missionmaker

user guide

for windows

immersive education

creative learning tools

Contents

Welcome to MissionMaker!

Please note: *This user guide is suitable for use with MissionMaker 07 build 1.5 and MissionMaker 2.0*

This guide will introduce you to the basics of using MissionMaker. If you have any problems with using this guide or your MissionMaker software, please contact our customer services team on 01865 886332 or support@imed.co.uk.

1. Getting started - new, load and play

Launching MissionMaker

To launch MissionMaker, simply double click on the MissionMaker icon on your desktop.

The screen shown to the right will appear when you first open the software. From here you can open a new game, load ready made games or save a game. Simply click on the correct tab at the bottom of the screen.

Creating a new game

If you click on 'New' on the load screen, followed by 'Edit' on the following screen, the 'Editor' screen will appear. This is where you author or edit a game. There are two menus, 'My Game' (top left) and 'New' (top right).

New
This lists everything that you are able to add to the game and therefore provides the building blocks that make up a game.

My Game
This allows you to establish the game-play, using game and player attributes, for example, requirements for success or failure based on such things as point scoring and timings. The other areas in 'My Game' record the elements the game author has added to the game and consequently allows them to be edited easily. This is a bit like a shopping basket or inventory.

Saving your game or 'Mission'

Before going any further you will need to learn how to save. Click on the 'Main' tab at the bottom right of the screen to return to the main screen. Click 'Save' and write in a name for your game. The game will be saved in a 'My Missions' folder but you may wish to navigate to a different location on your network or computer.

You will notice two other tabs on this screen. These allow you to go back to your game to play or edit it. Only 'export' the game when you are happy it is complete. It can then be player on the MissionPlayer.

Playing a game

To play a ready-made game, click on the 'Load' tab in the 'Main' screen. This brings up the 'My Missions' dialogue box. Navigate to the game you wish to open and double click on it. The menu screen will then disappear and return you to the screen shown opposite. From this screen, click play and you will see the words 'Building world please wait'. Your 3D gaming world is now being loaded. This can take some time depending on the size of the game. When the game is loaded you will be taken into the game and you can begin playing it.

2. Creating a game

To create a new game, click on 'new in the load screen and then 'edit'.

2i. Selecting the location

You are now in the 'editing' or authoring screen. Click on 'New' in the top right hand corner of the screen and then click on 'Location'.

The tiles along the top of the screen represent all the locations available to build your world. Scroll across to see all the location options by dragging the green scroll bar to the right.

To select a location, left click and drag it into the grid. You'll notice a small yellow circle with an arrow in the centre of the first tile you select. This tells you that your game will start here.

Notice that the tile is outlined in red with some heavier red lines in places. These are openings.

To add another tile click on it and drag it into a grid block next to where you have placed your first tile. They need to be touching so that they can connect.

The openings also need to join ie the two heavy red lines need to match up. If they don't, just left click once on the tile to rotate it into the right position. A word of advice: don't add more than 5 tiles to begin with.

Deleting tiles

To delete a location you have added to your world, select it by clicking on it and then click on the bin. You will be asked if you want to delete it; click OK.

When you have placed all your tiles on the grid, check that all the openings match up. Don't worry if some don't connect to anything at all. You'll just see a blank wall in your 3D world.

2ii. Building your world

Now you've set up the 'plan view' of your world, you're ready to view it in 3D. To do this, you need to click on the blue square at the top right of your screen which says: 'When you have finished arranging your tiles, click here to build the world.'

Wait for a short time and then you'll find yourself in your 3D world.

Changing your start point

You will start your game at the centre of the first location you placed in the grid. To change the starting point, navigate to your new starting position and click on the 'start player here' button (this is shown as two footprints as shown in the image on the right. Your game will now start in this new location.

Switching back to plan view

You can move between screen views (plan and 3D) by clicking the swap displays button (shown here).

Zooming in

If you wish to zoom in on the plan view of your location, click the magnifying glass icon at the top right of the screen and then click on the plan location in the grid. Keep clicking and zoom in as far as you wish. Click the right mouse button to zoom out. Click the magnifying glass again to get out of the zoom mode.

3. Adding objects to your world

To add an object click on the 'New' menu and then on the appropriate object you wish to add. This will change the selector bar at the top of the screen. To see all the objects of this type drag the green scroll bar to the right.

To add the object you want, you will need to select it from the bar then left click and drag into position.

When you drag a prop, active prop, special effect, pickup or trigger volume into place you'll see a yellow arrow at the top. This yellow arrow allows you to raise and lower objects. This allows you to hang a picture on a wall, for example.

If you use the arrow to lift the object you'll see a yellow dot. This yellow dot allows you to place objects more precisely.

Every item you add to your game comprises:
- **Properties** – these are the physical characteristics of the item (seen by the player as they play)
- **Actions** – the things that, through your rules, the player can cause to happen
- **Associations** – how this item links to others in the game.

You can change the name of the object by overtyping the name at the top of the screen shown here to the right. This can help if you're adding more than one of a particular object.
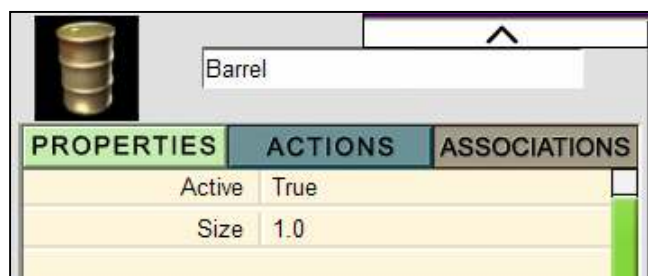
3i. Properties

The 'Property' is how the object appears at the start of the game. In other words, properties describe what the game-player sees as they are playing.

Active means that the object is visible, or active, in the 3D world. You can change this by clicking on Active and then the green arrow which will appear to the right. This allows you to change Active True to Active False. The object will disappear.

Size is the scale it comes into the world. The default size is 1. You can alter this up or down by over-typing the number. So, by changing 1.0 to 0.75 you would reduce the size of the object by 25%.

Active Props
The state of an active prop refers to the action the property can perform, such as, on/off; open/closed etc. You can select how you want it to appear at the start of the game.
Animation speed refers to the speed with which the state can change.

Special Effects
These have an additional property in that they can be attached to other objects in the game. Note: special effects don't change size.
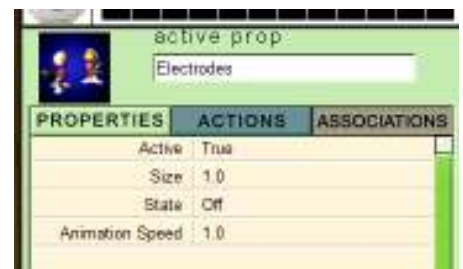
3ii Actions

By clicking on the 'Actions' tab you can create rules that mean your player has to perform an action in the game to make something happen. Click on the blue actions tab. This shows you the actions the object can be made to perform by the player.

Every type of object has a different set of actions. Props are the most basic, that is, they can be active, inactive or toggle between the two.

3iii Associations

This tab helps you to locate items. For example, if you used lots of electrodes in different places in your game, you could identify the one you want by selecting it from the 'My Game' menu and checking its 'Associations'.

4. Triggers and rules 1 – object clicked

Rules in game-making are really consequences. Put another way, when you create a rule you are setting a condition - if the player does this, then that will happen. So, put simply rules mean – *if this, then that*. In order for *this* to make *that* happen you need a trigger and activator. Sounds confusing, but once you've got the idea, all rules operate in the same way, so you'll be able to set challenges for your player to open doors, find objects, teleport, protect themselves from attack and so forth. As this is quite complicated the best way to explore the potential is through creating an example.

Example
You have created a game in a spaceship where the player has to find a series of gem stones to complete the game. You have hidden one in a chest and the player has to open the chest to find the gem. How do you do this?

- **Step one**. Find the chest in 'Active Props'. Drag it into your world. In 'Properties' set its state to open.

- **Step two**. Find the gem in 'Pickups' and place it inside your chest.

- **Step three**. Select the chest again and set the state to 'closed'. Your gem is now hidden in the chest.

- **Step four**. You want the player to be able to open the chest. To allow this to happen you need to create a rule. Click on the 'Actions' tab and decide what it is you want the chest to do. In this instance it is likely to be open (or Toggle state – this means move between open and closed). Click on open (or Toggle state) and an orange arrow will appear at the end of the row. Click on the arrow to bring up the 'Trigger Type' box.

  Trigger Type – this is what makes the action happen.
  - **Spatial Trigger** action prompted by entering a trigger volume that has been added to the game.
  - **Object Clicked** click a particular object to make the thing happen.
  - **State Trigger** if the object changes state (on/off etc) the action occurs.
  - **Global Trigger** refers to score, time, points awarded etc. as part of the whole game-play.
  - **Speech Trigger** an action prompted by a character or player's words.
   - **Shot by Player** is self-explanatory!

- **Step five**. In order to make the chest open, choose the simple 'Object clicked' trigger by selecting the orange button next to this trigger type in the list shown.

  You will be prompted to 'select an object'. That is, the object you want to click in order to make the chest open. The easiest option is to select the chest itself. Do this by clicking on the chest.
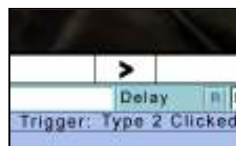
  This will appear in the 'Rule Editor' at the bottom of the screen.

- **Step six**. Check that this is the rule you want by reading the line at the very bottom of the screen (see above) - 'If Pirate Chest is clicked, Pirate Chest changes state to Open.'

- **Step seven**. If this rule is right, click the 'Create/replace Rule' button. If it isn't right, click the 'Close Rule' button and begin again.
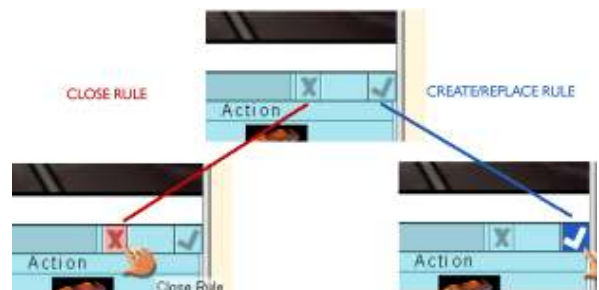
- **Step eight**. Now check that your new rule works. To do this you can play the game by clicking the white Play Game button above the 'Rule Editor' (as shown).

- **Step nine**. If your rule isn't working properly you can check it again and edit it. To do this, go to the 'My Game' menu and click 'Rule'. Clicking on a rule will bring up the rule in the 'Rule Editor' at the bottom of the screen.

Editing a rule
To edit a rule click on the part that you want to change in the 'Rule Editor' and swap the Activator or Trigger Type.

Deleting a rule
To delete the rule, click on the bin while the 'Rule Editor' is still showing at the bottom of the screen.

5. Triggers and rules 2 – state and spatial triggers

To get a basic idea about how rules and triggers work, refer to the previous section, section 4. In this section you'll learn how to use 'Active Props' and 'Trigger Volumes'. The two examples are:

- **State Trigger**: lighting a fire by pushing down a plunger. The plunger will change state and this will trigger the action.
- **Spatial Trigger**: lighting a fire by throwing a match into it. The match will enter the trigger volume and so trigger the action.

5i. State trigger

Context
You want your player to light a fire in the game by plunging a dynamite detonator. This will require two rules:

1. Make the plunger plunge and so change state.
2. Make the fire light when the plunger changes state.

Step one. Establishing the scene:
- Add 'Prop': fire
- Add 'Special Effect': bonfire
- Add 'Active Prop': plunger

Step two. Deactivate the bonfire (remember you want the player to light it). To do this, click on the bonfire, go to 'Properties', select Active True and change to Active False.

Step three. Create the first rule, which is, making the plunger plunge. Select the plunger by clicking on it and go to 'Actions'. Decide what you want it to do. In this case it's probably Plunge (or Toggle state) because the plunge is going to cause the fire to light. Click on plunge and click on the orange button next to the Trigger Type of your choice. The simplest for this is example is Object Clicked. Now select your object to be clicked. Keep it easy and choose the plunger. Your 'Rule Editor' will read:
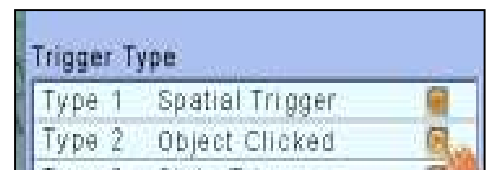
If Plunger	is clicked	Plunger changes state to Plunge

Click the 'Create/Replace Rule' button, as shown.
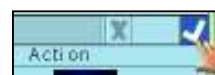
Step four. You'll still not quite there. Now you want the fire to light. Go to the 'My Game' menu and select 'Special Effect'. Select the bonfire. Click on 'Actions' and select 'Set Active'. Click on the orange arrow to bring up the 'Trigger Types'. This time select 'State' trigger. You will be prompted to 'Select an object from your game and more than one state'. In this case, the plunger. You'll be prompted to select the state from the menu. Click on 'Plunged'. Check the rule in the 'Rule Editor' and click 'Replace/Create Rule'. All that remains is for you to test the two rules by playing the game.

Exit the game by pressing 'Escape'.

5ii. Trigger volume

Context
You want the player to light a fire in the game by throwing a match into it.

Step one. Establish the scene.
1 Add 'Prop' – fire
2 Add 'Special Effect' – bonfire
3 Add 'Pickup' – matchstick.

You may want to add a description to the matchstick pickup to act as a clue to your player. To do this, select the matchstick and then click on 'Description'. This will appear when the player explores the item in their inventory.

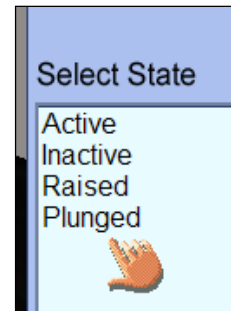**Step two**. Deactivate the bonfire – remember you want the player to light it. To do this, go to 'Properties'. Select 'Active True' and change to 'Active False'.

Step three. Select 'Trigger Volume' from the 'New' menu. Select either the Cylinder or Sphere trigger and drag it into your 3D world and place it over the fire. The cylinder trigger will work best in this context.

Placing and sizing trigger volumes can be little fiddly. Use the arrow and yellow dot to help you place the 'Trigger Volume' and resize by hovering the cursor over the top and sides until a hand appears then click and drag.

Step four. Create the rule. Select the bonfire from 'My Game' and 'Special Effect'. Go to 'Actions' and Set 'Active'. Click on the orange arrow to bring up the 'Trigger Types'.

Select Spatial Trigger. You will be prompted to, 'Select a Trigger Volume or Location from your game.' Click on the 'Trigger

Volume' you put over the fire. Next you will be asked to select an Activator. Click on the arrow at the end of Specific Object.

You will be told to 'Select a Pickup, Prop, or Active Prop from your game.' Click on the matchstick.

Read the rule at the bottom of the screen. If it's right, click the 'Create/Replace Rule' button and play your game to check it works. If the rule doesn't work, go to the 'My Game' menu. Select 'Rule' and edit the rule until it works.

6. Media 1 - audio, pop up and video

Click on the 'New' menu and 'Media' and you will be given the choice of Audio, Pop Up, Speech and Video. For instructions on speech see the next section.

6i. Audio

There are various ways of adding audio to your game. You can choose from the selection provided or from any you have access to on your network. You can add audio by selecting the audio file you want and then on 'Actions' through 'Media' (see below). Alternatively you can create the sound file in 'Media' and then add it to the object later through the object's 'Action' tab, however this can be complicated.

To add audio from the selection provided, choose the sound you want from the selector bar at the top. You can rename it in the name box at the top.

Select 'Actions' below the name of the sound file, and then 'Play' and click on the orange arrow. You will be offered a Trigger Type. Select the one you want and treat as a normal rule. (*See Rules and Triggers 1 and 2.*)

To add audio from another source, click on Filename and the downward pointing arrow. Navigate to where your files are kept. The file type needs to be MP3.
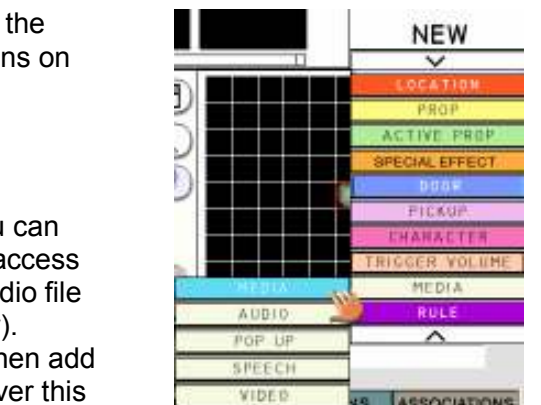
Although the **AUDIO files need to be MP3s**, there are various free pieces of software you can use to convert other file types to MP3. Use Google to find Quintessential, Audacity or just search Audio Video to MP3.

6ii. Video

Adding video is much like adding audio. However, unless you want to play full screen, you need to ensure that you have added an active prop with a screen, that is, it can play the video you have selected. These are located towards the end of the active props selector bar.

> **Videos need to be in Avi. format.**

1. Go to the 'New' menu and select 'Media' and 'Video'.
2. As with 'Audio' you can select from the options in the selector bar or choose your own. To use one provided click on the tile in the selector bar. To use your own navigate through Filename to where it is on the network.
3. Go to 'Actions' and click either 'Play' (for full screen) or 'Play On'.
4. If you choose 'Play On', click on the downward facing arrow. This will give you a dropdown menu of all the active props in your game capable of playing videos. Click on the one you want to bring up the Trigger Types.
5. If you click on 'Play' you'll go straight to the 'Trigger Types'.
6. Select the 'Trigger Type' you want and treat as a normal rule. (See *Rules and Triggers 1 and 2*)

6iii. Pop ups

Pop ups provide written text, narrative and clues for the player, and can be triggered to appear as appropriate to the game-play. If you don't have a cut scene at the beginning of a game, you may want a POP UP to establish the mission.

1. Click on the 'New' menu, then on 'Media' and 'Pop Up;.

2. You can select a background image from the selector bar or your own .**tga, jpg or bmp** from the network. To use one of the pre-made backgrounds just click on the tile. To navigate to your image on the network, click on filename and the downward pointing arrow. Give it a name.

3. Next select whether you want to display as 'Full Screen' or 'Pop Up' by clicking on 'Display As', the downward pointing arrow, followed by the appropriate choice in the menu.

4. Write what you want the pop up to say in the 'Overlay Text' box. Set the font, size and colour.

5. Decide whether you want the player to be able to click 'Dismiss' to get rid of the text when they have read it.

6. Set the duration or time you want to give the player to read the text. This is set at 4 seconds which is a good time to trial at the beginning.

7. Click on 'Actions' and select 'Play On' if you want to play on a screen (select the screen) or 'Play' if you want it to appear.

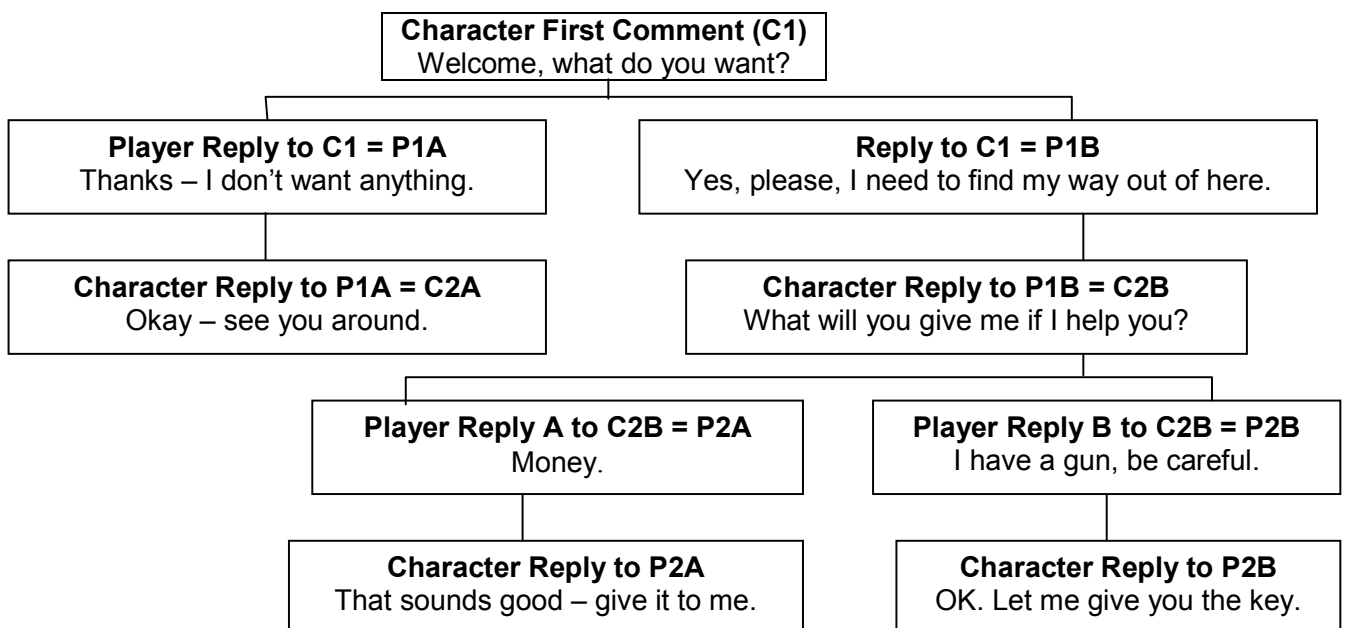8. Choose the 'Trigger Type' and create your rule.

7. Media 2 - speech

In order to create a meaningful conversation, you need to plan your speech carefully. It helps if you do this on paper first. This all looks very complicated but you will soon pick it up.

The character initiates the conversation and what the player can respond will be added to the 'Player List' so there always needs to be a choice. The character replies to the player's chosen speech with a single remark. The character is virtual and cannot make a choice! **However, for the speech to work properly, the character needs to have the last say in any conversation!**

What you produce could be envisaged as a branching dialogue and might be represented as a tree diagram (here the player has only two choices of response):

```
                    ┌─────────────────────────────────┐
                    │  Character First Comment (C1)    │
                    │    Welcome, what do you want?    │
                    └─────────────────────────────────┘
              ┌──────────────┴───────────────────────────┐
┌───────────────────────────┐         ┌──────────────────────────────────────┐
│  Player Reply to C1 = P1A  │         │        Reply to C1 = P1B             │
│  Thanks – I don't want     │         │  Yes, please, I need to find my way  │
│  anything.                 │         │  out of here.                        │
└───────────────────────────┘         └──────────────────────────────────────┘
              │                                          │
┌───────────────────────────┐         ┌──────────────────────────────────────┐
│ Character Reply to P1A=C2A │         │   Character Reply to P1B = C2B       │
│  Okay – see you around.    │         │  What will you give me if I help you?│
└───────────────────────────┘         └──────────────────────────────────────┘
                                    ┌──────────────┴──────────────────┐
                          ┌────────────────────────────┐  ┌────────────────────────────┐
                          │ Player Reply A to C2B = P2A │  │ Player Reply B to C2B = P2B │
                          │           Money.            │  │  I have a gun, be careful.  │
                          └────────────────────────────┘  └────────────────────────────┘
                                        │                              │
                          ┌────────────────────────────┐  ┌────────────────────────────┐
                          │  Character Reply to P2A     │  │  Character Reply to P2B     │
                          │ That sounds good – give it  │  │ OK. Let me give you the key.│
                          │ to me.                      │  │                             │
                          └────────────────────────────┘  └────────────────────────────┘
```

REMEMBER - **for everything the player says the character in the game needs to reply.**

7i. Character speech (properties)

1. Having got the idea of the branching diagram needed to plan speech. Go to the 'New' menu, select 'Media' and 'Speech'.
2. Rename the speech so that it is easy to find later.
3. Type the speech you want the character to say in 'Speech Text'.
4. This will be created as text to speech (TTS). You can select the 'Voicename'.
5. If you want to record your own voice change 'TTS True' to 'TTS False'.
6. To record your own voice click on the 'Start Recording' microphone icon. Click on the button (red circle) and read your script. Click on 'Stop' (square) and give your recording a file name.
7. To check that your recording or the TTS soundfile is OK, click on the 'Preview' button (arrow). This will now be saved in your 'My Game' menu as sound.
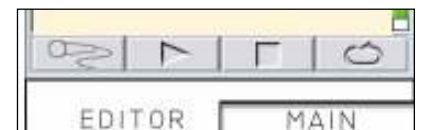
7ii. Player speech (properties)

This shows you how to add speech to give the player a choice of responses to the character's speech.

1. Go to the 'New' menu, select 'Media' and 'Speech'.
2. Rename the speech so that it is easy to find later.
3. Type the speech you want to add to the 'Player List' to say in speech text.
4. This will be created as text to speech (TTS). You can then select the 'Voicename'. If you want to record your own voice change 'TTS True' to 'TTS False' and record as before.
5. Change 'Player List False' to 'Player List True'.
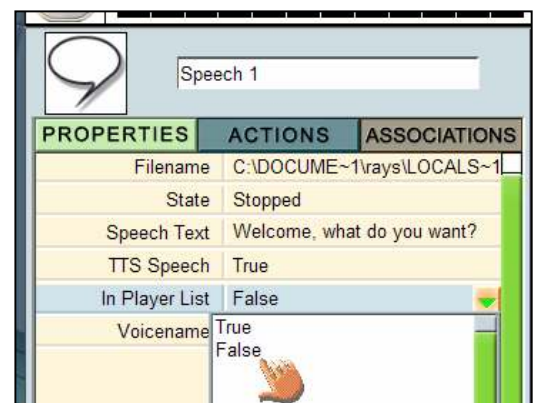
7iii. Adding speech to the gameplay (actions)

It's easiest to give speech audio to a character by clicking on the character. It's easiest to add speech to the 'Players List' by clicking on the 'Speech Audio'.

Character Speech (Actions)

1. Click on the character.
2. Click on 'Actions' and 'Say'.
3. Select the speech you want the character to say by clicking on the downward pointing arrow.
4. Click on the orange arrow at the end of the line to bring up the 'Trigger Types'. This will allow you to set a rule to trigger the speech. Do this as before (*See Rules and Triggers 1 and 2*).

Player speech (actions)

1. Click on the 'My Game' menu and 'Media' and then the speech you want to be added to the Player List in response to the character's speech.
2. Select 'Actions' and click on 'Add to Player List' to bring up the 'Trigger Types'.
3. Select the 'Speech Trigger' and then the character's speech that prompts this speech from the 'My Game' menu.
4. Keep adding character and player speech in this way: *character* by clicking on the character; *player* by clicking on 'Media'.

8. Camera / player's log

When playing a game, you can keep a log of pictures and notes.

Click on the camera icon next to the inventory to activate the 'Player's Log'. Aim the 'Sight' at a selected image and press the button to take a photograph.

Click on the note button and type in text. At the end of the game you'll be asked to save any photographs. You can save as an rtf. word document or as a Kar2ouche storyboard.

9. Keyboard short cuts

The following list outlines some keyboard shortcuts that you might find useful when using MissionMaker:

- **F1**: Shows the design lines of locations, characters etc.
- **F3**: Shows the blue lines through characters, props etc.
- **F5**: Shows red lines around characters, props etc.
- **F6**: Brings up the camera and Player's Log (press escape to close.)
- **F10**: Pauses the game.
- **F12**: Save a .jpg screen shot of your screen.
- **Home**: Makes all locations brighter (nb - after selection you can hold down the blue 'Function key' and use the blue **+** or **–** function keys to make all the locations brighter or darker).
- **Function and 7** = Brighten locations.
- **Page Down**: Turns the contrast down.
- **Page Up**: Turns the contrast up.

10. Customer support

If you would like further information on using or installing MissionMaker please contact us:

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                      Cassington
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Telephone: 01865 866 332 (customer support)
                      01865 866 333 (sales)

Fax: 01865 866 331