

407008 & 407010
Research and Development Project

Position Paper

UpStage Back-end

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4 Pages

1 Introduction

UpStage project is under a transition phase from the current legacy technologies towards a total new design with up-to-date open source technologies. In Semester 2 2014, AUT UpStage Team has identified three main research areas: Flash (ActionScript 2 front-end), Text-to-Speech synthesis systems and Video Streaming technologies. Team has been working on these areas for the new design of UpStage.

Team maintains two parallel processes: new research areas and current Version 3 maintenance activities throughout 2014–2015.

As team made further investigation into the high priority issues in the current implementation, team identified issues that are out of team's current project scope. The aim of this paper is to highlight all the significant issues of UpStage Version 3, and further clarify team's future tasks in such area as appropriate. UpStage version 3 was successfully deployed on the public server in August, 2014. However, in the October, 2014, UpStage public server suffered from various unknown

This paper will firstly describe the high priority issues in UpStage Version 3 implementation, then it will produce an initial analysis of the issues. This paper then will further clarify the area as a synchronization issue on the server end. Then this paper will emphasize the impact of such feature in the UpStage implementation and the importance of synchronization feature to UpStage's client. This paper suggests to establish a new research area to cover the shortage in the current UpStage software.

2 Issues

All the issues in this section are from AUT UpStage Team Github repository. For details, please refer to the repository issue list.

2.1 Ticket 203, 228, 230, 253, 254, 259, 264

203 holding different avatar on stage

228 voice swap between avatars

230 different users holding the same avatar

253 different backdrops show for different users

254 blank screen after reloading

259 clear button clears all avatars from stage

264 not seeing other avatars

3 Analysis

This section summarize the issues in the previous section. All the issues in section 2.1 have the same events sequential problems. The main features of synchronization issue are:

- Multiple users involved.
- Media display vary from different users.
- Users upload media to stage in different times.
- Situation is fixable by reloading client swf (small web format) template from server stage.

For instance, Both Player A (Pa) and Player B (Pb) have the media upload access to a stage (testS). Pa firstly uploads media via (either stage or media upload), then

enters testS. Then Pb uploads media, however, this time Pb does not enforce stage to reload (from the stage edit page, the SAVE button was designed to achieve such thing). Once avatar upload and assignation completed, Pb enters the stage. Then Pa will not see Pb's avatar on the wardrobe.

The same situation can also apply to all other media (backdrops & probs). One noticing item: the "Save Stage" resets media arrangement when clicked. So there is one scenario to show different display problem on multiple users' locations.

There are PlayerA (pA), PlayerB (pB), PlayerC (pC), and stageT. pA and Pb have entered stageT with loaded media. pA and pB both have avatars showing on the stage. Then pC wants to add more media into the stage media and choose "Save Stage" button. Once pC completes, pA & pB's avatars should be removed from stage. Then pC enters stageT. The display results for pA, pB & pC shall be different.

4 Conclusion

In the analysis section, few examples are presented to showcase synchronization issue for the v3 implementation. This situation can be possibly resolved by removing "Save Stage" button from stage edit page. However, this seems not meeting client's rehearsals requirement – from being overwhelmed by frequent stage page reload.

Both the performance of current implementation and client's requirements indicate an independent research area for synchronization. Such area was not included in my team's research scope; however, when we discussed these issues with our client, team realized new design should resolve such issue. So that UpStage will be more usable to serve its target users and audience.