



Flash applications on the XO

Flash applications performance on the XO laptop.
Tests description.

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Technical report

Objective

Flash applications don't behave properly on the XO laptops. They won't run at all or those which do, have a very low performance.

A group of applications is going to be tested on different platforms to let us compare and contrast the performance between them.

Tests

Tools

5 different platforms were used, listed here:

1. XO laptop w/build 656, AMD Geode 433 Mhz, 256 RAM, GUI Sugar.
2. XO using Debian, AMD Geode 433 Mhz, 256 RAM, GUI Gnome.
3. Desktop PC using Fedora Core 8, Pentium IV 3.0 GHz, 512 MB RAM, GUI Gnome.
4. Classmate laptop using Windows XP, Celeron 900 MHz, 256 Mb RAM.
5. Classmate laptop using Fedora Core 8, Celeron 900 MHz, 256 Mb RAM, GUI Gnome.

Procedure

The next games from <http://www.minijuegos.com> were tested on each platform:

- **Castle Wars**

Card game with low-end graphics.

- Platform 1

- Using gnash-0.8.1-1 game won't load at all.
- Using flash-plugin-9.0.124-0 game screen won't refresh normally and when it does, the game runs too slow in order to have a normal gaming experience.



- Platform 2
Only flash plugging used on this platform, same results as in (1).
- Platform 3
No problems found.
- Platform 4
No problems found, slower than (3) but still playable.
- Platform 5
Same as 4.
- **Hulk Central Smashdown** (action game with a heavy animation at the beginning)
 - Platform 1
 - Using gnash-0.8.1-1 game won't load, just colorful garbage on the screen is seen.
 - Using flash-plugin-9.0.124-0 game loads, but speed performance is too low to have a descent gameplay.
 - Platform 2
Same results as 1.
 - Platform 3
No problems found.
 - Platform 4
Game won't load, IE reports an error and closes.
 - Platform 5
No problems found, slower than (3) but still playable..
- **Freekick Fusion**
Soccer game, consists in shooting freekicks and scoring 3 goals before time runs out .
 - Platform 1
 - Using gnash-0.8.1-1 only main menu loads. "Play game" button won't work.
 - Using flash-plugin-9.0.124-0 game loads, but it's so slow that time runs out before the third free kick.



- Platform 2
Same as 1.
- Platform 3
No problems found.
- Platform 4
When third goal is scored, IE crashes.
- Platform 5
No problems found.

Notes

Gnash plugin on its version 0.8.1-1 is compatible up to Flash 6. Tested games were developed with later versions, that's why they won't load. Actually, most of the applications found on the Internet are developed with versions later to 6.

Conclusions

Using Adobe's plugin, all of the applications could be loaded, but their low speed performance made them almost impossible to interact with.

On the XO using Debian and Gnome for the GUI, the results were the same as in a standard 656 build, so speed problems don't seem to be caused by the OS or GUI used.

On Adobe's website, specifically on the Flash 9 requirements page, <http://www.adobe.com/products/flashplayer/productinfo/systemreqs/>, a chart shows that minimum hardware requirements needed by Linux based OS are: 800MHz processor, 512 Mb RAM and 128Mb for graphics.

As described at the beginning of this document, XO laptops don't reach such requirements.

Flash applications performance on a Classmate laptop was fairly good in a Windows environment as well as in a Linux based environment. These laptops use a 900MHz processor, 256 of RAM and graphics memory is shared with RAM.