

Dialog Audio Generator Documentation

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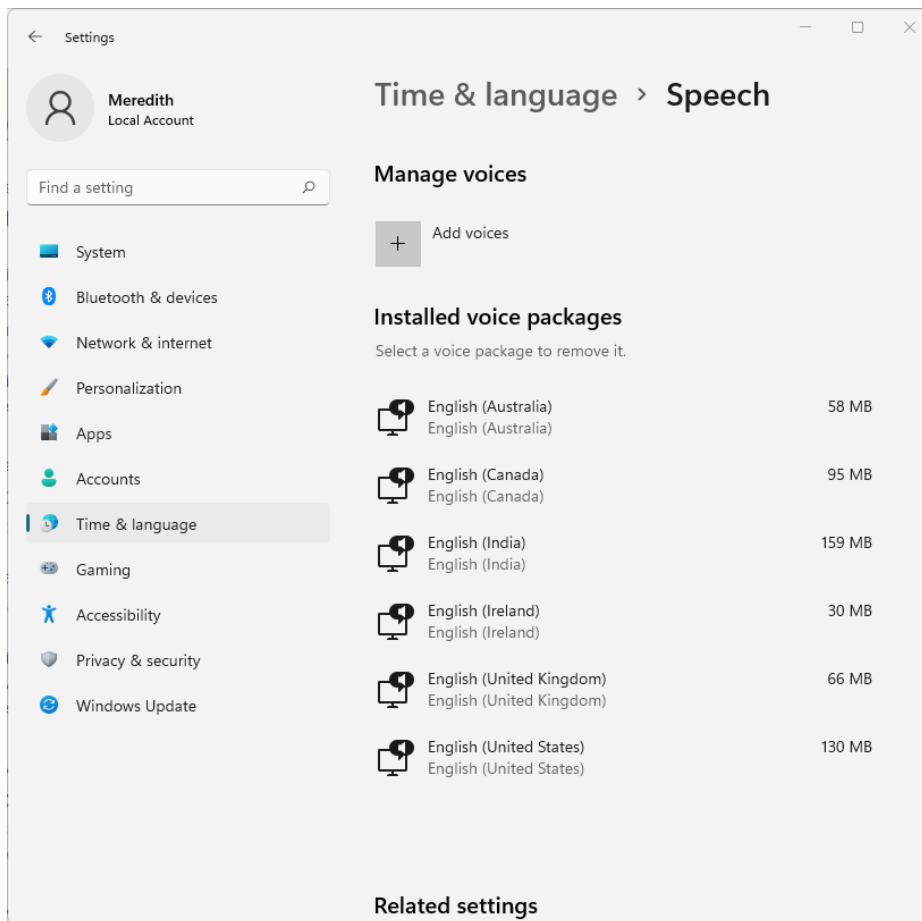
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Introduction

The Dialog Audio Generator application allows you to generate audio for your dialog engine dialogs using the text-to-speech voices installed on your PC.

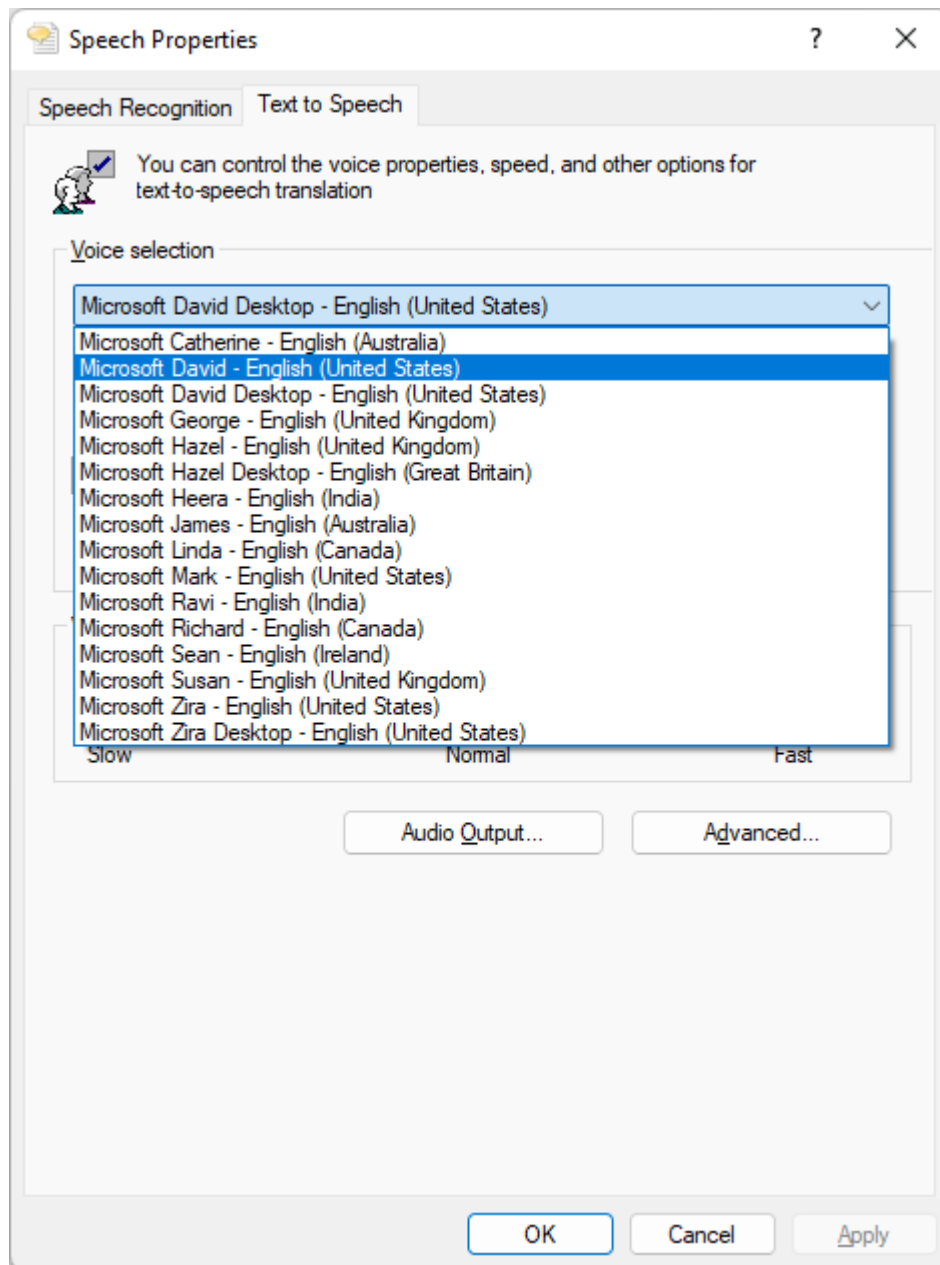
Unlocking more text to speech voices

By default, the application will only have access to SAPI voices, and not the various narrator voices that you can install on Windows. To see what SAPI voices you have, go to Control Panel\All Control Panel Items\Speech Recognition and click on “Text to speech” in the left menu. Usually there will only be a few voices in the list, but you can expand it to include the voice packages included in the Windows language packs.



Windows language packages

To expand the list of SAPI voices to include all the voice packages, you will need to edit a couple of files in your registry. Follow the instructions at this link: <https://www.ghacks.net/2018/08/11/unlock-all-windows-10-tts-voices-system-wide-to-get-more-of-them/> (if the link is no longer active, just Google “unlock all windows tts voices”).



Unlocked voices in text to speech dialog

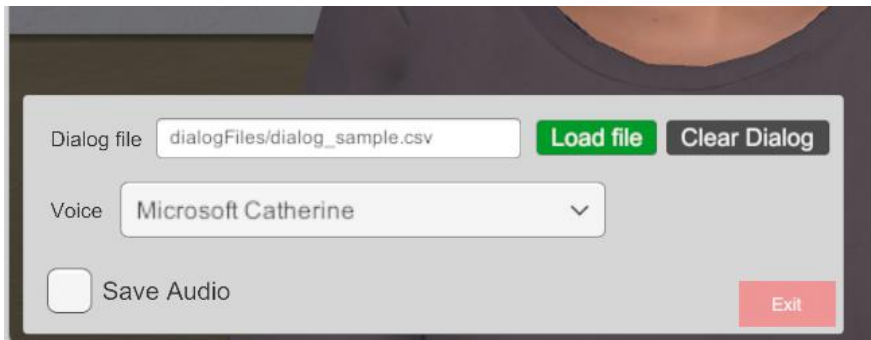
Running the Dialog Audio Generator application

1. Unzip the DialogAudioGenerator.zip folder and open the DialogAudioGenerator folder
2. Run the DialogAudioGenerator.exe application

The application will open in full-screen view, but you can press Alt+Enter to change it to a resizable window.

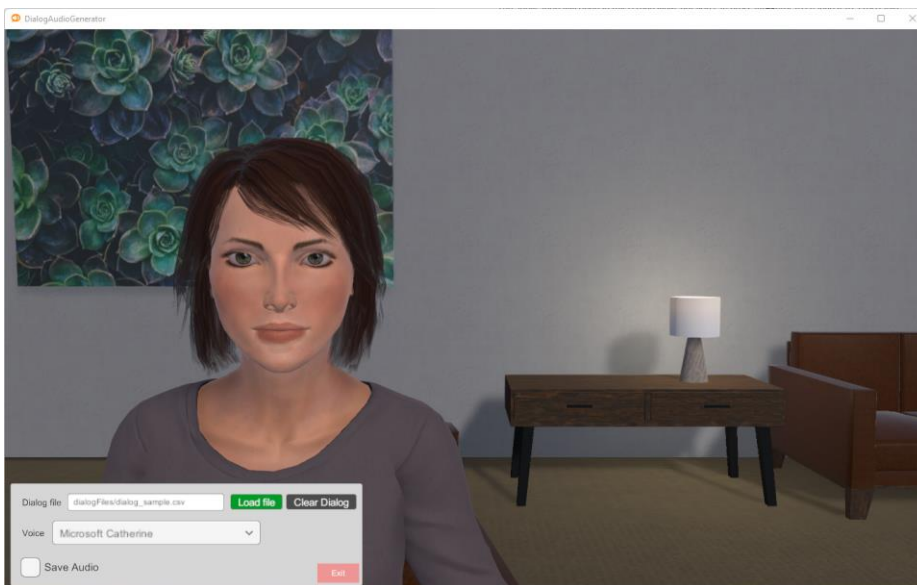
The application will come pre-loaded with a sample dialog file. Click "Load" to load the file. You can click "Clear dialog" to clear the loaded file. You can find the sample dialog file in the folder DialogAudioGenerator_Data/dialogFiles, which is where you should put all dialog files you want to load. It is called "dialog_sample.csv".

When typing the name of a new dialog file in the "Dialog file" text box, you must include the "dialogFiles/" folder name at the beginning.



The load dialog file panel

The “Voice” drop down will display the text-to-speech voices that the application has access to. Choosing a female voice will load a female avatar and choosing a male voice will load a male avatar. The female avatar will be loaded by default, even if the first voice displayed is a male voice. In this case you can load the correct avatar by choosing a different voice and then switching back to the original voice.



Female agent



Male agent

Preparing a dialog file for audio generation

The Dialog Audio Generator can load a single-agent dialog file, which is a csv file with the following heading structure:

Current State	Next State	Utterance	Meaning	Style	Actions
The name of the current line of dialog	The dialog state that comes next	The line of dialog	Blank	Blank	Blank

The Actions column should be blank and if you are generating audio for a multi-agent dialog, the AgentName column must be deleted.

After these changes have been made, you should be able to load a dialog file in as-is, but for optimal audio generation you can remove all player states and change the next state column so that each agent state autoplays one after the other.

	A	B	C	D	E	F	G	H	I
1	Current State	Next State	Utterance	Meaning	Style	Actions	AgentName		
2	Start	ZhengIntro	Click to start			clear:oran Zheng			
3	ZhengIntro	ShivaIntro	Hi I'm Zheng.			func_Add Zheng			
4	ShivaIntro	Zheng1	And I'm Shiva.			Shiva			
5	Zheng1	re_Zheng1	Let's all have a conversation about colours. How does that sound?			Zheng			
6	re_Zheng1	Zheng2	Sounds good			Player			
7	re_Zheng1	Shiva1	I don't like colours			disagree: Player			
8	Shiva1	Zheng2	Everyone likes colours!			Shiva			
9	Zheng2	Shiva2	My favourite colour is orange. What about you, Shiva?			Zheng			
10	Shiva2	re_Shiva2	I think mine is purple.			Shiva			
11	re_Shiva2	Zheng3	Mine is orange too.			set:orange Player			
12	re_Shiva2	Shiva3	Mine is purple too			set:purple Player			
13	re_Shiva2	Zheng4	Black.			set:black Player			
14	re_Shiva2	Shiva3	I like blue!			set:blue Player			
15	re_Shiva2	Shiva4	I like green!			set:green Player			
16	re_Shiva2	Shiva5	I like all the colours!			set:allcolc Player			
17	re_Shiva2	Zheng5	I don't like colours			set:nocolc Player			
18	Zheng3	Zheng6	That's great! I painted my kitchen orange!			Zheng			
19	Shiva3	Zheng6	I also like blue a lot. I hate red though.			Shiva			
20	Zheng4	Zheng6	That's nice.			Zheng			
21	Shiva4	Zheng6	Green's OK. I like that it goes with so many other colours.			Shiva			
22	Shiva5	Zheng6	Me too! Except red.			Shiva			
23	Zheng5	Zheng6	OK fine.			Zheng			
24	Zheng6	Shiva6	This line of dialog doesn't have any audio associated with it. You will need to click on it to progress.			Zheng			
25	Shiva6	Shivaorange	We can also remember things you tell us			if(purple) Shiva			
26	Shivaorange	re_Shivacolours	For example, I remember that your favourite colour is orange.			Shiva			
27	Shivapurple	re_Shivacolours	For example, I remember that your favourite colour is purple.			Shiva			
28	Shivablack	re_Shivacolours	For example, I remember that your favourite colour is black.			Shiva			
29	Shivablue	re_Shivacolours	For example, I remember that your favourite colour is blue.			Shiva			
30	Shivagreen	re_Shivacolours	For example, I remember that your favourite colour is green.			Shiva			
31	Shivaall	re_Shivacolours	For example, I remember that you like all colours!			Shiva			
32	Shivanone	re_Shivacolours	For example, I remember that you don't like any colours. Which doesn't make sense, because everyone likes colours.			Shiva			
33	re_Shivacolours	Zheng7	That's cool. Is there anything else you can do?			Player			
34	re_Shivacolours	Zheng7	Eh, that's ok I guess. What else can you do?			Player			
35	Zheng7	Zheng_Monday	We can also run functions that you can define in the Functions.cs script that is attached to the Dialog engine object.			func_Whi Zheng			
36	Zheng_Monday	Shiva7	For example, I've calculated that today is Monday			Zheng			
37	Zheng_Tuesday	Shiva7	For example, I've calculated that today is Tuesday			Zheng			
38	Zheng_Wednesday	Shiva7	For example, I've calculated that today is Wednesday			Zheng			
39	Zheng_Thursday	Shiva7	For example, I've calculated that today is Thursday			Zheng			
40	Zheng_Friday	Shiva7	For example, I've calculated that today is Friday			Zheng			
41	Zheng_Saturday	Shiva7	For example, I've calculated that today is Saturday			Zheng			
42	Zheng_Sunday	Shiva7	For example, I've calculated that today is Sunday			Zheng			
43	Shiva7	Start	Ok, that's all from us now. Bye!			Shiva			
44									

In the example above, all the player dialog states are highlighted. These rows should be deleted, leaving only the agent dialog states (make sure to save this as a separate file so your original dialog file isn't changed). In this file there are two agents, Shiva, who will need a female voice, and Zheng, who will need a male voice.

	A	B	C	D	E	F	G
1	Current State	Next State	Utterance	Meaning	Style	Actions	AgentName
2	Start	Zheng_Friday	Click to start				Zheng
3	Zheng_Friday	Zheng_Monday	For example, I've calculated that today is Friday				Zheng
4	Zheng_Monday	Zheng_Saturday	For example, I've calculated that today is Monday				Zheng
5	Zheng_Saturday	Zheng_Sunday	For example, I've calculated that today is Saturday				Zheng
6	Zheng_Sunday	Zheng_Thursday	For example, I've calculated that today is Sunday				Zheng
7	Zheng_Thursday	Zheng_Tuesday	For example, I've calculated that today is Thursday				Zheng
8	Zheng_Tuesday	Zheng_Wednesday	For example, I've calculated that today is Tuesday				Zheng
9	Zheng_Wednesday	Zheng1	For example, I've calculated that today is Wednesday				Zheng
10	Zheng1	Zheng2	Let's all have a conversation about colours. How does that sound?				Zheng
11	Zheng2	Zheng3	My favourite colour is orange. What about you, Shiva?				Zheng
12	Zheng3	Zheng4	That's great! I painted my kitchen orange!				Zheng
13	Zheng4	Zheng5	That's nice.				Zheng
14	Zheng5	Zheng6	OK fine.				Zheng
15	Zheng6	Zheng7	This line of dialog doesn't have any audio associated with it. You will need to click on it to progress.				Zheng
16	Zheng7	ZhengIntro	We can also run functions that you can define in the Functions.cs script that is attached to the Dialog engine object.				Zheng
17	ZhengIntro	Shiva1	Hi I'm Zheng.				Zheng
18	Shiva1	Shiva2	Everyone likes colours!				Shiva
19	Shiva2	Shiva3	I think mine is purple.				Shiva
20	Shiva3	Shiva4	I also like blue a lot. I hate red though.				Shiva
21	Shiva4	Shiva5	Green's OK. I like that it goes with so many other colours.				Shiva
22	Shiva5	Shiva6	Me too! Except red.				Shiva
23	Shiva6	Shiva7	We can also remember things you tell us				Shiva
24	Shiva7	Shivaall	Ok, that's all from us now. Bye!				Shiva
25	Shivaall	Shivablack	For example, I remember that you like all colours!				Shiva
26	Shivablack	Shivablue	For example, I remember that your favourite colour is black.				Shiva
27	Shivablue	Shivagreen	For example, I remember that your favourite colour is blue.				Shiva
28	Shivagreen	ShivaIntro	For example, I remember that your favourite colour is green.				Shiva
29	ShivaIntro	Shivanone	And I'm Shiva.				Shiva
30	Shivanone	Shivaorange	For example, I remember that you don't like any colours. Which doesn't make sense, because everyone likes colours.				Shiva
31	Shivaorange	Shivapurple	For example, I remember that your favourite colour is orange.				Shiva
32	Shivapurple	Start	For example, I remember that your favourite colour is purple.				Shiva
33							

The image above shows the dialog file with all the player states removed and the dialog rows sorted by agent name. This is helpful since the agents will be using different voices. The next state column for each state has been changed so that each state will trigger the next state down in the file.

	A	B	C	D	E	F	G
1	Current State	Next State	Utterance	Meaning	Style	Actions	
2	Start	Zheng_Friday	Click to start				
3	Zheng_Friday	Zheng_Monday	For example, I've calculated that today is Friday				
4	Zheng_Monday	Zheng_Saturday	For example, I've calculated that today is Monday				
5	Zheng_Saturday	Zheng_Sunday	For example, I've calculated that today is Saturday				
6	Zheng_Sunday	Zheng_Thursday	For example, I've calculated that today is Sunday				
7	Zheng_Thursday	Zheng_Tuesday	For example, I've calculated that today is Thursday				
8	Zheng_Tuesday	Zheng_Wednesday	For example, I've calculated that today is Tuesday				
9	Zheng_Wednesday	Zheng1	For example, I've calculated that today is Wednesday				
10	Zheng1	Zheng2	Let's all have a conversation about colours. How does that sound?				
11	Zheng2	Zheng3	My favourite colour is orange. What about you, Shiva?				
12	Zheng3	Zheng4	That's great! I painted my kitchen orange!				
13	Zheng4	Zheng5	That's nice.				
14	Zheng5	Zheng6	OK fine.				
15	Zheng6	Zheng7	This line of dialog doesn't have any audio associated with it. You will need to click on it to progress.				
16	Zheng7	ZhengIntro	We can also run functions that you can define in the Functions.cs script that is attached to the Dialog engine object.				
17	ZhengIntro	voice_changeover	Hi I'm Zheng.				
18	voice_changeover	Shiva1	Now select Shiva's voice from the voices dropdown list				
19	Shiva1	Shiva2	Everyone likes colours!				
20	Shiva2	Shiva3	I think mine is purple.				
21	Shiva3	Shiva4	I also like blue a lot. I hate red though.				
22	Shiva4	Shiva5	Green's OK. I like that it goes with so many other colours.				
23	Shiva5	Shiva6	Me too! Except red.				
24	Shiva6	Shiva7	We can also remember things you tell us				
25	Shiva7	Shivaall	Ok, that's all from us now. Bye!				
26	Shivaall	Shivablack	For example, I remember that you like all colours!				
27	Shivablack	Shivablue	For example, I remember that your favourite colour is black.				
28	Shivablue	Shivagreen	For example, I remember that your favourite colour is blue.				
29	Shivagreen	ShivaIntro	For example, I remember that your favourite colour is green.				
30	ShivaIntro	Shivanone	And I'm Shiva.				
31	Shivanone	Shivaorange	For example, I remember that you don't like any colours. Which doesn't make sense, because everyone likes colours.				
32	Shivaorange	Shivapurple	For example, I remember that your favourite colour is orange.				
33	Shivapurple	Start	For example, I remember that your favourite colour is purple.				

Finally, the AgentName column is removed, and an extra state is inserted in between Zheng's dialog and Shiva's dialog to give us time to select the new voice.

Alternatively, we could have separate dialog files for our male and female agent. Each dialog file will need a state called "Start" so we can trigger the dialog.

	A	B	C	D	E	F	G
	Current State	Next State	Utterance	Meaning	Style	Actions	
	Start	Zheng_Friday	Click to start				
	Zheng_Friday	Zheng_Monday	For example, I've calculated that today is Friday				
	Zheng_Monday	Zheng_Saturday	For example, I've calculated that today is Monday				
	Zheng_Saturday	Zheng_Sunday	For example, I've calculated that today is Saturday				
	Zheng_Sunday	Zheng_Thursday	For example, I've calculated that today is Sunday				
	Zheng_Thursday	Zheng_Tuesday	For example, I've calculated that today is Thursday				
	Zheng_Tuesday	Zheng_Wednesday	For example, I've calculated that today is Tuesday				
	Zheng_Wednesday	Zheng1	For example, I've calculated that today is Wednesday				
	Zheng1	Zheng2	Let's all have a conversation about colours. How does that sound?				
	Zheng2	Zheng3	My favourite colour is orange. What about you, Shiva?				
	Zheng3	Zheng4	That's great! I painted my kitchen orange!				
	Zheng4	Zheng5	That's nice.				
	Zheng5	Zheng6	OK fine.				
	Zheng6	Zheng7	This line of dialog doesn't have any audio associated with it. You will need to click on it to progress.				
	Zheng7	ZhengIntro	We can also run functions that you can define in the Functions.cs script that is attached to the Dialog engine object.				
	ZhengIntro	Start	Hi I'm Zheng.				

ZhengDialog.csv

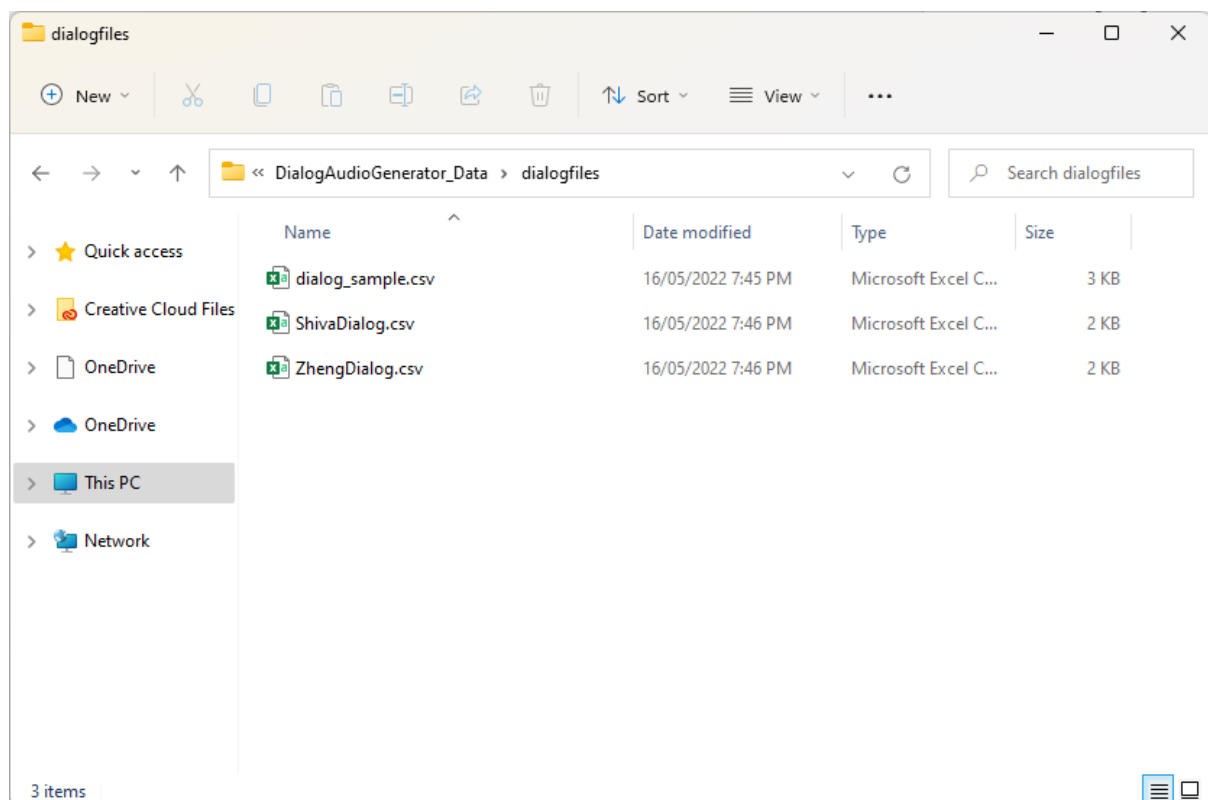
	A	B	C	D	E	F
1	Current State	Next State	Utterance	Meaning	Style	Actions
2	Start	Shiva1	Click to start			
3	Shiva1	Shiva2	Everyone likes colours!			
4	Shiva2	Shiva3	I think mine is purple.			
5	Shiva3	Shiva4	I also like blue a lot. I hate red though.			
6	Shiva4	Shiva5	Green's OK. I like that it goes with so many other colours.			
7	Shiva5	Shiva6	Me too! Except red.			
8	Shiva6	Shiva7	We can also remember things you tell us			
9	Shiva7	Shivaall	Ok, that's all from us now. Bye!			
10	Shivaall	Shivablack	For example, I remember that you like all colours!			
11	Shivablack	Shivablue	For example, I remember that your favourite colour is black.			
12	Shivablue	Shivagreen	For example, I remember that your favourite colour is blue.			
13	Shivagreen	ShivaIntro	For example, I remember that your favourite colour is green.			
14	ShivaIntro	Shivanone	And I'm Shiva.			
15	Shivanone	Shivaorange	For example, I remember that you don't like any colours. Which doesn't make sense, bec			
16	Shivaorange	Shivapurple	For example, I remember that your favourite colour is orange.			
17	Shivapurple	Start	For example, I remember that your favourite colour is purple.			
18						
19						

ShivaDialog.csv

Essentially, as long as the Current State name for each dialog isn't changed, you can use any configuration of dialog file that works best for you.

Loading and running a dialog file

Once you have finished preparing your dialog file for audio generation, place it in the DialogAudioGenerator_Data/dialogFiles folder.



Saved dialog files in the dialogfiles folder

Open the DialogAudioGenerator app and enter the file name into the “Dialog File” text box (make sure to include the “dialogFiles” folder name in front of your file name) then click the Load File button. Your starting state should show next to the agent.

Select the voice you want to use for the agent, and tick the “Save Audio” checkbox, then click on your starting dialog and let the dialog play through.



Loading a dialog file

Once the agent has started saying a line of dialog, you can click the line of dialog to progress to the next dialog state. The full audio will still be saved, even if it's interrupted.

If you want to reload the dialog file, or load another file, you must click the “Clear Dialog” button first, otherwise the new dialog will appear on top of the previous dialog.

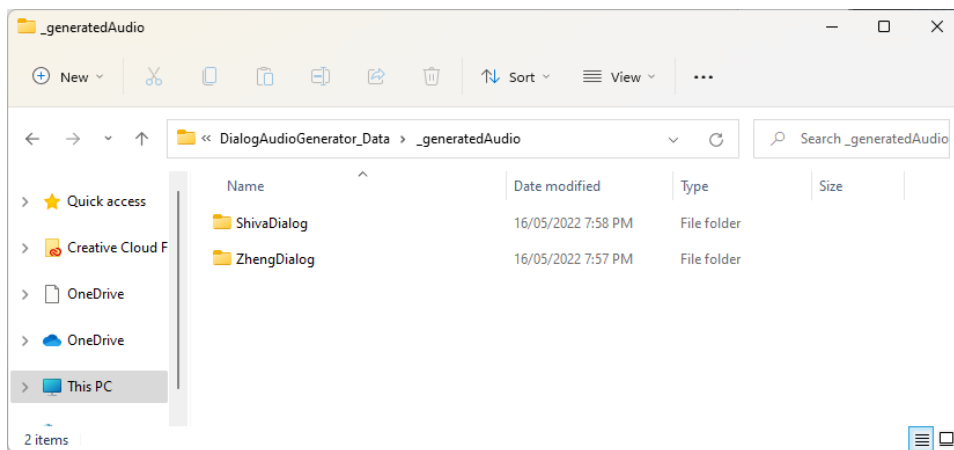
If you have more than one agent's lines in a single dialog file, you can change the agent's voice during the dialog play-through.



Selecting a new voice

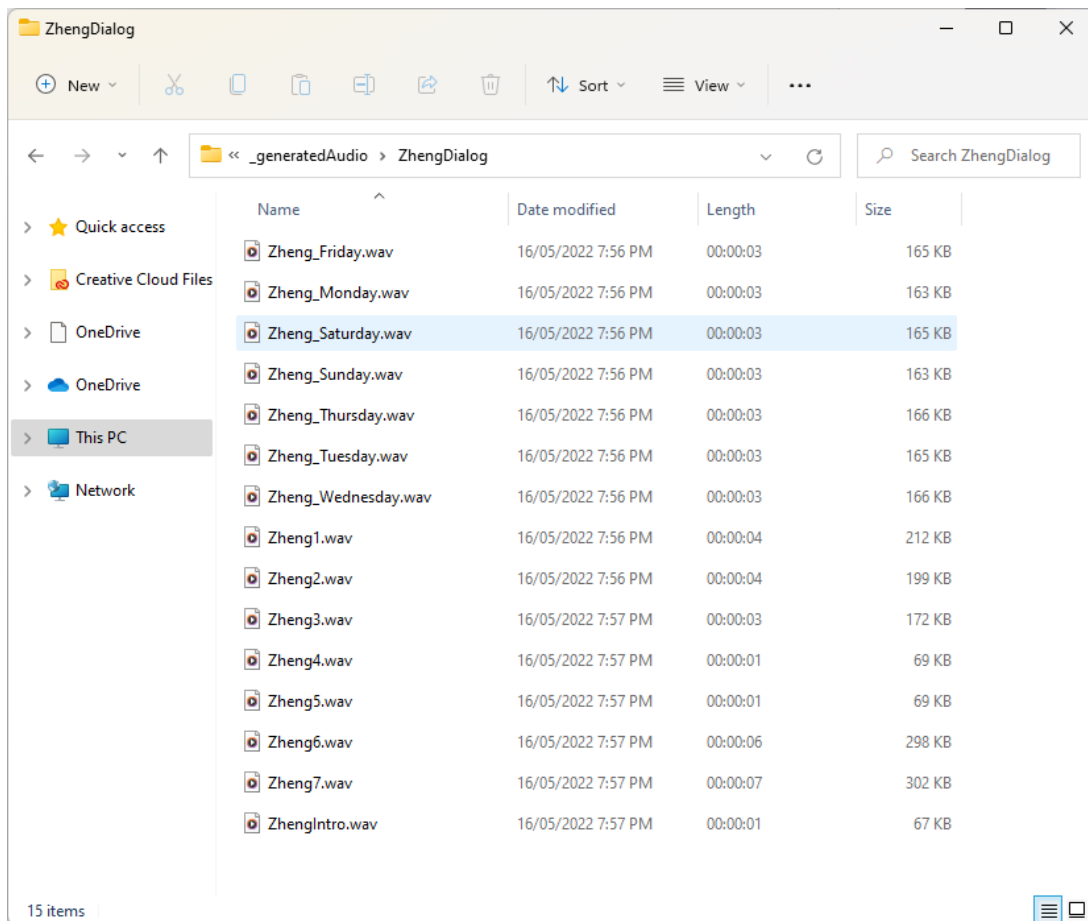
Using the saved audio files

If you have ticked the 'Save Audio' checkbox, the audio files will be saved in the "DialogAudioGenerator_Data_generatedAudio" folder.



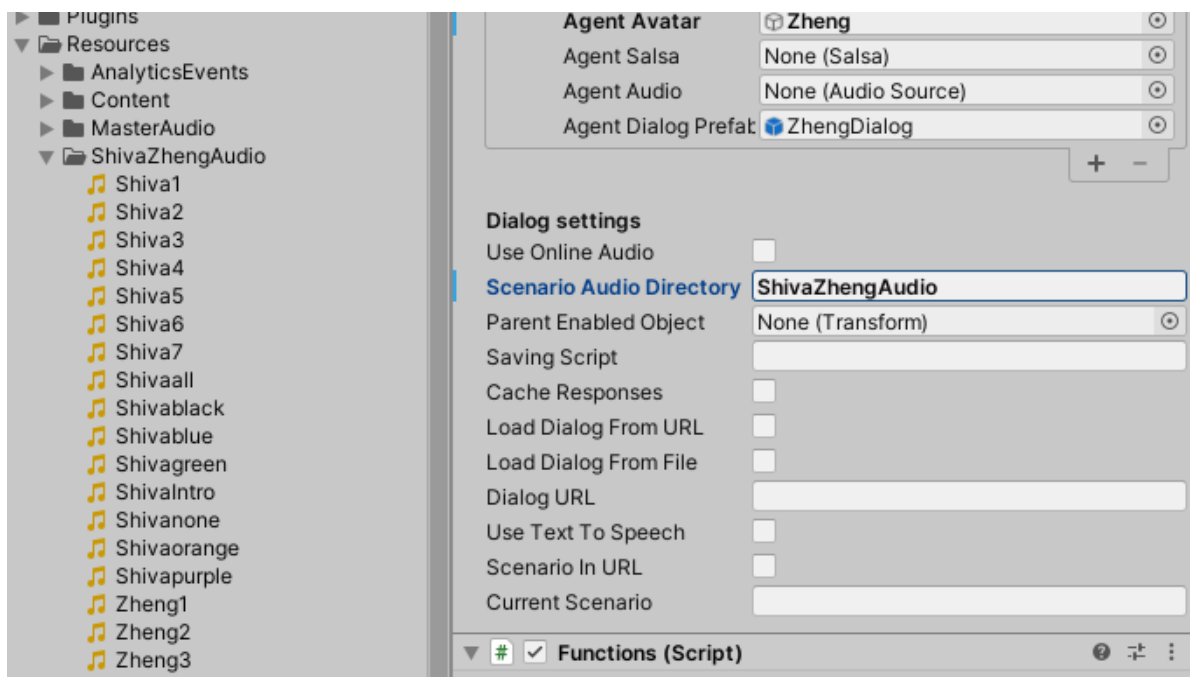
Saved dialog files in their own folders

The audio files will be uncompressed .wav files, which you can either use as-is in your unity project or convert to .mp3 or.ogg format using a program like Audacity, or an online converter.



Saved .wav files

If you have created separate dialog files to generate each of your agent's dialog audio, all the saved audio files should be put into the same folder in Resources when you are using it in your Unity project.



Both agents' audio files together in the same folder in Resources