# UNIVERSITI TEKNOLOGI MARA

## SAMARAHAN CAMPUS

## FACULTY OF SCIENCE ADMINISTRATIVE AND POLICY STUDIES

## DIPLOMA IN PUBLIC ADMINISTRATION

## PROJECT PAPER / THESIS (PAD 340)

## SEMESTER JULY – NOVEMBER 2005

# A Study on the perception towards camera-equipped phone and the impact of technology among Universiti Teknologi MARA, Diploma in Public Administration students.

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Date of Submission:

31 OCTOBER 2005

# Acknowledgement

The completion of a study of this kind depends upon the assistance and cooperation of many persons. The investigators wish to extend their thanks to Diploma in Public Administration (DPA) students from semester 4 until semester 6 who took part in answering the questionnaire. On top of all, the investigators are deeply thankful for the guidance and encouragement that they received from their supervisor Tuan Haji Saudi Bin Haji Narani.

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## Chapter 2: Literature Review

# A Study of perception towards camera-equipped phone and the impact of technology among Universiti Teknologi MARA, Diploma in Public Administration students.

# Chapter Outline

Research on our thesis started on the third week of December in our fifth semester as Diploma in Public Administration (DPA) students. After the creation of forming of our groups, the first meeting was hold to discuss on the matters on the scope of topic that are needed to be completed with the groups members, so that the real topic can be selected from the overall topics given. To achieve our goal, here is the chapter outline that will be presented in our thesis research.

Chapter one is the introduction that will make known to the readers of this research. Not only that, it also familiarize the reader with the background of study, problem statement, objectives of the study, the hypothesis, the thesis assumption, significance of study, proposed findings, the limitation of study and the scope of the study.

Chapter two is the literature review on the information that is related to the topic of this study. Here, we will also familiarize the readers with the problems that will arise regarding the perception of DPA students from Semester 4 until Semester 6 towards camera-equipped phone and the impact of technology among them.

Chapter three is the research methodology where we will explain the matters of the data gathered for the research. Here we also include the types of data and where we got the data and information related to our research.

Chapter four is the data analysis where we analyze the data and information gathered from various methods. Among the methods used are the questionnaires,

references from the library and electronic media. This chapter is the most important part of our research as it contains the outcome of the study on our topic.

Chapter five is the last chapter in our research paper. In chapter five, we will list down our suggestion to the person that is related to the topic of this research. The suggestion that we gave maybe useful to the related person to react on any wrongful acts done by students who committed any offences using their camera-equipped phone.

# Introduction of the Study

Phone is one of important devices to communicate between two or more person in one time in different distance. We can see the development from pervious day until now. Phone had developed become one of the important thing in life.

Nowadays, each person in the public holds one of mobile phone in his or her hand. Not only happen in the public but also happened among schoolchildren. They had already exposed to this technology since they are young. Mobile phone becomes a need in these ages.

We also want to see the perspective from different age namely teenage and adult who the most common user of this mobile phone in this era. What is their acceptance on this technology? Either it is good for them or not? All of this will be answered after we finish with the study later on.

A lot of thing that relate to mobile phone had been an issue this day. For example, the issue of privacy and the technology. How Saudi Arabia had banned this mobile phone to being used inside their country because the issue of privacy, which they received, complain from the public that irresponsible user had misuse of the mobile phone. They use their phone to take picture without permission and later on publish the photo. Breach of privacy is considered as a wrongful act not even in Saudi Arabia but any place in this world.

Therefore, the reason why we want to make this research is that we want to see the impact of this small technology to the society. It either gives more advantages than disadvantages or vice versa not only to the society but also to the world.

## Problem Statement

Nowadays, with the development of high technology machines, shows that human beings are too creative and innovative. Basically, camera-equipped phones were invented for the purpose of taking pictures with friends and families, or taking pictures of beautiful sceneries if you are forgotten to bring your camera or do not own any at time. However, the usage has been inverted into another way whereby users using it for the purpose of capturing pictures and videos for sexual satisfaction not only among the teenagers but as well as the adults.

# Objectives of the Study

The objectives of the study are derived from the main problem occur when a lot of teenagers are using camera-equipped phone for bad purposes. The objectives are:

1. To identify the main intentions of having a camera-equipped phone.

2. To examine the perception of students own a camera-equipped phone.

3. To analyze whether it is important for a student to have a camera-equipped phone.

4. To evaluate how far the students know how to utilize their handphones in a correct way.

5. To suggest recommendations to *Hal Ehwal Pelajar* (HEP) on the possible solutions to overcome the problem at the campus.

## Scope of Study

The study is focus on the students of University Teknologi MARA, Samarahan Campus, Kota Samarahan. Recently, we have heard so many cases of teenagers using camera-equipped phones into a wrongful way especially for the purpose of embarrassing someone or in other words, violating someone's privacy, pride and rights.

People who involve directly in this study is the students of DPA itself. The involvement of this element is very important because they can give the impact on the result of the study.

# Hypothesis

There are three hypothesis made in this study regarding the perception towards camera-equipped phone and the impact of technology among UiTM DPA students which are:

1.  We predict that majority of the students will have negative perception towards camera-equipped phone based on the issues posed in the questionnaire.

2.  We also forecast that majority of students will agree that UiTM should ban such a phone from being used in the campus area.

3.  We predict that not many students owned a camera-equipped phone as the price is expensive and students rely heavily on their *Pinjaman Tabung Pengajian Tinggi Negara* (PTPTN) loan and parents financial assistance.

# Significance of the Study

Our research is a question basis that needed to be answered. We want to see the perceptions toward our statement that is how the UiTM students accept camera-equipped phone in line with our research proposal topic that is **'A study on perception towards camera-equipped phone and the impact of technology among UiTM DPA students.'**

Our study in addition, has the significance impact to get greater views on the factors that may influence the people's perception towards the camera-equipped phone in Malaysia particularly, and around the world as a whole. This is because, in some aspects and with valid factors, the views may be vary to individuals themselves. On the other hand, our study has a wish to produce a statistical record and analysis on the students' perception within UiTM that will enhance the number of research done on camera-equipped phone as this matter is relatively new field to be researched on.

The other importance of the research is to seek as far as we can the different views and opinions from the various numbers of sources around the world regarding the significance of the research proposed as well as the weaknesses that are foreseeable. Also, we want to list all the factors that affect the perception among UiTM students.

# Limitations of the Study

There are several limitations of our study. The limitations of the study are the factors that may affect our research process and the result of the research. The first problem is about the cooperation given by our respondents. Some of our respondents do not fill their questionnaire completely and this makes us hard to do our analysis, findings and recommendation.

Secondly, we also face the problem of cost. Besides time, cost is the common problem for many researches that is already or yet to be done. Cost may limit our research in terms of the attainment for facts of the study, and the process of the study itself. In our study, we have enough funds to get access to all the important resources available such as to surf internet, prepare the questionnaire set for the respondents and so on.

The final limitation is limited number of resources available which also becomes the major limitation to our study. Since the problem statement of our research is quite a new topic for many individuals, there are not many available resources and data that we could get, besides some advices from our counselors on how we should approach our topic. There are only a few journals, books and brochures and articles from bulletins available that we could refer to. Most of our references are available on-line in the internet.

# Proposed Findings

As our respondent are DPA students part 4 to part 6, here are the findings we can predict:

1.  We hope to find the number of DPA students from part 4 to part 6 who know about the perception toward camera-equipped phone and how important to have camera-equipped phone.

2.  We predict that the most important issue is price, function, design, quality of picture, privacy and the least important is confidentiality.

3.  Majority of the student disagree that UiTM should ban camera-equipped phone from being used in the campus area.

# Literature Review

## i) History and the development of phone

Phone has already presented in the twenty century. The usage of the phone nowadays is an ordinary thing but nobody bother to distinguish about the history and development of the phone. Here we has a little bit about phone development and we want share it with you.

*Telephone is an electrical system for talking to somebody in another place using a special piece of instrument* (**Oxford Dictionary New Edition**) or can be measure as *system of transmitting speech using wire or radio* (**Oxford Dictionary Third Edition**). Generally, *telephone is a tool which copy the sound especially voice in the great distance using electricity*. This electricity transfers your voice from one to another place.

However, the real meaning of telephone comes from the *Greek word* that carries the meaning of *voice from afar*. String phone, megaphone or tube phone is one of phone but still it is not complete one of the important thing which is they do not transfers voice using the electricity in the first place like what Victorians mention '*talking by lighting*'. Thus, it is important to know better in the learning of electricity in the first place.

In the past, men really want to communicate from afar distance. They tried a lot of gadget to make sure that their message received safely by the other person or vise versa. They used pigeon as the middle device to send their message or to get messages. This pigeon was trained particularly for this task only. Thus, these pigeon know what to do when they are release from their cage.

Another way they used in their days to communicate was smoke signal. They will make fire to attract people from another place. Nowadays, we used smoke signals to put on view that something happen like emergency case and need an immediate action. Smoke signal also use when someone lost either in the jungle or any other place that relevant enough to use fire to ask for help or obviously they want to attract someone attention.

Other than that, they also use the mirror to flash light. Jungle drum to make noise usually used y the one who lives in the jungle or place that far from city facilities. Lastly, they also used semaphore which also same as the function or other instruments to send messages. Even though, a lot of instrument but still it is not effective enough to be use.

Some said that Francis Bacon predict the telephone in the year of 1627 in his book New Utopia. However, the book just covers a little bit about long speaking tube he had never mentioned about the existent of electricity. The real phone was not proposed until the electric was found.

In the 1729, an English chemist, Stephen Gray conveys the electricity over a wire. He sends nearly 300 feet over brass wire on one time. Few years later, Dutchamn Pieter van Musschenroek and Derman Ewald George von Kleist in 1746 build the Layden jar. Layden jar is a battery that can store up static electric. This Layden jar was fully covered with a tiny metal on it outside. This Layden jar had been used recently in the experiment, lecture and demonstration after its creation was publishing to the public. Nowadays, it is know as dynamo.

In 1753, an unidentified writer recommended in The Scot's Magazines that the electricity could be used to transfer message. He later on creates a scheme using

separated wires, which represent each letter. Meaning to say, the wire that he have are 26 wires. Using this wire, the message can be transfer a mile or two. In the modern ages, this is known as telegraph. For decade, they used this kind of facility to send out messages.

Until 1800, people still do not understand the relation between electric and magnetism. In 1820, Danish physicist, Christian Oersted finally found and understood about the relation between these two terms, which is electromagnetism. The experiment that he made in his University of Copenhagen was happen when he put a compass under a live electric wire. The result was that the needle turning from pointing north. He found out that electricity create magnetic field and vise versa. In addition, the principle of electromagnetism can be apply and used and in the same time create new era in communication.

Until 1831 the principle to build the telephone was already recognize. Only in 1854, Bourseul comes out and recommended to convey speech using the electricity. Nevertheless, nobody bother to make this dream became a reality until 22 year after that. In that time, they busy to think more on how to fly in the air and travel to the space. There is no one who ever think to overcome the problem to send message from one place to another. This happen because they have less knowledge about electricity in their mind. Who in the fifteenth century will ever think of having the facilities like telephone in their own house or pay phone in the corner of the road?

The real date that telephone was invented is on March 10, 1876, in Boston, Massachusetts, Alexander Graham Bell is the responsible person who made the dream comes true.

**ii) Issues on Camera-equipped Phone and Its Impact Towards Society.**

After having a strong foundation in knowing about history and development of telephone and technology revolution that it had caused, it is logical enough for us to know the issue regarding it and its impact towards the society. In short, we will figure out how the society accepts camera-equipped phone in line with our research proposal topic that is *'A study on perception towards camera-equipped phone and the impact of technology among UiTM students'* by providing relevant literature supported with solid, real life sources.

The first issue that will be a huge concern all around the globe about camera-equipped phone is on the right of privacy that should remain protected and respected. According to *'Lawlink, New South Wales' (2004)*, privacy is defined as 'the right to be left alone, or the right to exercise control over one's personal information, or a set of conditions necessary to protect our individual dignity and autonomy. Different people have different views about what privacy is as outlined by *'Lawlink, New South Wales'* (2004) such as physical privacy refers to bag searching and body searching, information privacy refers to how governments or organizations handle our personal information like age, address, freedom from excessive surveillance that means rights to live daily lives without being surveilled or have our actions caught on camera. We believe that anybody needs to have their own privacy in return for providing accurate information about themselves towards any parties. Privacy is a vital condition to be fulfilled in any society that values freedom and diversity.

We hereby can say that privacy is indeed a very important right and if individuals disrespect the others by misusing their camera-equipped phone to take and/or their

photograph without their permission or consent, then we can regard them as breaching or invading other people's privacy. Undeniably, the existence of camera-equipped phone is a major breakthrough in technology and communication around the globe. This is interesting in the sense that it shows that life can be made easier and less hassle in taking photographs with a single click on such a light, small but yet powerful device instead of having to carry a heavier, traditional camera. But, even though technology is meant to be used with good intention, there are always 'a black sheep' exist and misuse this technology. This is a real life reality that cannot be avoided or inevitable.

The second issue that is closely related with privacy is *confidentiality*. We had known that privacy only protects individual, but an organization may have secrecy or confidentiality concerns. According to *'Lawlink, New South Wales'* (2004), small and hidden cameras, whether or not included in a mobile phone, can be used to take images of documents, information, products or practices which are supposed to be confidential. Organizations nowadays can even ban the use of camera phones inside their premises to protect corporate secrets and avoiding their upcoming plans or projects that is only to be revealed at specified time to be known by public or other competitors without their prior approval. The concept of confidentiality can also be extended to governments where their various agencies keep a huge amount of information where some of them are regarded as the country's secret. In this term, camera-equipped phone usage is being monitored so that any matters which should remain secret will be kept strictly confidential.

The third issue is regarding *new functions or uses of camera phone. Bluetooth technology* obtainable from within camera equipped phone allows data such as voice and text to be transmitted wirelessly between devices as mentioned by Corporate

Communication Department, Temasek Polytechnic (2004). This means that the people can save time and cost if they want to transfer information as if they are using traditional means, they may need to connect a machine with other devices using wire system. This can suit the urgent need of anyone especially one that leads a busy life with hectic schedule. According to *Dr. Richard Sharp (2004)*, in a business environment, an IT administrator could approach a rack of systems and quickly determine the configuration of each by aiming their camera phone at the *visual tags* placed on the various server boxes where the configuration details will immediately be displayed on the camera phone screen. The administrator will use the phone's keypad to scroll through and select the information that he needs. The same concept also applies when anyone see a poster for a play where he or she can click on the visual tag by using camera phone to get more information –say on a listing of show times and locations where it is playing even to the extend of buying tickets right then. This is a great advantage compared to using interactive display or information kiosk where potentially user will be frustrated with broken display or bad state of keyboards, buttons or mouse. All and all, indeed, the society welcomes the usage of camera-equipped phone as it makes their life easier.

The fourth issue is camera equipped phone can be used to *take photograph as evidence in urgent situations*. According to **Corporate Communication Department, Temasek Polytechnic (2004),** the inbuilt camera can be a boon if one is involved in traffic accident and needs evidence. This means that camera-equipped phone can be used in a crisis or critical situation. In an article published by Reuters in The Borneo Post (2005) camera-equipped phone is described as a very compatible device to be used in helping *diagnose and suggest treatment for some serious wounds in patients in remote*

*locations far removed from a physician* as reported by researchers in Switzerland. The report from **University Hospital of Geneva** looked at leg ulcers in 52 patients that were examined both in person and remotely by doctors in a nearby room who had only pictures of the same wounds taken by a camera phone. They found remarkably high agreement between doctors who looked at the wound in person and those who saw the images. Thus, what we can conclude from here is if medical personnel in remote or rural location can send such images in for consultation, the cost to be bared by health care system to bring in patients to hospital or a doctor's office can be reduced and could be replaced with a faster treatment given based on immediate diagnosis and this surely benefits the patients life.

The fifth issue touching on camera-equipped phone is the features that come along with this device, such as the design, color, quality of picture taken. It seems that the camera-equipped phone had been a trend especially among younger generation that considers it as very stylish. **Kelly Goh (2004)** reviewed on French handphone maker, Sagem that released a model called Sagem My X-6 that comes with many features like minimalist design, color screen capacity in large pixel, camera enhanced built in with higher quality lens, easy to use. The society now even though not on the overall considers handphone as necessity as it enables them to constantly be reachable wirelessly. On camera-equipped phone however, it is optional based on the financial capability of users and the users' personal preference. Price is still an issue as camera phone is expensive in the market.

## iii) Cases and Comments

Having a handphone giving a lot of benefits to us, but not alone users using it for bad purposes. It sometimes can be too precious to that particular user as he or she starts to keep personal information about herself or him. *"With all the features available, handphones are also becoming personal Items, as users start to keep personal "things" inside the phones – messages, pictures, etc. With the audit trails that it leaves behind, a handphone can also become a good source for finding out what an individual has been up to."* **(Rahman, 2004)**.

In Saudi Arabia, the citizens are not allowed to have camera-equipped phone when the highest religious authority Sheik Abdel Aziz al-Sheikh issued an edict banning mobile phones equipped with cameras. *"... the Saudi Arabian government has started enforcing a ban on the sale of camera phones in the Kingdom"* **(Patrick, 2004)**. Saudi Arabia, as one of the biggest Muslims country, is very concern about maintaining the privacy, pride and the rights of its citizen.

A new study conducted by **Strayer and Drews** was published in the issue of Human Factors, the quarterly journal of the Human Factors and Ergonomics Society found that 18 - 25 year olds were placed in a driving simulator and talked on a cellular phone, they reacted to brake lights from a car in front of them as slowly as 65 - 74 year olds who were not using cell phone. From here we can see that cell phone users drive like the older people. *"If you put a 20-year-old driver behind the wheel with a cell phone, their reaction times are the same as a 70-year-old driver who is not using a cell phone. It's like instantly aging a large number of drivers,"* says David Strayer, a University of Utah psychology professor and principal author of the study.

"A teenager found to be taking photos and videos of the inside of a courtroom on his mobile phone has been sentenced to six months in custody." **(Jo Best, 2004)**. Even in the court, the public are not allowed to take pictures. The reason is that it can be a cause of violating the privacy, dignity and rights of the person that is to be judged.

In London, using a handheld mobile phone while driving is to be made illegal when the ministers say the new offence is to take effect from 1 December 2004, with offenders fined £30 initially - rising to a maximum £1, 000 if their case goes to court. For those caught breaking the ban would also get three penalty points on their driving licenses for each offence.

Even nowadays, we can see that there are a lot of new policies being implemented regarding the use of handphones, not only to handphones without cameras but also to camera-equipped phones. A likely reason for this is the wrongful uses of the handphones whereby users taking pictures and videos for sexual or pornographies purposes, and those pictures later will be distributed to other people which this becoming the root to violation of privacy for that particular person.

Second reason for this is, those drivers talking on the phone can cause road collisions whereby their concentration to the road is distracted and thus, they become careless as they are only busy talking or sending text messages while driving.

Due to the reasons mentioned above, the government has actually implemented a policy that is, using a handphone while driving is strictly prohibited. In Malaysia, an offender who is caught using a handphone while driving will be summoned for a maximum of RM300.

# Research Methodology

## 1. *Questionnaire*

In doing this research on the perception regarding camera-equipped phone, we used primary data from questionnaire and secondary data for the desk research.

### 1.1 Primary Data

According to Gilbert A. Churchill Jr, primary data are originated by the research for the purpose of the investigation at hand or can be defined as data collected for a specific purpose from original sources. In our research on the perception regarding camera-equipped phone, we used questionnaire as primary data.

## 2. *Desk Research*

According to Gilbert A. Churchill Jr, secondary data are statistics not gathered for the immediate study at hand but for some other purpose. In our research, we are using published materials from the internet, newspapers, magazines and relevant journals.

# Findings and Interpretation

## i) Table Analysis

**AGE**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 19- 20 | 26 | 43.3 | 43.3 | 43.3 |
| | 21-22 | 31 | 51.7 | 51.7 | 95.0 |
| | 23-above | 3 | 5.0 | 5.0 | 100.0 |
| | Total | 60 | 100.0 | 100.0 | |

Table 1

Table 1 shows the age of our respondents who are students of Diploma in Public Administration specifically from Part 4 until Part 6. Out of 60 students, majority of them, which are 51.7% students, are 21 to 22 years old. Meanwhile, 43.3% of students are 19 until 20 years old. Finally, only 5% of the students are 23 years and above.

**RACE**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Malay | 24 | 40.0 | 40.0 | 40.0 |
| | Iban | 17 | 28.3 | 28.3 | 68.3 |
| | Bidayuh | 6 | 10.0 | 10.0 | 78.3 |
| | Melanau | 3 | 5.0 | 5.0 | 83.3 |
| | Others | 10 | 16.7 | 16.7 | 100.0 |
| | Total | 60 | 100.0 | 100.0 | |

Table 2

Table 2 shows the distribution of race among our respondents. From 60 students who are Diploma in Public Administration students of Part 4 until Part 6, the highest number is Malay, which numbered to 24. This is followed by Iban, which numbered to 17. Thirdly, 10 students are from other races such as Kadazan and Cocos. Fourthly, 6 students are Bidayuh. The least race is Melanau, which numbered to only 3 respondents.

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**RELIGION**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Islam | 29 | 48.3 | 48.3 | 48.3 |
| | Christian | 29 | 48.3 | 48.3 | 96.7 |
| | Others | 2 | 3.3 | 3.3 | 100.0 |
| | Total | 60 | 100.0 | 100.0 | |

Table 3

Table 3 refers to the religion professed by our respondents. From a total of 60 students from Part 4 until Part 6 who undertake Diploma in Public Administration, the number of students who professed Islam and Christian are equally the same, which are 29 students. There are only 2 students who professed other religion.

**SEMESTER**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 4 | 17 | 28.3 | 28.3 | 28.3 |
| | 5 | 22 | 36.7 | 36.7 | 65.0 |
| | 6 | 21 | 35.0 | 35.0 | 100.0 |
| | Total | 60 | 100.0 | 100.0 | |

Table 4

Table 4 shows the specific distribution of our respondents who are Diploma in Public Administration students. From a total of 60 students, the highest percentage of respondents is 36.75% who are from Semester 5. This is closely followed by students from Semester 6 who makes up a total of 35% respondents. Finally, only 28.3 % respondents are from Semester 4.

**HOMETOWN**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Kuching | 19 | 31.7 | 31.7 | 31.7 |
| | Sibu | 5 | 8.3 | 8.3 | 40.0 |
| | Miri | 14 | 23.3 | 23.3 | 63.3 |
| | Peninsular Malaysia | 5 | 8.3 | 8.3 | 71.7 |
| | Others | 17 | 28.3 | 28.3 | 100.0 |
| | Total | 60 | 100.0 | 100.0 | |

Table 5

Table 5 refers to the hometown from which our respondents, Diploma in Public Administration students come from. From a total of 60 students of Part 4 until Part 6, 19 students come from Kuching. There are 17 students from other state like Sabah. Next, 14 students originated from Miri. Finally, there are 5 students each who are from Sibu and Peninsular Malaysia.

**USER**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | yes | 20 | 33.3 | 33.3 | 33.3 |
| | no | 40 | 66.7 | 66.7 | 100.0 |
| | Total | 60 | 100.0 | 100.0 | |

Table 6

Table 6 presents the specific number of students who are either camera-equipped phone users or not. Our respondents who are 60 students of Diploma in Public Administration specifically from Part 4 until Part 6 responded with these data: Majority of the students which numbered to 40 are not a camera-equipped phone user. There are only 20 students who are camera-equipped phone user.

**FUNCTION**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 2 functions | 5 | 8.3 | 8.3 | 8.3 |
| | 3 functions | 1 | 1.7 | 1.7 | 10.0 |
| | 4 functions | 10 | 16.7 | 16.7 | 26.7 |
| | 5 functions and above | 44 | 73.3 | 73.3 | 100.0 |
| | Total | 60 | 100.0 | 100.0 | |

Table 7

Table 7 refers to the number of functions of hand phone preferable to be used by Diploma in Public Administration students of Part 4 until Part 6. Majority of the students, which numbered to 44 out of 60 students used their hand phone for 5 functions and above For 4 functions, there are 10 students who responded that they used their hand phone for such number of functions. Meanwhile, there are 5 students who used their hand phone for 2 functions. Finally, only 1 student used their hand phone for 3 functions.

**IMPORTANT**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | strongly agree | 2 | 3.3 | 3.3 | 3.3 |
| | Agree | 9 | 15.0 | 15.0 | 18.3 |
| | Neutral | 33 | 55.0 | 55.0 | 73.3 |
| | Disagree | 12 | 20.0 | 20.0 | 93.3 |
| | Strongly disagree | 4 | 6.7 | 6.7 | 100.0 |
| | Total | 60 | 100.0 | 100.0 | |

Table 8

Table 8 presents the level of agreement among 60 of our respondents regarding a statement on whether it is important or vice versa to have a camera-equipped phone. Students who undertake Diploma in Public Administration from Part 4 until Part 6 stated their feedbacks as followed: Majority of them, 33 out of 60 students are neutral. There

are 12 students disagree with the statement. However, 9 students agree with the statement. Next, there are 4 students who strongly disagree with the statement. Finally, there are 2 students who stated that they strongly agree with the statement.

**REGULATION**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly agree | 2 | 3.3 | 3.3 | 3.3 |
| | Agree | 11 | 18.3 | 18.3 | 21.7 |
| | Neutral | 19 | 31.7 | 31.7 | 53.3 |
| | Disagree | 15 | 25.0 | 25.0 | 78.3 |
| | Strongly disagree | 13 | 21.7 | 21.7 | 100.0 |
| | Total | 60 | 100.0 | 100.0 | |

Table 9

Table 9 presents the level of agreement among 60 of our respondents regarding a statement on whether University Teknologi MARA should introduce a regulation regarding camera-equipped phone. Students who are from Diploma in Public Administration of Part 4 until Part 6 given their comments as followed: Majority of them, 19 out of 60 students are neutral. There are 15 students disagree with the statement. Next, 13 students strongly disagree with the statement. However, there are 11 students who agree with the statement. Finally, there are 2 students who stated that they strongly agree with the statement.

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**BANNED**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | strongly agree | 2 | 3.3 | 3.3 | 3.3 |
| | Agree | 3 | 5.0 | 5.0 | 8.3 |
| | Neutral | 16 | 26.7 | 26.7 | 35.0 |
| | disagree | 12 | 20.0 | 20.0 | 55.0 |
| | strongly disagree | 27 | 45.0 | 45.0 | 100.0 |
| | Total | 60 | 100.0 | 100.0 | |

Table 10

This table shows the level of agreement of our respondents who are DPA students of Part 4 until Part 6 with the statement whether UiTM should banned camera-equipped phone from being used in campus area. Two (2) of them or 3.3 % strongly agree, 3 of them or 5% agree, 16 of them or 26.7% is neutral, 12 of them or 20% disagree. Finally, 27 of them or 45% strongly disagree. Total respondents are 60.

**ISSUE**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | privacy | 12 | 20.0 | 20.0 | 20.0 |
| | confidentiality | 2 | 3.3 | 3.3 | 23.3 |
| | price or cost | 17 | 28.3 | 28.3 | 51.7 |
| | function | 20 | 33.3 | 33.3 | 85.0 |
| | quality of photograph | 6 | 10.0 | 10.0 | 95.0 |
| | design | 3 | 5.0 | 5.0 | 100.0 |
| | Total | 60 | 100.0 | 100.0 | |

Table 11

This table shows the distribution of issues regarding camera-equipped phone of our respondents who are DPA students of Part 4 until Part 6. Twelve (12) of them or 20% ranked privacy as the most important issue, 2 of them or 3.3% ranked confidentiality as the most important issue, 17 of them or 28.3% ranked price or cost as the most important

issue, 20 of them or 33.3% ranked function as the most important issue, 6 of them or 10%

ranked quality of photograph as the most important issue. Finally, 3 of them or 5%

ranked design as the most important issue. Total respondents are 60.

## ii) Bar Chart Analysis

## a. Consideration of the issue
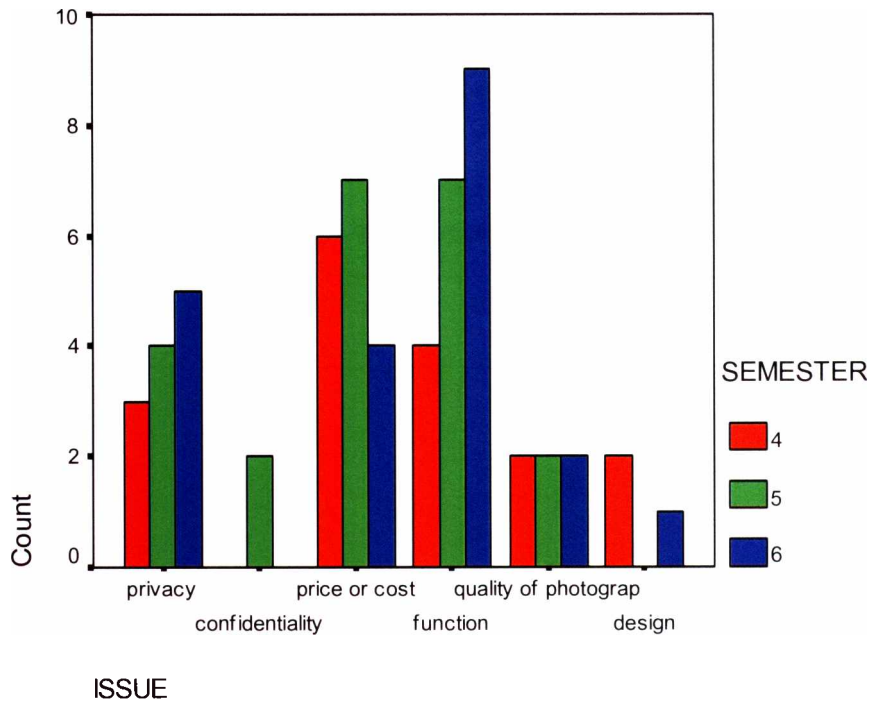


The graph shows the consideration of issue by semester from the most important to the least important. The issue of function of a camera-equipped phone has been chosen by majority of all Semester 4 to Semester 6 students. Semester 4, 24%, Semester 5, 32%, and Semester 6, 44%. The second issue chosen by many is about price or cost of the phone. There are 6 respondents form Semester 4, 7 respondents from Semester 5, and 4 respondents from Semester 6. Followed by the issue regarding privacy, there are 3 respondents from Semester 4, 4 respondents from Semester 5, and 5 respondents from Semester 6. The quality of photograph, there are 2 respondents considering it from every respective Semester. Only 2 respondents from Semester 5 choose confidentiality and

issue relating the design of the handphone has been chosen by 2 respondents Semester 4 and 1 from Semester 6. Many choose function as their main issue because they do not only buying camera-equipped phone for fun but it is because of the correct usage of the phone while design and confidentiality have less focus probably because it is not so important and it is not an issue of buying such phone.
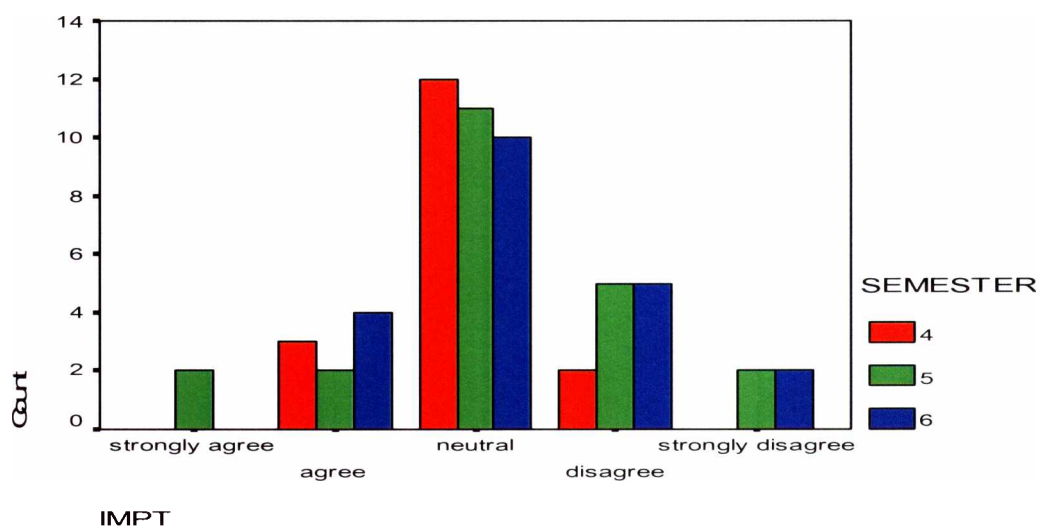
## b. Number of students who own camera-equipped phone
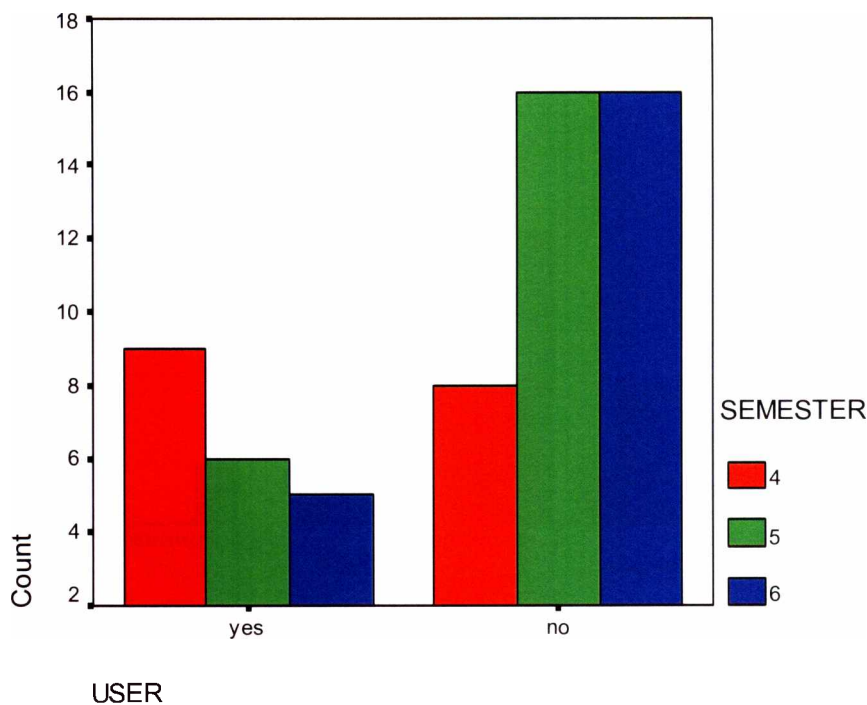


The graph shows the number of students own camera-equipped phone by Semester. Majority of the students from Semester 4 to Semester 6 do not own camera-equipped phone but there are also a few own such phone. For every Semester that does not own camera-equipped phone is calculated as such, 8 respondents from Semester 4

and 16 respondents from Semester 5 and Semester 6 respectively. For the "YES", there are 9 respondents from Semester 4, 6 respondents Semester 5, and 5 respondents from Semester 6. the reason of majority of them do not own a camera-equipped phone is probably because it is not important or not worthwhile to own one just because of the camera but the function such as to receive calls, make calls and sending message are the main issues.

## c. Number of students who believe it is important to have camera-equipped phone



IMPT

This bar-chart shows number of students who believe it is important to have camera-equipped phone by semester.

For Part 4, none out of 17 respondents strongly agree that owning camera-equipped phone is important. 3 respondents agree, 12 are being neutral, 2 disagree while none strongly disagree that having camera-equipped phonies important. This indicates that majority of the Part 4 students believe that it is up to the individuals to make up their

own mind on whether it is crucial or not to have camera-equipped phone. The number of respondents who agree and disagree are almost about equal showing that these students had different views about whether possessing camera-equipped phone is important or not for them based on their answers.

For Part 5, 2 out of 22 respondents strongly agree, 11 are being neutral, 5 disagree and 2 strongly disagree. This result shows that majority of the Part 5 students believe that the choice to decide on whether it is important to have a camera-equipped phone or not is merely an individual choice, it is up to them.

For Part 6, none out of 21 respondents strongly agree, 4 agree, 10 are being neutral, 5 disagree and 2 strongly disagree. Part 6 result shows that majority of the respondents choose to let the individuals themselves to make up their on mind on whether to state that it is important to have camera-equipped phone or the other way around.

## d. Number of students who utilized their hand phone in a correct way
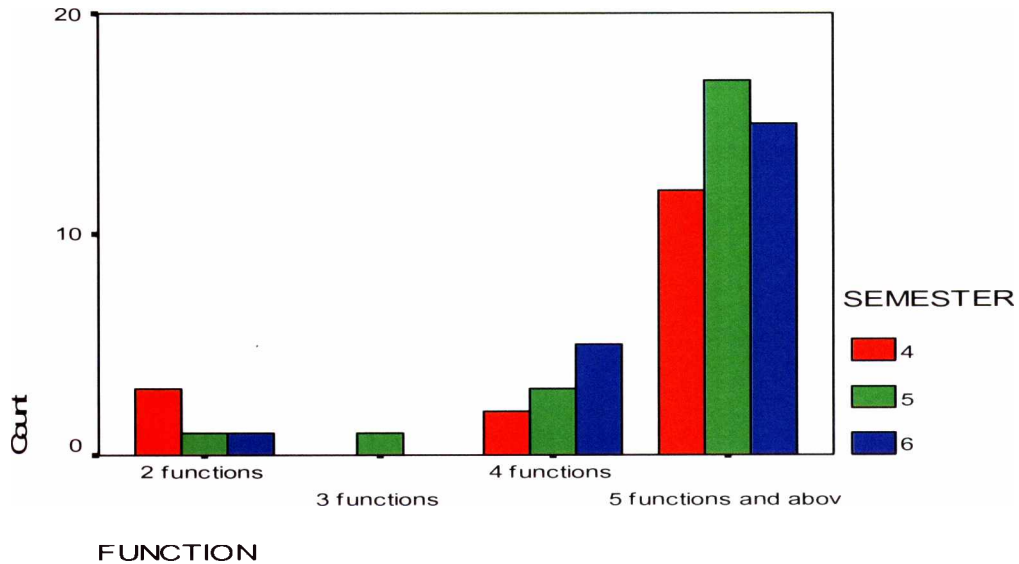


This graph shows number of students who utilized their hand phone in a correct way by semester. For this purpose, we had listed 11 functions of hand phone and requested our respondents to tick any of the functions that they usually used. The functions are, Short Messaging Service, received and make calls, chat, connectivity (example: web surfing), tuning to radio, taking picture using camera function, transfer voice and text via Bluetooth application, calculating figure, setting alarm and as a reminder on any activities.

For Part 4, 3 respondents ticked 2 functions, none choose 3 functions, 2 choose 4 functions and 12 ticked 5 functions and above. This shows that majority of Part 4 students used their hand phone for 5 or more functions which indicate that they used their hand phone for a number of ways in their daily life routine

For part 5, one respondent chose 2 function, one choice 3 function, three choice 4 function and 17 choose 5 function and above. This shows that majority of part 5 students used their hand phone to do 5 or more function to carry out their activities.

For part 6, one respondent choose 2 function, none choose 3 functions, 4 choose 4 function s and 16 choose 5 functions and above. This indicate that majority of the part 6 students used their hand phone a great deal, utilizing it for 5 or more purposes.

# e. Number of students who considered whether UiTM should or should not ban camera-equipped phone



BANNED
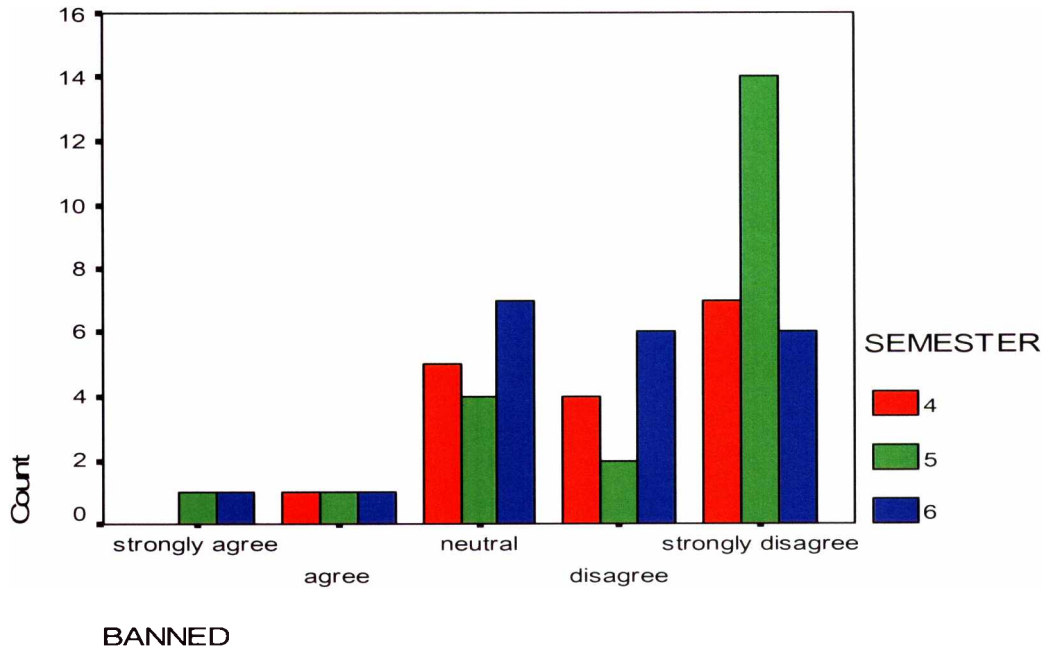
According to the bar above, it is the number of the students who considers whether UiTM should or should not ban camera-equipped phone. From the graph, we can see that 2 students strongly agree, 3 students agree, 16 students neutral, 12 students disagree and 27 students strongly disagree.

For the Part 4 students, none student choose strongly agree, 1 choose agree, 5 students choose neutral, 4 students choose disagree and 7 student choose strongly disagree. this showed that majority of the student in part 4 did not agree if UiTM want to ban camera-equipped phone.

For the Part 5 student, 1 student choose strongly agree, one student choose agree, 4 students choose neutral, 2 students choose disagree and 14 students choose strongly

disagree. From the bar chart, we can see that majority students from Part 5 students also strongly disagree if UiTM want to ban this hand phone in the campus.

For Part 6 students, one student choose strongly agree, one student choose agree, 7 student choose neutral, 6 student choose disagree and 6 student also choose strongly disagree. Meaning to say, most of them did not agree if UiTM want to ban this type of phone to come into UiTM.

As a conclusion, majority of DPA student from Part 4 until Part 6 did not agree if UiTM want to ban this type of Phone from entering the UiTM area. This may be cause by the increasing of percentage of camera equipped phone user among them.

## f. Number of students who consider whether UiTM should introduce regulation regarding camera-equipped phone or not
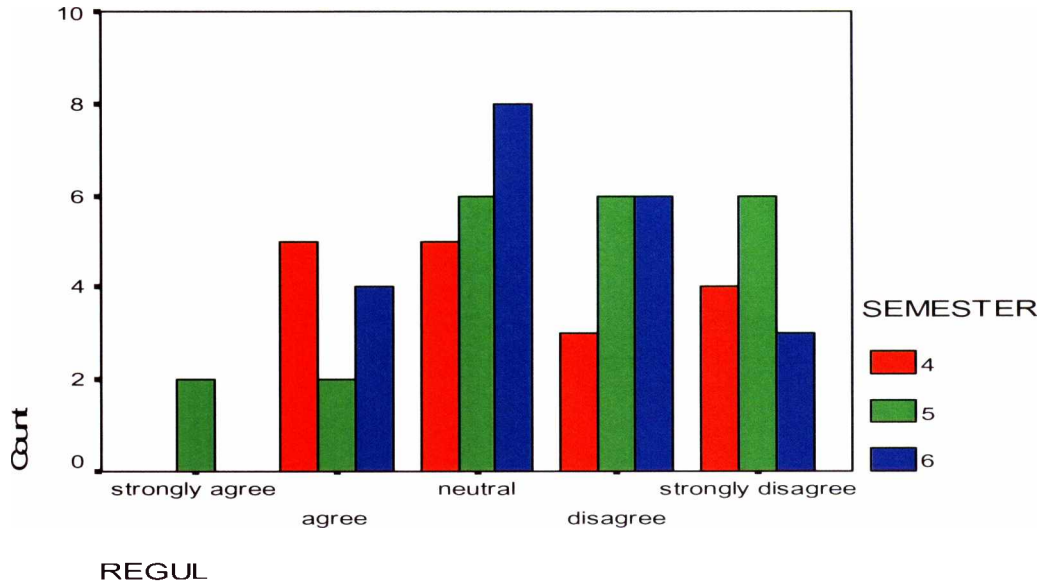


REGUL

In the consideration on the regulation and whether it is shall be introduced by UiTM or not and this is the result that we gain from the respondent.

For the Part 4 students, none of them choose strongly agree, 5 students choose agree, 5 students choose neutral, 3 students choose disagree, and 4 students choose strongly disagree. from the number of students, we know that majority of them in the Part 4 agree if UiTM want to implement a regulation regarding to the any abuse of using camera-equipped phone in the UiTM area.

For the Part 5 students, 2 students choose strongly agree, 2 students choose agree, 6 students choose neutral, disagree and strongly disagree. it s showed that most of them do not agree if any regulation made due to any wrong doing by the camera-equipped phone user.

While for Part 6 students, none of them choose strongly agree, 4 students choose agree, 8 students choose neutral, 6 students choose disagree and 3 student choose

strongly disagree. This may tell us that most of them let the UiTM made a decision whether want to impose any regulation on the matter or not.

# Recommendation

For part 4 students, their feedbacks are; first, most of them stated that the wrongdoer had to be brought to the UiTM Court to be trial on their allegation and if they are found guilty, then further action can be taken because of their bad attitude. Second, they suggested that UiTM should give equal punishment to the offender or may be in term of fined so that they wont do the bad attitude in the future. Third, they felt that the student who found guilty on the allegation on misuse of the camera-equipped phone should be expelled from the University. Fourth, they also suggest that UiTM should make an inquiry before taking any action of the offender. Finally, warning statement should be issued as one way to prevent this kind of problem.

For part 5 students, their gave their ideas as follows; first, most of them suggested that UiTM should react on the wrongful act done by students by taking disciplinary action such as imposed fined, dismiss the offender and banned him or her from UiTM facilities. However, respondent believe that prior to taking any action, investigation should be carried out to find evidence and proved the allegation that the student had committed unfavorable act using their camera equipped phone. If the evidence is substantial enough, than only action can be taken to penalize the student. Second. counseling is also needed an approach to advice the student to be fully aware about their immoral wrongdoing and the consequences of their action to other people. Finally, it is also suggested that UiTM make new regulation specifically regarding camera-equipped phone to deal with student who wrongly used their camera-equipped phone for unlawful purposes.

Majority of the Semester 6 of DPA students suggest that UiTM should give punishment on any wrongful acts done by students who committed such offences using their camera-equipped phone. The punishments that are suggested by them are as follows; expel the students from UiTM, fine or compound them, ban the usage of camera-equipped phone in the campus area, suspend the students for 1 semester, detain their handphone for 1 semester, bar the students from sitting their final exam, prohibit using such phone at certain places, and give warning.

As for the conclusion, majority of the DPA students of Part 4 until Part 6 believed that disciplinary action should be taken against such offenders who abuse their camera-equipped phone. However, to them, they also mentioned that it is necessary to prove that the individual accused for such offence is really committing the offence through detail investigation.

# Conclusion

Based on the study that we have conducted, we come out with this conclusion;

From the objectives that we had prepared, we are able to identify the main intention for DPA students to have camera-equipped phone. The reason why most students prefer to own a camera-equipped phone is because of its various functions. Most of them perceived that it is not necessary or not too important to own a camera-equipped phone.

Based on the hypothesis the outcomes that we can summarize are;

Instead of predicting that majority of the students will have negative perception towards camera-equipped phone, we revealed that the students believed that as long as camera-equipped phone user utilize their handphone for beneficial purposes, there will be no negative issue to be raised. Besides that, we forecast that majority of the students will agree that UiTM should ban such a phone from being used in the campus area, we found out that the students choose to be neutral as they prefer to let UiTM to decide regarding making such a regulation. Next, our prediction that not many students on a camera-equipped phone are accurate as the price is expensive and students rely heavily on their PTPTN loan and parents financial assistance.

As for our proposed findings, below are the results that we have obtained;

Majority of the camera-equipped phone user know how to utilize their phone and the important to have one. The most important issue that we revealed is function followed by price or cost.

# Gantt Chart

## Part 1: Research Proposal

| MONTHS / ITEMS | Dec-04 | Jan-05 | Feb-05 | Mar-05 |
|---|---|---|---|---|
| Group Formation and Topic Selection | ▓ | ▓ | | |
| Writing the Research Proposal | | ▓ | | |
| Literature Review | | ▓ | | |
| Reseach Methodology | | ▓ | ▓ | |
| Designing Questionnare | | ▓ | ▓ | |
| Write 1st Draft of Reseach Proposal | | ▓ | ▓ | |
| Review of Reseach Proposal | | ▓ | | |
| Submission of Research Proposal | | ▓ | ▓ | ▓ |

## Part 2: Final Research Project

| MONTHS / ITEMS | Jul-05 | Aug-05 | Sep-05 | Oct-05 |
|---|---|---|---|---|
| Data collection | ▓ | ▓ | | |
| Coding and editing of data | | ▓ | | |
| Data analysis and interpretation | | ▓ | | |
| Write 1st Draft of Reseach Project | | ▓ | ▓ | |
| Review of Reseach Project | | ▓ | ▓ | |
| Submission of Research Project | | ▓ | ▓ | ▓ |

# Budget: Estimated Costs

In preparing this research proposal we contribute some amount of money to be used in order to but goods that we need to complete this research proposal. The list and price of the goods are shown as follows:

| | |
|---|---|
| Binding soft cover | RM5.00 |
| Cartridge (black) | RM13.00 |
| Cartridge (colour) | RM24.00 |
| A4 paper | RM1.50 |
| Ink refill – Black | RM13.00 |
| Photostat questionnaires | RM10.50 |
| Other expenses | RM20.00 |
| Hard Cover | RM30.00 |
| TOTAL | RM117.00 |

# Appendices


# Appendix 1: QUESTIONNAIRE (1 SET) - *sample*

# UNIVERSITI TEKNOLOGI MARA
## SAMARAHAN CAMPUS
## FACULTY OF ADMINISTRATIVE SCIENCE AND POLICY STUDIES
## DIPLOMA IN PUBLIC ADMINISTRATION
## RESEARCH METHODOLOGY AND DATA ANYLSIS (PAD 340)
## SEMESTER NOV 2004-APRIL 2005
## GROUP: D5P2

Dear respondent,

The objective of this research is to find out the perception towards camera-equipped phone and the impact of technology among UiTM, DPA students. Respondents are assured that all views written on this paper will be used strictly for academic purpose and we hope that with your assistance our research endeavor will be successful.

Thank you for your cooperation.

## PREPARED BY:

| | |
|---|---|
| UMIRAWATI ABD AZIZ | 2002354649 |
| AMEILIA MICHEAL | 2002354219 |
| LILIAN AMBIN | 2002354377 |

**Section A.**

Please tick where applicable.

1 Age

- [ ] 19 - 20
- [ ] 21 - 22
- [ ] 23 and above.

A1 [ ]

2 Race

- [ ] Melayu
- [ ] Iban
- [ ] Bidayuh
- [ ] Melanau
- [ ] Others: _____

A2 [ ]

3 Religion

- [ ] Islam
- [ ] Christian
- [ ] Others: _____

A3 [ ]

4 Semester

- [ ] 4
- [ ] 5
- [ ] 6

A4 [ ]

5 Hometown

- [ ] Kuching
- [ ] Sibu
- [ ] Miri
- [ ] Peninsular Malaysia
- [ ] Others: _____

A5 [ ]

**Section B**

Please tick the relevent answer

1 Do you have a camera-equipped phone?

Yes

No

B1

2 What are the function of handphone that you usually used?
(You may tick more than one)

Sms
Received and make call
Chat
Connectinvity (e.g. web surfing)
Turning into radio
Taking picture using camera function
Transfer voice and text via bluetooth application
Calculating figure
Setting alarm
As reminder on any activity

Others: _____ (please specify)

B2

Please indicate your level of agreement with the following statements.

|  | - Strongly Agree | - Agree | - Neutral | - Disagree | - Strongly Disagree |  |
|---|---|---|---|---|---|---|
| 3 It is important to have camera-equipped phone. | ☐ | ☐ | ☐ | ☐ | ☐ | B3 ☐ |
| 4 UiTM should introduce a regulation regarding camera-equipped. | ☐ | ☐ | ☐ | ☐ | ☐ | B4 ☐ |
| 5 UiTM should banned camera-equipped phone from being used in campus area. | ☐ | ☐ | ☐ | ☐ | ☐ | B5 ☐ |

6 Please rank the following issues related to camera-equipped phone from most important (1) to least important (6). Please use each number only ONCE.

|  |  |
|---|---|
| ☐ | Privacy |
| ☐ | Confidentiality |
| ☐ | Price or Cost |
| ☐ | Function |
| ☐ | Quality of photograph |
| ☐ | Design |

B6 ☐

**Section C**

Please answer the following questions.

1 Why would you like to own a camera-equipped phone? (Please state your reason(s))

_____

_____

2 What is your opinion about issues concerning camera-equipped phone?
  (Please state your reason(s) and include any issue(s) that you wish to add)

_____

_____

_____

_____

3 Suggest on how UiTM should react on any wrongful acts done by students who
  commited such offences using their camera-equipped phone.

_____

_____

_____

4 What would you perceived if your friend is a camera-equipped phone user?

_____

_____

_____

# Appendix 2: Newspaper Cutting

# Newspapers' Cuttings.

**News 1**

<u>Handphones as personal items</u>
(A Shukor Rahman)

HOOSING a handphone is no longer a simple task these days. There are so many models and makes to choose from. Survey the market thoroughly and there will always be more than one that suits your needs and budgets.

Functionality and price used to be the main criteria for making the selection.

Making decisions was quite straightforward – if you want to save money, get one with basic features only; otherwise, pay more and get the best phone in town. But those were the days.

Today, handphones are no longer just phones. While making calls and sending/receiving messages remain the core functions, hosts of other features have been pumped into the device that is getting smaller and smaller.

The result is that one can have handphones that also take pictures (some even take video clips). They can also remind you of important dates and keep your appointment schedule. Some handphones also function as voice recorders, MP3 players, radio receivers and many more.

Of course, the price issue still exists but that is not all.

Above all the technical features, the design elements are also becoming important factors. Handphones have become items of fashion, especially among the younger generation. Size, shape and colour are all being looked at.

But the shift in the trend should not be so surprising. It is quite a natural progression seen in the consumer electronics market.

With all the technical things being more or less equal, the more subtle elements would make the difference. The packaging of these available features becomes an important marketing tool.

Handphones have also become affordable to most people. In fact, it is not uncommon to see schoolchildren carrying one. As the user base is now getting so huge, manufacturers have to come up with variations of the same model to get the attention of different groups of users.

From another aspect, handphones have become an indispensable tool to many individuals. To some, yours truly included, the handphone is also the one which keeps all the personal and professional contact numbers.

Loosing a phone is no fun. Getting a new one is the easy part but recovering your contact numbers is the big headache. You would be fortunate if you have a backup.

With all the features available, handphones are also becoming personal items, as users start to keep personal "things" inside the phones – messages, pictures, etc. With the audit trails that it leaves behind, a handphone can also become a good source for finding out what an individual has been up to.

In fact, some people have gotten into big trouble because of such audit trails, as well as due to the "personal" items kept in their handphones.

But all these should not worry ordinary users like you and I. Handphones are not made to make life difficult. It is a wonderful tool to enable you to communicate with others. For most people, handphones can do a lot more good than harm.

Do read on to find out more on some of the latest in the handphone market.

You may find the articles useful in helping you choose your next handphone.

The regular columns and other items on the PC market are also useful.

Happy reading.

**Comment:** Having a handphone giving a lot of benefits to us and but not alone the wrongful usages of it. It sometimes can be too precious to that particular user as he or she starts to keep personal "things" such as messages, pictures, videos and audios, inside the phone.

# News 2

## Saudi bans camera phones
(By Patrick)

According to local media reports, the Saudi Arabian government has started enforcing a ban on the sale of camera phones in the Kingdom. The ban has come following several reports that young men have been taking photos of women without permission. There had also however been reports that some female students had themselves been expelled from school after taking photos of their fellow students. Any retailers with stock of camera phones will have them confiscated and offered a refund from the funds garnered when the handsets are sold to an export agency.

# News 3

## Saudi edict bans camera-equipped phones

RIYADH, Saudi Arabia, Sept. 29 (UPI) -- Saudi Arabia's highest religious authority Sheik Abdel Aziz al-Sheikh issued an edict Wednesday banning mobile phones equipped with cameras. Al-Sheikh was quoted as saying in the daily al-Madina, "These gadgets are being used to spread corruption and vice inside the Muslim society." He said the phones are being used to photograph people without their knowledge or acceptance which "makes this equipment an instrument for encouraging evil and vice." A fistfight erupted at a Saudi wedding recently when a guest photographed other women guests clandestinely while they did not have their veils on. Marriages in Saudi Arabia are held separately without any mixing between men and women.

Comment: Saudi Arabia, as one of the biggest Muslims country, is very concerns about the privacy of its citizens whereby they banned camera-equipped phones in the country.

**News 4**

Camera phone used to take illegal photos of children

A 20 yr old Australian man is facing charges of indecent treatment of a child after he apparently took photographs of a young girl in a playground using his camera phone.

The child's parent detained the man who allegedly had taken a photograph of the young girl with his mobile phone whilst she played in a children's play area at the centre.

The 20-year-old man will appear in the Ipswich Magistrates Court on October 30, charged with the indecent treatment of a child under the age of 16.

**Comment: We can see that even the young ones are the victims of becoming the model of pornographies without their realization.**

**News 5**

Cell Phone Users Drive like Older People

If you have been stuck in traffic behind a motorist yakking on a cellular phone, a new University of Utah study will sound familiar. When young motorists talk on cell phones, they drive like elderly people, moving and reacting more slowly and increasing their risk of accidents.

"If you put a 20-year-old driver behind the wheel with a cell phone, their reaction times are the same as a 70-year-old driver who is not using a cell phone. It's like instantly aging a large number of drivers," says David Strayer, a University of Utah psychology professor and principal author of the study.

Frank Drews, an assistant professor of psychology and study co-author, adds: "If you want to act old really fast, then talk on a cell phone while driving."

The new study by Strayer and Drews was published in this winter's issue of Human Factors, the quarterly journal of the Human Factors and Ergonomics Society.

The study found that when 18- to 25-year-olds were placed in a driving simulator and talked on a cellular phone, they reacted to brake lights from a car in front of them as slowly as 65- to 74-year-olds who were not using a cell phone.

The elderly drivers, meanwhile, became even slower to react to brake lights when they spoke on a cell phone. But the good news for elderly drivers was that their driving skills

did not become as bad as had been predicted by earlier research showing that older people performing multiple tasks suffer additional impairment due to aging.

The study found that drivers who talked on cell phones regardless of whether they were young or old were 18% slower in hitting their brakes than drivers who didn't use cell phones. The drivers chatting on cell phones also had a 12% greater following distance an effort to compensate for paying less attention to road conditions and took 17% longer to regain the speed they lost when they braked.

In addition, "there was also a twofold increase in the number of (simulated) rear-end collisions when drivers were conversing on cell phones," the study says.

Strayer and his colleagues are widely known for their 2001 study showing that hands-free cell phones are just as distracting as hand-held cell phones, and for a 2003 study showing that the reason is "inattention blindness," in which motorists can look directly at road conditions but not really see them because they are distracted by a cell phone conversation. The research has called into question legislative efforts by various states to ban motorists from using handheld but not hands-free cell phones.

The same researchers also gained publicity for another study, which was presented at a scientific meeting in 2003, showing that motorists who talk on cell phones are more impaired than drunken drivers with blood alcohol levels exceeding 0.08.

The new study included older adults (ages 65 to 74, with average age 70) and 20 younger adults (ages 18 to 25, with average age 20). All of them had normal vision and a valid driver's license. Preliminary tests showed older people were slower to process information, as was expected.

Then the psychologists had the young and older study participants "drive" in a high-tech driving simulator. Participants in the simulator used dashboard instruments, steering wheel and brake and gas pedals from a Ford Crown Victoria sedan, surrounded by three screens showing freeway scenes and traffic, including a "pace car" that intermittently hit its brakes 32 times as it appeared to drive in front of study participants. If a participant failed to hit their own brakes, they eventually would rear-end the pace car.

Each participant drove four simulated 10-mile freeway trips lasting about 10 minutes each, talking on a cell phone with a research assistant during half the trips and driving without talking the other half. Only hands-free phones were used to eliminate any possible distraction from manipulating a hand-held cell phone.

Thirty times each second, the simulator measured the participants' driving speed, following distance and if applicable how long it took them to hit the brakes and how long it took them to regain speed. Those factors "have been shown to affect the likelihood and severity of rear-end collisions," Strayer and Drews wrote.

Six participants in the new study rear-ended the pace car while driving the simulator. Four accidents (one older adult and three younger adults) happened while the participants talked on cell phones. Two did not (one older adult and one younger adult).

There were too few collisions for statistical analysis. But Strayer notes that twice as many accidents happened to motorists on cell phones compared with motorists who were not talking. And young drivers were in collisions twice as often as elderly drivers.

"Older drivers were slightly less likely to get into accidents than younger drivers," Strayer says. "Why? They tend to have a greater following distance. Their reactions are impaired, but they are driving so cautiously they were less likely to smash into somebody," although in real life, "older drivers are significantly more likely to be rear-ended" because of their slow speed.

When Strayer and Drews combined the new accident data with simulated driving accidents in their earlier studies, they counted 12 rear-end collisions among 121 study participants. Ten of the collisions happened when motorists were talking on cell phones.

That is statistically significant and provides "clear evidence that drivers using a cell phone were more likely to be involved in a collision than when these same drivers were not using a cell phone," the psychologists wrote.

**Comment: Using the handphone while driving is part of the contribution to road collisions.**

## News 6

### Teen sent down for court camera phone use
(by            )

A teenager found to be taking photos and videos of the inside of a courtroom on his mobile phone has been sentenced to six months in custody.

Nineteen-year-old Shaun Nash was convicted on Friday after he was spotted, by a juror, in the public gallery of Bristol Crown Court recording video and taking photos on his mobile. He was arrested and charged with contempt of court.

The robbery trial had to be aborted because of Nash's action and the teenager was sentenced to six months in a young offenders' institution.

Judge Michael Roach described his actions as "extremely serious" and said the conviction was necessary to show other that mobile phones can not be used in court.

Nash told police he was "just having a laugh". Nash's phone was found to contain two pictures and some short films, which the judge described as like a montage of "my day out at the Crown Court".

**Comment: Even in the court, the public are not allowed to take pictures. The reason is that it can be a cause of violating the privacy, dignity and rights of the person that is to be judged.**

News 7

Surveillance Cameras Drive Drug Deals Indoors

HAGERSTOWN, Md. (AP) - Video surveillance cameras along downtown Hagerstown streets are driving drug dealers indoors, city police say.

"People used to be lined up two and three deep waiting to get served" on certain public streets, Officer Dave Russell told The (Hagerstown) Herald-Mail.

But since the city of 37,000 began installing the cameras at about a dozen locations nearly two years ago, the drug trade has been moving into apartments, police said.

In addition, more dealers are limiting their business to established customers and staying away from strangers, Russell said.

"You just can't walk up to Joe Blow and buy a 40-piece or 50-piece anymore," he said, referring to $40 and $50 pieces of crack cocaine.

Police Chief Arthur R. Smith called the changes a small victory, resulting in less chance of injury to innocent bystanders.

The city activated the downtown cameras in September along several blocks around City Hall. The first were installed in early 2003 along Jonathan Street, just north of the downtown area, after a series of crimes that included a fatal shooting.

The cameras can focus on objects as much as 500 yards away. From a room at City Hall, police can keep watch through a computer monitor, a 42-inch flat-screen television and a high-tech control board.

Smith and his officers traced much of the local drug trade to dealers from New York City who have learned to make bigger profits with less hassle by selling crack cocaine in small, relatively quiet cities like Hagerstown.

Russell and Officer Tom Langston said a "rock" of crack cocaine that sells in New York for about $7 generally can fetch $40 or $50 in Hagerstown. "The markup is incredible," Langston said.

Smith said a number of shootings in the city during the past several years have involved a New York transplant. At least one New Yorker was charged in each of three murders in 2001, 2003 and 2004.

Despite the police crackdown on drug dealing, Smith said drug crime stems mainly from the demand for illegal substances.

"As long as you have someone looking for drugs, someone will be there to supply it," he said.

*Updated: Tuesday, Nov. 30, 2004 - 6:02 AM*

## News 8

Drivers face mobile phone ban

**Using a handheld mobile phone while driving is to be made illegal.**

Ministers say the new offence is to take effect from 1 December this year, with offenders fined £30 initially - rising to a maximum £1,000 if their case goes to court.

Those caught breaking the ban would also get three penalty points on their driving licences for each offence.

Under current laws motorists can only be prosecuted for using mobiles if they fail to keep proper control of their vehicle - there is no actual law specifically prohibiting the use of mobiles while driving.

The government announced it was considering the law change last August. Since then it has consulted the public and experts on the proposal - with nearly 90% of responses in favour of a ban.

## Concentration block

The planned new law will have to be approved by Parliament and be added to the Road Vehicles (Construction and Use) Regulations.

Roads Safety Minister David Jamieson said: "Driving whilst using a mobile phone is dangerous.

"We are all too familiar with the sight of people driving along while holding and talking on their mobile phones.

"Any driver will be distracted by a phone call or text message

"It affects the ability to concentrate and anticipate the road ahead, putting the driver and other road users at risk.

> **Missing a call won't kill you - an accident quite possibly could**
>
> David Jamieson
> Roads Safety Minister

"Our decision to introduce this new offence will make the roads safer for us all. Missing a call won't kill you - an accident quite possibly could."

## Hands-free distraction?

Mr Jamieson said other types of behaviour, such as eating and drinking while driving, could be dangerous and were covered by general careless driving laws.

But mobile phone calls posed particular risks as they could often continue for 10 to 15 minutes, he argued.

Research shows that people using a phone while driving are four times more likely to have an accident, says the government.

> **As a motorcyclist, I'm delighted that this issue has finally been addressed**
>
> Chris Hendrie, London

It is also warning users of hands-free phones that they still risk prosecution for failing to have proper control of their vehicle or for careless or reckless driving.

Studies by the Transport Research Laboratory have suggested using a hand-held mobile is more dangerous than drink driving.

## Accidents

The practice is illegal in more than 30 countries.

The Royal Society for the Prevention of Accidents (Rospa) welcomed the announcement and warned that thousands of accidents had been caused by people talking on the phone, including 20 deaths.

Hands-free phones were being used in at least two of those tragedies. Rospa warned motorists not to swap to hands-free and called for these to be banned as well.

Kevin Clinton, Rospa's head of road safety, said: "We are delighted to see a new law, but it will not have the impact we have been hoping for if people switch to hands-free devices instead.

"It is the telephone conversation that is the main problem. People are drawn into the conversation and ignore what is happening on the road around them."

*It's a bit like the seat belts law - nobody bothered with them until the law came out although they knew it made sense*

Andrew Howard
AA

Mr Clinton was worried phone companies might use the handheld phone ban to market hands-free products.

But Sumit Biswas, from mobile operator Vodafone UK, said: "Drivers should be aware that, just because it is legal to use a fixed, hands-free mobile phone in a car, it does not necessarily mean it is safe to do so."

## 'Looking cool'

A survey by the RAC motoring organisation last year suggested most drivers backed a handheld phone driving ban.

Andrew Howard, head of road safety for the AA motoring trust, predicted the law change would see phone driving "plunge drastically".

He told BBC News Online: "It's a bit like the seat belts law - nobody bothered with them until the law came out although they knew it made sense."

## Why no eating ban?

Mr Howard thought that the new law would give people the excuse they wanted to stop using their mobiles without worrying about not looking "cool".

Conservative shadow transport secretary Tim Collins welcomed any measures which would genuinely improve road safety.

"But there are a number of anomalies and gaps in this new policy," he said.

Mr Collins asked why, for example, mobile phone use should be banned specifically when eating a sandwich or reading a newspaper, were not.

Nowadays, we can see that there are a lot of new policies being implemented regarding the use of handphones. A likely reason for this is the wrongful uses of the handphones whereby users taking pictures and videos for sexual purposes, and those pictures later will be distributed to other people which this becoming the root to violation of privacy for the particular person.

Second reason for this is, those drivers talking on the phone can cause road accidents whereby their concentration to the road is disturbed and thus, they become careless as they are only busy talking or sending messages while driving.

Due to the reasons mentioned above, the government has actually implemented a policy that is, using a handphone while driving is strictly prohibited. In Malaysia, an offender who is caught using a handphone while driving will be summoned for a maximum of RM300.
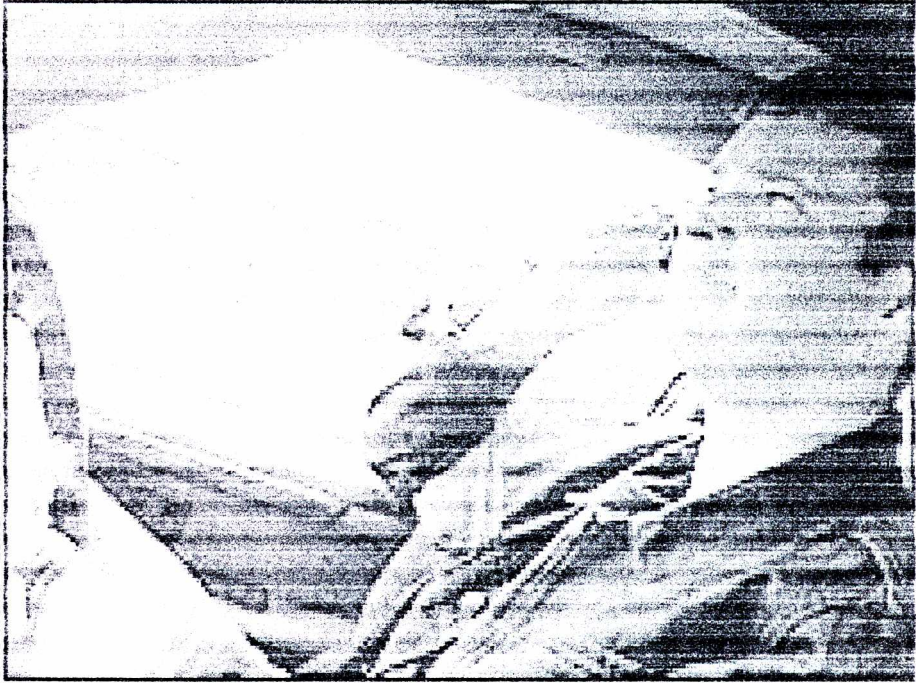
# Appendix 3: Articles from the Internet

5. NSUNT-FOCUS 13/07/2003 <u>Camera-equipped handphones give rise to new forms of mischief </u></bin/main.exe?f=doc&state=r85r0l.1.5> (699 wds)

TOKYO: It may have been inevitable. Now that cell phones with little digital cameras have spread throughout Asia, so have new brands of misbehaviour. Some people are secretly taking photos up women's skirts and down into bathroom stalls. Others are avoiding buying books and magazines by snapping free shots of desired pages.

**e-media** **NSTP**

http://202.184.94.19/bin/main.exe?p_lang=English&p_d=ARCH&fdy=2003&tdy=2004&f=archtoc&a_search=Search&p_toc=archtoc&p_search=search&p_help=s_help&p_op_ALL=and&p_plural=no&p_L=25&p_SortBy1=DA&p_Ascend1=NO&p_s_ALL=handphones%20with%20camera

Where am I now? <u>Lawlink </lawlink.nsf/pages/index></u> > <u>privacynsw </lawlink/privacynsw/ll_pnsw.nsf/pages/PNSW_index></u> > <u>Your Privacy </lawlink/privacynsw/ll_pnsw.nsf/pages/PNSW_your_privacy></u> > **What privacy issues do camera phones raise?** <javascript:PrintPage()> <javascript:PrintPage()>Print page <javascript:PrintPage()>

# What privacy issues do camera phones raise?

On one hand, you could say that camera phones (mobile phones with in-built digital camera technology) don't raise any new privacy issues – they raise the same issues as any small camera. Camera phones are simply an example of applying a new technology to an existing privacy problem : <u>the problem of taking and publishing photographs without consent.</u>

On the other hand, because of their dual use and the ubiquity of mobile phones in Australian society, camera phones may increase the likelihood of photography which is intrusive or otherwise an invasion of privacy.

A related problem is confidentiality. While privacy only protects individuals, an organisation may have secrecy or confidentiality concerns. Small and hidden cameras, whether or not included in a mobile phone, can be used to take images of documents, information, products or practices which are supposed to be confidential. Organisations which ban the use of camera phones inside their premises may be protecting their corporate secrets or confidentiality, as well as being concerned about the privacy of individuals. Confidentiality and secrecy are different concepts to privacy, and are not regulated by privacy laws. <u>More information about what privacy is (and is not)>> </lawlink/privacynsw/ll_pnsw.nsf/pages/PNSW_04_faqprivacy></u>

**The law**

There are no laws in NSW to specifically regulate camera phones. Because of the rapid speed at which new technologies develop, it is best for laws to be 'technology neutral'.

Existing laws and remedies involve stalking / harassment laws, nuisance and trespass. The

NSW Government has also recently passed new amendments to the Summary Offences Act <http://www.austlii.edu.au/au/legis/nsw/consol_act/soa1988189/s21g.html> which make it an offence to film for indecent purposes, or to install a device to facilitate filming for indecent purposes. "Filming" in this context includes the recording or transmission of still (photograph) or moving (video) images. This offence only applies if:

- the purpose of the filming is to provide sexual arousal or gratification, and
- the person being filmed does not consent, and
- the person being filmed is in a state of undress, or engaged in a private act, in which a reasonable person would expect to be afforded privacy.

Privacy laws, which deal with the handling of personal information, don't generally regulate the behaviour of individuals. (Find out how privacy laws </lawlink/privacynsw/ll_pnsw.nsf/pages/PNSW_nswprivacy_laws> regulate the behaviour of government and business organisations.)

However this gap in regulation has been reviewed by the NSW Law Reform Commission, which reported in February 2001. The Law Reform Commission recommended a comprehensive system of surveillance regulation, in which personal privacy should be the paramount concern. Click here to read the Law Reform Commission's Report on Surveillance <http://www.lawlink.nsw.gov.au/lrc.nsf/pages/r98toc>.

Privacy NSW strongly supported the Law Reform Commission's recommendations, and has recommended that in the development of new laws, the proper balance needs to be struck between the public interest in the protection of individuals' privacy on the one hand, and the public interest in law enforcement and public safety on the other. Click here to read our submission </lawlink/privacynsw/ll_pnsw.nsf/vwFiles/sub_surveillance2002.pdf/$file/sub_surv eillance2002.pdf> in response to the Law Reform Commission's Report on Surveillance.

**Evidence of trends**

Complaints and enquiries to Privacy NSW about surveillance in general, and the taking and publishing of photographs in particular, have risen in recent years.

However to date there is little evidence to suggest that we have had a rise in complaints about taking / publishing photos in relation to camera phones in particular. However we understand that camera phones only became widely available in about mid 2003, and so we do not expect to be able to analyse the trend properly until at least the end of 2003-04.

Our statistics for 2002-03 are as follows:

*Informal enquiries*
- 2,848 enquiries were received in total.
- 287 of these enquiries (10%) were about surveillance / physical privacy in general.
- Of these 287 enquiries, 16 (5.6% of the surveillance category, or 0.6% of the total enquiries) were about 'taking and publishing photographs' as opposed to other forms of surveillance.
- The other 271 enquiries were about other forms of surveillance such as CCTV, listening devices, email monitoring, internet monitoring, location tracking and interference with mail.

*Formal complaints*
- 221 formal complaints were finalised in total.
- 33 of these complaints (15%) were about surveillance / physical privacy in general. This represents an increase from 2001-02, in which only 13% of complaints were about surveillance / physical privacy.
- Of these 33 complaints, 6 (18% of the surveillance category, or 3% of the total complaints) were about 'taking and publishing photographs' as opposed to other forms of surveillance. This represents an increase from 2001-02, in which none of complaints were about taking and publishing photographs.

*Requests for advice*
- 230 formal requests for advice were answered in total.
- 12 of these requests for advice (5%) were about 'taking and publishing photographs'.

## Complaints about breaches of privacy

Individuals who are concerned that their privacy has been invaded by the use of a camera phone to take and/or publish their photograph without consent may make a complaint to Privacy NSW. Click here for more information about **making a privacy complaint** </lawlink/privacynsw/ll_pnsw.nsf/pages/PNSW_your_privacy>.

If the photograph involved the person in a state of undress or engaged in a private act, and the photograph was taken for the purpose of sexual arousal or gratification, the person should instead make a complaint to NSW Police about the criminal offence covered by the **Summary Offences Act** <http://www.austlii.edu.au/au/legis/nsw/consol_act/soa1988189/s21g.html>.

http://www.lawlink.nsw.gov.au/lawlink/privacynsw/ll_pnsw.nsf/pages/PNSW_04_cameraphones

Where am I now? Lawlink </lawlink.nsf/pages/index> > privacynsw </lawlink/privacynsw/ll_pnsw.nsf/pages/PNSW_index> > Your Privacy </lawlink/privacynsw/ll_pnsw.nsf/pages/PNSW_your_privacy> > What is privacy?
<javascript:PrintPage()> <javascript:PrintPage()>Print page <javascript:PrintPage()> **What is privacy?** Privacy has sometimes been described as: the right to be left alone, or the right to exercise control over one's personal information, or a set of conditions necessary to protect our individual dignity and autonomy. We often think about privacy in different ways, for example: **physical privacy** - such as bag searching, use of our DNA **information privacy** – the way in which governments or organisations handle our personal information such as our age, address, sexual preference and so on. **freedom from excessive surveillance** – our right to go about our daily lives without being surveilled or have all our actions caught on camera. In different situations we may prefer one or other definition. We may also choose to emphasise different aspects of privacy depending on the reasons why we think that privacy is important. Privacy is important because it is: a way of controlling the power which people or organisations gain through collecting and storing information about others, a means of securing the trust which people expect in return for providing accurate information about themselves, a necessary condition for living in a society which values freedom and diversity, and the basis on which we form meaningful relations with other people by deciding how much of ourselves to reveal or conceal to any given person. Earlier discussions about privacy tended to emphasise the way it protected home and family life. Our approach has changed with new forms of technology and communication that have overcome the physical boundaries that used to separate the domestic and public spheres. Greater recognition of the rights of women and children have also altered some traditional views about privacy. Some people claim that because of new technologies privacy no longer exists or is no longer a useful way of trying to protect our selves and our

interests. Opinion polls and surveys consistently show that most people continue to believe that privacy is important.

http://www.lawlink.nsw.gov.au/lawlink/privacynsw/ll_pnsw.nsf/pages/PNSW_04_faqprivacy

# Saturday, Mar 13 2004

## Saudi bans camera phones
## <http://news.mobile9.com/2004/03/saudi-bans-camera-phones>

By *Patrick*

According to local media reports, the Saudi Arabian government has started enforcing a ban on the sale of camera phones in the Kingdom. The ban has come following several reports that young men have been taking photos of women without permission.

There had also however been reports that some female students had themselves been expelled from school after taking photos of their fellow students.

Any retailers with stock of camera phones will have them confiscated and offered a refund from the funds garnered when the handsets are sold to an export agency.

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http://www.cellular-news.com/story/10831.shtml

# Saudi edict bans camera-equipped phones

RIYADH, Saudi Arabia, Sept. 29 (UPI) — Saudi Arabia's highest religious authority Sheik Abdel Aziz al-Sheikh issued an edict Wednesday banning mobile phones equipped with cameras. Al-Sheikh was quoted as saying in the daily al-Madina, "These gadgets are being used to spread corruption and vice inside the Muslim society." He said the phones are being used to photograph people without their knowledge or acceptance which "makes this equipment an instrument for encouraging evil and vice." A fistfight erupted at a Saudi wedding recently when a guest photographed other women guests

clandestinely while they did not have their veils on. Marriages in Saudi Arabia are held separately without any mixing between men and women.

SOFTCOM Home <http://www.softcom.net/> |
          http://www.softcom.net/webnews/wed/dc/Usaudi-mobile.Ri8l_EST.html

by Dr. Richard Sharp (Jul. 1, 2004) 22.12.2004

**Overview: New Uses for Camera Phones**
In cities around the world, purchasing a soda out of a vending machine can be as easy as dialing your cell phone. Even parking and toll fees are easily paid through a cell phone. Cell phones are already much more than a communication device. They are used as debit/credit cards to purchase food, services, and gas.
Now, the global proliferation of cell phones with cameras brings more opportunities to use mobile phone devices in different capacities. Intel researchers are exploring new applications for camera phone technology, and the best part is that these applications require no additional hardware.
In Intel's research labs, camera phones are being used as pointing devices, authentication devices, and storage devices. Intel researchers have also shown how camera phones can provide user interfaces for systems that, because of cost and/or form factor, aren't able to accommodate a display of their own.

**Exploring New Methodologies**
Have you ever been frustrated when you tried to use the interactive display at a museum or information kiosk? More than likely the device that allows you to interact with the display is broken; keyboards, mice and buttons suffer at the hands of thousands of users.
But what if the device that you use to interact with that display belongs to you and is already in your pocket or purse -- your camera phone? Then, instead of dealing with a broken button or keyboard, you take out your mobile phone and control the display with that. Essentially your camera phone becomes your own personal mouse and keyboard.
There are many scenarios where the combination of visual tags and camera phones (Figure 1) can be employed. Maybe you're walking down a city street and see a poster for a movie or a play. On the poster is a visual tag. By using a camera phone, you could click on the visual tag to get more information on the film – perhaps a listing of the show times and locations where it is playing. Additionally, there may be an option to buy your tickets right then and there.



Figure 1. Tag-reader running on a camera phone.

In a business environment, this technology is also valuable. For example, an IT administrator could approach a rack of systems and quickly determine the configuration of each by aiming their camera phone at the visual tags placed on the various server boxes (Figure 2). The configuration details would immediately be displayed on his camera-phone screen, and using the phone's keypad he could scroll through and select the information that he needs.
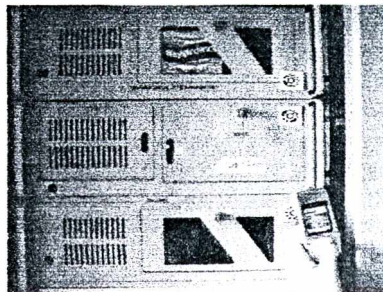


Figure 2. Camera phones can enable IT administrators to quickly learn server configuration details.

**Maximizing Existing Technology**
Current Intel studies on new methodologies for camera phones depend on two existing core technologies: visual tags and Bluetooth* wireless technology. Bluetooth technology has already shipped worldwide on millions of camera phones, and market research estimates that rapid adoption is likely to continue in the foreseeable future (IDC Research, *Moving Pictures 2003: Worldwide camera phone survey, forecast, and analysis, 2003-2007*).
Unlike touch screens, which require users to stand close to a display, a camera phone can be used to remote control a display from a distance. This allows interactive displays to be situated in places where users cannot reach them, making optimal use of space (for example, plasma screens located above supermarket aisles).

**Using Visual Tags**

Visual tags encode information in two parts: a *service identifier* and a *data block*. The service identifier encodes the name of the Bluetooth service to which a tag relates. The data block contains a few bits of application-specific information that are used to identify a particular tag. By using a *combination* of visual tags and Bluetooth, the user is shielded from tedious and unintuitive device naming and pairing issues. In an environment where multiple services are exposed over Bluetooth, this kind of naming abstraction is of great benefit.

The visual tags can be used as both active and passive controls. Active visual tags can be generated dynamically from a PC display (Figure 3). Passive tags can be printed on posters or in magazines, for example. Visual tags have already been tested in marketing posters used for events in Europe.
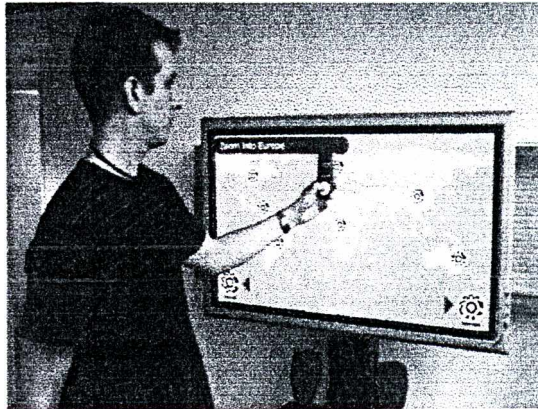


Figure 3. Active visual tags generated dynamically from a PC display.

The visual tags used in the Intel Research project are SpotCodes developed by High Energy Magic, Ltd. SpotCodes are two-dimensional circular barcodes with two data rings and 21 sectors. High Energy Magic has already released high-performance SpotCode-reading software for use on camera phones. The reader captures frames from the phone's embedded camera, performing real-time image processing to locate and decode SpotCodes at 15 frames-per-second. When a SpotCode is detected, it is highlighted with a red crosshair on the phone's display. A beta version of the SpotCode reader is available for download at the High Energy Magic Web site.

**Added Benefits**

To both the consumer and provider, there are many benefits to these new interaction methodologies and, because they all rely entirely on commodity hardware, there is no associated cost in implementing them.

Rather than install expensive displays with input devices that could easily be broken or vandalized, consumers would instead use their own device. Similarly, rather than standing in line to access a ticket machine, people could avoid lines by using their own personal devices to purchase tickets. Indeed, if everyone used personal devices in this way, there would be no need to install and maintain expensive ticket machines at all: by pushing user-interfaces onto devices people already own, service-providers have an opportunity to reduce costs.

Another advantage of controlling computing devices with camera phones is that a device knows *which* camera phone is controlling it. This allows devices to be personalized automatically to suit their users. Consider, for example, a hi-fi system that can restore *your* personal settings, such as volume, equalization, or programmed radio stations, at the click of a visual tag.

**Summary**

The research work being done at Intel Cambridge demonstrates some of the untapped potential of an existing infrastructure. By exploring camera phone devices enabled with Bluetooth that are already widely in use globally, any development will impact users worldwide.

The applications that are possible with camera phones are endless, and making the software and tags available to others in the research community and high tech industry will open the door to even more opportunities to maximize the potential of an already popular device. As technology advances with higher resolution cameras and expanded storage capabilities, and the cost continues to lower for high tech parts, camera phones will be set to take on an expanded role.

**More Info**

- Discover more about the Intel Research Network of university labs, including the Cambridge lab.

## JULY 05, 2003
### SAMSUNG BANS CAMERA PHONES IN WORKPLACE

This is wild. **Samsung Electronics**, the world's leading maker of high-end camera phones said it would block employees and visitors from bringing their camera phones into their factories. The ban will be effective from July 14, according to Saturday Nation on the Web and **The Korea Herald** (a valid link courtesy of **Mike Masnick from Techdirt Wireless**)

"The company seems to have no other choice. The fast penetration of high-powered camera phones is now fueling worries over leakage of corporate information and industrial know-how".

Steve Outing **reported** earlier on the Auto Industry confiscating cell phones before entering certain areas for fear of pictures taken of un-veiled models. After **privacy concerns** on an individual level and bans in public places, now camera phones bans are hitting the industrial sector.

## DECEMBER 11, 2004
### ADMIRALTY BANS PICTURE PHONES IN TERROR FEAR

**Picture phone bans in the UK Ministry of Defence are being rigorously enforced** amid fears that terrorists could "hack" into mobiles and use their microphone and camera as the "ultimate bugging device", reports **Yorkshire Post Today**.

"Senior officers and staff in sensitive parts of the **Admiralty in London** have been ordered to turn phones off in case "hackers" gain images of the layout of the inside of Britain's military headquarters or listen in on confidential or top-secret information.

There are fears that a virus or other electronic trigger could activate features of an innocent user's phone without their knowledge and use them to gather intelligence.

Security experts have warned that a modern phone, which usually includes a camera and Internet connection, can be turned into the "ultimate bugging device".

- **View videos** of people using the applications developed at Intel Research.

- Learn more about the SpotCodes that Intel researchers are using in their studies at the High Energy Magic Ltd. Web site.

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**Author Bio** – Dr. Richard Sharp is a senior researcher with Intel Research in Cambridge, Great Britain. Prior to working with Intel research, Sharp was a research engineer at AT&T laboratories working on hardware description languages and compilers. He has been published in many journals and is also active in world-class technology conferences. Sharp received his B.A. and Ph.D. in computer science from the University of Cambridge.

http://www.deviceforge.com/articles/AT5785815397.html

LinuxDevices.com    |    WindowsForDevices.com

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**View: Table of Contents, and Page Sample (Adobe PDF document)**

**Analyst BIO: Tony Henning**

Camera-phones are on the verge of delivering the snapshot capabilities that people currently expect from single-use film cameras and entry-level digital cameras. The recent release of two-megapixel camera-phones by all three Japanese wireless carriers raises the question: Why buy a digital camera?

The purpose of this 36-page study, including 119 figures, charts, and tables, was to determine if currently available camera-phones are capable of delivering acceptable consumer prints and to assess how the images produced measure up to those produced by the most popular standalone consumer cameras. Prints from images obtained by camera-phones with resolutions of 640 x 480 (two models), one megapixel, and two megapixels were compared to those from a single use (OTUC) film camera, a single use (OTUC) digital camera, and digital point-and-shoot cameras of one-, two- and three-megapixel resolution.

Six test subjects, representative of standard consumer photo activities, were photographed: a house in full sunlight, an interior shop display, an outdoor portrait in bright open shade, an indoor portrait, a close-up of small objects, and an antique spice rack in dim interior lighting. Standard consumer 4 x 6-inch borderless glossy prints of all 54 test shots were made using three different methods — a home inkjet printer, thermo-autochrome equipment at a corner drug store kiosk, and an online service that uses a silver halide-based process. We used the prints from these various sources as the basis for our evaluation of the results. Prints were scored in four performance categories — sharpness/level of detail, color accuracy and saturation, compression/interpolation artifacts, and dynamic range, yielding overall quantitative scores for each device for each subject and for each performance dimension.

40-page study, including 119 figures, charts, and tables

A CD-ROM containing all the original images used to make the prints is also available.

http://www.futureimage.com/sfm.cgi?sn=2FA159;t=p/SHO
future image 22.12.2004

## Samsung Bans Camera Phones In The Workplace

**Contributed by Mike on Monday, July 7th, 2003 @ 01:03AM**
**from the gotta-ship-'em-out-the-door...-not-in dept.**

Emily Turrettini discovered that Samsung, makers of quite a lot of camera phones, are now banning them in their own factories, as they're afraid that people will use them for corporate espionage. The link that Emily originally included is now gone, but another story has the details including an answer to my first question: the factory that makes camera phones will not have the ban enforced. Seems like an over-reaction, but the number of such "mobile phones banned!" stories seems to be showing up at an increasing rate. It will be interesting to see if the resulting bans lessen the adoption rates of such phones, as people will realize there are additional tradeoffs.

http://www.techdirt.com/articles/20030707/012255.shtml
tech dirt 22.12.2004

13 JAN 2005 TEMASEK POLYTECHNIC

**Bluetooth Application Curbs Handphone Camera Usage**

The inbuilt camera in a handphone can be a boon if one is involved in a traffic accident
and needs evidence. However, the device can also violate one's privacy as well as
breach security at protected areas. A letter in the 'Talk' section of Sunday Times on July
4, 2004 related an incident where the writer witnessed a man standing behind a woman
in a body-hugging outfit at an ATM machine in Pasir Ris, snapping pictures of the woman
from different angles. What steps can be taken to safeguard against such abuse of
camera-enabled phones?

To address this problem, three students from Temasek Polytechnic's Diploma in
Telecommunications course have developed an application, called '**Phone Profile
Switching**' that will remotely disable the camera function in Bluetooth-enabled mobile
phones. Initiated by the Infocomm Development Authority of Singapore (IDA), work on
the application began in January 2004. The students applied the knowledge obtained
from their Telecommunication Application Programming and Wireless Technology
subjects when they worked on this project in Temasek Engineering School's Radio
Frequency & Wireless Technology Competency Unit (RWCU).

Bluetooth technology allows data such as voice and text, to be transmitted wirelessly
between devices. The application, 'Phone Profile Switching', can disable the camera
function of a mobile phone via Bluetooth, regardless of whether the handphone camera
has been activated or if the phone's Bluetooth feature has been switched off. The
application also has a feature which alerts handphone users via a pop-up message,
when cameras and photo-taking are not allowed at a particular location.

Presently, the students are fine-tuning the 'Phone Profile Switching' application to make
it compatible with all handphones in the market, so that in future, the application can be
installed in every new handphone.

Handphones as personal items
A Shukor Rahman

HOOSING a handphone is no longer a simple task these days. There are so many models and makes to choose from. Survey the market thoroughly and there will always be more than one that suits your needs and budgets.

Functionality and price used to be the main criteria for making the selection.

Making decisions was quite straightforward – if you want to save money, get one with basic features only; otherwise, pay more and get the best phone in town. But those were the days.

Today, handphones are no longer just phones. While making calls and sending/receiving messages remain the core functions, hosts of other features have been pumped into the device that is getting smaller and smaller.

The result is that one can have handphones that also take picture (some even take video clips). They can also remind you of important dates and keep your appointment schedule. Some handphones also function as voice recorders, MP3 players, radio receivers and many more.

Of course, the price issue still exists but that is not all.

Above all the technical features, the design elements are also becoming important factors. Handphones have become items of fashion, especially among the younger generation. Size, shape and colour are all being looked at.

But the shift in the trend should not be so surprising. It is quite a natural progression seen in the consumer electronics market.

With all the technical things being more or less equal, the more subtle elements would make the difference. The packaging of these available features becomes an important marketing tool.

Handphones have also become affordable to most people. In fact, it is not uncommon to see schoolchildren carrying one. As the user base is now getting so huge, manufacturers have to come up with variations of the same model to get the attention of different groups of users.

From another aspect, handphones have become an indispensable tool to many individuals. To some, yours truly included, the handphone is also the one which keeps all the personal and professional contact numbers.

Loosing a phone is no fun. Getting a new one is the easy part but recovering your contact numbers is the big headache. You would be fortunate if you have a backup.

With all the features available, handphones are also becoming personal Items, as users start to keep personal "things" inside the phones – messages, pictures, etc. With the audit trails that it leaves behind, a handphone can also become a good source for finding out what an individual has been up to.

In fact, some people have gotten into big trouble because of such audit trails, as well as due to the "personal" items kept in their handphones.

But all these should not worry ordinary users like you and I. Handphones are not made to make life difficult. It is a wonderful tool to enable you to communicate with others. For most people, handphones can do a lot more good than harm.

Do read on to find out more on some of the latest in the handphone market.

You may find the articles useful in helping you choose your next handphone.

The regular columns and other items on the PC market are also useful.

Happy reading.

31 Aug 2004(http://www.tp.edu.sg/happening/press/aug3104_hp.htm)
(Corparate Communication Department,Temasek Polytechnic)
Bluetooth Application Curbs Handphone Camera Usage
The inbuilt camera in a handphone can be a boon if one is involved in a traffic accident and needs evidence. However, the device can also violate one's privacy as well as breach security at protected areas. A letter in the 'Talk' section of Sunday Times on July 4, 2004 related an incident where the writer witnessed a man standing behind a woman in a body-hugging outfit at an ATM machine in Pasir Ris, snapping pictures of the woman from different angles. What steps can be taken to safeguard against such abuse of camera-enabled phones?

To address this problem, three students from Temasek Polytechnic's Diploma in Telecommunications course have developed an application, called 'Phone Profile Switching' that will remotely disable the camera function in Bluetooth-enabled mobile phones. Initiated by the Infocomm Development Authority of Singapore (IDA), work on the application began in January 2004. The students applied the knowledge obtained from their Telecommunication Application Programming and Wireless Technology subjects when they worked on this project in Temasek Engineering School's Radio Frequency & Wireless Technology Competency Unit (RWCU).

Bluetooth technology allows data such as voice and text, to be transmitted wirelessly between devices. The application, 'Phone Profile Switching', can disable the camera function of a mobile phone via Bluetooth, regardless of whether the handphone camera has been activated or if the phone's Bluetooth feature has been switched off. The application also has a feature which alerts handphone users via a pop-up message, when cameras and photo-taking are not allowed at a particular location.

Presently, the students are fine-tuning the 'Phone Profile Switching' application to make it compatible with all handphones in the market, so that in future, the application can be installed in every new handphone.


Tuesday, August 19, 2003 ( the Star online- Techcentral))
Sagem's shining shutterbug
SAGEM MY X-6 -- spec
By KELLY GOH
JUST when the camera phone revolution seems to be dominated by the big boys in terms of new rollouts and publicity, it's interesting to see some smaller players stepping up to the plate with noteworthy models.
This week we look at the My X-6 from French handphone maker Sagem; it boasts many features that may give market favourites such as Nokia a run for its money in the camera phone segment.
Minimalist design
The Sagem My X-6 is the top-of-the-line model in Sagem's handphone catalogue and it follows the success of the company's first colour screen phone, the My X-5.
While the My X-5 took a leaf out the Nokia design book, the My X-6 seems to have opted for the Zen-like design philosophy of Sony Ericsson.
In fact the phone looks like the Sony Ericsson T610 at first glance as it sports the same rectangular shape and minimalist design.

The phone has a flat front with a large screen area just like the T610 but with dimensions of 110 x 46 x 22mm, the Sagem is certainly a bigger and bulkier proposition.

Personally I had no problems with the design of the phone but its boxy shape didn't go down too well with some of my friends.

Unlike the T610, the cover of the Sagem is made of plastic that looks and feels cheap but in all fairness everything fits nicely into place and should be sturdy enough for regular urban use.

I've dropped it a couple of times during the course of this review and am glad to report that the phone suffered no apparent ill-effects.

Colours everywhere

One of the highlights of the phone is the large 128 x 160 pixel TFT colour screen where everything is displayed in glorious 65,000 colours.

This makes the Sagem among the first candy-bar shaped phones in the market to have a true colour screen and also makes it a direct competitor to the T610 and the Samsung V200C.

Having used all three phones before, I have to say that the Samsung V200C boasts the best looking colour screen yet but that phone sports a clamshell design, which isn't everyone's cup of tea.

If you prefer candy-bar shaped phones, the screen on the Sagem is the best yet (for me anyway) as it is nice and bright and the colours looked more vibrant than the one on the T610, which seemed a little too muted for my liking.

Notice the absence of Nokia in this little comparison of mine. It's simply because I think the Finnish company has lost its way lately as it is still using relatively low quality colour screens for its high-end phones.

As things stand right now, Sagem has given a very good account of itself by coming out with one the best-looking colour screens in the market today.

Camera special

Apart from a brilliant screen that puts Sagem at the top end of the current colour screen handphone heap, the phone also has a built-in camera with the strongest features to date.

The camera uses a higher quality CCD (Charged Coupled Device) lens that is normally used in most branded standalone digital cameras and can take sharper pictures than camera phones using CMOS (Complementary Metal Oxide Semiconductor) lenses.

The T610 and Samsung V200C use the same type of lens but they can only take pictures at a maximum resolution of 352 x 288 pixels.

The Sagem does better as it can take pictures at maximum of 640 x 480 pixels and the quality of the photos is quite impressive for such a small device.

Most of the pictures looked good and sharp around edges and the lens is also sensitive enough to take pretty decent indoor shots.

Although pictures taken with competing camera handphones look good when viewed on their respective handphones themselves, most of them look flat when transferred to PC.

However, that is not the case with the Sagem and I dare say that the pictures even look good enough to make small basic printouts or to be posted on the Internet.

This is probably due to the fact that the pictures are saved at a higher resolution.

The only other camera phone that I have used that is able to take 640 x 480 pictures is the Nokia 7650 but the images were often blurry around the edges.

The Sagem also features lots of interesting add-ons for photo taking. It comes equipped with a three-level digital zoom, four picture modes and a host of image editing functions that allow you to adjust sharpness and contrast of photos.

As an added bonus you also get to add a wide variety of effects such as frames, negative, sepia, solarise, emboss and grey scale to your pictures. As far as I know, there are no other camera phones in the market that have such a repertoire of picture effects available to a user. Heck, there is even a little mirror next to the camera lens for self-portraits.

Pictures are saved in the JPEG format with an average size of 50KB-60KB at high-resolution. However, you can opt to save your pictures in a "mobile format" (120 x 160 pixels, 10KB), which is ideal for MMS use.

In case you're wondering the phone has a total of 2.3MB of space that is shared between all applications.

This means there are no restrictions to the amount of pictures you can store or entries you can have in the phonebook. The total amount of memory is your only limitation here.

Features galore

If a great-looking colour screen and the ability to take pictures seem frivolous to you, note that the Sagem also has more "serious" features shoehorned into its system.

Its tri-band sensibilities should put it in good standing amongst business travellers and there is also a fairly impressive set of organiser functions such as a diary, to-do-list, currency converter, calculator, alarm and timer.

The phone also comes with the WellPhone communication and management software that allows you to manage your phone data, send and receive faxes plus create connections to the Internet on your PC.

The software interface is easy to use and you don't need to be a techie to add, delete and copy names and phone numbers using WellPhone and then transfer the revised data to your phone.

You can also type out messages using the application and this method sure beats struggling with the phone keys.

If you have subscribed to the right options with your network operator, you can also use the Sagem as a modem via a standard GSM or a speedier GPRS connection.

However, the version of the software that came bundled with the review unit didn't have any feature to allow users to transfer photos to a PC. For that, you still have to beam over the photos individually via an infrared connection.

Easy to use

Although it seems Sagem has tried to cram everything they can into making the My X-6 such a feature-rich device, the good news is that they haven't forgotten its primary responsibilities as a handphone.

One of the benchmarks of any good phone is that it must be easy to use. The Sagem does well in this department as everything is squared away neatly in nine menus that makes the navigation process fairly intuitive.

There are two programmable shortcut/function keys under the screen, a four-way navigator and a call and hang-up key to help you get around.

Additionally the asterisk and hash keys double up as shortcuts to silent mode and zoom mode (for SMS and WAP menus) respectively.

You access the menus by pressing the up and down navigation keys, which is easy, but I still think Sagem could have done better by displaying all the menu icons on the screen

like the T610 and Nokia 7650. After all, the display is certainly large enough to fit nine main menu icons.

Some important information (to me at least) is also hidden in weird places. A case in point is the calls list, buried quite deep in the Settings menu of the phone, which differentiates between missed, made and received calls rather obscurely.

If you're a fan of SMS (and now MMS), you'll be glad to know that there is a fairly strong T9 predictive text implementation in place and typing response time is also good. However those with large digits would probably find the keys a little too tiny for fast typing and I personally found the keys to be a little too springy.

As far as signal reception and voice quality are concerned, the Sagem performed as well as any other good phone in the market.

The battery lasted for roughly two days in real-world usage, which is fairly decent given the inclusion of a colour screen. If that is not enough, there are various screen and keypad backlight operating modes you can choose from to squeeze the most out of the battery.

Final words

Overall it looks like Sagem has done really well with its implementation of a camera phone with the My X-6. It has practically all the features one can possibly want in such a phone and more. The screen ranks as the best I've seen on a candy-bar shaped phone so far, which proves one doesn't have to be a market leader to come up with an innovative product.

As with most products, there are inevitable drawbacks and one of the few affecting this phone is that it doesn't quite have the design and finishing qualities of its more established competitors and the resulting user experience is made a tad poorer by it.

However, if you can close an eye to the few minor shortcomings, the Sagem My X-6 is certainly one to take into serious consideration if you're in the market for a camera phone.

Pros: Brilliant TFT colour screen; good camera implementation; easy-to-use; great features.

Cons: Plastic housing looks and feels cheap; small buttons; menu system could do with a few adjustments.

http://star-techcentral.com/mobilephone/story.asp?file=/2003/8/19/sagem_s_shining_shutterbug&sec=reviews&sid=643

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