UpStage

Semester 1 & 2 2014

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Clients:

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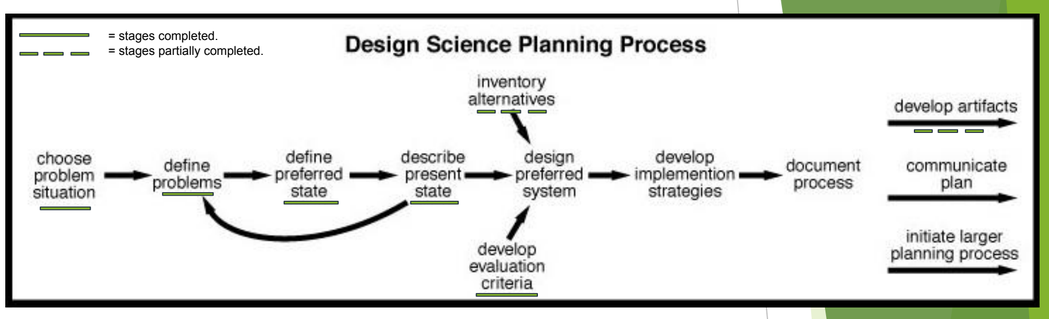
Introduction:

UpStage is a web application that needs no installation which allows people to hold cyber performances for audiences anywhere in the world.

The project is completely open source and has been going for over 10 years. There have been many AUT students work on it in the past for final year projects and it is a continuing project.

Rationale:

- The code and technology in UpStage has aged, becoming unstable and is proving very difficult to maintain and extend functionality.
- Once we understand the current functionality and technology being used we can research potential solutions for our clients and future team members, supported by proofs of concepts developed following the Design Science process.



[1]

Project Objectives:

Semester 1:

- Fix major bugs and release version 3 of UpStage.
- Define the functionality of the current UpStage software.
- Analyse and define the motivation for a renewed design of UpStage.

Semester 2:

- Fix minor bugs and add small extensions of functionality to UpStage in order to familiarise the new members with the existing code.
- Define how technologies are used in UpStage, namely Flash, text to speech and video streaming.
- Research and identify potential replacements or solutions for Flash, text to speech and video streaming technology in UpStage.

Our Processes:

Semester 1

- Scrum + XP development.

Semester 2

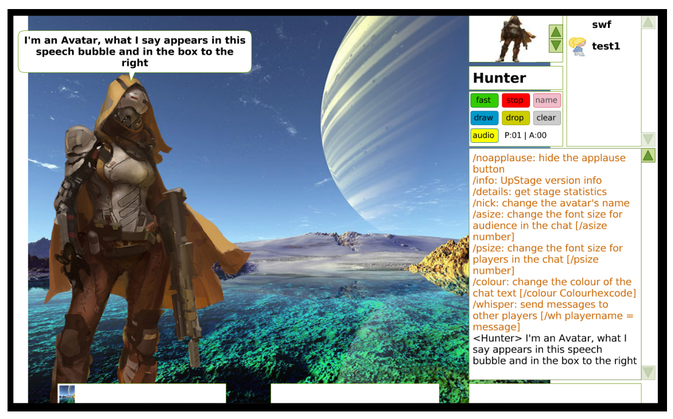
- Design Science.
- Research & Documentation.
- Producing proofs of concepts.

Overall

- Pair programming.
- Regression testing.
- Self-management.

Challenges:

- Working with clients in different cities, one being in a different time zone.
- Coordinating a large group effort.
- Teaching what we recently learnt to new team members.
- Working on two separate projects in parallel.



An Avatar and Backdrop on a Stage in UpStage. [4], [5].

Technical Difficulties:

- 10 year old code.
- Code written by many different people.
- Understanding undocumented code.
- Unfamiliar languages and technologies.
- No unit tests or automated testing facility set up in software's lifespan.

Learning:

- Working for real world clients as a team.
- Fundamentals of Python, Javascript, and ActionScript languages.
- Development of Client-Server web application via a Linux (Debian) server machine, as well as developing within a virtual environment.
- IDE-less development with Sublime Text 2.
- Version control and Integration management via GitHub.
- Planning, Controlling and Managing a project.

[2]

Achievements and Deliverables:

- We have released Version 3 of UpStage to our clients after the major bug fixes in Semester 1.
- We defined the functionality of the current software.
- We documented the motivation for a redesign.
- Minor bug fixes and small improvements to UpStage.
- Researched possible replacements for technologies used in UpStage. We also formulated and provided some proofs of concepts to support research with some success i.e. we created an example of Text To Speech working on a mobile device's browser.

[3]

Image References:
[1] Design Science Process: http://www.wcdsc.net/overview/images/dsplanbig.jpg, [2] Orange man: http://b-i.forbesimg.com/meghanbiro/files/2013/05/elearning_image1.jpg, [3] Future/Hands http://www.thatsreallypossible.com/wp-content/uploads/2014/04/hands_holding_future_sig_450.jpg,
[4] Planet Background http://www.hdwallpapersinn.com/wp-content/uploads/2014/08/free-download-wallpaper-spiderman-4-10.jpg, [5] Destiny Character http://static4.wikia.nocookie.net/__cb20130219164061/destiny2579/images/5/5b/Hunter_Render.png