Introduction must suite purpose of the device. various

Introduction

The propagation of wireless technology has brought in a variety of mobile devices such as the Personal Digital Assistants (PDA) and the wireless handheld phones that have a wide range of applications such as video messaging, three-dimensional games and other software. A mobile device such as an iPhones or a tablet PC incorporates various programming languages such as a Java program. The program is familiar due to its ability to manage virtual machines by allowing some reasonable amount of accessibility to underlying functions of the devices.

The Unified Modelling Language (UML) and wireless Java toolkits provides both user-friendly interfaces for easy manipulation and object oriented designs for easy development of mobile applications (Gookin, 51).

Current Mobile Interfaces

Current mobile interfaces are able to offer clear audio as well as video contents and the formats make these devices more applicable for various portals. They are also able to handle deeper or wider multimedia contents. The multimedia contents are presented in three main categories namely, downloadable applications, virtual streamed content, which is transferable in real-time and immediate content that is transferable on demand. Mobile downloads come in various codes and applications for current mobile devices such as tablet PCs, ipads and iphones support majority of these formats. Currently, the packaging formats for both audio and video codec, depending on the application-developing program or team. The most common form of video or audio compatibility option for the hand-held devices include the

MPEG-4 (MP4), Flash Video, MIDI, WAV, MP3, 3GP2, Real Audio, MOV, AVI and 3GP.

Some of the format names originate from the manufacturers' identity for instance the 3G companies. The current applications such as the Windows Micro-media player on personal computers are able to incorporate majority of these formats, at high qualities (O'Reilly, 3).

Designs of mobile Information Devices

There are new set of challenges for User Interface (UI) designers and software developers, especially when developing software for new Internet-enabled wireless mobile phones or the two-way pagers. In accordance with Fling (89), when designing a consumer product or developing a software application, various aspects ought to be considered. First is the ability to supports a Graphical User Interface (GUI), which will make it friendlier to the consumer. The GUI should accommodate multiple windows simultaneously. Secondly, the input functions must handle data in a fast and easy way.

This does not mean that the product should be very complicated, because not all consumers feel at ease with complicated interfaces. Lastly, the most important aspect during development of a mobile application is to ensure use of the right applications and features, which must suite purpose of the device. Various designers have been able to produce a simple and realistic application suite to guide them when coming up with Mobile Information Device (MID) applications: The minimum MID profile should be 96 pixels wide and 56 pixels high and 1-bit in depth(black and white) The device should support a one handed or two-handed input mechanism. A one handed

keyboard has the numbers 1-9, an asterisk (*) and a pound sign (#). A two handed keyboard is elaborated by a QWERTY keyboard style like the personal computers. The MID profiles made of User Interface (UI) or Application Programming Interfaces (APIs) are divided into two parts; high and low level APIs (O'Reilly, 82). High-level APIs are designed for writing an application or service that a network provider needs to deploy during high-level abstraction.

The use also helps to different products by shape, colour or font. " Low level APIs are designed for applications that need precise placement and control over graphics. This is because they provide very little abstraction" (O'Reilly, 37). Games are programmed using the low level API since the screen must interact freely with the user through its GUI. The four types of screen used in MID profile include list, alert, text box and a form (O'Reilly, 37).

The designing of the System application is initiated by the Manufacturer. Many products like the Microsoft applications have command buttons that send a certain signal when pressed. A keyboard is mainly used as a device for providing shortcut options, but in cases of mobile devices such as iphones, the command buttons send certain signals to the operating system, which includes camera, Music player, radio and the internet.

The operating system of current mobile devices prioritizes some commands and sets others to be performed later. This indicates that manufacturers have to decide and test their devices before marketing them, in order to determine their functionality. Developers use high-level abstract commands when programming applications that use programs like Java Language, in

order to develop products that offer competitive market value (Books Llc, 7). Mobile applications are thus designed with a lot of creativity and uniqueness to satisfy the UI requirements.

Common rationale behind mobile multimedia designs

WURFL Technology

The ability to deliver multimedia content through a mobile device depends on properties or file formats.

The capability of the mobile devise determines its capacity to hold complex capabilities such as full-file downloads or capacity to play file features as they download using HTTP streaming. According to Pernici (34), majority of the mobile applications fail to work with the multimedia files because they are generally huge. The incompatibility therefore determines the sellers' decision to include such files that may slow down traffic of data flow. Downloads that take too long to load may be of high costs for the client, who may end up unsatisfied due to the streaming delays. Direct downloading techniques is almost compatible with all the mobile devices especially the iphones and the tablet PCs that utilize the android setups.

Web Technology

Not all the mobile devices have embedded multimedia setting; therefore, their display units constrain some features and only allow audio outputs (Fling, 89).

Various applications such as the flash players or flash-Lite are compatible with mobile devices and the flash video formats (FLV) mainly used in recent technological mobile devices such as ipods, iphone, tablet PCs as well as

palmtops. At present, it is possible to compile the flash player 8 for a mobile device and retrieve information with different formats for instance the YouTube version. Desktop applications works well with devices with enabled Flash-Lite 3 (Fling, 89). Mobile applications are also able to play videos or show images using different programs such as the QuickTime Player that opens on its own without being embedded in a browser like the YouTube.

Streaming

Reference video clips are created in special applications such as iOS and safari, which work well with various applications such as QuickTime.

Streaming highly depends on the strength of the signal since the receiver continues to use the file while it runs from the provider's end. Mobile devices mainly working on the wireless technology suffers from delays (the satellite hops), therefore application developers have difficulties in implementing the concept of streaming video and audio in mobile devices (Setchi, 261). The compatibility of streaming into various mobile devices therefore requires use of different or special platforms along with strong technologies. Currently, devices such as the blackberry or window mobile have a strong support for real-time streaming of files including video files.

The applications use the Real-Time Streaming Protocols (RTSP) that assists in launching of a default player such as Real Player or Window Media Player whenever a streaming link is accessed. This application enables the live broadcasts to occur, for instance reality TV shows, discussion forums or sporting events. The protocol is standardized to provide and control establishments between linked workstations (Setchi, 261). The Real-Time

Transport Protocol (RTP) also allows video or audio streaming for delivery of live events or other multimedia content as per users' demands. There is lack of streaming services on various mobile devices due to lack of functional application in support of the provision, for instance special flash player for the mobile technologies (Setchi, 262). The Flash Lite 3.

0 devices and different recently manufactured iphones are compatible with various applications that support streaming such as the Adobe Flash server, Red5, Helix Media and the QuickTime streaming server. The apple company has also come up with the Darwin Streaming server for its mobile devices (Setchi, 262). The use of UDP or TCP protocols for mobile devices streaming causes some proxies problems associable with redirecting to or from the HTTP setting. Direct streaming from the HTTP setting therefore has an advantage.

During live streaming, HTTP also suffers some overhead problems compared to the other protocols, therefore if the mobile device uses the direct HTTP streaming, the device might have to download the entire file before playing as opposed to download and play simultaneously. Apple has been able to bypass the internet protocol and produce a live HTTP streaming application for its mobile devices. iOS 3. 0 supports this Apple streaming application on iphones. The iphone applications also get accelerated live streaming services from Akamai and influxis. The procedure requires repackaging and buffering of the data into smaller packets for transmission to clients. The switching of bandwidth to accommodate different qualities over HTTP setting provides a great advantage of ability to pass through various proxies setting and firewalls without suspicious blocks (McNamara, 219). The current mobile

device applications also allow users to upload files including video files to the internet, to steaming websites like YouTube through use of an internal flash player application.

Comparison between Mobile and Computer Applications

Mobile devices such as the tablet personal computer are an evolution of the computer technology, which have various technical applications for better performance levels. Majority of today's devices are controlled trough touch screens, digital light pens or finger calibration. This means that some of the earlier applications of the computer systems have been rendered obsolete. The main aim of establishing new applications is to enhance the concept of mobility. When every need is catered for through a hand-held device, there is ease of operability as well as mobility.

Common mobile devices today include the iphones, convertible tablets, booklet tablet, slate, and hybrid tablet PCs (Setchi, 263).

Common Application on Various Mobile Devices

Advanced data entry systems such as touch or voice recognition system means that currently, applications are catering for intelligent systems. The ability to enhance connectivity such as the universal connectors, Bluetooth, infrared and other wireless connection to various peripheral devices is a clear induction that technology of application is on a steep modification procedure (Jacko, 34). Mobile devices especially the communication devices like computers or phones have similar appearances that often offer preferences of usage attributable to support for advancing technology such as internet television or video broadcasting. The importance of having

internet on a mobile device also requires a special form of applications for easier interpretation (Jacko, 34).

Conclusion

Mobile devices are emerging day-in-day-out, and the applications are under a constant revolution to cater for high technological functions anticipated by users.

The devises are hybrid because they cater for various features of related products as well as features on some of the earlier devices. The application support adaptable features and this is evident from current usage such as the use of iPad that was launched in mid 2010. The applications therefore have various features borrowed from both personal computer and earlier phone models.

Works Cited

Books Llc. Tablet Pc: Ipad, Joojoo, Comparison of Tablet Pcs, Microsoft Courier, Hp Touchsmart, Itablet, Adam Tablet, Hp Compaq Tc1100.

New York, NY: General Books LLC, 2010. Press Fling, Brian, Mobile Design and Development: Practical Concepts and Techniques for creating mobile sites and web applications. California, CA: O'Reilly Media, Inc.

, 2009. Press. Gookin, Dan. Laptops for Dummies. Indiana, IN: Wiley Publishing, Inc. 2010.

Press Jacko, Julie. Human-Computer Interaction. Interacting in Various Applications Domains. Germany: Springer-Verlag Berlin Heidelberg. 2009.

Press O'Reilly, Tim. Web 2. 0: A Strategy Guide. California, CA: O'Reilly media Inc.

2008. Press McNamara, Joel. Netbooks for Dummies. Indiana, IN: Wiley Publishing, Inc. 2009. Press Pernici, Barbara.

Mobile information systems: infrastructure and design for adaptivity and flexibility. New York, NY: Springer, 2006 Setchi, Rossitza. Knowledge-Based and Intelligent Information and Engineering Systems. Berlin, Germany: Springer. 2010.