upstate v3 user manual draft

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INTRODUCTION


UpStage

Version 3 User Manual

www.upstage.org.nz

This manual was last updated on

Introduction

Welcome to the user manual for **UpStage version 3**; released in January 2014, this version incorporates audio-visual streaming, introduces many new features and provides significant enhancements to the workshop and media management system.

If you are working with an earlier version of UpStage, please refer to either the version 2.4.2 manual or the version 2.1 manual.

Background

UpStage is a web-based venue for cyberformance[1] - the real-time compilation of digital media into live performance, by multiple remote players for an online audience (and sometimes an offline audience as well). People anywhere in the world can participate in live performance events by using standard browser software to access UpStage, without having to download and install additional software and without needing to know anything other than a web address.

The concept for UpStage was developed by Avatar Body *Collision*, a globally dispersed cyberformance troupe whose members have been experimenting with online theatrical performance since 1999, and together as Avatar Body *Collision* since 2002. UpStage was born from the desire to reach a wider audience and to make it easier for audiences and performers alike to participate in live performance via the internet.

The software combines the different elements of cyberformance - graphical avatars, web cams, audio, images, text chat (and who knows what else in the future) - into a single interface. The audience simply directs their browser to the web address at the appointed time, to watch and participate in the cyberformance.

The UpStage server application is open source and free to download. It is available under dual licensing: a Creative Commons Attribution-NonCommercial-ShareAlike 3 License and GNU General Public Licence (GPL).

The initial development of UpStage was funded in 2003 through the Smash Palace Collaboration Fund, a joint initiative of Creative New Zealand and the NZ Ministry of Science, Research and Technology. In 2006, the UpStage project received funding from the Community Partnerships Fund of the New Zealand government's Digital Strategy to develop UpStage version 2. UpStage V2 was also supported by partners CityLink, MediaLab and Auckland University of Technology.

Currently, UpStage is supported by CityLink, who provide free server hosting and traffic, and Auckland University of Technology, who provide teams of final-year computer programming students to work on the ongoing development of the software. The UpStage team and user community are very grateful for this vital support.

This is the **user manual**; it provides general instructions for using UpStage version 3.0 and is divided into 7 sections:

- Introduction

- Audience
- Players
- Media Management
- Creating Media
- Streaming
- Appendices

Open sessions are held regularly in UpStage, providing training in the basic use of UpStage and how to create cyberformance; everyone is welcome. For dates and times for the next open session, visit www.upstage.org.nz and join the UpStage Announce list.

If you are looking for technical support including instructions for installing the UpStage server, please visit the Developers page on the UpStage web site, and join the developers' mailing list.

For further information and updates, please visit www.upstage.org.nz.

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1. Cyberformance uses internet technologies to bring remote performers together in live theatrical events; www.cyberformance.org^

UpStage Team

This project was initiated in 2003 by Avatar Body *Collision*, who are Vicki Smith, Leena Saarinen, Karla Ptacek and Helen Varley Jamieson. The project continues to be managed by Vicki Smith and Helen Varley Jamieson. For more information about the Colliders, please visit www.avatarbodycollision.org.

The UpStage application was originally written by Douglas Bagnall, who is a digital artist with a background in open source development of online projects. His artistic work includes the development of a film-making robot and a cloud-classifier; visit http://halo.gen.nz/ for more information.

At the end of 2010, former AUT student Paul Rohrlach joined the team as a developer and server administrator and in 2011 Francesco Buonaiuto became our volunteer documenter. Many other artists are involved in the annual UpStage Festival, and we have a growing team of open source developers who are supporting the maintenance and development of the software.

Since December 2004, the UpStage server has been generously hosted by Citylink.

Thanks to Anne Philpott, we have an ongoing relationship with Auckland University of Technology (New Zealand) which has seen teams of final year software development students working on UpStage as their major project since 2006.

The AUT UpStage teams[1] to date are:

- 2013-14: Vanessa Henderson and Nikos Philips
- 2013: Lisa Helm, David Daniels and Nitkalya Wiriyanuparb
- 2012-13: Scott Riddell, Gavin Chan & Craig Farrell
- 2012: Benjamin Qin and Daniel Han
- 2011-12: Nessa Baterina, Karena Goh, Corey Robb
- 2011: Heath Behrens and Vibhu Patel
- 2010-11: Mohammad Al-Timimi, JR Malonzo and Henry Goh
- 2010: Tom Choi, Paul Rohrlach & Craig Farrell
- 2009-10: Natasha Pullenster, Nicholas Robinson and Shaun Narayan
- 2009: John Coleman and Vishaal Solanki
- 2008-09: Shaun Nesbitt, Wendy Wen, Candy Yang
- 2008: Aaron Barnett
- 2007-08: Alan Crow and Tony Wong
- 2007: Endre Bernhardt, Lauren Kilduff & Phillip Quinlan
- 2006-07: Beau Hardy, Francis Palma, Lucy Chu and Wise Wang.

Many other people have contributed to the development of UpStage through encouragement, advice, user testing, feedback, and simply believing that it was possible. The project team thanks every one of you.

If you are interested in being a part of the development of UpStage, you can join the developer list, https://lists.sourceforge.net/lists/listinfo/upstage-list.

If you would like to be kept informed about events in UpStage, you can join the announcements
list: https://lists.sourceforge.net/lists/listinfo/upstage-announce.

1. Students in their final year of Bachelor of Computer and Information Science at Auckland University of Technology (New Zealand) have worked on UpStage as a "real world" project since 2006.^

Technical Information

UpStage is a server-side application. This means that it runs on a web-server, and the users of UpStage (players and audience) access it via a web browser; you do NOT install UpStage on your own computer.

If you have access to a web server and wish to install your own, customisable, version of UpStage, please refer to the installation manual and other support available on the SourceForge site. NEEDS TO BE CHANGED ... WHERE ARE WE GOING TO PUT THE INSTALLATION MANUAL? ON UPSTAGE WEB SITE? ON FLOSS MANUALS?

Programming technologies

DOES THIS NEED TO BE UPDATED?

UpStage is written in Python, using the Twisted framework for event-driven asynchronous networking. It doesn't require Apache (or MYSQL or anything else). The client is written in pure Actionscript, and is compiled using Mtasc, so there is no requirement for Macromedia software other than the Flash player plug-in on the client computer.

Words typed in by the players are converted into speech using the Fesitval speech library, eSpeak and MBROLA, and streamed to the clients as MP3s.

The server runs on Debian Linux, but should easily convert to other platforms. Python and Twisted are cross-platform, but there is a line or two of shell scripts that tie in the speech synthesis.

The software has been worked on since June 2003 and contains some 8000 lines. Please visit our SourceForge site UPDATE to find the latest stable version and installation documentation.

Client hardware and software requirements

If your computer has a browser with the Flash player plug-in and an internet connection, then you already have everything you need to use UpStage. Obviously faster processors and higher RAM give improved performance, but UpStage has been designed to work on relatively low-spec client machines.

A broadband internet connection will give the best performance, but UpStage performs surprisingly well over dial-up. The main disadvantage when using dial-up is that the load time for each stage is longer. You may need to allow up to 15 minutes to load a stage, depending on how many graphics are on it. Once it's loaded, the real-time interaction and overall performance of UpStage is not much slower on dial-up than on broadband.

UpStage has been designed to run on a wide range of clients using the Macromedia Flash Player plug-in (we recommend the latest version). It should function properly in all standard browsers such as Firefox, Safari, Internet Explorer and Opera.

Note: due to an issue in Chrome for Mac, at the time of writing it is not possible to upload .swf files from a Mac computer using the Chrome browser. Until such time as Chrome fixes this issue, you will need to use an alternative browser such as Safari or Firefox to upload .swf files.CHECK - THIS HAS BEEN FIXED HASN'T IT?

Linux users may need to install gsfonts and gsfonts-x11 (see the section **Troubleshooting** for information about this). CHECK - IS THIS STILL RELEVANT?

ADD SOMETHING ABOUT THE IE7 PROBLEMS

Firewalls

CHECK THIS SECTION - DOES IT NEED UPDATING? PORT(S) FOR STREAMS?

UpStage will function through most but not all firewalls, depending on how the firewall has been set up.

If you install your own UpStage server, it will ask you to specify which ports you want to use (the defaults are 8081 and 7230). You will need to ensure that your users have the correct ports open.

The Open UpStage server uses ports 8084 and 7230-7233, therefore these ports need to be open if you are trying to access this server through a firewall. These ports are open by default in most private internet connections, but some organisational networks will close any “unnecessary” ports.

How to Help UpStage

Get involved - volunteer

Donate

Developers

Install your own server

AUDIENCE

Audience View

Audience members enter UpStage by following a web link from an email or web page; you do not need to download or install any additional software as long as you have a browser with the Flash player plug-in[1]. Audience members do not log in, and do not have access to the on-stage tools used by the players.

Once the stage loaded in the browser window, you will see and hear the performance and be able to participate in the text chat by typing into the text input field. Audience chat is silent, whereas avatars operated by players have audible synthethised voices.

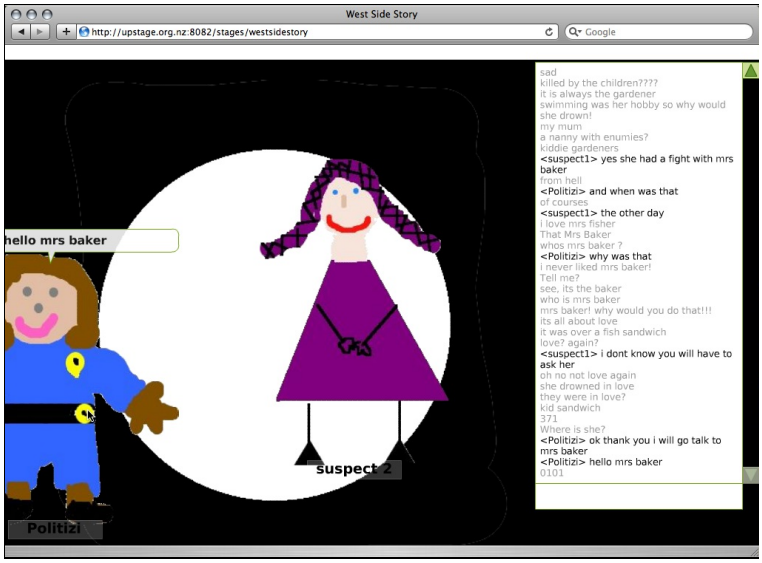
An example of the audience view of the stage is shown below: the text chat window is at the right, with an input field at the bottom and up-down scroll arrows on the right top and bottom corners. Above the text chat window, a counter shows how many players and audience members are on the stage. The rest of the screen is the "stage" where the visual action of the performance takes place.

1. The Flash player plugin comes preinstalled with most browsers; if you don't have it, it is free to download here: www.adobe.com/support/flashplayer/downloads.html.^

Audience Chat

Audience members are also known as "chatters", because they can interact with the performance by typing into the text input field at the bottom right of the screen. This text appears in the text chat window, amongst the players' text.

Audience text is grey, silent and anonymous, while players' text is black, slightly larger than audience text, spoken aloud by the computer and identified with the avatar's name. Audience can identify themselves by manually adding a name at the start of their comments; in the future it will be possible for audience members to have a name if they want.

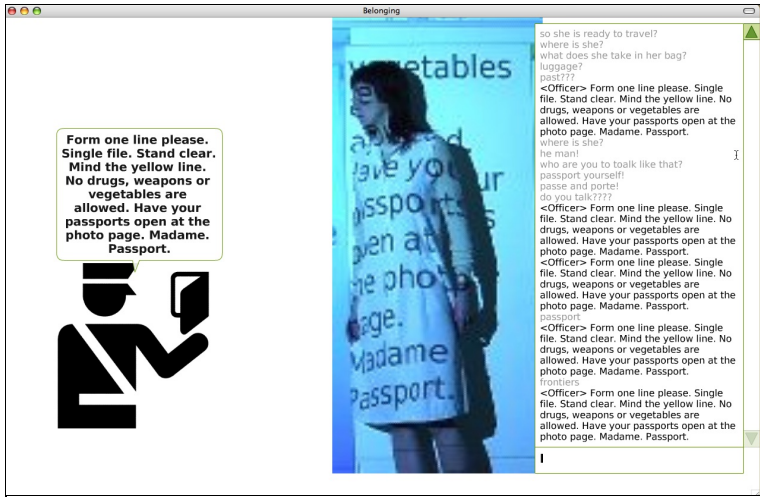


The screengrab above, from *West Side's Story* (101010 UpStage Festival) shows audience and player text in the chat.

The audience chat has a life of its own. Often at the beginning of a performance, audience members will ask where other people are physically located and have conversations between each other. During the performance, the audience can respond to and comment on the action of the performance, embellish the narrative or provide a counterpoint. Obviously every audience is different, making every performance significantly different - sometimes an audience may be very quiet and at other times they can be very chatty.

Re-presenting the chat

Audience text can also be incorporated into the performance, for example repeated or responded to by the players. Another effective re-presentation of audience chat into the performance is the projection of chat text and its subsequent capturing and re-presentation as a streamed image, as shown in the screengrab below from *Belonging* by Avatar Body *Collision* (2007).


Belonging
Form one line please. Single file. Stand clear. Mind the yellow line. No drugs, weapons or vegetables are allowed. Have your passports open at the photo page. Madame. Passport.
so she is ready to travel?
where is she?
what does she take in her bag?
luggage?
past???
<Officer> Form one line please. Single file. Stand clear. Mind the yellow line. No drugs, weapons or vegetables are allowed. Have your passports open at the photo page. Madame. Passport.
where is she?
he man!
who are you to toalk like that?
passport yourself!
passe and porte!
do you talk????
<Officer> Form one line please. Single file. Stand clear. Mind the yellow line. No drugs, weapons or vegetables are allowed. Have your passports open at the photo page. Madame. Passport.
<Officer> Form one line please. Single file. Stand clear. Mind the yellow line. No drugs, weapons or vegetables are allowed. Have your passports open at the photo page. Madame. Passport.
passport
<Officer> Form one line please. Single file. Stand clear. Mind the yellow line. No drugs, weapons or vegetables are allowed. Have your passports open at the photo page. Madame. Passport.
frontiers
<Officer> Form one line please. Single file. Stand clear. Mind the yellow line. No drugs, weapons or vegetables are allowed. Have your passports open at the photo page. Madame. Passport.

Audience Interactivity

The primary form of interactivity for the audience is the text chat, discussed in the previous chapter. There are also a few other things that the audience can do.

Commands

Audience members can use a number of commands in the text chat; these are instructions typed into the text chat input field after a **/**

For example:

/asize 8 (or another number): this changes the font size of audience-input text to 8 (the default size is 5) on that computer. This is useful for people with visual impairment or if the screen is being projected for a group audience.

/psize 8 (or another number): this changes the font size of player-input text, as above.

/info: gives some information about UpStage.

Players have a lot more commands available to them - see the chapter on Commands for more information.

Applause

Something about how the applause button will work.

Volunteer

Something about how the volunteer button will work.

PLAYERS

Logging In

Players log in to UpStage to create and present performances. You do not need anything other than a browser with the Flash player plugin, and an internet-connected computer, to do this.

Log in

From the home page, enter your username and password in the input boxes at top right.

<INSERT LOG IN SCREENSHOT HERE>

Player permissions

Depending on the permissions level that you have been given, once you have logged in you will have access to different tools. There are currently four levels of permissions: player, maker, admin and creator.

Player

The default "Player" permissions enable a logged in player to access the on-stage player tools, so that they can collaborate in a performance. This level is also used for guest log-ins for open walkthroughs and workshops where people are learning the basic operations of UpStage before starting to make their own show. This default level does not give access to the Workshop.

Maker

A player with "Maker" permissions can access the Workshop to upload media, edit their own media, create stages and edit their own stages; as well as access the on-stage player tools.

There is also "Unlimited Maker" - allowing a maker to upload files larger than the 1MB file upload limit.

Admin

A player with "Admin" permissions can edit others media and stages as well as their own, add and edit players, and edit the content of the Workshop pages. An admin user also has unlimited upload permission.

Creator

A player with "Creator" access can do everything an admin can do, as well override a stage lock and create new creator level users. Usually a creator will be the person or people who have set up a particular UpStage instance, and therefore may also have access to the server in order to perform upgrades and other maintenance.

Player Profile

All players with more than the default player level of access can edit their own profile, change their password or add/update their email address.

actually it would be helpful for a basic player to also be able to edit their own profile - e.g. change their password and enter/update their email address - but i realise this maybe is the difference between a "player" & a "guest" ...

From the Workshop navigation, click on **Edit Players** then edit the information you want to update.

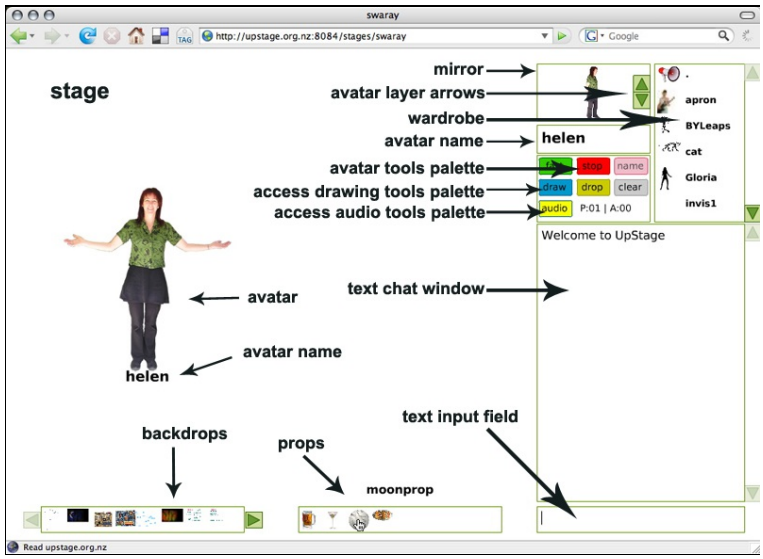
‹INSERT PLAYER EDIT PAGE SCREENSHOT HERE›

Player View

Players log in to UpStage to create and present performances. You do not need anything other than a browser with the Flash player plugin[1], and an internet connected computer, to do this.

Different levels of access and permissions can be given to players. The default level allows access only to the on-stage player tools, for collaborating in performances and learning how UpStage works (see the chapter **Logging In** for more information about player permissions).

The "player view" of the stage is different to the "audience view" (see the chapter **Audience View**).



The Wardrobe (top right hand corner) is a scrollable list of the avatars that have been assigned to this stage. The Mirror (the square beside the Wardrobe) shows the avatar you are currently holding (if you are holding one), with its name in the rectangle under the mirror.

There are tools below the Mirror, and image galleries for backdrops and props along the bottom of the stage area. Players see a smaller text chat window than the audience.

The tools and palettes are explained in detail in the next chapter, **On-stage Player Tools**.

1. The Flash player plugin comes preinstalled with most browsers; if you don't have it, it is free to download here: www.adobe.com/support/flashplayer/downloads.html.^

On-stage Player Tools

Logged-in players have access to a range of on-stage tools, not visible to the audience, which enable the real-time manipulation of preloaded media and live elements on the stage.

The previous chapter showed the default player view of the stage, with the Avatar palette at the top right above the chat, and galleries for props and backdrops at the bottom of the screen. The Avatar palette appears as the default, with the Audio and Drawing palettes accessed by clicking the appropriate button in the Avatar palette. These three palettes are explained in the following chapters.

nging Backdrops

Backdrops are images that fill the entire background area of the stage; avatars, props, streams and all except one layer of drawing appear in front of the backdrop.

The backdrops assigned to a particular stage appear as small icons in the Backdrops Gallery, at the bottom left of your screen.

Roll your cursor over the icons to display the name label so that you can accurately choose the backdrop you want. If more than 8 backdrops are assigned to a stage, arrows will appear at either end of the bar to allow you to scroll through the backdrops, which are displayed alphabetically.

Click once on the icon to place the backdrop onto the stage; click the icon a second time to remove it.

Multiframe backdrops can be used in the same way as normal backdrops; to change the backdrop's frame, type **/b 1**, **/b 2** etc in the text input field. Type **/b 0** to make the backdrop animate through its frames. (For information about creating multiframe backdrops, see the chapter Creating Graphics for UpStage).

ling and Placing Props

Props are images that can be "held" by an avatar; you must be holding an avatar on the stage in order for that avatar to then hold a prop. When an avatar holding a prop moves, the prop will move with the avatar.

The props assigned to a stage appear as small icons in the Props Gallery at the centre bottom of the screen.

When you roll your cursor over the icons, a name label appears, allowing you to distinguish between similar or very small props. If more than 8 props are assigned to a stage, arrows will appear at either end of the bar to allow you to scroll through the props, which are displayed alphabetically.

Click on the prop icon in the Gallery, and it will appear at the top left of your avatar. Click again on the prop icon in the Gallery, and it will remove the prop from your avatar. If another player clicks on the same prop that you are holding, it will be transferred to their avatar.

Props that have been created as .swf animations, or uploaded as multiframe props, do NOT allow you to change the frame of the prop while it is on stage (as is the case with avatars and backdrops). When placed on the stage, a prop which has been uploaded as an animated sequence will appear only as a looped animation; a prop uploaded as a single frame (as .swf, .jpg or .png) will appear only as a still image. (For information about creating props, see the chapter Creating Graphics for UpStage).

Avatar Tools

The avatar palette, at the top right of the player stage view, provides tools for holding and moving an avatar. An avatar is a graphic object that a player operates to move around the stage and speak, a sort of digital puppet.

ling and Moving an Avatar

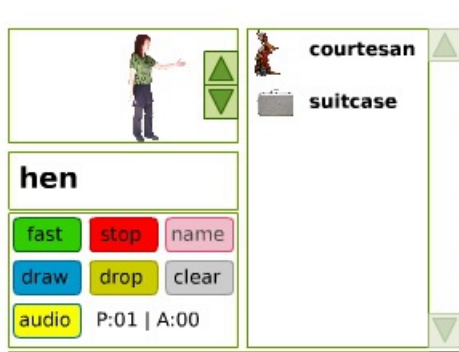
The avatars assigned to a stage appear as small named icons in the Wardrobe (the area at the right of the avatar palette); use the arrows to scroll up and down the Wardrobe list. To hold a particular avatar, click on its icon in the Wardrobe. The icon will disappear from the Wardrobe and appear in your Mirror, the square area to the left of the Wardrobe. This shows you which avatar you are currently holding. A greyed-out icon in your Wardrobe means that another player is holding that avatar.

Once you have an avatar in your Mirror, click on the stage area and your full-size avatar will appear there. Click in another place, and it will move there.

Tool palette

The set of buttons below the mirror give you tools to operate your avatar. There are also the green arrows in the mirror - these allow you to move your avatar in front of and behind other avatars on the stage.

Fast/Slow



This button controls the avatar movement – fast causing the avatar to jump to where you click, and slow causing it to glide there. The button shows the action that the avatar will change to when next clicked – for example if your avatar is gliding, the button will show fast. Click on it to change to fast, and the button will become orange and say “slow”.

Stop

When your avatar is gliding (in slow mode), click on stop to stop it at any point in its trajectory.

Name

This button will hide or show your avatar's name on the stage – this is particularly useful when working with invisible avatars. When you first hold an avatar, the default state is for the name to be showing, so click on "name" before you place the avatar on the stage if you don't want the name to show.

Draw

This button changes the function from acting to drawing, displaying the drawing tools palette instead of the avatar tools. See the chapter **Drawing Palette** for more information about drawing.

Drop

The drop button will remove your avatar from the stage, and put it back in the Wardrobe so that you are no longer holding it. If you want to leave your avatar on the stage while you operate another avatar, simply select the new avatar from the Wardrobe without clicking drop.

Clear

Use clear to remove all unheld avatars and props from the stage.

Audio

This button displays the audio tools palette. See the chapter **Audio Palette** for more information about using audio.

Player/Audience counter

Below the control buttons, a counter keeps a live tally of the number of players (P) and audience (A) present on stage at any time. Typing /details in the text chat input field will give you a list of the usernames of the players and the number of audience in the chat window.

Right-click menu

The right-click menu is accessed by right-clicking you avatar on stage; if you are using a Mac, hold the control key (ctrl) and click on the avatar to access the menu.

‹INSERT RIGHT-CLICK MENU SCREENSHOT HERE›

Rotate Avatar Left/Right

These options allow you to rotate your avatar 90° either clockwise (right) or anti-clockwise (left).

Move Up/Down

These options change which layer of the stage your avatar is on; allowing you to hide your avatar behind other objects (excluding the backdrop) or have it in front of everything else. (The same functionality is provided by the arrows in the mirror.)

Move Fast/Slow

These control how your avatar moves about the stage. Fast will cause it to jump to where you click, and slow make it glide to where you click. (The same functionality is provided by the fast/slow button in the tool palette).

Draw On Avatar

This allows you to draw on your avatar. Anything you draw on your avatar will move with your avatar.

need some explanation here of how this works - e.g. to change colours, & how this differs from drawing on a drawing layer (also is it possible to draw on someone else's avatar, or only the one you are holding?)

Clear Draw On Avatar

This will clear all drawings currently on your avatar.

Rename Avatar

This allows you to rename your avatar, and will only work if you right-click on the name. (You can also rename your avatar with the /nick command).

Operating Multi-frame or Animated Avatars

Avatars that have been created as .swf animations, or uploaded as multiframe avatars, allow you to change the avatar while it is on stage.

Animated Avatars

Created as .swf files, these avatars will animate in the Workshop, Wardrobe and Mirror. When placed on stage, animated sequences will appear as a still image in the first frame of the animation. Type **/a 0** to start the looped animation, and to display a different still frame type **/a 1** (the default), **/a 2**, **/a 3** etc.

Flash Movieclips will animate on loop without typed-in commands. You need to create these as movies in Flash – see the chapter **Creating Graphics for UpStage** for more information.

Multi-frame Avatars

These work in a similar way to the animated avatars, but are created by uploading a series of still images (in .png or .jpg format) rather than creating an .swf file.

Changing Your Avatar's Name

There are three ways to change an avatar's name: off stage, via the media edit section of the workshop, or on stage using either a command or the right-click menu. The on stage methods are explained here.

Type **/nick *newname*** (with *newname* being the new name that you want) in the text input field at the bottom of the chat window, and hit enter.

Or, use the right-click menu option "Rename Avatar".

You will see the name underneath your mirror change, and when the avatar is on stage the new name will appear below it (unless you have used the "name" button to turn off the name). The new name will also appear in the text chat window before the text your avatar speaks.

When using invisible avatars, you can make words float around the stage by showing the name, and using **/nick** or the right-click menu option to change the visible word on screen.

Only up to 9 characters will be visible on stage; if you have a longer name it will all be visible in the text chat.

Audio Palette

Prerecorded MP3 audio files can be uploaded and assigned to a stage. This chapter deals with how audio files are operated on a stage; see the chapter **Uploading Media** for information on how to upload audio files.

The audio palette

Click on the yellow **audio** button in the tool palette to reveal the **audio palette**. Audio files assigned to the stage will appear alphabetically in a list on the right, with musical notes indicating music tracks and "sfx" indicating sound effects. Use the green arrows to scroll up and down if there are more than six tracks assigned to the stage.

‹INSERT AUDIO PALETTE SCREENSHOT HERE›

(helen tried inserting image 24/10/13 but it isn't working ... have emailed the FM list)

Click on a track and its file name will appear in one of the three slots to the left, where you can start, pause and stop individual tracks, set looping and adjust the volume with the slider.

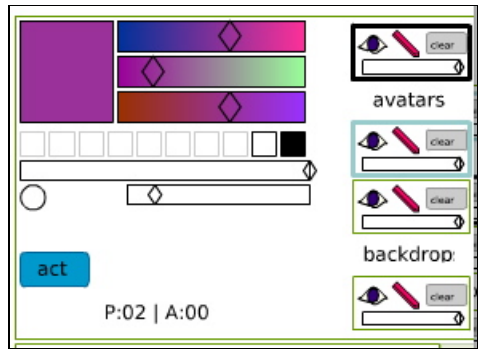
You can stop all tracks at the same time by clicking **clear all**.

Click on the blue **act** button to return to the avatar tool palette. (Your avatar can still speak and move when you have the audio palette open).

Drawing Palette

Clicking on the **draw** button in the tool palette reveals a different set of tools – the **drawing palette**. You can be still holding an avatar while you are drawing and can speak, but you won't be able to move your avatar on stage, because your cursor is now your paintbrush. Click the **act** button to return to the tool palette so that you can operate your avatar again.

Layers



Drawing allows you to draw directly onto the stage, in one of four layers; the layers correspond to the four boxes on the right hand side of the drawing palette. Click on the **red pencil** icon to select a layer to draw in. The black border shows which layer you have selected; a pale blue border indicates that another player is holding that layer. In this example (left) you are holding the top layer, which has the black border around it, and another player is holding the layer beneath, which shows a pale blue border. If you select a layer with a blue border, you will "steal" it from the other player.

The top box will draw in the top layer, over the top of any avatars. The next two layers let you draw in amongst the avatar layers, and the bottom layer draws behind the backdrop (so when a backdrop is placed on the stage, the drawing will be hidden).

Tools

Click the **eye icon** to hide or show your drawing. Click **clear** to erase all the drawing from that layer. Note that it is currently not possible to erase only part of the drawing in a layer.

The **slider in the layer box** controls the transparency of what has already been drawn in that layer: move it to the left and the drawing in that layer will become more transparent; move it all the way to the left and it will vanish completely. This is useful for fading a prepared drawing in and out, for example to create a "curtain" effect that covers the whole stage then is faded out to indicate the start of a scene.

The **colour picker** at the top has three sliders, letting you adjust the colour of what you're about to draw. Move the sliders to change the hue, and the new colour appears in the square to the left of the sliders. The small squares below the colour picker sliders show your last used colours, which is useful is you what to repeat the same colours in several drawings as you can simply click on the small square to draw with that colour.

The slider immediately below the colour picker controls the **transparency** of what you are ABOUT to draw, that is you can draw in percentages of transparency on the same layer (use the slider in the layer box to change the transparency of something AFTER you have drawn it).

The circle and slider below the transparency slider control the **size of your brush**. Move the slider to the right and the circle will increase in size, indicating how big it will appear on stage. Move it to the left to make it smaller.

Currently it is not possible to erase, other than to clear everything in a particular layer. If you are trying to draw a curved line and find that it appears as sections of straight lines, you are moving your mouse faster than UpStage can keep up with; try drawing slowly for smoother curves.

If you want to draw a completely straight line, hold the shift key down while you click at the beginning and the end of the line.

Attaching a drawing to your avatar

A new feature in UpStage v3 is the ability to attach a drawing to your avatar. This means that the drawing will move with the avatar, so for example if you have drawn a hat for your avatar, it can stay on the avatar's head when it moves to another place on the stage. Or, if you are using an invisible avatar, a drawing can move around the stage by itself.

To create a drawing attached to an avatar, right-click on the avatar and select "Draw on avatar". You can then adjust the colour, transparency and size in the drawing palette. (need some more info here about how it works, e.g. can you only draw on an avatar that you are holding yourself?)

To remove the drawing, open the right-click menu again and select ...

What happens to the drawing when you drop the avatar?

Speech and Text Chat

Avatars are different to other visual media in UpStage (e.g. props and backdrops) because they have the power of speech. Using text2speech synthesis, avatars' text can be spoken aloud in a variety of ways.

Note that at the moment, it is only possible to use characters from the Roman alphabet (including letters with accents such as é, ñ, ø, ü) but not other alphabets such as Cyrillic, Greek, etc.

Speaking

To make your avatar speak, type into the text input field below the chat window (bottom right of your screen) and hit enter (if there isn't a blinking cursor line there already, you may need to click the mouse there).

Your text will appear after your avatar's name in the text chat window, as well as in a speech balloon on the stage above or below your avatar (unless you have not put your avatar onto the stage). It will be spoken aloud in the voice selected for that avatar.

The audience can also type into the text chat, but their text won't be spoken out loud and only appears in the text chat window, not on the stage. As the audience doesn't log in, there are no names connected to the audience chat. If you are logged in but aren't holding an avatar, your text will appear the same as audience text.

Note that the default font size in the text chat window is 5. You can increase or decrease the size of the font on individual computers using the commands /asize (audience text) and /psize (player text) followed by a number, e.g. "/asize 8" to make the audience text font size 8.

Thinking

You can **make your avatar "think"** by typing : (a colon) before the text. Your text will appear in a thought bubble over the avatar, but won't be spoken aloud. It will appear in the text chat window in blue and with curly brackets around it (see image below).

Shouting

To **make your avatar "shout"**, type **!** (exclamation mark) before the text. Your text will appear in a red-outlined bubble over the avatar, and in the text chat window as red capitalised text. It will be spoken aloud and the avatar's voice is subtly modified upwards in pitch.

Avatar Voices

UpStage uses the Festival Speech Synthesiser and MBROLA to generate text2speech audio for the avatars' voices. (does this need updating?)

When you upload a new avatar, you can select a voice for it from the dropdown menu in the upload screen. To change the voice of an avatar that has previously been uploaded, go to the edit screen for that avatar and select a new voice from the dropdown menu. In both situations, you can test the voices to decide which one you want.

Once you have changed the voice, you will need to reset the stage(s) it is assigned to for the change to take effect.

Note that changing an avatar's voice will change it on ALL stages that the avatar is assigned to; therefore you should not change the voice of an avatar that is not yours, or that other people may be using on another stage.

See the appendix on **Text2Speech Voices** for more information about available voices, descriptions, and how to add more.

Saving the log

The text chat is automatically saved by the server, and can be viewed by adding "/log" to the end of the URL in the address bar of your browser (e.g. http://upstage.org.nz:8084/stages/walkthrough/log). You can then either select **Save as** from your browser's file menu, or copy and paste the text into a text file.

To permanently delete all of the text from the chat log for a stage, go to the stage edit screen and click **Clear stage** at the top-right of that screen. This will also remove any drawing, and clear any media left on stage (putting it back into the wardrobe, not unassigning it).

Whispering

Players can "whisper" to other logged-in players; this lets you communicate with your fellow players without the audience hearing or seeing it. You can whisper to an individual player, a number of players, or to all logged in players present on the same stage as you. You can also whisper to players on other stages, but you must use their usernames, and there is currently no way to whisper to a player who is in the Workshop and has no stage open. Note that you can have multiple stages open at the same time in different browser tabs or windows, and you can have the Workshop open as well as a stage or stages.

Typing a whisper command incorrectly displays a "how to" message in your chat window. If messages are not delivered to users (due to misspelling a username, or a user not currently being online), the whisper "bounces" and informs the sender what went wrong in the chat field.

Commands:

To whisper:	Type:
to a single player	/wh username1=Message
to multiple players	/wh username1,username2,username3=Message
to all users on the same stage as you	/wh *=Message

Note - **/whisper** works exactly the same as **/wh** but obviously it's easier to just type **/wh.**

/ Commands

There are a number of commands you can type into the text chat input field to do certain things. Typing a **/** at the beginning tells UpStage that what is following is a command, rather than text to be spoken.

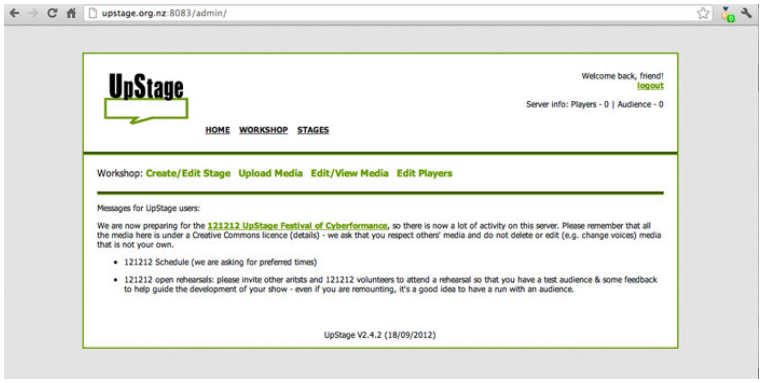
Here is a list of the commands that can be used by players:

/a 1, **/a 2** etc	displays a different frame of an animated or multiframe avatar
/a 0	animates a multi-frame or animated avatar
/asize	**/asize** followed by a number will adjust the size of the audience text in your chat window (note – this only affects your own screen; the text size will not adjust for the audience or other players); the default size is 5. Audience can also use this command to adjust the size of font in their browser
/b 1, **/b 2** etc	displays a different frame of a multi-frame backdrop
/b 0	animates a multi-frame backdrop
/details	lists the usernames of all players and the number of audience members who are present on that particular stage
/help	gives you a list of some of these commands
/info	shows information about UpStage including which version of the software you are using
/nick	allows you to change the name of the avatar you are holding – type **/nick *newname***
/license	provides information about the dual GPL and Creative Commons license
/psize	**/psize** followed by a number will adjust the size of the player text in your chat window (note – this only affects your own screen, the text size will not adjust for the audience or other players); the default size is 5. Audience can also use this command to adjust the size of font in their browser
/whisper or **/wh**	allows you to communicate with other players without the audience being aware; the whisper command is explained in the chapter **Speech and Text Chat**
/applause	Brings up a button below the chat box. This button is available to everyone on the stage and plays an applause sound when clicked.
/noapplause	Hides the applause button
/colour	**/colour** followed by a hex code will change the colour of the text in the chat box. (cool - but for who? just you, or everyone?)
:	typing **:** before your text will give you a silent thought bubble, rather than a speech bubble and spoken text. The text is blue in the chat window
!	typing **!** before your text will make your avatar shout. The speech bubble outline and the chat text is red

MEDIA MANAGEMENT

The Workshop Interface

Once you have logged in to UpStage, you arrive at the Workshop, from where you can either proceed to a stage to rehearse or perform, or choose from a range of options that allow you to create and manage stages and players, and upload and manage the media (graphics and audio) that you will use in your performances.



At the top left, the **UpStage logo** provides a link to the UpStage web site, where you can find information about the UpStage project, festivals, regular open sessions and other activities.

To the right of the logo, **HOME** will take you to the foyer page for this UpStage server: this is the public entry point, where audience can find information about upcoming shows and click on links to enter stages. The content of the Home or Foyer page can be edited by players with admin permissions.

WORKSHOP is the page you are on, and **STAGES** gives a list of all the stages on this server.

In the top right-hand corner, you can **log out**, and you can also see how many players and audience are currently on this server.

Workshop Navigation

From the Workshop links between the green and black lines, you can do the following:

- **Create/Edit Stage**: create a new stage, or edit an existing one
- **Upload media**: upload graphics and audio files, and in the same process assign them to stages and select voices for avatars
- **Edit/View Media**: browse and view media (filtered by who has uploaded it, type of media, or stage it is assigned to); edit your own media (including changing avatar voices); and assign or unassign media to and from the stages
- **Edit Players**: edit your own password and email address and, if you have admin permissions, edit the profiles of other players and create new players.

Those with admin permissions will see an additional link at the right-hand end of the navigation bar, "Edit Page Mode"; this takes you to an interface to edit and customise the content of the workshop pages.

How to do all of these things is explained in more detail in the following chapters.

Messages for UpStage players

The text area below the navigation is an editable area (by users with admin permissions) that can be used to provide information for players on this server - for example if maintenance is scheduled at a particular time, or to remind people about upcoming events and deadlines.

At the very bottom of the screen is the version of UpStage and the date it was last updated.

Creating and Editing Players

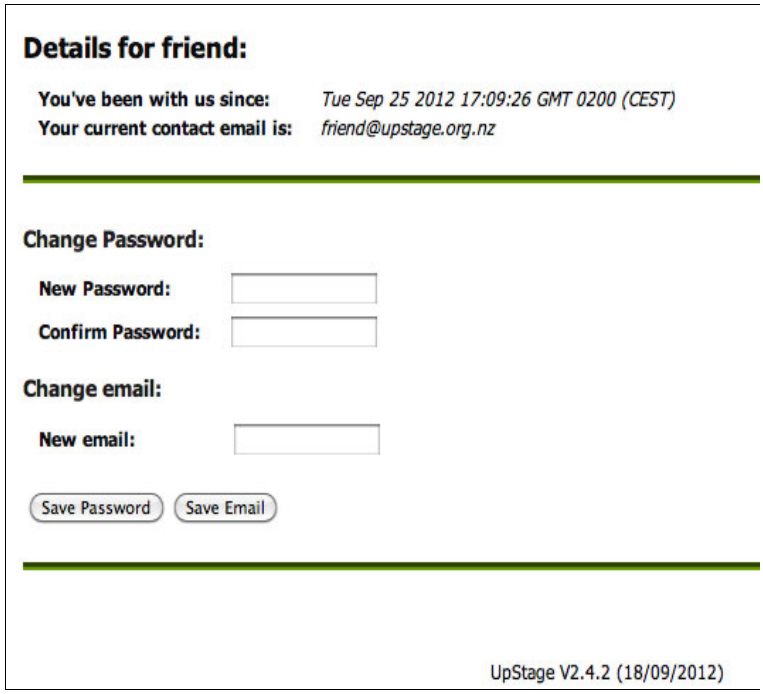
All players can edit their own information; if you have admin permissions you can edit your own and others information, and create new players.

Edit your profile

From the Workshop navigation, click **Edit Players.**

All players can update their email address or change their password.

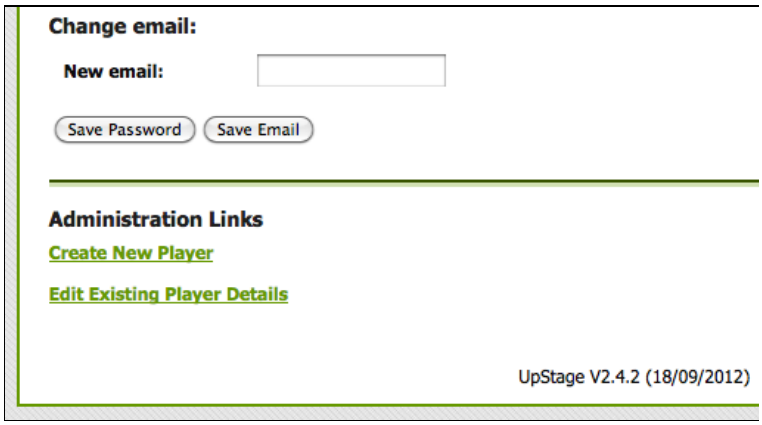
(need to update or crop this image as it has v2.4.2 at the bottom)



Administration links

If you have administrative permissions, you will also have the ability to create new players, edit the details of existing players, and delete players. You will find these **Administration Links** below the save buttons at the end of your details.

(need to update or crop image)



Adding a player

To add a new player:

1. Click **Create New Player** and a dialogue box will pop up.
2. Enter a username and password for the new player (if you use a generic or easy password, you should advise them to change their password when they first log in).
3. Enter their email address (if you don't have it, this can be added at a later date by you or the player).
4. Select the permissions (explained below) that you wish to give this player.
5. Click **Save Player**.

(need to update screengrab to show v3 permissions)

Player Permissions

Different permissions can be given to players, according to what you want them to be able to do and access on your UpStage server. The default permissions allow access to the on-stage tools, but no access to the Workshop to upload/edit media, or create/edit stages. Tick the checkboxes to give a player extra permissions:

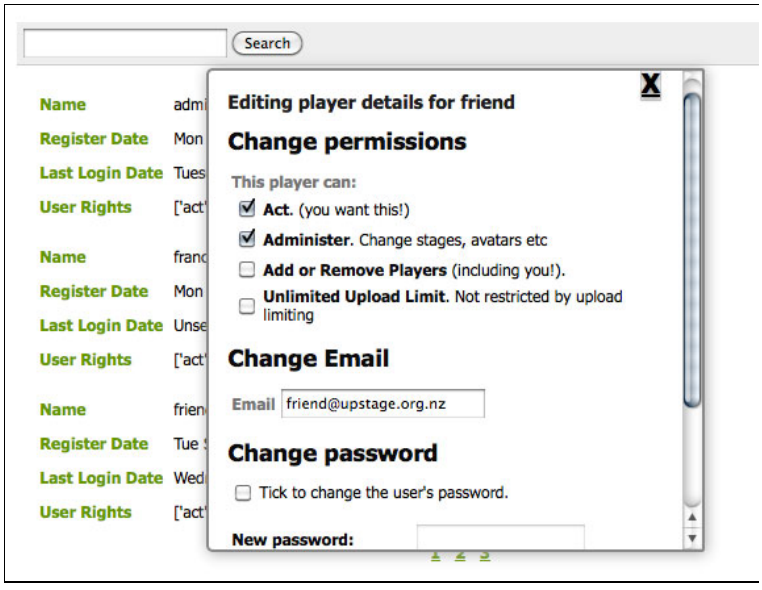
- **Player:** The default permissions enable a logged in player to access the on-stage player tools, so that they can collaborate in a performance. This level is also used for guest log-ins, for open walkthroughs and workshops where people are learning the basic operations of UpStage before starting to make their own show. This default level does not give access to the Workshop.
- **Maker:** A player with "Maker" permissions can access the Workshop and upload media, edit their own media, create stages and edit their own stages; as well as access the on-stage player tools.
- **Unlimited Maker:** A player with unlimited upload permission can upload files larger than the 1MB file upload limit.
- **Admin:** A player with admin access can administer their own and others media and stages, add/edit players, and edit the Workshop pages. An admin user has unlimited upload permission.
- **Creator:** A player with creator access can do everything an admin can do, as well override a stage lock and create new creator level users.

Editing Players

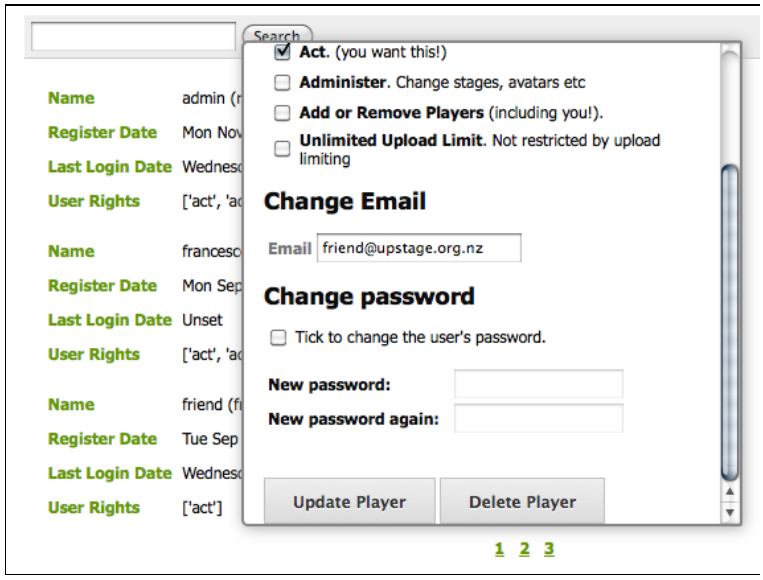
From time to time, you may need to edit the details of a player other than yourself - for example if someone's email address has changed but they haven't updated it themselves, or if you wish to give someone extra permissions such as an unlimited upload limit. The most common example is when a player has forgotten their password - an admin player can create a new password for them so that they can log back in.

The **Edit Existing Player Details** link at the bottom of an administrator's **Edit Players** screen will give a list of all players, and clicking on a player will open a pop-up window as shown below.

(update screengrab)



Make the changes that you want to make for the player, then scroll down to click **Update Player**; this is also where you can delete a player, by clicking on the **Delete Player** button at the end of this pop-up window.


Search
Act. (you want this!)
Administer. Change stages, avatars etc
Add or Remove Players (including you!).
Unlimited Upload Limit. Not restricted by upload limiting
Change Email
Email friend@upstage.org.nz
Change password
Tick to change the user's password.
New password:
New password again:
Update Player
Delete Player
Name
Register Date
Last Login Date
User Rights
1 2 3

Creating and Editing Stages

Stages are web pages on which UpStage performances take place. An UpStage server can have any number of stages, and media uploaded to the server can be assigned to multiple stages.

A player can be "in" more than one stage at a time, simply by having different stages open in different browser tabs.

Audiences enter a stage for a performance by clicking on the stage link - from the foyer page of your UpStage server, from another web site, or from an email. In a similar manner, an audience member could attend concurrent shows on different stages by using tabs or windows or a show that is presented in multiple stages.

Create a new stage

To create a new stage, click **Create/Edit Stage** in the Workshop menu, and then with the dropdown menu showing **New Stage**, click **Select**.

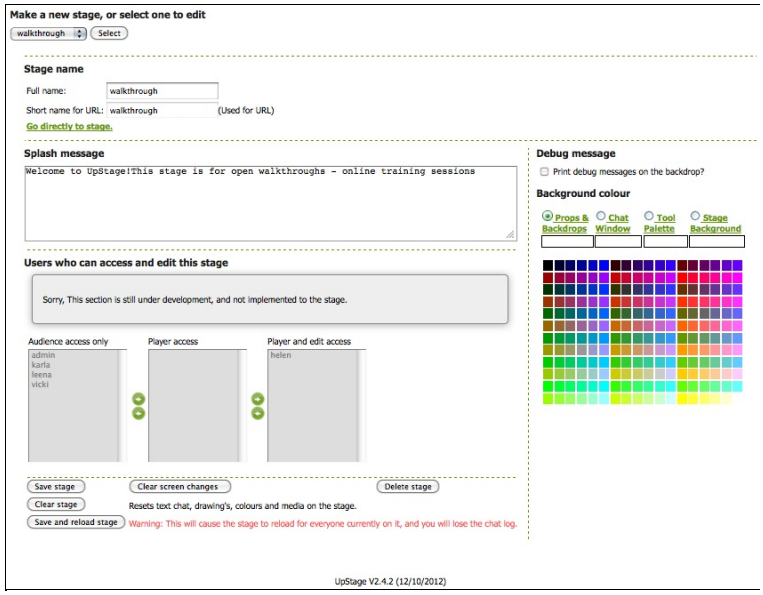
A dialogue box will open over the page. Enter a name for your stage and the URL - this can be the same as the name, but it can't have any spaces in it.

Click **Create Stage** and, voila! your stage has been created. You will find yourself at the edit screen for your new stage.

Editing a stage

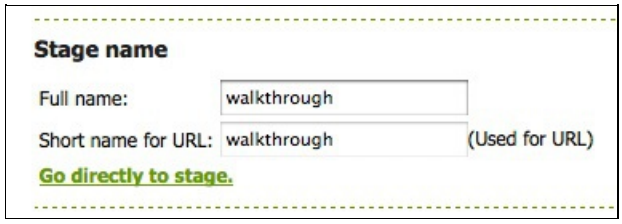
You will arrive at the edit screen when you create a new stage following the steps above. If you wish to edit an existing stage, in the Workshop menu click **Create/Edit Stage** and then select the stage you wish to edit from the dropdown menu.

(update screengrab)



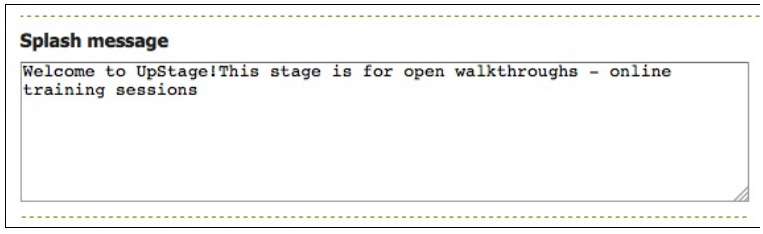
Stage name

You can edit the name of the stage, and its URL, by changing the text in the appropriate boxes then clicking **Save**.



Splash message

The splash message appears on the screen while a stage is loading and as a welcome message on the chat field; you can use this text to give some information about your show. After editing the text, scroll to the bottom and click **Save**.



Debug message

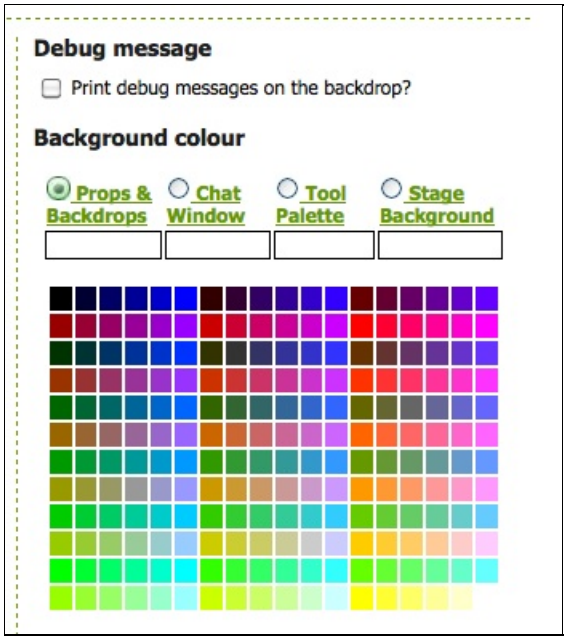
The option to print debug messages on the backdrop of your stage is primarily for developers, so that they can identify bugs by seeing what is happening as actions are performed on the stage. However, it can and has been used in performance, to add a layer of performing code to your show.

Background colour

Here you can select background colours for different areas of your stage: the chat window, the tool palette, the props and backdrops bars and the entire stage. Click on the radio button for the area whose colour you wish to change, then select from the colour palette. The chosen colour will be displayed in the box under the name of the area.

Remember to click **Save** in order to save your changes.

SCREEN SHOT HERE



Stage list

This option allows you to hide your stage on the stage list. If it is not selected then people will need a link to get onto the stage (either as a player or an audience member).

Lock Stage

This option will allow you to lock a stage so it cannot be modified by anyone other than yourself, or players who you give access to (see below). Only a player with creator permissions is able to unlock a locked stage.

(question - what is the difference between using the stage lock, and access levels to the stage? if you don't give anyone else edit access isn't that the same as the stage being locked?)

Stage media controls

SCREEN SHOT HERE

New to version 3.0 of UpStage is the ability to unassign media from the edit stage screen. This section also allows you to preview media that is assigned to the stage.

To preview a media item that is assigned to your stage, select it and click **Preview**.

To unassign a media item, select it in the Assigned list and use the green arrows to move it to the Unassigned list. Remember to click **Save** in order for this to take effect. Unassigning does not delete media from the server, it just takes it off that stage. You will still find it in the media management system and it will still be on any other stages it has been assigned to.

Player access

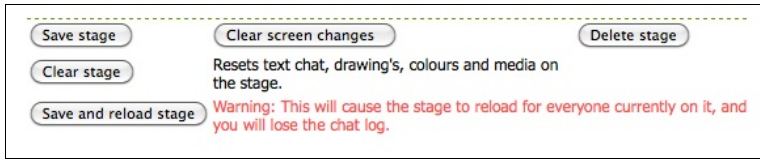
SCREEN SHOT HERE

Here you are able to set different access levels for a stage. When you first create a stage, all players apart from yourself will be listed in the "Audience access only" section. You can select which players you want to give player access to the stage, and which players can also edit the stage. The creator of the stage will always have full edit access.

Save buttons

There are a number of different possibilities for saving your stage:

SCREEN SHOT HERE



- **Save stage** will save the changes you have just made in the edit screen.
- **Cancel** will remove any changes you have entered in the screen, without saving them, so your stage will not be changed.
- **Clear stage** will delete all the text in the chat window, remove any media that has been left on the stage (it will still be assigned to the stage, but not actually visible on the stage area) and remove any drawings that have been left in the drawing palette.

- **Save and reload stage** will save the changes you have entered, and cause the stage to reload for any players and audience who are currently on it. This is useful during rehearsals when you are trying out different media and want people to see something you have just assigned to the stage, but should be avoided during performances - unless you deliberately want the audience to experience an unexpected stage reload.

Uploading Media

The following media formats can be uploaded to UpStage:

- audio: mp3 ONLY
- graphics: swf, png, jpg and gif; swf will give the best quality result, as all files are converted to swf on upload. swf and png will allow for transparency.

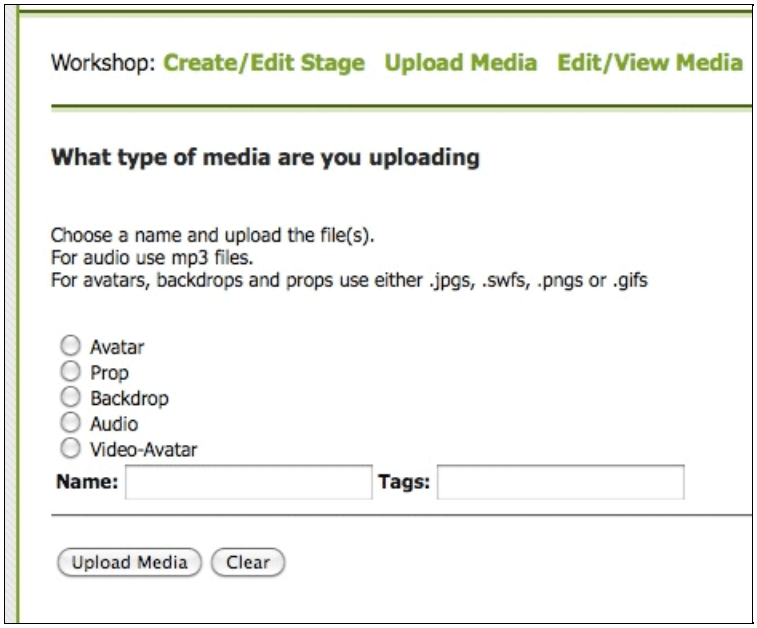
You must first create your media in a graphics or audio application, before uploading; please see the section on **Creating Media** for more information about this.

Note: this page cannot be used on Internet Explorer 7 or below, we recommend using the latest version of your browser to ensure compatibility. If you are unable to update we recommend using an alternative browser such as Firefox or Chrome.

How to upload media

Click on **Upload Media** in the Workshop navigation bar, and you will see the following screen:

REPLACE SCREEN SHOT



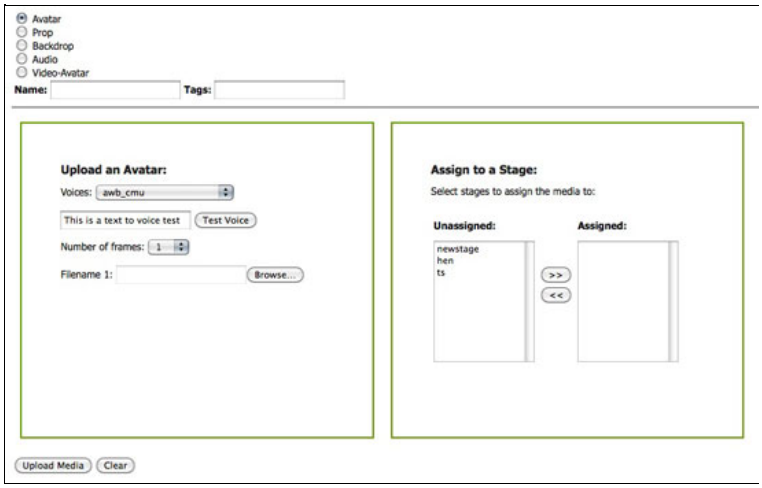
When you click on the radio button for the type of media you want to upload (Avatar, Prop, etc) the screen will expand to provide the upload form.

We will look at each media type in detail.

Upload an avatar

When you select the **Avatar**, the screen will expand to give you the form below:

REPLACE SCREEN SHOT



Enter a **name** and any **tags** you want to attach to this media item (tags can help you to find a media item later) then click **Browse** to navigate to where your media item is on your hard drive or online.

Avatar voice

Select a voice for your avatar from the **dropdown menu of voices**. To hear what each voice sounds like, click **Test Voice** (you can change the text that will be spoken in the input box). There is more information about the different voices in the appendix **Text2speech Voices**.

Streaming Avatars

A stream avatar enables an audio-visual stream to be displayed on the stage. See the section on **Streaming** for information about how to do this.

Multi-frame avatars

One way to create animated or multi-frame avatars is to use an application such as Flash that can generate a multi-framed swf file. Another option is to create multi-frame avatars in the upload process. You will need to prepare each frame beforehand, making sure that each image is the same size, then upload them using the **number of frames** dropdown menu.

1. Select the number of frames you require, which will create additional fields below **Filename 1:** for each frame.
2. Click **Browse** to navigate to the file that you have created for each frame of the avatar.

Assign to a stage

You can assign your avatar to any of the existing stages as part of the upload process:

1. Click on the name of the stage in the **Unassigned** list to select it.
2. Click on the arrows to move it to the **Assigned** list.

Upload!

When you're ready, click **Add Media** to upload your media. If you've forgotten to enter any required information - such as a name - a dialogue box will prompt you. You can also change information later by editing your media.

Upload a backdrop

Backdrops work in the same way as avatars; select the **Backdrop option** and the form is the same, minus the voice selection and test and streaming options.

Upload a prop

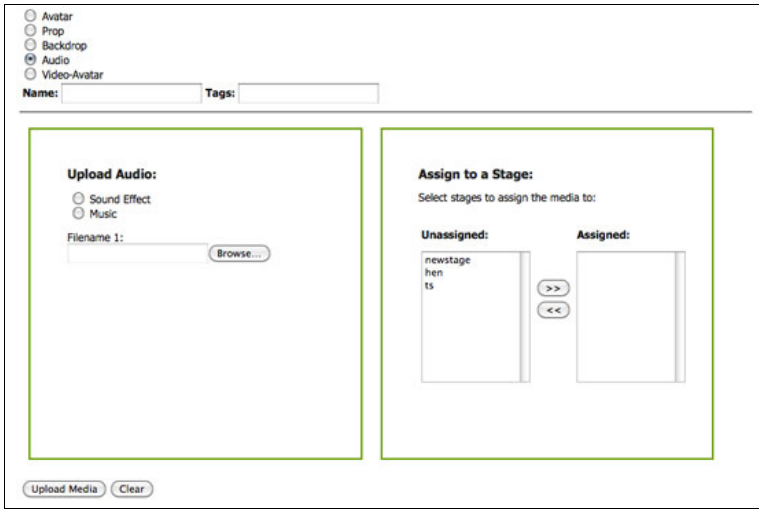
To upload a prop, select the **Prop option** and you will see a similar form to that for uploading a backdrop, minus the multiple frame option.

REPLACE SCREEN SHOT

Upload an audio file

Select the **Audio**, navigate to find your file, and select any stages that you wish to assign the audio to. The only difference this time is that you are also asked to select either **Sound Effect** or **Music** as the type of audio file. Audio files MUST be MP3.

REPLACE SCREEN SHOT

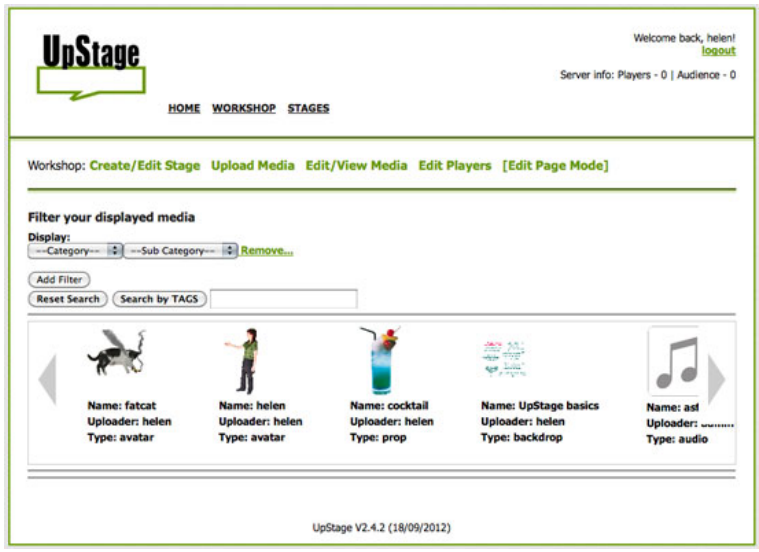


Browse Media

REWRITE THIS SECTION

One of the major improvements in this version of UpStage is the greatly enhanced ability to filter and browse media that has been uploaded to the server. You can use filtering and tags in order to find what you want quickly and easily.

Clicking **Edit/View Media** in the Workshop navigation bar gives you an interface where you can browse all of the media that has been uploaded, by yourself and other players, as well as edit individual media items (see the chapter **Edit Media** for information on editing).



Filter your displayed media

Probably you are most interested in finding your own media, or media uploaded by your collaborators for a particular show. The filtering system allows you to do that easily.

Under the **Category** dropdown menu, you can select:

- **User** to display all the media uploaded by a particular player
- **Stage** to display all the media items assigned to a particular stage
- **Type** to display all the media of a particular type.

Once you have chosen which category you want to filter by, the **Sub-category** dropdown menu will then allow you to select from all the options within that category - i.e. all players who have uploaded media, all stages, or all media types.

For example, you could set the filters to **Category: Type** and **Sub-category: Backdrops** to find all the backdrops that have been uploaded.

Add a second filter

But let's say that you only want to see all the backdrops that you have uploaded yourself. Click **Add Filter** to add a second level of filtering to your search. This time, select the **Category: User** and for the **Sub-category** your own player name. Only the backdrops that you have uploaded yourself will be shown.

Another example would be to see all of the avatars on a particular stage:

1. Set the Category to Stage.
2. Set the Sub-category to the name of the particular stage.
3. Click Add Filter.
4. Set the Category to Type.
5. Set the Sub-category to Avatar.

And voila! the thumbnails displayed are only the avatars that have been assigned to that particular stage.

Search by tags

Another way to search for specific media items or groups of media items is to use **tags**. Tags can be added at the time of upload, or later by editing a media item (see the chapter **Edit Media** for information on how to do this).

For example, you may wish to be able to easily find all media that has been uploaded for a particular show, even if some are test items and have not been assigned to the stage. Filtering would allow you to find the items assigned to the stage, but if you have given them all a common tag, such as the name of the show, searching for this tag will allow you to find all of that media. This can be useful when you want to delete all of the unwanted test media, if you want to decide to use an item that you'd previously rejected, or if you are making different versions of the same show that require slightly different sets of media.

Tags can also be used to:

- group media that is intended for workshops and tutorials, such as informative backdrops and example media items
- make media on a specific theme findable by other players
- help manage a large amount of media if you are a heavy UpStage user.

Edit Media

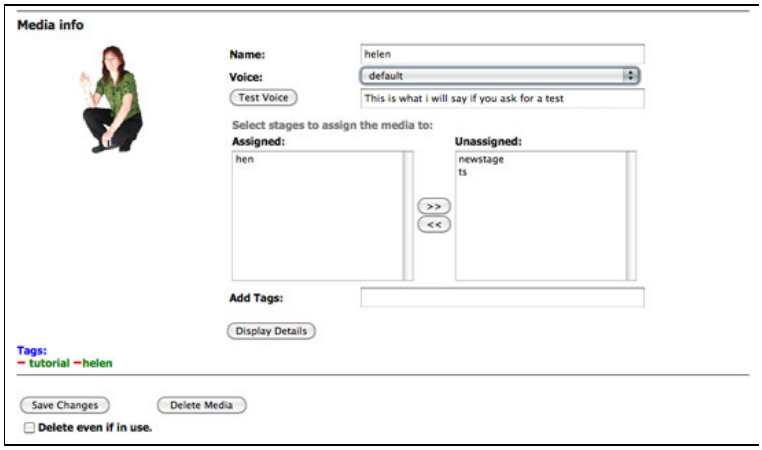
To edit media that has been previously uploaded, click **Edit/View Media** in the Workshop navigation bar.

Use the filters or tag search (explained in the chapter **Browse Media**) to find the media item(s) you want to edit. The table display provides information about the media, including:

- who uploaded it and when
- what type of media it is, including stream information
- any stages the item is assigned to
- any tags given to the item.

From the table view, click on the line of a media item to display its preivew and editing tools. The information for that item that is displayed in the table will appear under the preview, along with the item's URL and the size of the file.

(update screengrab)



Here you can:

- change the name (note that this will change it on all stages where the media item has been assigned)
- change the voice of an avatar: select from the dropdown menu, and click **Test Voice** to hear what it sounds like
- assign the media item to stages, or unassign it: select the stage name and use the arrow buttons to move that name from one list to the other
- add tags: more than one tag can be added by separating them with a comma
- replace the media item with another file
- download the media item
- delete the media item.

(needs some more info)

The edit interface is the same for all types of media, apart from one difference: avatars have the voice dropdown menu and **Test Voice** button, and audio items have a **Test Audio** button, which allows you to listen to the file.

CREATING MEDIA

Creating Graphics for UpStage

Avatars, backdrops and props for UpStage can be created using standard graphics applications such as Gimp, Photoshop, Fireworks, Flash etc. However, before you go ahead and upload something you prepared earlier, please read this chapter as there are many important points to ensure that your graphics appear the way you want them once uploaded to UpStage.

Format and size

The recommended formats for your original graphics files are **.swf or .png**. Vector-based images will appear much cleaner than pixel images (such as .gif and .jpeg), as they resize in UpStage to match the dimensions of individual screens and browsers. You can use .gif and .jpg but your images will lose quality (note – as the exception to the rule, backdrops are fine as jpegs).

Avatars and props will appear on stage approximately two to three times larger than the original file. This is because the stage is not in a fixed-size window: it allows for different screen resolutions and sizes, and different sizes of browser window. The aspect ratio is 7:3 (see the backdrop diagram below).

The recommended size for the original file for a "standard" size avatar is approximately 100x100 pixels – obviously you will want bigger and smaller ones, but this gives you somewhere to start. In order to test the size of your avatar, you must upload it, assign it to a stage, then look at it on that stage (the same applies to props, and also for backdrops if you are working out what is going to be obscured by the chat window).

It can be a time-consuming process getting your graphics to the size you want, so it's a good idea to make a couple of samples first and then base the rest of your graphics on those once you have got them the size you want. If you upload graphics that are not the right size, please remember to **delete your unwanted files**, to keep the server tidy.

Creating .pngs

The .png file format is good for avatars and props, as it allows for transparency (unlike .gif or .jpg) and gives a good quality image. Most graphics applications will allow you to save your files as .png. In the **File** menu, choose **Save As** and look for the .png option.

Do NOT interlace the file when you save it.

Creating .swfs

All graphic files that are uploaded to UpStage are converted to .swf format in the upload process. Because of this, the best quality of graphics can be achieved if your original is already an .swf.

To create .swf files, you need an application which produces the .swf format. The following information is based on the commercial Adobe Flash application, however there are now many open source alternatives such as swfmill, SWFTools, Haxe, Flex, Red5 and FlashDevelop. If you have experience in using any of these applications and would like to provide instructions for creating .swf graphics for UpStage that could be added to this manual, please email info@upstage.org.nz.

Please note that the following information is by no means a comprehensive Flash tutorial. If you do not know how to use Flash at all, or if the following steps are not clear to you, we recommend that you look on the web for a Flash tutorial.

At the time of writing, UpStage only supports Actionscript 2; please make sure that you save your files correctly, as files saved with Actionscript 3 will not work.

Create a single frame .swf avatar or prop

The basic steps for producing a single frame avatar or prop using Flash is as follows:

1. Start with a .png file in which you have clear-cut your image and given it a transparent background. Keep the .png image at a large size – around 500px square for a standard-sized avatar is a good guide, as much larger will result in an unnecessarily large .swf file but a smaller file will start to lose quality.
2. Open Flash and from the **File** menu, choose **Import**; navigate to your .png file and import it into Flash.
3. Click on the image to select it – a grey border appears around it.
4. In the **Insert** menu, choose **Convert to symbol** – the border will change to a thin blue line.
5. Resize it (**Modify › Transform**), remembering that avatars and props will increase in size by about 2-3 times when uploaded into UpStage. Around 100 pixels is a good size to begin with if you don't know what size you want.
6. Once you have reduced it to the required size, adjust the document size to match.
7. From the **File** menu, choose **Export Image**. Put the jpeg quality up to 100% and save the .swf file.

Animated avatars and backdrops

UpStage supports both animated sequences and Flash movie clips.

You can create an animated sequence either in Flash (an .swf with a series of frames) or by creating a series of .pngs (or .jpgs or .gifs) and uploading them with the multiframe option in UpStage. When you put sequenced (frame-by-frame, or motion or shape tweened) animation onto the stage it will appear static with the image in the first frame. To change to other frames of the animation, type **/a 2**, **/a 3**, etc. To make the avatar animate, type **/a 0** and to return to the first frame type **/a 1**.

If you have saved your .swf as a movie clip animation it does not need any commands, it will automatically loop and can be used on stage either as a continuously looping animation or as a series of still avatars that are swapped using the **/a** command, as above.

Props and backdrops can also be animated using Flash. But bear in mind that Flash animations can end up as larger files, which will increase the time it takes to load your stage.

Animated sequence

To create an animated sequence, follow these steps:

1. Create a series of .png files and give them numbered filenames.
2. Open Flash and from the **File** menu, choose **Import** and navigate to the first .png file; Flash will ask if you want to import the series, say "yes". This will create a frame for each image.
3. On each frame in turn, click on the image to select it (a border appears around it); from the **Insert** menu, choose **Convert to symbol** (the border will change to a thin blue line)
4. Resize (**Modify > Transform**), remembering that avatars and props will increase in size by about 2-3 times when uploaded into UpStage.
5. Once the images are all reduced to the required size, adjust the document size to match; if your images are not all exactly the same size make sure you have made the document size as big as the largest image.
6. From the first frame, and with the image selected (the blue line should appear around it), go to the **Insert** menu and select **Create motion tween**.

- To check that the tweening has happened, go to the **Control** menu and select **play** – your sequence of images should play.
- From the **File** menu, choose **Export Movie**; put the jpeg quality up to 100% and save the file.

Sounds can be embedded into Flash movie clips, but it takes a bit of trickery to be able to control the sound.

When using Flash to create animated avatars and props, be sure to check the the frame rate and whether it is set up to loop. If the frame rate is, for example, 24 fps and it is set to loop, the image will reload 24 times a second, regardless whether anything else is changing on the screen. Making your still flash pictures run at, for example, 1 fps and/or switching off looping will ease the load on everyone's browser. Very slow animation, for example tweened over 40 or so frames and looping, will cause the least strain and can create some very effective movement.

UpStage doesn't cope with movie clips nested within the frames of a Flash animation, but it is possible to import Quicktime movies into Flash and then export as a .swf. You will need to experiment with file sizes and perhaps remove some of the frames from the Quicktime movie in order to keep the file size down.

Once again, this manual does not pretend to provide a comprehensive Flash tutorial. Please look on the web for more detailed information on using Flash.

Backdrops

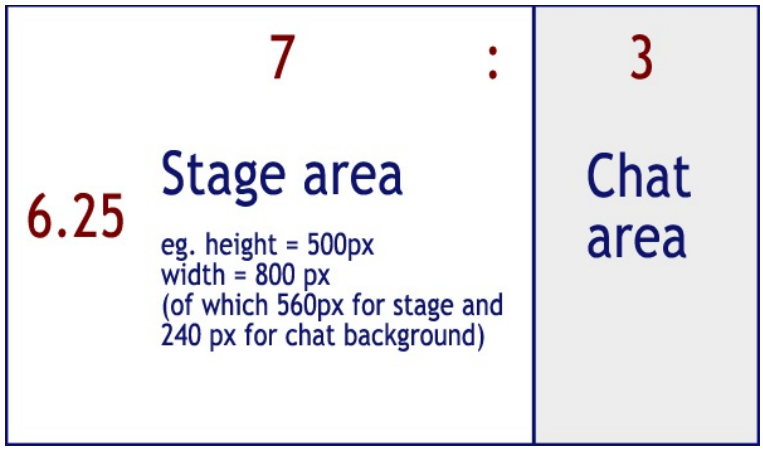
As long as the original image is 380x240px or larger, a backdrop will fill the UpStage screen, including going behind the text chat window. You may wish to create a backdrop that has a blank area on the right where the text chat window is to ensure that important parts of your backdrop are not hidden behind the chat window.

The proportions of the whole image are:

total width : total height - 800 : 500 (or multiples of these proportions)

width of stage area : width of chat area - 5 : 3.5 (if your image is 800 wide, the chat will begin at 550).

minimum width : height – 380 : 240 pixels



Bear in mind that everyone's screen size and browser window size can be different – your backdrop will stretch to fill the space.

Note that in the Player view of the stage, an strip along the bottom of the backdrop will be obscured by the Backdrop and Prop Image Galleries – but as these tools are not seen by the audience, it is recommended that your backdrop extend below that strip.

TIP: it's a good idea to look at your stage in audience view as well as player view; you can do this while you're working by having it open in two browsers, one where you are logged in and one not.

Backdrops can be created as .png, .swf, .gif or .jpeg; as with avatars and props, .png or .swf will give the best quality results, however generally a .jpg backdrop will also be fine. If you are using .gif or .jpeg, upload a test backdrop to see if it's going to be good enough, and remember to delete unwanted images.

Note that .png files should NOT be interlaced when saving.

File Sizes

UpStage has a default file size limit of 1MB for each media item uploaded. This can be over-ridden by giving a player unlimited upload permission, but in general it's a good idea to keep your files as small as possible. The larger the files you upload, and the more media assigned to your stage, the slower the stage will load.

What is a "reasonable" file size for your original graphic? This is very hard to say, as it's completely different for a small static flat graphic prop which may be only 1K, and an animated flash backdrop or multiframe avatar, which could be over 500K. And a stage with a single large graphic may load faster than one with many medium sized graphics.

If your original files are larger than 500K, check whether you can resize them and save them again to a smaller file size. Remember that screen resolution is only 72ppi so there is no need for your originals to be at a higher resolution.

Deleting Graphics

It is good practice to delete unwanted graphics in order to keep the server tidy and minimise digital storage requirements.

1. From **Edit/View Media**, browse to find the item you wish to delete and select it.
2. If the item is a assigned to one or more stages, tick the checkbox at the bottom of the screen **Delete even if in use.**
3. Click **Delete media**.

If you are working on a server that is used by many players, such as the Open UpStage (http://upstage.org.nz:8084) please do not delete anything that has been uploaded by someone else. But also be aware that we operate a Creative Commons policy, so your media may be "borrowed" by others, for learning and playing; no-one should use someone else's media in a performance without the original creator's permission.

Embedding links in graphics

Active hyperlinks can be created by typing a URL into the text chat window (use right-click or ctrl+click to open or copy the link); however sometimes it's useful to have a graphic onstage that provides a hyperlink to another stage or a different web site.

The way to do this is to create a .swf image with an ActionScript button containing the following code:

```
on (release) {

        getURL("http://desired.url", "_self");

}
```

This could be an avatar or a prop that is placed on the stage at the time that you want the audience to follow the link.

More Flash tricks

If you are experienced in using Flash and Actionscript, you can do a lot more with it in UpStage; most (but not all!) interactivity that can be achieved in a web page using Flash, can be achieved in UpStage. Performances that have enhanced audience interactivity through sophisticated Flash programming include Virtual Theatre's *Lines* (090909 Festival) and *Murder 2.0* (101010 Festival), and *The Best Air-Guitar Album in the World Vol II* by Anaesthesia Associates (070707 Festival).

The purpose of this manual is not to teach you how to use Flash, but there are some relevant tutorials on the UpStage web site which you may find helpful.

Creating Audio for UpStage

As well as sound created in real-time by avatar voices, prerecorded .mp3 files can be uploaded to UpStage and played via the **audio palette** in the on-stage player tools.

Prerecorded audio can include music, sound effects, human voices, etc. At this stage, ONLY the .mp3 format works. Another possibility for adding audio to your performance is to embed audio in a Flash animation, if you have the skills and ability to do this.

There is a 1MB file size limit for all media uploads, to ensure that the server doesn't get unnecessarily filled up with enormous files and that stage load times are not too long and tedious for the audience. It is possible to over-ride the 1MB limit by giving a player unlimited upload permission, but remember that when the audience enters your stage, all of the media assigned to the stage must be loaded to their computer, therefore the bigger the files, the longer the load time.

Converting files to .mp3

There are many ways to create, convert and compress .mp3 audio files; we recommend that you refer to other manuals for more information on this if you are not familiar with it.

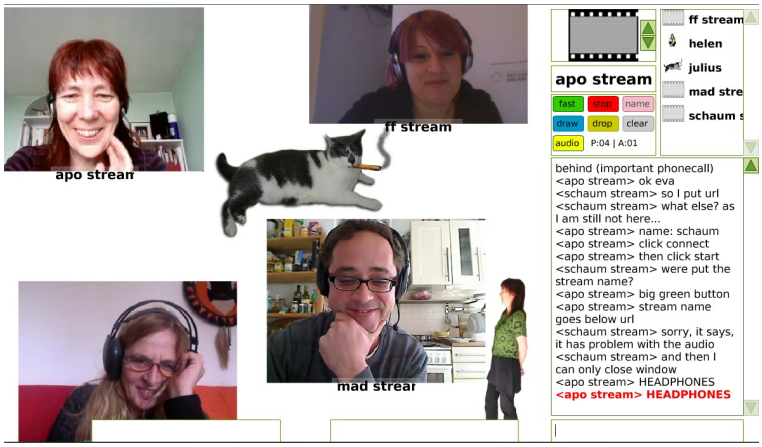
If you are a Mac user, a simple method to convert an audio file from another format to .mp3 is to open the file in iTunes, and from the **Advanced** menu select **Create MP3 Version**.

STREAMING

Introduction

This manual is for the **UpStage Video Hack (2013)** and is specifically about the new audio-visual streaming feature, developed by Martin Eisenbarth for the project *We have a situation!*. It should be used in conjunction with the UpStage v2.4.2 User Manual, but bear in mind that there are some differences between v2.4.2 and the video hack version of UpStage.

THIS MANUAL IS A WORK IN PROGRESS!



Streaming via UpStage involves two things:

1. sending a stream from your computer to a **streaming server**; and
2. inserting that stream into the UpStage interface, by either creating a **stream avatar** or uploading an .swf graphic (backdrop, avatar or prop) that has the stream embedded within it. The first option is more straightforward, the second requires some knowledge of Flash.

This manual gives instructions on how to stream to a Red5 server, and how to create and use a stream avatar. Some information on embedding a stream in an .swf graphic is provided but this manual is not about how to use Flash.

This manual is an extension to the UpStage v2.4.2 manual, specifically to explain the audio-visual streaming feature. For all other UpStage information, please see the v2.4.2 manual.

Video tutorial

Here is a 10-minute video tutorial which gives examples of how streaming has been used in UpStage and explains how to send a stream using the FMLE.

Sending a stream

You need to have access to a streaming server in order to send an audio-visual stream from your computer to UpStage.

Please note: this manual is not about how to install a streaming server; for information this and on installing the UpStage video hack version, please click here. Normally you will not need to install your own streaming server, just have access to one.

The information in this manual is based on the Red5 streaming server; this is not the only option, but it is the one that we have tested and found to work well.

Stream server name

The Red5 server will have an **rtmp URL** that will look something like this (with "example.com" being the URL of the host server):

```
rtmp://red5.example.com/oflaDemo
```

or:

```
rtmp://example.com/oflaDemo
```

You will need to enter this into the **"Stream server"** field when you create your stream avatar in UpStage (see the chapter **Creating a stream avatar**), and you will also need to enter it into the streaming application that you use to send the stream from your computer.

Streaming client or publisher interface

There are two ways to send a stream from your computer to a Red5 server:

1. Using the Red5 Publisher - the browser interface provided by the Red5 server.
2. Using a streaming client, such as VLC (Linux) or Flash Media Live Encoder (Mac & Windows).

Using a streaming client rather than the Red5 publisher gives more control over the quality and other variables of your stream. It also allows you to save the settings in a profile, so that when you reopen the client to restart a stream, all your settings are automatically loaded and you do not have to enter them all again.

Whichever option you use, you will need to:

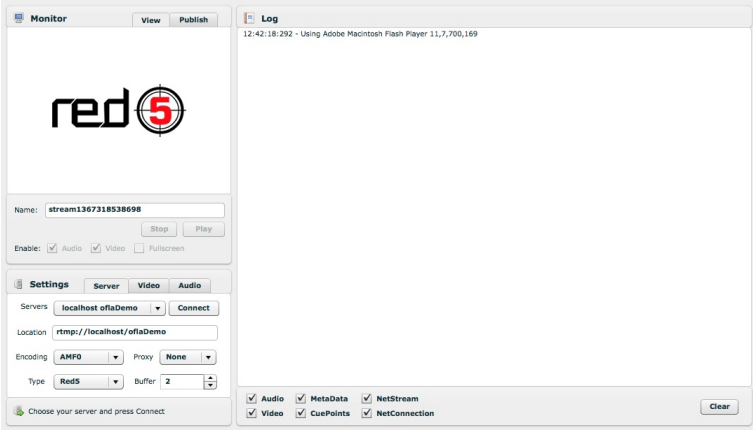
1. enter the server URL (rtmp:// ...)
2. enter the stream name, exactly the same as it is for the UpStage avatar
3. select the appropriate video and audio devices
4. create a connection to the server
5. start your stream.

It is easy to make small errors in any of these steps that will stop your stream from working. For example, a space at the end of the server URL will prevent the connection from being made. If your stream does not work, please carefully check all of these settings to be sure you have everything right, no extraneous spaces or small typos.

This manual provides configuration instructions for the Red5 Publisher interface (no download required), VLC and the Flash Media Live Encoder (FMLE). For the latter two, you will need to first download and install the application; then follow the instructions in this manual.

Red5 Publisher interface

The Red5 Publisher is a browser interface that allows you to publish a stream without having to download and install a streaming application. However, it does not allow as much control or optimisation over the stream you are sending, so if you are going to be regularly streaming and/or wish to have the best quality stream, it is recommended that you use VLC, FMLE or another similar application (see the following chapters for download links and set-up).



To access the Red5 Publisher, you need the publisher URL for the Red5 server you are using. This URL will look something like:

`http://example.com:5080/demos/publisher.html`

or

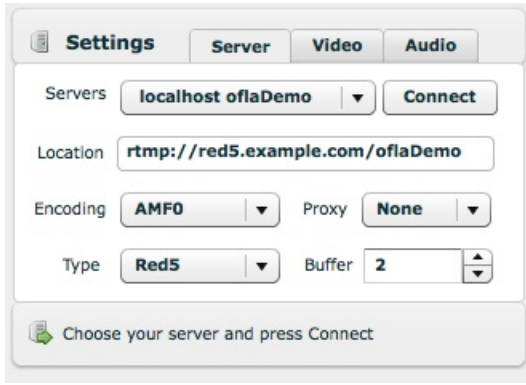
`http://red5.example.com/demos/publisher.html`

(where "example.com" is the url of the host server).

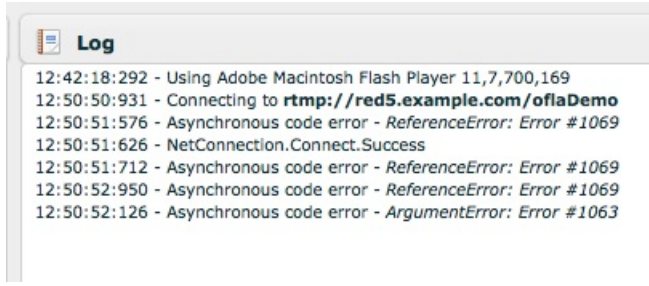
Enter the settings

Open the Red5 Publisher URL in a browser (it will look like the screengrab above) then follow these steps:

1. In the **Settings** area, select the **Server** tab and enter the appropriate rtmp URL (in **Location**), then click **Connect**:



2. You should see now in the Log that you are connected, from the line that says "NetConnection.Connect.Success" - don't worry about the error messages.



3. Go to the Video settings and choose the video source you want to use, then click **Start**:

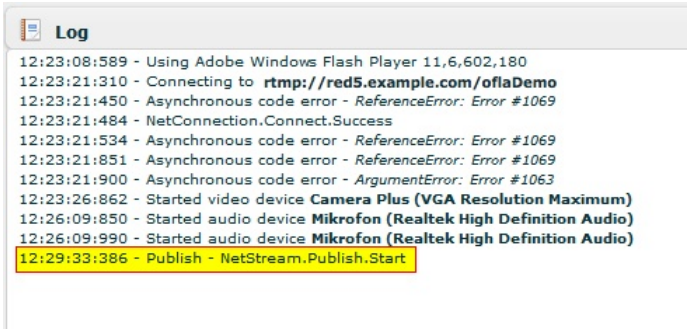
4. Click **Allow** on the pop-up window that asks you if Flash can access your web cam.
5. Go to the Audio settings and choose the audio source that you want to use, then click **Start**:

6. You should see in the Log that both your video and audio has started (naming could be different depending on your hardware):

7. You should also see your webcam image and hear your audio in the preview tab. Now enter the stream name (exactly the same as you have given to the stream avatar in the UpStage workshop, this example shows the name 'mystream') and click **Publish**:

   Note: the **Publish** tab only shows the capture from your hardware; to see the actual stream select the **View** tab, enter the stream name and click **Play**.

8. If your stream is successfully published you will see it in the Log (you will also see error messages, but these can be ignored):



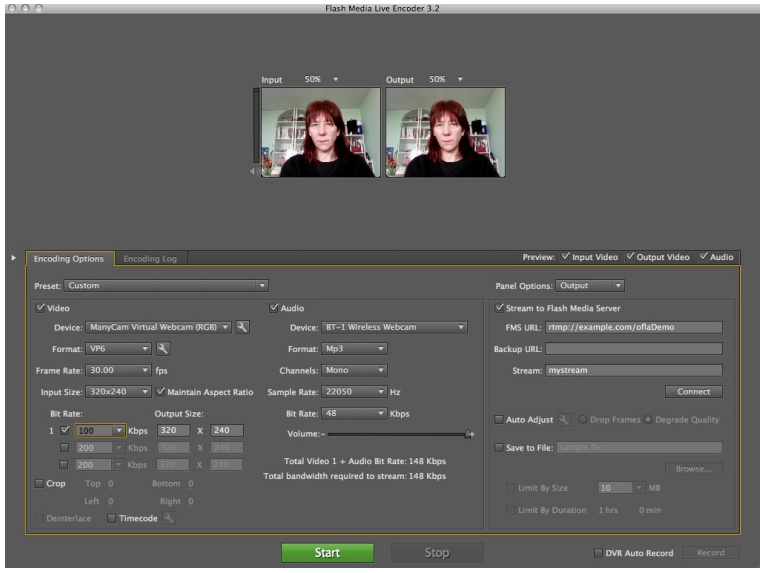
9. To stop the stream, just click **Stop** in the Publish tab.

Flash Media Live Encoder (Mac & Windows)

First download and install the cost-free Flash Media Live Encoder application (FMLE); you will need to create an account if you do not already have one, but this does not cost anything. Then select whether you want to download the Mac or Windows version. The current latest version at the time of writing this manual is version 3.2, and that is what the version that the following instructions are for.

Stream settings

Once you have downloaded and installed the FMLE, open the application and enter the following settings in the Encoding Options panel:



On the right hand side, under **Panel Options: Output**, ensure the box "Stream to Flash Media Server is checked and enter the appropriate stream server URL and stream name.

Click **Connect** to test the connection to the server.

Video and audio settings

The video and audio settings will vary according to your hardware, the quality of stream you want to send, and the capability of the streaming server you are using. The following settings are what we are using as standard for UpStage, but you can experiment with them.

1. Select your web cam and audio input from the dropdown menus; note - if you do not want to stream audio, **uncheck the box beside Audio**.

2. The formats will normally be VP6 for video and MP3 for audio.
3. The video frame rate can be set at 30; if you have a lot of streams or a low capacity streaming server, you can reduce the frame rate to improve performance.
4. Select the appropriate input size for your video; for best results, ensure that the Output Size exactly matches the input size.
5. Bit rate: a low bit rate will help to ease the load on the server and reduce lag (delay) for those receiving the stream. We recommend 100 for video.

Click the green **Start** button to start streaming. Click the red **Stop** button to stop streaming.

Save a profile

If you are going to be using the same streaming server on a regular basis, remember to save a profile once you have entered the settings by going to **File > Save Profile**. This means that next time you open the FMLE, your settings will automatically be loaded.

If you try different settings to experiment with quality, you can save a new profile and then go back to the original settings by going to **File > Open Profile**.

VLC (for Linux users)

VLC offers the possibility to stream on Linux using video4linux (can access different kinds of hardware like webcams but also TV tuners etc.) and FFmpeg for transcoding (transcoding to FLV and sending RTMP to a stream server).

The file STREAMING.txt contains some links to in-depth information about streaming parameters for use with VLC.

Sample script

For easy setup please use the avstream_vlc_linux_example.sh script (download here by right clicking and saving as file).

Modify settings

-

Adjust to your hardware:

> `VIDEO_CAPTURE_DEVICE`:
>
> e.g. `/dev/video0` for your internal webcam, or `/dev/video1` and so on for further external hardware
>
> `AUDIO_CAPTURE_DEVICE_SLAVE`:
>
> use `alsa://hw:0,0` for your internal microphone or `alsa://hw:1,0` and so on for external microphones
>
> set the stream url `STREAM_PUBLISH_URL`, for example if your stream name is *stream1*:
>
> ```
> rtmp://red5.example.com/oflaDemo/stream1
> ```

Additionally you may want to adjust all settings starting with `STREAM_...`, all other settings probably won't need to be touched. The standard configuration is to stream with **VP6** and **MP3** codecs, **320 x 240 pixels** at **30 fps** and a total bandwidth of **196 kBit/s**.

Start streaming

Please ensure the script is executable and can be run:

> using the terminal: execute `chmod 755 ./avstream_vlc_linux_example.sh`
> using a graphical windowmanager: right-click the file and select *Properties*, then search for the settings to allow execution of the script by the user

If your script is executable you can run it:

> in the terminal: execute `./avstream_vlc_linux_example.sh`
> using a graphical windowmanager: double-click the script and select *execute in terminal*

Note: In case you want to see a live preview of the streamed video you can uncomment the line in the section *"watch stream?"* of the script. You will need the software rtmpdump and mplayer to watch the stream.

Creating a stream avatar

The easiest way to make your stream appear on an UpStage stage is to create a stream avatar. This avatar is created in the same way as a normal avatar, from the **Add Media** section of the Workshop interface:

1. Click **Add Media**.
2. Select **Avatar** from the media type dropdown menu.

Adding a stream avatar

3. Give the avatar a name, tags, and select a voice if you want.
4. Check the **"Enable streaming?"** box.
5. In the **"Stream server"** field, enter the rtmp address of the streaming server you will be using.
6. In the **"Stream name"** field, give the stream a name.

Adding a stream avatar

7. Assign the avatar to the appropriate stage(s).
8. Click **Add Media**.

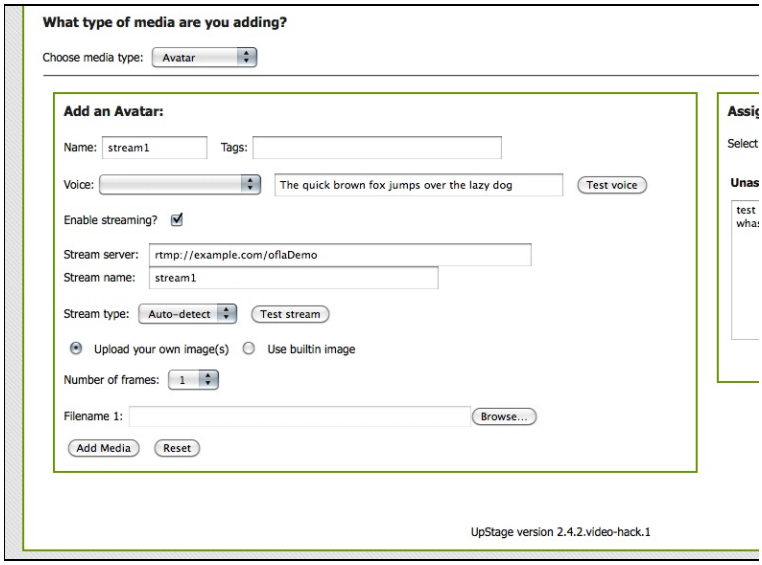
You must have the exact same stream server and stream name information entered in whichever streaming application you use.

Stream as part of a graphic avatar

It is possible to have an avatar that is both a static or animated graphic AND a stream. To do this, once you have entered the stream information as described above:

1. Select the radio button **"Upload your own image(s)"**.
2. Select the appropriate number of frames.
3. Browse to the image(s) on your hard drive and select.
4. Assign the avatar to the appropriate stage(s).
5. Click **Add Media**.

Note that this means the stream will be visible behind every frame of the avatar, unless you are not actually streaming anything.



Now go to your stage and start your stream in order to see your stream avatar; remember that you must assign the avatar to a stage before you can see it!

Prerecorded streams

It is possible to play a prerecorded video or audio file in the same way as a live stream. This allows you to add additional media to the stage without increasing the initial load time for the audience, and enables a greater variety of formats.

In particular, it allows the playing of prerecorded video at high quality, which was not previously possible to do directly in UpStage (prerecorded video can be played by embedding in .swf files).

File formats that can be streamed are **MP3, FLV**, or for higher quality **MP4** or **AAC** (note that higher quality also means more bandwidth and potential problems for people on slower networks).

You will need FTP access to the streaming server; ask the person who is administering the streaming server you are using for this information.

Streaming prerecorded video and audio

1. Via FTP, upload your video or audio file to the streaming server (note: use only letters and digits in the file name, no special characters or spaces).
2. In UpStage, go to **Add Media** and create a stream avatar with the RTMP URL of the streaming server and the stream name as the filename of the video or audio file.
3. Assign the stream avatar to the appropriate stage(s).
4. Test the stream in the Add Media interface to ensure it is working.
5. Go to the stage, hold the avatar, and place it on the stage; the recording will start playing from the beginning of the file.
6. To stop the stream, simply drop or clear the stream avatar from the stage.

Recommended bitrates

The bitrate of your streams are very important: the total bitrate of all the streams on stage at one time should not exceed 800kBit/s, to avoid network overload and stream interruptions for some people.

For videos: a bitrate of 200 - 400 kBit/s should be sufficient.

For audio: a bitrate of 64 - 160 kBit/s should be sufficient.

APPENDICES

Glossary

Here are definitions for some of the terms that are used in this manual. Please let us know if something is missing.

Audience: people present online at a performance, but not logged in. The audience can participate via the text chat, but do not have access to the same tools as the players.

Avatar: a graphical icon that can be held and moved around the stage by a player, and that can speak.

Backdrop: a graphic which fills the stage behind any avatars and props that are placed on it. A backdrop can also extend behind the text chat.

Chatters: the online audience are also referred to as "chatters", as they contribute to the performance via a text chat function.

Cyberformance: live online performance where remote players and/or audience use internet technologies to come together in real time. http://en.wikipedia.org/wiki/Cyberformance

Drawing: functionality that allows real time drawing directly onto the stage.

Foyer: the home page of an UpStage server – where the audience can come to see what's on, and where players can log in.

Mirror: the square on a stage that shows a player which avatar they are currently holding.

Palette: e.g. "drawing palette" or "audio palette" – a set of tools for a particular function.

Player: a logged-in participant in a performance. Players have access to on-stage tools which allow them to manipulate avatars, backdrops and props, and can have different levels of permissions to allow them to access the Workshop and administration tools.

Prop: a graphic which can be held by an avatar or placed on the stage using an invisible avatar.

Splash screen: a sort of "curtain" that appears over the stage while it loads; the splash screen shows the name of the stage, a loading progress indicator and an editable welcome message.

Stage: a dynamic web page where you can place and move avatars, props and backdrops to create a performance.

Stage tools: tools visible on the stage to logged-in players (but not visible to the audience) that enable the players to manipulate media on the stage in real time.

Text chat: an input field and text chat window, where avatars' speech and audience text appears and is visible to everyone; the text chat window can be scrolled up and down to read text that has been entered previously, and can be accessed for saving by adding /log to the end of the stage url.

Tools: the buttons, sliders and icons that allow logged-in players to manipulate media.

UpStage: UpStage is an open source platform for cyberformance: remote performers combine images, animations, audio, web cams, text and drawing in real-time for an online audience. Players and audience need only a standard web browser with the Flash player plug-in. For more information about the UpStage, visit the web site: www.upstage.org.nz.

Wardrobe: the interface through which players can select avatars on a stage; an alphabeticised and scrollable list of the icons and names of the avatars assigned to that particular stage.

Whispering: silent text communication between logged-in players that is not visible to the audience.

Workshop: the "back stage" interface where logged-in players can upload media, view and edit existing media, create and manage stages and manage players.

Text2Speech Voices

UpStage's speech is generated by the Festival Speech Synthesiser, developed at the Centre for Speech Technology Research at Edinburgh University (http://www.cstr.ed.ac.uk/projects/festival/).

An avatar's voice is selected from a dropdown menu when uploading or editing an avatar. There are currently about 100 voices on the Open UpStage server; if you are setting up your own UpStage server, please see the technical documentation regarding installing voices.

Note that at the moment, it is only possible to use characters from the Roman alphabet (including letters with accents such as é, ñ, ø, ü) in the text chat, but not other alphabets such as Cyrillic, Greek, etc.

Voices currently available on UpStage

The voices currently available with UpStage have a filenaming system that gives a clue as to what kind of voice each one is. Some of the voices speak English with a foreign accent, some speak English with different English accents, and some are designed to speak other languages more-or-less accurately. We have endeavoured to include a good variety of accents as well as male and female voices.

The format is: ["e" or "emb"] _ [native language] - [en] - [modifications]

For example:

- e_de – speaks and reads German
- e_en – speaks and reads English
- e_en-fast-f1 – speaks English quickly, in a female voice
- e_en-wm – speaks english in a west midland accent.

Other accents in the e_en series are "n" for north, "sc" for Scots, "rp" for RP, "r" for rhotic (which means it pronounces the r in words like church).

- emb_af1 – speaks and reads Afrikaans
- emb_af1-en – speaks English in an Afrikaans accent
- emb_de4-en-low-slow – speaks english, lowly and slowly, in a german accent

You can test the voices on the avatar upload and edit screens, by selecting different voices from the drop down menu and entering the text you want to test.

We are in the process of compiling descriptions for all the voices; following is the information so far:

Voice	**Male**	**Female**	**Accent**	**Non-Eng**	**Description**
bud	X		NZ?		Deep, calm
crunchy					Crunchy - good for witches & effects

default		X	NZ?		Smooth, young
e_en-fast-f1	X		NZ?		fast, boyish
e_en-r-f3	X		NZ?		fast, boyish
e_en-wm-slow	X		Australian??		nasal drawl
e_en-wm-slow-f3	X		Australian??		boyish nasal drawl, computerish & like a learner-reader reading
e_eo	X			foreign	
emb_de4	X		German	German	neutral German male
emb_de4-en	X		German		mid-range, clean, English w/German accent
emb_de4-en-low-slow	X		German		pimp's voice: low & lecherous (English w/German accent)
emb_de5	X		German	German	slow low somewhat distorted voice
emb_de5-en	X		German		slow high somewhat distorted voice, English w/German accent
emb_de5-en-high-slow	X		German		mid-high slightly strangulated male, English w/German accent
emb_de7	X		German	German	middle somewhat slow and drawn out male, German
emb_en1-high	X		English		soft mid-range male voice
emb_fr1-en-low	X		European		low & lecherous
emb_fr4-en-high-slow	X		European		mid-high male voice, sounds like he has trouble speaking
emb_hu1-en-slow		X	European?		low soft female voice with slight European accent
emb_nl2	X			Dutch	mid-low male
emb_nl2-en	X		European?		mid-low male voice with slight European accent
emb_pl1		X		Polish?	mid-low calm female
emb_pl1-en		X	Polish?		mid-low calm female with European accent
emb_ro1-en	X				
emb_sw1-en-fast	X		Swedish?		mid-low male speaking quickly
high	X	X	Computer		boyish computer monotone
roger	X		English		Thin, proper-sounding, not deep
slow	X		computer		gets slower & lower, very good for effects

Adding more voices

You can install additional speech plug-ins on your own server to extend the range of voices available to the avatars. As long as you don't mind messing around with the source code a little bit it's not difficult – Patricia Jung explains how she did it (for Linux, using UpStage V1 - note that this is now several years old):

> Just add another entry in the VOICES section in Upstage/upstage/voices.py like:
>
> #txt2pho/mbrola:
>
> 'de1': ("| /usr/local/mbrola/pipefilt | /usr/local/mbrola/preproc /usr/local/mbrola/Hadifix.abk /usr/local/mbrola/Rules.lst | /usr/local/mbrola/txt2pho -p /usr/local/mbrola/data/ |/usr/local/mbrola/mbrola /usr/local/mbrola/de1/de1 - -",
>
> _fest),
>
> I know, it looks awful but this is only because the command is an awful chain consisting of four commands with a couple of options each and the relevant path:
> "| pipefilt ...| preproc ... | txt2pho ... | mbrola ..."

It does some preprocessing (like exchanging all appearances of "z.B." with "zum Beispiel"), then hands the resulting text over to txt2pho and to mbrola.

As long as your command or command chain takes text input from the standard input and outputs the result as sound in raw format on the standard output chain (Unix stuff, ask me if you haven't heard about it) you can put whatever you like in between the "| and the ".

The above mentioned awful command chain will work when one has installed the txt2pho frontend; it uses the de1 female mbrola voice, and you can choose it in the web interface using the name de1.

The only problem with this kind of reconfiguration is: as config.py isn't a nice configuration file but a python script one needs to know at least that python is very picky about vertical alignment: It's extremely important that your new voice entries have the same amount of whitespaces at the beginning of the line as the other voice entries.

The reason it took me so long was TTS: I failed completely and utterly in making the German festival extensions for use with mbrola voices:

http://www.ims.uni-stuttgart.de/phonetik/synthesis/festival_opensource.html

work. Then I tried txt2pho with mbrola:

http://www.ikp.uni-bonn.de/dt/forsch/phonetik/hadifix/HADIFIXforMBROLA.html

(http://bogmog.sourceforge.net/document_show.php3?doc_id=34 has a nice installation description), ignoring Festival, and this worked at once.

Troubleshooting

UpStage is a work in progress: it is being maintained and developed by volunteer programmers, which means that things happen but sometimes slowly, and sometimes things break as we go. We welcome input from anyone who has the time and skills to work with us on the development of UpStage - please visit the GitHub site for more information, and join the developer's list.

If you encounter a problem that isn't listed here, or that you still can't find an answer to, please:

- check the FAQ page on the UpStage web site, maybe there's an answer there;
- visit the Issue log on GitHub to see if it's something that we're working on (if it is, please add comments as more information can help to find a solution);
- contact the UpStage team - we will try to help.

Browser Problems

We are constantly monitoring browser compatibility, so if you experience problems connected to your choice of browser, please contact us.

ou are having browser problems, we recommend the following:

- ensure that you have at least version of the Flash player installed;
- close your browser window, open a new window and log in again. If you still have problems after doing this, quit your browser application and restart it.

Note: due to an issue in Chrome for Mac, at the time of writing it is not possible to upload .swf files from a Mac computer using the Chrome browser. Until such time as Chrome fixes this issue, you will need to use an alternative browser such as Safari or Firefox to upload .swf files.

Note: due to an issue in Internet Explorer 7 and below, you will not be able to use the media edit or media upload pages. For this reason we recommend the use of either alternative browser (such as Firefox or Chrome) or update to Internet Explorer 8 or above.

Stage Won't Load

If the stage fails to load properly, and the splash screen remains over the stage with the message **Couldn't load all images**, this could mean that there is a corrupted image assigned to the stage.

The first thing to do is try reloading, as it could just have been a blip in the data flow; either use the **reload** button on the splash screen, or use the back button in your browser to return to where you came from and click on the link to the stage again.

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