

# **1 Introduction**

This project will discuss mobile phones and telecommunication developing in 21 century, focusing on the negative and positive effects of them, how they affect people's working and living environments, the globalisation and the future of mobile phones and telecommunication.

Mobile phones and telecommunication are the media for people to communicate with each others in the 21<sup>st</sup> century. They are comprised with telecommunications, radio communications and mobile communications. Today, the term telecommunications covers a particularly large number of human activities relating to the transport of data. We all use it almost every day such as telephony, radio and TV. Moreover, modern communication technology and systems are essential to communicate over distance, to the broadcasting of information on a mass or individual basis, and to innumerable forms of entertainment.

Mobile communications is shooting up rapidly in area within the telecommunications sector. Over the last few years it has experienced unprecedented growth in subscriber numbers, especially in cellular mobile telephony. So we can find that the telecommunication industry have their development opportunity as well.

Tomorrow's communicator will integrate the features of telephone, agenda and organiser, combined with PC functions. This will include videophone and fax features, as well as the possibility to "plug" into office or private computers. They will integrate multimedia and telecommunications applications. Moreover, the mobile phones functions would also have their development opportunity for example; the 3G, 4G, Bluetooth, I-mode, Wap, Wireless and packet switching are the new fantastic functions in this 21<sup>st</sup> century.

## **2 Mobile Phones and Telecommunication**

### **2.1 History**

Historically, telephone comes from the Greek word tele, meaning from afar and phone, meaning voice or voiced sound. Generally, a telephone is any device which conveys sound over a distance. A string telephone, a megaphone, or a speaking tube might be considered telephonic instruments.

In 1973 the Martin Cooper makes the first call from a Motorola mobile phone and he is now head of California-based firm ArrayComm. Five years later, USA developed the first experimental analogue mobile phone service. After that, in 1984, the big and bold Dyna TAC mobile phone enters the market. Afterward, mobile phones start to resemble what we see today with the introduction of the Motorola Star Tac in 1995. Shortly, the first camera phone enters the mobile market in 2000.

## **2 Mobile Phones and Telecommunication**

### **2.2 Function**

Now we are entering a new era, full of new knowledge and innovative ideas. No exception, mobile phones and telecommunication are also becoming more and more popular in this generation. Although everybody also have their own mobile phones, certainly they do not completely know how many functions of their mobile phones included.

Generally, messages and graphs are the common functions in the mobile phones in the past few years. However, today there are the others modern functions inside the mobile phones in the generation. Deep down, 3G, 4G, Bluetooth, I-mode, Wap, Wireless and packet switching are the new functions in this 21<sup>st</sup> century.

The first wave of third-generation (3G) wireless services is due to be deployed in Japan during the summer of 2001. 3G systems will work in new frequency bands, away from the spectrum of existing voice based cellular networks. Fully 3G systems will be completely dominated by data, especially the mobile Internet, using packet switching. Voice traffic will be worked in somehow, but there are different plans on how to do that.

4G systems, although speculative at this point, promise universal telephone service, with any kind of phone working in any country, using whatever technology the local wireless carrier offers. 4G phones will accommodate different operating systems and frequencies through special hardware built into the phone, as well as software downloaded at the time from the local carrier.

Bluetooth enabled laptops, mobile phones, desktop computers or PDAs can all communicate with each other as if they were on a wired LAN. Today, bluetooth is extremely common in this generation because it has numerous advantages. For instance, convenience, efficiency and accuracy are the excellent factors that it can become more unusually popular.

I believe that the telecommunication industry has a massive developing potential in the 21<sup>st</sup> century. The creative and innovative products are the particularly element to develop over the world especially in those developing countries.

## **2 Mobile Phones and Telecommunication**

### **2.3 Advantages and Disadvantages**

Everything in the world has its own two sides. Without exception, there are both advantages and disadvantages about the mobile phones and telecommunication.

One of the advantages of using mobile phones and telecommunication is convenience because mobile phones do not have any restricted area. We can use mobile phones at anytime and anywhere even you are deal your business over the world. At this 21 century's, mobile phones not only can transmitted messages but also can transmitted graphs or music. Moreover, some of the 3G mobile phones also can take photos. Put it in the other words, mobile phones and telecommunication can reduce working pressure and provide a better living environment for citizens. It can reduce the gap with each other's even in difference countries and make city life colourful around the world as well. Consequently mobile phones and telecommunication has a wide application in all aspects of our lives.

Obviously, save time and economic are the other advantages for mobile phones and telecommunication. As social advances amazingly, mobile phones and telecommunication are becoming more common. At the same time, the cost of using mobile phones and telecommunication are decreasing gradually. In addition, due to people can use telecommunication to get into conversation with the other especially for businessman, they can avoid time-consuming for travelling.

On the contrary, mobile phones and telecommunication also have their disadvantages. Recently some scientists have expressed alarm at another possible danger that the use of mobile phones itself and harm the user's health, perhaps even causing cancer. Furthermore, safety is a considerable problem, a number of accident are caused from user who using mobile while driving on the road. When the drivers used hand-held or the hands-free versions, there was a slowing of responses and a substantially increased risk of accident. Actually, the solution of harmful accident happened would not be neglected.

In addition, brain cancer takes years or decades to develop, users of mobile phones who had developed certain types of brain tumors were more likely to report having used the phone on the side of the head with the tumor than on the other side. In fact, mobiles are held closer to the ear, thus more radiation penetrates the skull. Moreover, today many of children have their mobile phones as well so a considerable number of expert worry about the children because the human brain continues growing and developing after birth, and goes on doing so till puberty. Children's skulls are thinner and heads are smaller, so radiation would go deeper. Even mobile phone can bring us more colourful life but the negative effects of mobile phones should be avoided

Another negative effect of mobile phones is raising the mobile phones criminal. According to the England Police report, there are 700,000 mobile phones were taken last year and many criminal had happen in street attacks. Home Office minister John Denham said:

‘Mobile phone thefts have been a key factor in rising street crime – stolen mobiles are now involved in 50% of all robberies in London’

Undoubtedly, the mobile phones cause a significant number of street crimes because mobile phones are quickly turned into cash by thieves. Moreover, a black market exists for resale the SIM cards and handsets and the value of between £10 and £60. Once mobile phone thieves could face up to five years in jail and unlimited fines under emergency legislation, a greater percentage of street crime of mobile phones increase rapidly.

Generally, mobile phone signals can cause unpleasant symptoms such as headaches, dizziness, nausea and fatigue. Besides, a part of people in the UK are ‘hypersensitive’ to mobile phones and would affect hormone levels. Of course, we can happen that using mobile phones cause people to feel unwell. It is harmful to people in the technology century. Nevertheless, mobile phones actually can give us a considerable number of advantages. But we cannot escape a number of negative effects of mobile phones and should be taken it seriously. The discussion as to whether the mobile phones are a blessing or a curse arouses most people’s interests.



### **3 Effect of People's Working and Living Environment**

#### **3.1 The Working Environment**

With the development of society, telecommunication is exceedingly significant for everyone especially for working environment. Basically telecommunication are comprised with telephone, fax, telegraph and e-mail, it can give us more opportunities to communicate with the others in the 21<sup>st</sup> century. In spite of they bring us more convenience, efficiency and clearly information from the machine, as the same time, some of the technicians problems come out with us as well. We can recognize that a considerable number of the problems when using each kind of telecommunication machine seem obvious.

Data and information are very important in each business aspect environment. Safety, accuracy, clears and efficiency data and information are the seriously technicians problems for each aspect of business environment in this 21<sup>st</sup> century. Although the telecommunication is excellent today, we need to avoid the data and information transfer to the hacker or other as well. Recently the phenomenon has aroused wide concern. Some people are in alarm those problems. No doubt, this is a global problem for each aspect of business environment especially for the developing countries.

### 3 Effect of People’s Working and Living Environment

#### 3.2 Family and Teenagers

We have just crossed the threshold of the 21<sup>st</sup> century and the curtain of the new millennium is slowly rising. With the steady growth in the country’s economy as well as the people’s living standard, the rhythm of people’s living is speeding up and a lot of changes have taken place in their daily life. Mobile phones and telecommunication are rapidly gaining its popularity around the world.

According to the National Statistics Department in UK, we can find that a considerable number of teenagers have their own mobile phones as well. The bar chart figure 3.1 provides more details about the user of mobile phones and telecommunication for teenagers.

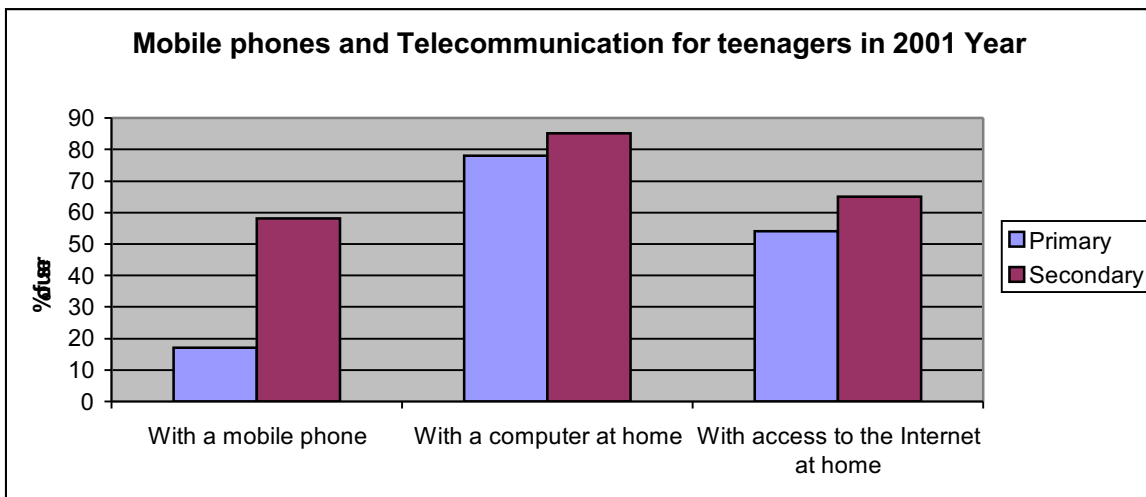


Figure 3.1: Source: CensusAt School

From the figure 3.1 illustrate, more than 15 percentage of mobile phones users are found in primary and Secondary school. At the same time, the number of computer users reached its peak especially for people who used computer at home.

On the other hand, a part of people argue that pupils can or cannot use mobile phones during the lesson. Some body agrees and some body disagrees. In fact, I believe that even students don't talk a phone during the lesson, but they can send text message at anytime. Although a part of students can have a well-informed decision for using mobile phones during the lesson but not all the students can do that. Actually, students should have their responsibility and they should know what they can do and what they can't do. Nevertheless, people have different ideas about it. For instance, Mr David Nayler allowed students using mobile phones during the lesson because he thinks children should have much more responsibility for themselves. Mr David said that "Children have much more of a sense of loyalty, involvement and responsibility for their school if they are involved."

Though the opinion stated above seems to have some merits, it overlooks some deeper and more basic factors. When students using the mobile phones during the lesson, not only the user would miss some information from the teacher but also he would influence the other students whom near by him. In fact, many of schools and universities are not allow using mobile phone during the lesson. According to my interview with the Business lecturer in University of Salford Mr Kelvin Marshall (2003) said:

I would prefer not I don't think student should use the mobile phones during lessons or lectures. Because it is very disturbing for the lecture and very difficult to concentrate when hundred of thirty students may be mobile going on to a few minutes, using mobile phones could disturb students from concentrating on what we said in the lectures for example play games, text, when I have seen to do that I ask them to put the mobile away or turning off on the lesson.

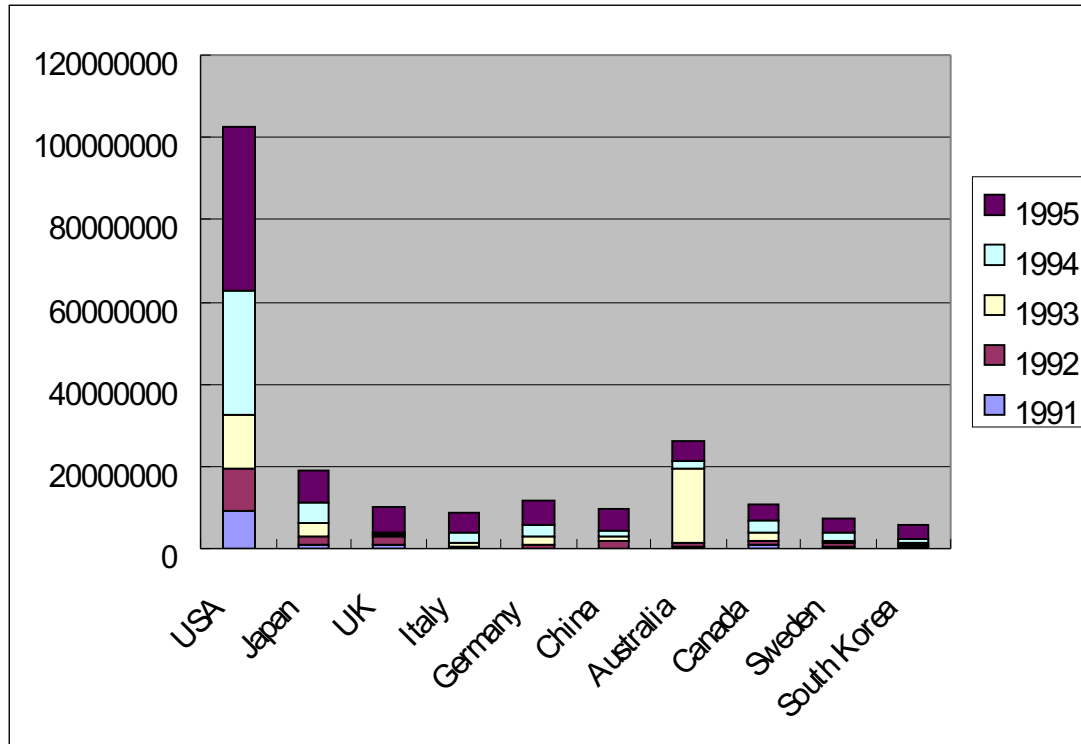
(Mr Kelvin Marshall, 2003)

Otherwise, the International Foundation Year Course tutor in University of Salford Mr John Fyfe (2003) said: 'No, it's terrible think because people when they using the mobile phone, they are not play attention to the teacher, so they are not allow using mobile phones in the class and this is not polite.'

In addition, mobile phones sound expensive for students, once the student lost the mobile phones, the school must have their responsibility to investigate the problems. Otherwise, a number of parents would want a child to be able to call home if lost or to dial 999 in an emergency using the mobile phones. So there aroused a heated debate as to whether we should allow students can use mobile phone during the lesson.

## 4 The Developing of Mobile Phones and Telecommunication

### 4.1 European Countries



**Figure. 4.1** Subscribers of cellular telephones from the end of 1991 to 1995.

The rapid rise in the use of mobile telephones in the European Countries, we can find that the telecommunication industry in the European Countries would have a considerable increase in the near future. From Figure 4.1, which shows the subscribers of cellular telephones in European Countries, there is evidence that the prospects of the cellular telephones are brightening. Furthermore, from figure 4.1 express that the UK telecommunication industry also grow dramatically.

Generally, Europe has now more than 8 million cellular mobile phones users, the mobile phone user increased three-fold three years ago. There are also more than 8 million users using the other mobile communications services for instant paging and so-called private mobile radio systems. What is more, some of the article predicts that there could be nearly 40 million users in the European Union, and with the growing expansion into personal communications services (PCS), up to 80 million users by the year 2010. Furthermore, the market research predicts that 30-40% of the population would have personal communications for private use by 2010.

In the UK, BT is a well-known telecommunication company. According to the BT Annual Statement, BT Retail launched the Next Generation Contact Centre Programme, which will rationalise the number of call centres from 104 sites to 30 over the next two years. The associated exceptional costs of £68 million are found by following this link. Within the Dial IP market. It would be better to say, the evolution of telecommunication in European Countries will have more opportunities for his future career.

## **4 The Developing of Mobile Phones and Telecommunication**

### **4.2 Asia Countries**

With the development of society, telecommunication industry acts as main role in an Asia countries in the 21<sup>st</sup> century. Most of the telecommunication companies also provide a wide range of services all around the world. In Asia, Hong Kong Telecommunication Company PCCW is the first provider will have inflight email service for Cathay Pacific Airways.

Inflight access to email has become a priority for many passengers, allowing them to communicate inflight just as they would on the ground. The NETVIGATOR Inflight service allows passengers in First and Business Class, and the front rows in Economy Class, to send and receive email messages using their laptop computers. Cathay Pacific was the first airline to commit to offering inflight email across its entire fleet. It was also the first to offer data connections to a high-speed onboard network.

Telecommunication industry in Asia also has an extent to develop as well as European countries. There are many instances in our daily life that can verify this. For example, the NETVIGATOR inflight service provides by HONG KONG ISP PCCW. Moreover, the prices of telecommunication are cheaper compare with the other European countries such as Germany and Italy.

## **5 Conclusion**

Along with the rapid development of the society, remarkable changes have taken place in telecommunication industry. In the 21<sup>st</sup> century, yet when it comes to mobile phones and telecommunication, people from different backgrounds hold different attitudes. However, there is a good side and a bad side to everything. Mobile phones and telecommunication are no exception.

Undoubtedly, conveniences, efficiency, creative and innovative are the advantage for the development of the telecommunication industry. Bluetooth, I-mode, Wap, Wireless, packet switching, 3G and 4G are the modern technology for us. Notwithstanding how well of the telecommunication, they must have their disadvantages. In fact, brain cancer, car accidents and street crimes are the absolute bad influence for us. That is a very important thing for people nowadays either the advantages or the disadvantages. Indeed, not only the World Health Organisation should establish the regulation for the mobile phones user to avoid the car accidents and enhance the supervision of mobile phones manufacturers but also the International Police Association should establish guideline to crack down on street crimes such as advice mobile phones users don't use phones when they are walking in the street.



It goes without saying that mobile phones and telecommunication user are continuously increased. At the same time, a number of effects must appear for people's communication. For company, the security of transmitted data and information are the serious problem for them. In fact, the companies must have an extremely security system to protect their data and ensure the data send to the other under the secure environment. On the other hand, some people argue that teenagers using mobile phones during the lesson should be allowed. Actually, this question is very controversial one in this generation.

Finally, mobile phones and telecommunication industry will have an excellent development in the 21<sup>st</sup> century especially for those developing countries. From what has been discussed above, we know that the Hong Kong ISP PCCW is the first telecommunication company provide NETVIGATOR Inflight service for Cathay Pacific Airways. Obviously, a considerable of fantastic new technology products will bring us more entertaining life and energetic working environment.