

DECISION RATIONALE

# PURPOSE

The purpose of this document is to rationalise the decisions we have made. The UpStage team is expected to use this document to document these decisions when they are made.

# REVISION HISTORY

|  |  |  |
| --- | --- | --- |
| Date | Description | Author |
| 05/08/2010 | Added methodology rationale | Henry Goh |
| 29/09/2010 | Added development environment rationale | Paul Rohrlach |
| 14/04/2011 | Added server installation rationale | Heath Behrens |
| 13/05/2011 | Added server installation rationale | Team |
| 25/05/2011  14/07/2011 | Server Web Page Re-design Rationale  Added Developer Handbook rationale | Mohammed Al-Timimi  Heath Behrens |
| 29/09/2011 | Pylint and Pep8 rationale | Heath Behrens |
| 29/09/2011 | Automated Testing rationale | Heath Behrens |
| 21/10/2011 | Moving from project to task tracker spreadsheet. | Corey Robb , Heath Behrens |
| 21/10/2011 | Embedding audio player in page. | Corey Robb, Heath Behrens |
| 21/10/2011 | Modifying Media edit page | Corey Robb, Heath Behrens |
| 21/10/2011 | Moving from AS3 to AS2 | Corey Robb, Heath Behrens |
| 24/10/2011 | Keeping 2.1 until festival | Karena Goh |
| 07/03/2012 | Debian 6 upgrade | Karena Goh |
| 07/03/2012  09/05/2012 | Deployment of 2.4.1 onto 8084  Suspension of AS3 | Karena Goh  Karena |
| 31/07/2013 | Move development trunk to GitHub | David, Lisa |
| 31/07/2013 | Post coding standards on GitHub | Nikos |
| 23/08/2013 | One week sprint for video-hack merge | Lisa |
| 27/08/2013 | Improve file structure | Nikos |
| 03/09/2013 | All sprints now one week | Lisa |
| 23/09/2013 | Two week sprints, split into sub-sprints | Lisa |
| 29/09/2013 | Drop support for Safari on Windows | Lisa |
| 09/04/2014 | Virtualising the Development Server | Vanessa,Nikos |
| 21/05/2014 | Re-Imaging Development Server/ Moving to Debian 7.5 | Vanessa |
| 20/06/2014 | Stop testing on Internet Explorer and Opera | Nikos |
| 04/08/2014 | Added Testing on Ubuntu and Firefox | James and Takuma |
| 02/10/2014 | Use Kanban board to indicate the progress of version 3 maintenance | Takuma |

# METHODOLOGY RATIONALE

## Decision

Use SCRUM and XP methodologies

## Date

05/08/2010

## Reason

We chose to follow the SCRUM and eXtreme Programming because we believe that working in pairs will increase our chance of getting familiar with the software since we applied this practice in other programming papers, and having to release software in small iterations reduces the risk of making huge changes if the clients change their mind.

# DEVELOPMENT ENVIRONMENT RATIONALE

## Decision

Dual boot our development machines

## Date

29/09/2010

## Reason

We decided to change our development environment from virtual box to an actual PC. The reason why we did this is because the virtual images corrupt every time we create one and install the UpStage server. We looked for advice from students and supervisors during our quality review last semester and we found out that the corruption of the virtual images is caused by the old Ubuntu distribution. Since all of us are unfamiliar with how other linux distributions work, our other option is to dual boot our PCs and we have the latest version of the Ubuntu running on it.

# SERVER INSTALLATION RATIONALE

## Decision

Automate install script

## Date

14/04/2011

## Reason

It took us too many steps to just get the server installed, so we decided to automate it to download all the necessary packages for the UpStage server when the install script is executed. We confirmed it working when we dual boot the extra machine assigned to us. However, the server can only run on any Linux distribution that comes with Python 2.5.

As part of the new installation script the creation of deb packages has been automated too, this provides users with less experience to very easily install and remove UpStage.

# SERVER INSTALLATION RATIONALE

## Decision

Decided to leave server as it is; only compatible with machines running Python 2.5 and therefore older Linux Operating Systems.

## Date

13/05/2011

## Reason

We did not port the server to Python 2.6. Firstly, there is currently a student in Germany who is working on the re-design of the UpStage architecture for their Masters; this therefore means that in the next year or so the way UpStage is run may change completely. It was therefore pointed out to us at our Quality Review that it will be a waste of our time to change these ourselves. Secondly, the documentation for the new replacement module, nevow at the moment is non-existent. If we attempt to port the server, then we would be wasting time fixing existing bugs. So the only thing we can do is wait it out for a few months for the documentation to complete then we can find out the equivalent method calls for the deprecated ones in woven.

# SERVER WEB PAGE RE-DESIGN RATIONALE

## Decision

Change to a more dynamic and modern server web page

## Date

25/05/2011

## Reason

This was something the client had wanted done eventually; but because there were a lot of HTML/JavaScript bugs that we had to fix, we decided we may as well redesign the website so that one, we are familiar with what we are working with and two achieve another client requirement at the same time.

# Developer Handbook RATIONALE

## Decision

Create a developer manual which will be given to new members as a reference.

## Date

14/07/2011

## Reason

One of the most significant issues with the UpStage project is information being lost or not passed on to new developers. This leads to new developers not knowing valuable information that is required to function within the UpStage environment. The handbook is intended as a handbook or reference for developers, which contains the combined knowledge of the UpStage developers. It is intended to be updated on a regular basis and stay up to date with the components of the project. This will ensure that new developers are well informed and should require less of a training period as they are able to refer to the handbook at any point in time.

# Pylint and Pep8 RATIONALE

## Decision

Enforce coding standards through an automated tool named Pylint along with the use of Pep8.

## Date

23/09/2011

## Reason

Being that at this point in time we need to concentrate on making changes according to our client and testers feedback. We have a stable release ready for the festival however from this point until the festival we will be working on making modifications and debugging. We have decided that while doing so we need to make the code more readable so that developers find it easier to understand what is going on. Also it is easy to see whether or not the people working on the file have been following our coding standards. Pylint also plugs into eclipse so it can check coding standards while coding.

# Automated Testing RATIONALE

## Decision

Writing a number of unit tests under PyUnit and using custom Python web scripts to test the web server.

## Date

23/09/2011

## Reason

Testing is very important, it can take us 3 days to test our code as we do not have an automated method for testing (other than selenium). Right now we make changes, remove a bug or add something to the application and it only gets tested the next time we run acceptance tests. This means that something could potentially have been broken in the period of time between making the changes and running the acceptance tests. We need an automated method of at least testing part of the system after changes have been made, this will at least provide some feedback on whether or not there are any regressions or bugs added.

## MS project to task tracker spread sheet RATIONALE.

## Decision

Ms Project has now been swapped out as a tracking tool for the excel task tracking sheet.

## Date

21/10/2011

## Reason

MS Project provides an overview of the tasks for a period of time, however it does not include detailed time tracking such as ours spent on a specific task. Also as our development is done in a Linux environment MS Project does not offer a Linux alternative, therefore it is easier to edit a spread sheet rather than a project document. The task tracking also provides burn down charts for work hours highlighting the workload that has been done.

# Embedding audio player in page RATIONALE

## Decision

The embedding of the audio player has now been placed into the web page.

## Date

21/10/2011

## Reason

Previously selecting the audio clip would redirect to a new page, and then the audio would play. This required navigation back and forth between the previewing and playing of the media. Having an embedded player on the page provides the user with a preview of the audio without extra navigation.

# Modifying Media edit page RATIONALE

## Decision

Based on feedback from the clients, they required a clearer layout particularly having everything easily accessible.

## Date

21/10/2011

## Reason

Based on feedback from our client and various performers testing of the media management system a number of changes needed to be made on the layout. Most of the changes were to do with aesthetic looks; however a number of components on the page needed re-ordering in order for performers to get access to information regarding the media item. As tags were going to be added to media modifications needed to be made to accommodate these tags, as such changes would have needed to be made anyway.

# Moving from AS3 to AS2 RATIONALE

## Decision

After a meeting with Helen and Vicki it was decided we needed to focus on the media management system, particularly for the festival in November this lead to a merge of the AS2 client into the current 2.4.1.

## Date

21/10/2011

## Reason

With the number of issues around the AS3 stage having a stable release version for the 11/11/11 festival would have meant certain parts of the media management system may have been left out. It had been decided that the media management system was more important than having an AS3 version of the stage. Also this means that future development can focus on the AS3 stage. Adding the AS2 stage to 2.4.1 provided feedback on the stability of the server code itself. This also outlined where the issues lie within the system.

# Keeping 2.1 on 8084 until 11/11/11 festival

## Decision

After a meeting with Helen and Vicki it was decided that in order for a stable version of 2.4.1 to be implemented onto the 8084 server, we would require more time then is available.

## Date

24/10/2011

## Reason

Although we could push 2.4.1 onto the server, there is no time to allow for testing and potential bug fixing. As we currently have some issues around server configuration with the AUT and official server having different configurations, we cannot ensure that an error free tested version here will be error free on the official server, as working and testing on 2.4.1 on AUT cannot guarantee the same results over on the main server with different configurations.

# Upgrading to Debian 6 (Squeeze)

## Decision

After having a meeting with Helen and Vicki, we decided it was time to upgrade to Debian 6 to allow for future development on the latest version of Debian.

## Date

07/03/2012

## Reason

As we are currently developing on Debian 5, Helen and Vicki (and the team) strongly believe it is time to upgrade to Debian 6 before any other implementations are carried out (while 2.1 is fully stable). This will be an advantage due to the fact that we will be developing on the latest version of Debian. Configurations will be mapped out after the upgrade is stabilised and compared with the main server to ensure that both machines are running in parallel and that all errors are not only occurring on one side. This will then provide the team with a good foundation to develop and test the deployment of 2.4.1

# Deployment of 2.4.1 onto 8084

## Decision

After a meeting with Helen and Vicki it was decided it was time to deploy 2.4.1 that contains full working media management system onto 8084 ready to use (on Debian 6) well in advance of the 12/12/12 festival.

## Date

07/03/2012

## Reason

With 2.4.1 ready to use months ago but was backtracked due to the festival, it was decided it was time to deploy 2.4.1 to 8084 ready for public use. This allows the team to fix any bugs that arise from the deployment over on our new Debian 6 upgrade, in time for our next festival (several months away). It also provides more time for us to have exact server configurations to ensure that all tests that pass at AUT will pass on the UpStage server. Also 2.4.1 adds various new media management features that Helen and Vicki are increasingly wanting available for UpStage actors.

# Suspension of ActionScript3

## Decision

After a discussing with Helen and Vicki and clarified with Anne, we decided it was appropriate to suspend the implementation of AS3 until research indicates the significance of this implementation is of higher value.

## Date

09/05/2012

## Reason

With time constraints as an obstacle towards the end of semester, our time management skills were vital. After early implementations of AS3 began, we realised it would take more man hours than expected to complete the whole implementation of AS3. We decided to contact Helen and Vicki immediately regarding this concern and to clarify the significance of having AS3 implemented this semester. In addition, a meeting was held with our supervisor Anne for advice on our next actions in place of the AS3 implementation. Together with Anne, our team decided it would be a better use of our remaining time this semester, to research and analyse the benefits of having AS3 (at present, we feel that disadvantages of implementing AS3 is outweighing the disadvantages – however, solid research needs to be conducted to make the right decisions). Depending on our research, we can then compare and contrast benefits and detriments of having AS3 implemented. This research will continue over the holidays and will determine the AS3 implementation in the coming semester.

# GitHub

## Decision 1

After presenting options to Helen and Vicki, they decided that the main development trunk of UpStage to GitHub.

## Date

## Reason

SourceForge removed free Trac options and thus UpStage could no longer use it. Vicki and Helen decided that GitHub was the most viable option.

## Decision 2

Put the coding standards document onto the GitHub wiki.

## Date

31/07/2013

## Reason

After reviewing the code we found that not all developers had been adhering to the same coding standards as previously set by UpStage teams. This was due to the fact that the coding standards were never made public. Therefore we decided that it would be beneficial to the quality and readability of the code to release the coding standards document onto the GitHub wiki. We hope that this combined with the readme document that points to the standards that future and present developers will adhere to the same standards, improving the quality of the code.

# One Week Sprint for merging of ‘video hack’

## Decision

The sprint in which we merge the video hack will only be one week long.

## Date

23/08/2013

## Reason

It requires immediate and full testing, but is only one week’s worth of work.

# Improve file structure

## Decision

Reorganise the file structure of the code

## Date

27/08/2013

## Reason

The original file structure made it difficult to find desired modules.

# Sprints all one week long

## Decision

All future sprints will be one week long.

## Date

03/09/2013

## Reason

Due to the effectiveness of the one-week sprint we used for the ‘video hack’ merge, we will continue developing in single-week sprints. We found that this strategy keeps us focussed, and does not allow an “I’ll do it next week” mentality.

# Two week sprints, split into sub-sprints

## Decision

All future sprints will be two weeks, with single week sub-sprints

## Date

23/09/2013

## Reason

The one-week sprints result in too much overhead, which having longer sprints will reduce. We have still maintained the single-week sub-sprints for the reasons we switched to single-week sprints in the first place.

# Drop support for Safari on Windows

## Decision

We will no longer test or offer support for Windows users who use Safari to access UpStage. We will instead test the Safari browser on Mac OS X.

## Date

29/09/2013

## Reason

Apple has stopped supporting the Safari browser for Windows, and the browser does not support Flash, therefore UpStage users who try to access the stage under these conditions will not be able to enter text into the chat on the stage. The Safari browser is not popular on Windows anyway, and is really only used by Mac users, therefore we will focus our support for Safari on the Mac OS X version.

# Stop Testing on Internet Explorer and Opera

## Decision

We will no longer test UpStage on Internet Explorer or Opera.

## Date

20/03/2014

## Reason

Due to testing taking the team a considerable amount of time to complete, the number of browsers we test on needs to be reduced. We chose to remove these two browsers since Internet Explorer has been the cause of quite a few issues, and Opera is not commonly used by UpStage users.

# Virtualising the Development Server

## Decision

The physical development server computer in WT501 is to be virtualised on the AUT cloud.

## Date

09/04/2014

## Reason

The lease for the computer in WT501 that was being used as the UpStage development server is coming to its end. It has been decided that rather than having a physical machine we will move it to the cloud where we can access it via SSH and from anywhere.

# Re-Imaging Development Server/ Moving to Debian 7.5

## Decision

Re-Imaging Development Server/ Moving to Debian 7.5

## Date

21/05/2014

## Reason

One of the issues that we have run into while trying to virtualise the server has been that one of the partitions had no space left. We had to change this before we moved forward with the virtualisation. Due to the nature of where the full partition sat, we were unable to enlarge it without re-imaging the whole machine. When we were reimaging the machine we also figured that while UpStage was being reinstalled, that we would move to the latest version of Debian (Debian 7.5).

# Testing on Firefox 28.0 and Ubuntu 14.04

## Decision

We will now test UpStage on Firefox on Ubuntu 14.04 LTS

## Date

19/07/2014

## Reason

Due to being an Open Source project, the clients recommended we need to test on an open source platform and browser. The user feedback they received was one person who said they use Firefox on Ubuntu. We have decided on the latest stable version of Ubuntu at this date, which is 14.04 LTS, and the version of Firefox that comes bundled with the Operating System which is version 28.0.

# Use Kanban board to indicate the progress of version 3 maintenance

## Decision

Use the white board in the project lab as a Kanban board to track the progress of pair programming

## Date

1. 02/10/2014

## Reason

In the supervisor meeting, we have identified an issue where our plans are not followed, and that there are no consistent mechanism to check the progress of each task. As a nature of Kanban-board, it may also boost the teams’ motivation to be more productive.