YouDanMu Sprint 1

Defect Log

Team Member: Naiwei Zheng, Yucong Ma,
Yibo Gou, Ge Yan,
Jiaqi Zhu

A. Design Inspection Defects Log

Product	YouDanMu Design Inspection		
Data	02/12/17		
Author	Ge Yan		
Moderator	Naiwei Zheng		
Inspectors	Jiaqi Zhu, Yibo Gou, Naiwei Zheng		
Recorders	Yucong Ma		
Defect#	Description	Severity	How corrected.
1	The submission of Danmaku by users are originally planned to submit back to original Danmaku source. However, since user can select different source of danmaku, different source requires different accounts to submit danmaku, the user is required to login various website to ensure the submission is always working.	1	Store submitted danmaku to our server and let user to decide if the Danmaku needed to be submitted to original source.
2.	Because we decided not to implement a user login feature, we need a solution when the user want to store their settings and applied to other computer.	1	We decided to use Chrome Sync for the chrome extension to sync the user settings.
3.	First we would we like to give user permission to change overall color of Danmaku. Later, we realized that each Danmaku has its own color setting. Overall color changing function would be counter logic.	1	We decide not to have a function of changing over all color.
4.	Originally we decided to put a setting box on the YouTube video page to let user change their settings. But it's hard to fix into the YouTube page and needs regular update since YouTube changed their design from time to time.	1	We decided to put the setting box in the popup window of chrome extension. So we can design our own setting UI and don't need to maintain it regularly.

B. Code Inspection Defects Log

Product	Damaku Fetch module inspection		
Data	02/09/17		
Author	Yibo Gou		
Moderator	Naiwei Zheng		
Inspectors	Yucong Ma, Yibo Gou, Ge Yan		
Recorders	Yucong Ma		
Defect#	Description	Severity	How corrected.
1	Youtube is running under HTTPS protocol. However, the Danmaku source from one of our source website is hosted under http protocol. Chrome prevents mixed content loaded in HTTPS page. HTTP content cannot be downloaded in foreground.	3	Put download process in background and use SendMessage() to push the contents downloaded from sources to foreground to allow the danmaku being loaded by foreground scripts.
2.	Chrome only allow ajax contents requested under the same origin as the javascript file. This prevents our local ajax being called to download contents from other website	2	Put download process in backgound where security policy is defined by extension developer. Here we can enable Allow-Control-Allow-Origin flag to prevent this problem being happening. The downloaded contents can be push to foreground by using SendMessage() by chrome browser
3.	The video of Bilibili.tv has two different record system, (av number and CID), we were using the av number to download the Danmaku from Bilibili. But it turns out that some of the video has different av number	2	Change the algorithm to use CID all the time to download Danmaku from Bilibili.com

	and CID so we can't just using av number to reference a video.		
4.	Some of the video in Bilibili has different part in one video. But they all share a same av number.	2	When we acquire the Danmaku, we promote for another variable called PID to identify which exact part of the video we want to download.

Product	Youtube Integration module inspection		
Data	02/09/17		
Author	Naiwei Zheng		
Moderator	Naiwei Zheng		
Inspectors	Yibo Gou		
Recorders	Jiaqi Zhu		
Defect#	Description	Severity	How corrected.
1	We need to hijack the youtube API, but youtube API is not public documented also the code has been compressed.	3	We use “on youtube player ready” callback function. When we hijack this function we can hijack the youtube API
2.	When navigate between Youtube video pages. New Danmaku cannot be loaded.	3	Place a listener on CUE and Playing event. Detect if currently playing a different video. If so,clean the old Danmaku and reload.
3.	When loading video web page, our hijacking might happen after youtube been played, we might miss the playing event		When we successfully hijack the youtube API, Manully check the existance of playing id. If so, fire up playing event.

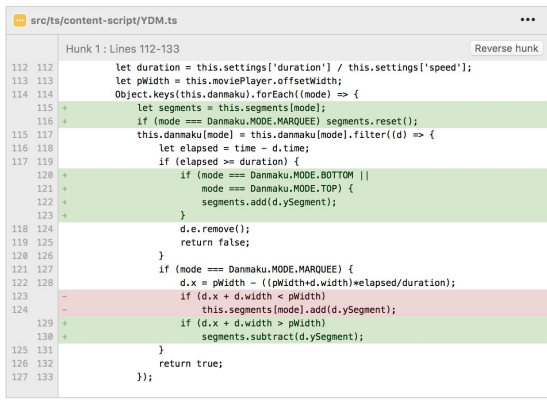
Product	Chrome Integration module Inspection.		
Data	02/09/17		
Author	Yucong Ma		
Moderator	Naiwei Zheng		
Inspectors	Jiaqi Zhu, Ge Yan		
Recorders	Jiaqi Zhu		
Defect#	Description	Severity	How corrected.
1	Because the potential user are both Chinese and foreigner,we need to do internationalizatio. Although Chrome have i18 interface, out script is inject in the webpage. We do not have the permission to do internationalization.	3	Before we inject the content-script in the webpage. We will do preprocess and replace the Placeholder.
2.		2	
3.			

Product	Render module inspection.		
Data	02/09/17		
Author	Yibo Gou		
Moderator	Naiwei Zheng		
Inspectors	Jiaqi Zhu, Naiwei Zheng		
Recorders	Naiwei Zheng		
Defect#	Description	Severity	How corrected.
1	Before we place Danmaku on video, we need measure the weight and heigth. But when we create DOM in node JS, there is no Weight and Height.	3	Using a 0 height parent DIV to pre render the element. It is invisible due to 0 height. But we can still get the value of weight and hight.
2.	When we trying to get the playing time of current video. The precision of time return by Youtube API is 1/100 s which is not precise enough. The render frame per second is 5 microsecond. This would cause frame dropping.	2	When using request animation frame, it will pass DOM Highrate time stamp and it is a double which is precise enough. We relate this value to the time return by Youtube to acquire measurement of time which is more precise.
3.	When new Danmaku was submitted, we should choose a position which will not cause an overlap.	1	Using a Segments data structure. Keep track of available space.

Product	Bilibili Danmaku paser module inspection.		
Data	02/09/17		
Author	Yibo Gou		
Moderator	Naiwei Zheng		
Inspectors	Naiwei Zheng, Ge Yan		
Recorders	Yucong Ma		
Defect#	Description	Severity	How corrected.
1	There are some “special” Danmaku in some source website. Which has their own property that we don’t provide in YouDanMu.	3	We decided to parse the “special” Danmaku to ordinary Danmaku.

Product	Danmaku display module inspection.		
Data	02/09/17		
Author	Jiaqi Zhu		
Moderator	Naiwei Zheng		
Inspectors	Naiwei Zheng, Yibo Gou		
Recorders	Yucong Ma		
Defect#	Description	Severity	How corrected.
1	The Danmaku overlap each other when they are posted at the same time period in the video.	3	We found and corrected some logical errors in our Segments data structure algorithm that used to calculate the layout of Danmaku.

Product	Danmaku display module code inspection.		
Data	02/09/17		
Author	Jiaqi Zhu		
Moderator	Naiwei Zheng		
Inspectors	Naiwei Zheng, Yibo Gou, Yucong Ma		
Recorders	Yucong Ma		
Defect#	Description	Severity	How corrected.
1	The Danmaku segement algorithm is incorrectly calculated result in a overlap of Danmaku.	3	See below screenshot.



Product	Bilibili Danmaku fetch module code inspection.		
Data	02/09/17		
Author	Yucong Ma		
Moderator	Naiwei Zheng		
Inspectors	Ge Yan, Yibo Gou		
Recorders	Yucong Ma		
Defect#	Description	Severity	How corrected.
1	When we are trying to parse the special Danmaku in Bilibili. We originally want to render the Danmaku but we later decided just make the Danmaku as ordinary Danmaku. So we left some abundant code.	3	See below for abudant code.

```
if (p[1] !== '7') {
    var c = comment.childNodes[0].nodeValue.replace('/n', '\n');
     var size = parseInt(p[2]);
     comments.push.apply( {'time': parseFloat(p[0]), 'timeStamp': parseInt(p[4]), 'index': i, 'content' : c,
     'type': {'1': 0, '4': 2, '5': 1, '6': 3}[p[1]],
     'color': parseInt(p[3]), 'size': size} );
     } else {
     var c = comment.childNodes[0].nodeValue;
    comments.push.apply( {'time': parseFloat(p[0]), 'timeStamp': parseInt(p[4]), 'index': i, 'content': c, 'type': 7,
     'color': parseInt(p[3]), 'size': size} );
    }
```

C. Unit Test Defects Log

We used automated unit testing in our project. We used JasmineJs as our testing framework, and Gulp.js as our test runner. For logical modules, such as data structures, general algorithms, we can test them in the console. For web operations, such as rendering Danmaku, displaying dialogs, we run the tests inside browser. Both strategies use sets of rules and specifications to check for assertions.

Product	YouDanMu display module Uni test		
Data	02/010/17		
Author	Naiwei Zheng		
Moderator	Naiwei Zheng		
Inspectors	Ge Yan, Yibo Gou		
Recorders	Jiaqi Zhu		
Defect#	Description	Severity	How corrected.
1.	When the video is paused, the Danmaku keep coming out. The should be stopped as well.	1	We used a flag to store the state of video playing, we will check the flag before the next frame is rendered.
2.	When we playing the video we found out that the speed of Danmaku will not sync with the playing speed of video.	2	Place a listener on onPlaybackRateChange. According to “time” argument, we update speed of Danmaku.
3	The Segment data structure doesn’t correctly calculate subtraction if the two segments have same starts or same ends. The returned Segments may contain zero length segments.	3	When checking overlaps, use non-equal comparators for end point overlapping check.
4.	When entering fullscreen mode, the Danmaku won’t appear unless a pause and play action is performed.		Fixing in progress.

Product	Bilibili Danmaku fetch module Uni test		
Data	02/010/17		
Author	Yibo Gou		
Moderator	Naiwei Zheng		
Inspectors	Naiwei Zheng, Yucong Ma		
Recorders	Jiaqi Zhu		
Defect#	Description	Severity	How corrected.
1.	Some of Danmaku from one of our sources website requires login authutive to fetch	1	Send message to indicate “Log in operation needed”

Product	YouDanMu render module Uni test		
Data	02/010/17		
Author	Yibo Gou		
Moderator	Naiwei Zheng		
Inspectors	Yucong Ma, Naiwei Zheng		
Recorders	Jiaqi Zhu		
Defect#	Description	Severity	How corrected.
1.	Firstly we use HTML element to render Danmaku.But after stress testing, lag will occur when huge amount of data come in.	3	Using SVG to render.