

Dialog Engine for Two Agents Documentation

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Running the Male and Female Dialog scene

Open the URL https://web.science.mq.edu.au/vworlds/agent_dialog/MFdialog/ in a browser. It will run best in Chrome or Firefox. Wait for the Unity WebGL application to load and then you will be able to run through the sample dialog provided.

Uploading and Downloading Dialog files

You can upload new dialog and audio files and download the existing files on the Agent Dialog Management page: https://web.science.mq.edu.au/vworlds/agent_dialog/

On this page you can access the Male and Female dialog scene via the link under the “Current Agent Links” heading, and upload and download dialog and audio files under the “Upload dialog Files” heading.

Agent Links

Current Agent Links

- [Male and Female dialog](#)

Upload dialog Files

Upload dialog csv file

Select which agent dialog you are uploading the dialog csv file for:

☐ Male and Female dialog

Select the csv file you want to upload

No file selected.

Upload dialog audio files

Select which agent dialog you are uploading the audio files for:

☐ Male and Female dialog

Select one or multiple audio files to upload. You can upload up to 20 files at a time.

Note: audio files must be in MP3 format. If your audio files are not in this format, you can convert them here: <https://online-audio-converter.com/>

No files selected.

Viewing and Downloading Existing Files

To view and download the existing dialog file that is being used by the Male and Female dialog scene, select the “Male and Female dialog” radio button under the “Upload dialog csv file” heading and then click on the “dialog.csv” file that appears. This will download the dialog file to your computer. You can then open this file in Excel, notepad, or any other spreadsheet or text editing tool.

Upload dialog csv file

Select which agent dialog you are uploading the dialog csv file for:

☒ Male and Female dialog

Select the csv file you want to upload

No file selected.

Files uploaded for Male and Female dialog

[dialog.csv](#)

To view and download the existing audio files that are being used by the Male and Female dialog scene, select the “Male and Female dialog” radio button under the “Upload dialog csv file” heading. This will display all the audio files that have been uploaded for the dialog. You can click on these files to open them in the browser, or right click and save them to your computer.

Upload dialog audio files

Select which agent dialog you are uploading the audio files for:

☒ Male and Female dialog

Select one or multiple audio files to upload. You can upload up to 20 files at a time.

Note: audio files must be in MP3 format. If your audio files are not in this format, you can convert them here: <https://online-audio-converter.com/>

No files selected.

Files uploaded for Male and Female dialog

[female1.MP3](#)

[female2.MP3](#)

[female3.MP3](#)

[female4.MP3](#)

[female6.MP3](#)

[femaleIntro.MP3](#)

Uploading New Files

To upload a new dialog file, select the “Male and Female dialog” radio button under the “Upload dialog csv file” heading, then click the Browse button and select your dialog file, then click “Upload

csv file". Make sure the dialog has been saved in csv format before you upload it. The file will be renamed to "dialog.csv" and will overwrite the previous dialog file.

Upload dialog Files

Upload dialog csv file

Select which agent dialog you are uploading the dialog csv file for:

☒ Male and Female dialog

Select the csv file you want to upload

male_female_dialog.csv

Files uploaded for Male and Female dialog

To upload new audio files, select the "Male and Female dialog" radio button under the "Upload dialog csv file" heading, then click browse and select your audio files, then click "Upload audio files". You can use shift + select to select up to 20 files to upload at once.

Upload dialog audio files

Select which agent dialog you are uploading the audio files for:

☒ Male and Female dialog

Select one or multiple audio files to upload. You can upload up to 20 files at a time.

Note: audio files must be in MP3 format. If your audio files are not in this format, you can convert them here: <https://online-audio-converter.com/>

9 files selected.

The uploaded audio files will overwrite any existing audio files with the same names.

Once your new dialog and audio files have been uploaded, you can access the updated scene using the "Male and Female dialog" link at the top of the page. You can upload a dialog file without uploading any audio for it, but you will need to click on each speech bubble to progress the dialog.

Creating a dialog file

A Dialog file should be in csv format with UTF8 encoding and have the following heading structure:

Current State	Next State	Utterance	Meaning	Style	Actions	Agent Name
The name of the current line of dialog	The dialog state that comes next, or End if this is the last state	The line of dialog	Blank	Blank	What you want to happen at the end of this dialog state	The name of the Agent who is speaking or just "Player" if it is a player state

Each agent has a unique name assigned to them that must be entered into the Agent Name column. For the Male and Female dialog scene, the names are "Male" for the male agent and "Female" for the female agent. All agent names are case sensitive.

	A	B	C	D	E	F	G
1	Current State	Next State	Utterance	Meaning	Style	Actions	AgentName
2	Start	femaleIntro	Click to start			clear:all	Female
3	femaleIntro	maleIntro	Hey Jason, how are you going?				Female
4	maleIntro	female1	Hey Kristen, I'm ok. I'm pretty hungry though. Should we go out to eat?				Male
5	female1	male2	Sounds good. What were you thinking of?				Female
6	male2	female2	How about pizza?				Male

Dialog states

There are two categories of dialog states, agent states, and player states. An agent state is something that is said by one of the agents or characters the player is talking to. A player state is a list of responses that the player can choose from.

A player state must have "re_" in front of its state name and can take up several rows – one row for each option. Each option can either go to a different next state or the same one.

e.g.

Current State	Next State	Utterance	Meaning	Style	Actions	Agent Name
Agent_a1	re_player1	Hello, how are you?				Agent_a
re_player1	Agent_b1	I'm great				Player
re_player1	Agent_b1	I'm good				Player
re_player1	Agent_b2	I'm not that good				Player
Agent_b1	End	That's good				Agent_b
Agent_b2	End	I'm sorry to hear that				Agent_b
End	Agent_a1	Click to restart				Agent_b

Your first state should be called "Start" and have the Utterance be something like "Click here to start".

Current State	Next State	Utterance	Meaning	Style	Actions	Agent Name
Start	Agent1	Click here to start				Agent_a
Agent1	re_agent1	Hello, how are you?				Agent_a

When you want to end your dialog, put “End” as the next state, and make the End state say something like “Click to restart”.

Current State	Next State	Utterance	Meaning	Style	Actions	Agent Name
Agent20	End	Goodbye for now				Agent_a
End	Agent1	Click to restart				Agent_a

Dialog variables

You can set and unset variables in the Actions column using the syntax *set:varname* and *clear:varname*. A variable set during a dialog state will be set once the dialog state is ready to progress to the next state.

Current State	Next State	Utterance	Meaning	Style	Actions
Agent1	Agent2	The variable begin has not been set			set:begin
Agent2	Agent3	The variable begin has been set			clear:begin
Agent3	End	The variable begin has been cleared			

You can set and clear several variables at once using the ‘;’ character to separate them, or use *clear:all* to clear all variables at once.

Current State	Next State	Utterance	Meaning	Style	Actions
Agent1	Agent2	Hello there!			set:begin;clear:var2;set:var3

A variable will stay set until it is cleared in the dialog file. Refreshing the browser page or closing and opening the browser will not clear the variables. You can pre-emptively clear variables in your starting state if you want to make sure they are all cleared for each new session.

Current State	Next State	Utterance	Meaning	Style	Actions
Start	Agent1	Click to Start			clear:all

Using variables

You can use variables to re-direct to a different next state using the syntax *if(variable[&variable&..]):next_dialog_state*

Current State	Next State	Utterance	Meaning	Style	Actions
Agent1	re_player1	What is 2x3?			
re_player1	Agent2	6			set:six
re_player1	Agent2	12			set:twelve
Agent2	re_player2	What is 5x3?			
re_player2	Agent3	15			set:fifteen
re_player2	Agent3	53			set:fiftythree
Agent3	Agent4	Thanks			if(twelve&fiftythree):Agent6;if(six):Agent5; if(fifteen):Agent5;if(six&fifteen):Agent4
Agent4	End	Great! You got 100%			clear:six;clear:fifteen
Agent5	End	Not bad, you got 50%.			clear:six;clear:fifteen
Agent6	End	Too bad, you got both wrong.			clear:twelve;clear:fiftythree

In the above example, there are 3 different outcomes of the maths questions: 100% correct, 50% correct and 0% correct. The if statements are evaluated from left to right, so if the player answered both six and fifteen, the last statement **if(six&fifteen):Agent4** will overwrite the two previous if statements: **if(six):Agent5** and **if(fifteen):Agent5** and the player will be redirected to the state **Agent4**.

Progressing through the dialog

The dialog engine will display each dialog state as a speech bubble above the head of the agent in the AgentName column. If the dialog has an audio file associated with it, the agents' dialogs will progress automatically with their audio, otherwise you can click on the speech bubble to progress the dialog to the next state. The Start and End states will not be read out by the agents and must always be clicked on.



Creating Audio

When the dialog engine displays each state's speech bubble, it will look for an mp3 file with the same name as the state to play at the same time. If no audio file is present, it will still display the speech bubble, but you will need to click on it to progress to the next state.

For example, in the sample file, when the dialog engine displays the state "femaleIntro", it will look for an audio file called "femaleIntro.mp3" to play at the same time.

	A	B	C	D	E	F	G
1	Current State	Next State	Utterance	Meaning	Style	Actions	AgentName
2	Start	femaleIntro	Click to start			clear:all	Female
3	femaleIntro	maleIntro	Hey Jason, how are you going?				Female

You can see this file in the "Upload dialog audio files" section of the Agent Dialog Management page (https://web.science.mq.edu.au/vworlds/agent_dialog/)

Upload audio files

Files uploaded for Male and Female dialog

female1.MP3

female2.MP3

female3.MP3

female4.MP3

female6.MP3

femaleIntro.MP3

Each state must have a separate mp3 file with the same name as the state. The audio can be recorded using a text-to-speech service (like <https://ttsmp3.com/>), or a voice actor. The agents will lip-sync to the audio as it is being played.