Engineering for portability – structure planning

Paragraph 1 – question and introduction

How has the development in demand for mobile games affected the choices in which platforms developers make games on/port games to?

Mobile gaming has become a huge part of the gaming market. Globally smartphone gaming revenue accounts for €12.1 billion each year, in the US 67% of adults play games. So it is fair to say that mobile devices have become a large part of how people play and pay for games. How has this affected software developers though? Have they changed to focus more on this platform? Most importantly, how has this affected developers practices with regards to the portability of their software?

Paragraph 2 – Talk about main problems of software portability as a whole.

Software portability has come a long way in the last 20 years. However software portability has always been a huge issue in software development. "Engineers making use of computer-aided engineering and design (CAE/CAD) packages are often not aware of the problems faced by software houses implementing and supporting complex software across a range of computer systems and workstations." [4] This paper shows that there is much more to software portability than most software developers are aware.

Portability to different systems often means learning new languages in order to comply to the new platforms regulations. There are hundreds of languages, each with their own strengths, weaknesses and difficulties to port from one system to another.

Paragraph 3 – talk about specific problems of software portability to mobile platforms

Mobile software is constantly in demand as it has become such a large part of the everyday consumers needs and wants. Many games originally designed to run on PC's have been ported over to mobile platforms. Hearthstone was originally developed to run on PC but has since been implemented onto tablets and phones in a way which allows players on different devices to still play against each other. The major problem the developers had was reviewing the interface interaction to still feel the same as using a mouse.

More specifically there are problems developing software for certain platforms of mobile devices. Apple's IOS for example is restrictive on software developers, as it only allows for the user of objectiveC and swift. While Android is much more open about the languages allowed to be used on it, it is also known that certain languages have larger impacts on performance than others. Potentially the SDK used can also have large impacts on the software developed as well.

Paragraph 4 – talk about cases of software have been ported successfully and what can be learned from these cases.

Some are older games like GTA vice city, which have been given new interfaces which better fit touchscreens used on nearly all modern mobile devices. Overall porting the game was largely a success and has gained good reviews, although there were complaints that using the ipad interface poses some problems to user experience.

Paragraph 5 – summary of problems with portability to mobile platforms

It seems that the largest problem of porting software to a mobile platform is changing the interface to give a user friendly experience, without letting the software become unfamiliar to the user.

notes:

Mobie platforms capabilities:

Iphone - Can only be programmed in swift of objective C (derivation of C++ and general c languages)

[https://developer.apple.com](https://developer.apple.com/)

Android - Can be programmed in many different languages . Java, Lua, c++, HTML5 Javascript and CSS. Some Development kits do have hits on performance however.

[1] <http://www.androidauthority.com/want-develop-android-apps-languages-learn-391008/>

Games ported from PC to mobile - Hearthstone , FTL (faster than light), The wolf among us, Grand theft auto vice city(2002 origional)

[2] <http://gadgets.ndtv.com/games/features/the-10-best-pc-and-console-games-on-android-iphone-and-ipad-777660>

Games ported from mobile to PC - Link to reddit page with games ported from android to PC (some games have less perfomance android than PC)

[3] <https://www.reddit.com/r/AndroidGaming/comments/4aixyw/complete_list_of_good_android_games_and_ports_for/>

[4] <http://ieeexplore.ieee.org.ezproxy.falmouth.ac.uk/document/50630/>

[5] <http://hearthstone.gamepedia.com/Design_and_development_of_Hearthstone#iPad>