in equidistant spectral bands, as well as extract the spectrum and the amplitude or pitch envelopes. It is also possible to call a function to correct the loudness of a file with a single line of code.

Command line version

You can integrate Alto Studio into your build pipeline by using the command line version, which is located in the same folder than the Alto Studio tool. The name of the executable is AltoCLI.exe. The command line version reads the same project or settings files than the GUI version. This makes it easy to configure a project and keeps the calling syntax simple.



The available commands are described below:

Check: check the properties of the audio files in a folder and generates a report. It is similar to the Quick Check feature from the tool and reads the same settings file. (.qcs).

```
AltoCLI -check -folder -settings -report
     -folder       path of the folder with the audio files.
     -settings     path of the settings file (.qcs).
     -report       name of the analysis report to generate
                   (valid extensions: .xls, .xlsx)
```

Analyze: analyze the files in an Alto Studio project and generate a report. This command is the equivalent of the Analysis or Compare features from the tool and reads Alto Studio project files.

```
AltoCLI -analyze -project -report
     -project      path of the Alto Studio project to analyze.
     -report       name of the analysis report to generate
                   (valid extensions: .html, .pdf, .xls or .xml)
```

Depending on the extension specified for the report's name, Alto Studio will generate an XML file, an Excel workbook, a PDF document, or HTML pages.

Correct: analyze and correct the files referenced by an Alto Studio project. This command is the equivalent of the Correct or Conform features from the tool and reads Alto Studio project files.

```
AltoCLI -correct -project [-report]
     -project      path of the Alto Studio project to analyze and correct.
     -report       name of the optional report to generate
                   (valid extensions: .html, .pdf, .xls or .xml)
```

The report generation is optional, and the type of report created depends on the extension specified for the report's name.

Info: display information about an Alto Studio project, such as the reference and localized languages and script information if any.

```
AltoCLI -info -project
     -project      path of the Alto Studio project to analyze and correct.
```

Voices: display the list of synthesis voices installed that are compatible with Alto Studio.

```
AltoCLI -voices
```

The names can be used for the -voice parameter of the next command.

Synthesize: synthesize dialogue using Windows text-to-speech synthesizer.

```
AltoCLI -synthesize -text -voice -output [-basename] [-volume] [-rate]
     -text         path of .txt file containing the dialogue lines.
     -voice        name of the voice to use e.g., 'Hortense'
     -output       path of the folder where to save the .wav files.
     -basename     optional base name of the .wav files (default = name of the voice).
     -volume       optional volume of the voice [1...100] (default = 100)
     -rate         optional rate of the voice [-10...10] (default = 0)
```

Support

Should you have any questions about Alto Studio's usage, any feedback, bug reports or feature requests, don't hesitate to contact us directly at the following email address: support@tsugi-studio.com

We value your feedback and we are constantly working with professional game studios and localization agencies to bring the features the most needed to Alto Studio. Don't hesitate to contact us!

To get quickly up to speed with Alto Studio, there are a several videos on Tsugi's YouTube channel:
https://www.youtube.com/user/tsugistudio

There are also some presentations on SlideShare:
http://www.slideshare.net/TsugiStudio/alto-tutorial-slideshowen

More technical questions may be answered by the other documentations that come with Alto (you can also find them on our web site).

Release Notes: describes the changes that occurred between the different Alto Studio updates (http://www.tsugi-studio.com/Support/Alto%20Release%20Notes.pdf)

Integration Notes: describes how to integrate Alto Studio with an existing tool, pipeline or workflow. In particular, it explains how to develop Alto Studio importer and tool plug-ins. (http://www.tsugi-studio.com/Support/Alto%20Integration%20Notes.pdf)

Concerning integration, we have developed several custom versions of Alto Studio as well as specific plug-ins for game publishers. Don't hesitate to reach out if you think this is something you may need our help with.

For the most recent information about Alto Studio and to download the latest version, check Alto Studio's page on Tsugi's web site:
http://www.tsugi-studio.com/web/en/products-alto.html

Annex 1: Keyboard Shortcuts

Command buttons / menu functions

New Project	**Ctrl + N**
Load Project	**Ctrl + O**
Save Project	**Ctrl + S**
Save Project As	**Ctrl + Shift + S**
Export Project	**Ctrl + X**
Exit	**Alt + F4**
Single-language analysis	**Ctrl + Shift + A**
Multi-language analysis	**Ctrl + A**
Single-language correction	**Ctrl + Shift + C**
Conform to reference language	**Ctrl + C**
Publish	**Ctrl + P**
Find Files	**Ctrl + F**
Edit Source Project in Tool (or Open In Explorer)	**Ctrl + E**
Synchronize	**Ctrl + K**
Remove Files	**Ctrl + M**
Quick Check	**Ctrl + Q**
Interactive Dialogue Tester	**Ctrl + I**
Speech Synthesizer	**Ctrl + T**
Loudness Equalizer	**Ctrl + L**
LipSync with FaceFX	**Ctrl + Y**
Batch Processing with AudioBot	**Ctrl + B**
Batch Renamer	**Ctrl + R**
ID Generator	**Ctrl + G**
VoiceFX	**Ctrl + V**
Alto Studio Documentation	**F1**

In the report view

Jump to previous error type	**Shift + Up**
Jump to next error type	**Shift + Down**
Jump to previous language	**Page Up**
Jump to next language	**Page Down**
Jump to start of report	**Home**
Jump to end of report	**End**
Play localized file	**Space**
Play reference file	**Ctrl + Space**
Compare in waveform view	**Ctrl + Tab**
Open in sound editor	**Enter**

In the project tree

Play reference file	**Space**
Play localized file	**Ctrl + Space**
Open reference file in sound editor	**Enter**
Open reference file and all localized files in sound editor	**Ctrl + Enter**
Show reference file in folder	**Ctrl + Shift + Enter**

In the Interactive Dialogue Tester tool

Play Sample	**Space**
Play Dialogue	**Ctrl + Space**
Play Random	**Shift + Space**
Remove sample	**Delete**
Compare in waveform view	**Ctrl + Tab**

In the Batch Renamer tool

Add new preset	**Ctrl + P**
Rename selected preset	**F2**
Remove selected preset	**Ctrl + Delete**
Add files	**Ctrl + F**
Add folders	**Ctrl + Shift + F**
Add languages	**Ctrl + L**
Clear files	**Ctrl + D**
Add conditional rule	**Ctrl + C**
Add addition rule	**Ctrl + A**
Add removal rule	**Ctrl + R**
Add replacement rule	**Ctrl + Shift + R**
Remove all rules	**Ctrl + Shift + D**
Remove selected rule	**Delete**
Select previous rule	**Up**
Select next rule	**Down**
Move selected rule up	**Ctrl + Up**
Move selected rule down	**Ctrl + Down**
Move rule out of condition	**Ctrl + Left**
Move rule in condition	**Ctrl + Right**

In the Results pane of the Find Files tool

Play selected file	**Space**
Open selected file in sound editor	**Enter**

In VoiceFX

Select first rack in chain	**Home**
Select last rack in chain	**End**
Select next rack	**Ctrl + Tab**
Delete selected rack	**Delete**