

Evaluating the hci developments over recent years computer science essay

[Technology](#), [Computer](#)



In the following assignment I will be talking about how interfaces have improved along the years in products and computer systems, with relation to GUI (Graphical User Interfaces) and the contrast of using non graphical interfaces.

For the Distinction criteria, I will explain on the improvement of using interfaces within gaming and how this has been improved with the world of motionless gaming such as Kinect. For the final Distinction criteria I will compare my interfaces with real life interfaces and talk about how they relate and how they contrast. I will conclude the assignment with my main points and any potential summaries I have.

The GUI:

History of the GUI:

In the computing and technical world, the graphical user interface has sharpened the way we as humans have designed and improved technology over the recent years and decades. Interfaces allow the end user to look at a graphical representation on their actions which cannot be shown in real life. For example, surfing the internet and viewing landscapes that are on the other side of the world would not be possible in a real life visual perspective.

The GUI (Graphical User Interface) was implemented into the Apple Lisa computer in January 1983. Steve Jobs and Steve Wozniak purchased the GUI technology from a corporation called Xerox at their research centre called PARC (Palo Alto Research Centre) and used the technology in the Apple Lisa

computer which since then started the revolution of interfaces within technology devices.

1

The Apple Lisa Computer

Before a Graphical User Interface was implemented, a fellow competitor called Microsoft developed a CLI (Command Line Interface) that resembled the name MS-DOS (Microsoft Disk Operating System) on IBM Computers in 1981. IBM (International Business Machines) is a large international company which supply computer hardware and software. They used MS-DOS on their computer systems to provide an interface that required the knowledge of commands and complex wording. This limited the market to a small amount, only professors and students was able to operate it with prior knowledge. But with the release of Apple Lisa, this broadened the audience to allow less technical people to operate a computer.

2

Image displaying the MS-DOS which was used on IBMs computers

Advancements

With the ongoing progress of developing interfaces and applying them to a variety of screens such as LCD and LED monitors, this has allowed technical manufacturer to explore the interface and include ways of familiarising the user with HCI (Human Computer Interaction) elements. Elements such as

proximity, the ability to group similar icons together to make the human think the buttons are related. Another important element of HCI is continuity. Continuity is used in most operating systems to keep the familiar colour schemes and desktops without a drastic change. This will allow users to become familiar to the interface without the need to learn to use it again.

Some more advances of interfaces over the years is the technology of 3D imagery and gaming. Games such as RTS (Real Time Strategy) Starcraft II can be played with the aid of Nvidia's 3D GPU (Graphical Processing Unit) series. This allows 2D content to be rendered with 3D physics and displayed using glasses.

3

With the technology of 3D arriving in the current technological world, interface design has changed in a way that humans perceive the experience. Such so that other projects have included the 3D technology such as theme park rides, 3D computer systems, computing gaming and television. This has revolutionised the way we, as humans interact with everyday devices.

A large proportion of society uses technology in their everyday lives, from checking their email, surfing the internet, checking their bank balance at an ATM machine etc. Technology has been integrated into culture so deeply, that as a society we all cannot communicate and work efficiently without it.

Mobile Devices and Development:

In modern technological news, mobile platforms and gaming has developed on a large scale over the current years. The idea of playing simple games on a wireless mobile device anywhere started a revolution for the gaming industry, the development of computer games and interface design.

In my opinion, the first major mobile platform for gaming was Snakes.

Introduced to arcades in the mid 1970s. Its sequel Snakes II was eventually introduced on the Nokia 3310 in the year 2000. This successful handset was hinting game developers to in cooperate different interface design into a smaller handset device, rather than an arcade or gaming console.

4

The above image is an example of many different interfaces that Snake has been developed into.

Since the thought of how to place simple gaming projects into smaller handsets and mobile phones, arguable the Smartphone and touch screen devices provided a firm platform for developers and many game companies to work with. An example of this would be the iPhone handset.

The iPhone handset (iPhone 2 Generation) was implemented by Apple on January 9th 2007 and announced to the public. It was one of the most successful Smartphone's and PDA (Personal Digital Assistance) integrated together. Users had the ability to surf the internet, download application to run on their handsets, make calls, take pictures and send them to another

handset or computer etc. The icons were smaller, controls and commands were made for touch and point, interface design that was new to the market.

5

Current iOS interface during writing the assignment

The main differences from any phone during that time, was the complexity and power of the iPhone applications and development area. Apple provided the App store to sort all applications into a centralised place for users to download and interact with. The applications correspond of utilities and maps to gaming and various map searching apps.

Over the constant development of iPhone handsets it was labelled as one of the major device for mobile gaming, a label which changed the way gaming and interfaces were developed. Now devices have the ability to run high end graphics and with the iPhone 4 device, retina display was introduced (960A-640) and has the smallest pixels ever to be introduced on a Smartphone device.

With mobile development and gaming changing the way we use interfaces, the ability to scrap the interface from touch and use our current movement was recently introduced by Microsoft, this was known as Kinect.

Project Natal (Kinect) was created by Microsoft recently in late 2010 as a motion controller for gaming. [6] “ You are the controller. No gadgets, no gizmos, just you!” The quote basically means that the controller is the user, and no touch or physical contact will be needed. The technology of recording

motions and gestures is proving successful; with regards to future gaming it will shape the future of interfaces.

7

Mention Holograms potential future.

Comparison of Interfaces