

# **Planning report for thesis at IDA**

## **Author**

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## **Preliminary Title**

Performance test and optimize in HTML5-based web game: a case study of Flappy Bird

## **Problem Description**

Nowadays, a lot of Web Games are based on HTML5 canvas, which is the most widely supported standard for 2D immediate mode graphics on the web. However, with the size of application increased, developers inadvertently hit the performance wall.

Actually, there are a lot of articles aim to optimize the performance of Websites, But we find little resource focus on the optimization of web games, especially for HTML5-based web game.

## **Approach**

Basically, I will Chrome as our mainly performance test tools and will focus on the performance test and optimize of Flappy Bird.

I will firstly use some tools test the current implementation of Flappy Bird and then make some optimize by reviewing the principles of writing high quality of HTML5 code.

## **Literature base**

[1] Xu Hui; Wei Lihao; Wang Tian; Luo Xiaoben, Canvas based HTML5 Application Performance Analyzer, Journal of Convergence Information Technology. Dec2012, Vol. 7 Issue 23, p280-289. 10p

[2] <http://flappybird.io/>

[3] <https://developer.chrome.com/devtools/docs/cpu-profiling>

[4] <http://www.html5rocks.com/en/tutorials/canvas/performance/>

## **Relevant Courses**

TDDB84: Design Patterns

TDDD27: Advanced Web Programming

TDDD97: Web Programming