MOBILE PHONE CULTURE:
COMPUTING EVERYWHERE

Submitted by

JONATHAN POTTs

University of West Florida

April 26, 2010
ABSTRACT

Mobile phone culture is the idea that mobile phones serve as ubiquitous computers that offer anytime, anywhere connectivity and communication. The idea spawned from Japan where the teenagers took business-aimed tools of communication such as mobile phones and pagers and adapted them to serve social uses such as text messaging. With the constant push for advancement in the social connectivity of mobile phones by teenagers, mobile phones have developed into very devices that offer many features and have become always connected through the use of mobile Internet services which were inspired by the connectivity that text messaging offered. The mobile phone culture of Japan has influenced how people around the world interact with their mobile phones and has enabled them to become personal.
## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>CHAPTER NO.</th>
<th>TITLE</th>
<th>PAGE NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ABSTRACT</td>
<td>ii</td>
</tr>
<tr>
<td>1.</td>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>2.</td>
<td>EVOLUTION OF MOBILE PHONES</td>
<td>2</td>
</tr>
<tr>
<td>2.1</td>
<td>START OF MOBILE PHONE CULTURE</td>
<td>2</td>
</tr>
<tr>
<td>2.2</td>
<td>EVOLUTION OF MOBILE MEDIA</td>
<td>2</td>
</tr>
<tr>
<td>2.3</td>
<td>SOCIAL IMPLICATIONS OF MOBILE PHONES</td>
<td>3</td>
</tr>
<tr>
<td>3.</td>
<td>ADVANCEMENTS IN FEATURES AND SERVICES</td>
<td>4</td>
</tr>
<tr>
<td>3.1</td>
<td>ELECTRONIC MONEY</td>
<td>4</td>
</tr>
<tr>
<td>3.2</td>
<td>ELECTRONIC CLIPPING</td>
<td>4</td>
</tr>
<tr>
<td>4.</td>
<td>CONCLUSION</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>REFERENCES</td>
<td>7</td>
</tr>
</tbody>
</table>
1. INTRODUCTION

Mobile phones are used as a tool of ubiquitous computing offering connectivity to social networks and information at anytime and available from anywhere. By using these devices, people can be freed from the restriction of location because they are no longer required to be tied down to a wire or within the vicinity of a small-range wireless network such as a Wi-Fi access point. With this added freedom from location, people can also be freed from enforcement of social laws created by authoritative figures such as parents or supervisors. [4, p. 1]

The idea behind mobile phones as defined by the Japanese mobile phone culture is to offer a device that is personal and portable that allows communication in a way that can supplement everyday life. The word in Japanese used to describe mobile phones is “keitai” which means “something that you carry with you” and is a very good example of what mobile phones are expected to be, a device that you carry with you everywhere because that is how important it is in your everyday life. The importance behind mobile phone culture does not lie directly under technological advancement, but how mobile phones can aid in the constant communication between social contacts and the instant availability of information. By striving to obtain these benefits, the technological components of mobile phones advance in order to better facilitate in the functionality they provide for social communication and information gathering. [3, p. 1]

We will be investigating the evolution in mobile phones in their applications for social interaction as well as ubiquitous computing and information gathering, their social impacts, and what the future is of mobile phone culture. Also, we will explore how mobile phone culture will affect mobile phone usage in the Western world particularly in technology because in Western communities, technological advancement tends to be the driving force behind mobile computing.
2. EVOLUTION OF MOBILE PHONES

2.1 START OF MOBILE PHONE CULTURE
Mobile phone culture started as a tool for youth to gain access to benefits not offered to them that adults were afforded via their rights. Through the use of text messaging, teenagers are afforded a method of privacy in which they can communicate with their peers in ways they cannot due to them not owning homes and now having workplaces like adults which can use these places as methods of communication. Also, text messaging is seen as a low cost way to communicate with social groups in ways that can avoid monitoring of conversations and allows for near instantaneous discussion without the need to use speech which may be disruptive in certain environments. [4, pp. 2-4]
Mobile phones and pagers were originally designed as tools primarily used for business communication but through the desire of the youth to have a tool for communication, they were fashioned into devices used for social interaction. In the early nineties, Japanese teenagers were using numeric codes which represented messages to send across pager networks to communicate with each other. As a response to the pager culture, which used pagers as a form of social interaction, short messaging services (SMS) were created. Through the constant push for advanced technology with mobile devices by the teenagers, mobile technology has developed at a rapid pace, and thus the mobile phone culture had spawned. [4, pp. 2-4]

2.2 EVOLUTION OF MOBILE MEDIA
With the development of short message systems, teenagers were given an intuitive way of communicating with their mobile phones. However, it continued with teenagers who were constantly pushing for advancements in the social capabilities
of their mobile phone. These pushes caused development in mobile media in where information could become available to users of mobile phones. [1, p. 4]
In the late nineties, NTT DoCoMo, the largest mobile phone service provider in Japan launched their mobile Internet service called “i-mode”. The adoption rate of the the “i-mode” Internet service was very high and as such, it was determined that Internet service for mobile phones was a huge success. With the availability of this service as well as the rapid advancement in mobile phones, Japan’s mobile phone industry has maintained a spot as the most advanced in the world. With the availability of Internet connectivity from mobile phones, other services and features began to come to market such as mobile commerce (e.g. ringtones, app stores), location-aware computing (e.g. GPS-enabled mapping services), camera and video phones, and mobile video sharing. In Japan, where the adoption of mobile Internet service is so high, the use of short messaging services has been replaced with the use of mobile email. [3, pp. 1-2]

2.3 SOCIAL IMPLICATIONS OF MOBILE PHONES
A large part behind the evolution of mobile phone culture deals with the social implications of communication especially as involved in Japan. In Japan, it is a very important not to cause commotion, and as such, mobile email has become of strong important in Japan. By using mobile email, one does not have to audibly communicate which prevents causing disruptions to other people within the vicinity of the person communicating. However, as such, communication tends to become slightly more impersonal because most communication is performed via text. [2, p. 22] [4, pp. 9-11]
Also, since communication can be performed between two mobile phones in an inaudible fashion such as mobile email, privacy can be maintained between the members of the conversation. As such, it is harder to enforce social rules set by
authoritative figures such as parents or supervisors who may not want particular conversations from occurring. In Japan, most parents feel that they can trust their teenagers and do not perform any kind of monitoring on their teenagers conversations; however, in places such as the United States, where parents are much more cautious of their teenagers actions, it is probably much more likely for the privacy allowed by mobile email and text messaging to become an issue. [4, pp. 5-8]

3. ADVANCEMENTS IN FEATURES AND SERVICES

3.1 ELECTRONIC MONEY
With the advancements of features and services available on mobile phones, companies were looking at ways to incorporate a credit or debit card into a mobile phone. Trying to obtain this, Sony developed a technology called “FeliCa” which enabled near-field communication between mobile phones and terminals via radio frequency identifier (RFID) chips. Using Sony’s FeliCa technology, payment vendors such as banks and other financial institutions can offer wireless payment functionality that will work on mobile phones. In Japan, the “Suica” card which acts as a pre-paid transit pass and payment card can be tied to a user’s mobile phone and their mobile phone can act as their Suica card when interfacing with terminals that support Sony’s FeliCa technology. In the United States, similar payment options can be adapted to use near-field communication technology within mobile phones such as Visa’s “payWave” service and MasterCard’s “PayPass” service. [2, pp. 21-22]

3.2 ELECTRONIC CLIPPING
With the popularity of camera-enabled mobile phones, and the numerous amounts of printed media, a method is needed for capturing the analog information from the
media and converting it to a digital format. Electronic clipping is a tool used for converting visual data such as barcodes or landmarks and allowing access to useful data pertaining to the media that was captured. Photographs can be taken by a camera-enabled mobile phone of a barcode located on a movie poster which can then redirect the user to a movie trailer available on the Internet or a photograph can be taken of a monument and information about the monument can be displayed. Google is trying to implement this technology in the United States with the use of 2D barcodes on business posters as well as their Google Goggles technology which displays relevant information of monuments that are photographed. [1, pp. 753-759]

4. CONCLUSION

Through the investigation of the Japanese mobile phone culture in areas such as the evolution of mobile phones and the advancements of features and services, we can conclude that there is a significant trend for the advancement in mobile phones, primarily caused by the push of teenagers in their desire for more socially-advanced devices they can use for anytime, anywhere communication and computing. Trendy companies in the United States, such as Apple Corporation, have noticed this push for the advanced mobile phones and have brought the innovations of Japanese mobile phones to the mainstream market in the United States. For example, Apple Corporation with the release of their mobile phone called the “iPhone”, has brought many of the features such as a always-connected experience which allows for location-aware computing and constant communication with social connections. Many other companies such as Google and Microsoft have followed suited by developing platforms designed for mobile computing designed around social interaction. We think that mobile phone culture is here to stay and will only keep getting more advanced as the social expectations
of the youth grow and as they push for a more connected experience with their peers.
REFERENCES