

The Emergence of Camera Phones - Exploratory Study on Ethical and Legal Issues

Joseph M. Dunphy

Michael Smurfit Graduate School of Business, University College Dublin
joe.dunphy@ucd.ie

Geoffrey J. Prendergast

Michael Smurfit Graduate School of Business, University College Dublin
geoff.prendergast.2@student.ucd.ie

Peadar Ó Scolaí

Michael Smurfit Graduate School of Business, University College Dublin
synergy@iol.ie

ABSTRACT

One of Louis Daguerre's¹ earliest pictures of a Paris street scene was taken in 1839. Due to long exposure time required to capture the image, moving objects did not register, so the street appears empty. However, during the exposure, a man stopped on the street corner to have his shoes shined. As a result, both he and the person shining the shoes appear in the picture. It can be argued that these men are the first people to ever have been photographed. If this is one of the earliest photos, then they are certainly the first to be unknowingly photographed.

Late in 2002, in the run up to Christmas, outlets acting as agents for the three mobile phone licence holders in Ireland started selling a new generation of mobile phone handsets. These handsets incorporated a digital picture messaging facility, which enables the phone user to take a digital photograph, which can be sent to others with similar handsets, and in some cases, via the Internet and email.

This is an exploratory study of the usage issues surrounding camera phones. The study highlights a number of issues concerning privacy. This study identifies camera phone stakeholders and includes analyses of their attitudes regarding camera phone use. The study uncovers stakeholders' reluctance to accept and address possible negative effects. It also highlights the lack of both formal and informal methods of regulation. The legal examination highlights the possibility of existing (Irish) legislation curtailing the use of camera phones for specific purposes. The ethical literature, while contradictory in places, mirrors in some cases, general principles of privacy outlined in Irish case law.

INTRODUCTION

The new millennium continues where the old one left off. Technology challenges the way we live, accompanied by the promise of a bright future, a brave new world.

Among the pioneers of progress is the telecommunications industry, and wireless communication is to the fore of these advances. Mobile phones of the 1980's resemble a scene from a Lilliputian beach when compared to today's equipment. With increasing network capability and infrastructure, not to mention manufacturing developments, the industry has taken another innovative leap. This leap takes the form of camera phones.²

Not unlike many mobile-technology trends, camera phones originated in Japan. Although Western manufacturers and carriers had camera-phone plans prior to 2002, the revolution didn't ignite until Japanese carrier J-Phone introduced camera phones in the first half of 2002, and immediately saw its sales and profits soar. Almost overnight, manufacturers and carriers around the world took note of J-Phone's success, and started or accelerated their own camera-phone plans.

In late 2002 advertisements appeared in Ireland from the worlds leading service provider, Vodafone. Manufactures like Nokia, Sony and Motorola, supported by the service providers Vodafone and O₂, began a massive national campaign aimed at enticing people to purchase the new device, to avail of the 'fun' that these phones provide.

A camera phone radically changes the capacity to take pictures. Most people limit picture taking to special occasions. This is due, in part, to the inconvenience of carrying a camera, and expense of developing film. While digital cameras eliminate film, camera phones go much further. They facilitate its ubiquitous use and an almost instant global sharing.

One of the early benefits is its potential to aid Irish law enforcement.³ Other benefits, including improved business processes, are beginning to emerge. Auctioneers, builders, car salesman and a plethora of other occupations are finding that the camera phone has the potential to assist them in improving internal processes, thus saving valuable time and money.

However, amongst the enthusiastic applause, voices of caution can be heard. News trickles through of abuses in places like Japan.⁴

One national newspaper reported that pornographic images are already being transmitted on Irish mobile networks. Foreign "adult content" service providers are already in discussions with one of the leading service providers.⁵ Schools have been advised to incorporate rules on the use of camera phones into their behaviour policy.⁶ Gyms and pubs throughout Ireland have also introduced codes of practice banning the use of camera phones after complaints from patrons that the phones were being used to take sneak photographs. Some restaurants have followed suite, as the issue of intrusion becomes a topic for debate.⁷

The ubiquitous nature of the camera phone presents a plethora of possibilities. We are at the initial introductory stages of development. From initial cautionary tales the camera phone's effect on individual privacy is developing a body of concern.

What follows is an identification and investigation of the major stakeholders and an analysis of the literature to identify the camera phone's impact on privacy.

LITERATURE REVIEW

Focus Statement

From our preliminary investigation, the key ethical and legal issue that arises from the use of camera phones is privacy. Privacy is an issue that arises time and again in relation to information technology and has been considerably well documented in academic and popular literature. However, most of the discussion has centred on issues such as data mining, marketing, "big brother" surveillance etc., generally on the gathering and processing of data about people. In general, the "bad guys" in these situations are governments and large companies who systematically infringe the privacy of citizens to further their quest for power and/or profit. The privacy issue concerning camera phones and picture messaging is different. In this situation it is often your fellow citizens who for impulsive reasons infringe your privacy, generally on a once-off occasion.

One of the important aspects of camera phones is the digital nature of the medium. This is important for two reasons. Firstly, images captured in this format can be effortlessly copied and distributed. As economists such as Varian point out, the marginal cost of producing additional copies of information goods is almost zero (Shapiro and Varian, 1999). Using the mobile phone networks or the Internet and email, images captured on camera phones can be distributed to large amounts of people in a very short time period. Secondly, images captured in digital form do not wear out or fade over time. This means the product of the invasion of privacy has the potential to exist indefinitely.

Media Reports

Some commentators believed that a Multi Media Messaging Service (MMS)⁸ would prove to be a novelty. It would suffer the same fate as the Wireless Application Protocol (WAP).⁹ Others speculated that camera phones could have serious business applications. Those who need to take and transfer images from remote locations, such as tree surgeons or building contractors, would find them useful. "No estate agent or used car sales person will be without one. By the end of the year they will be pretty ubiquitous."¹⁰

Police sources foresaw a time when every officer would have a camera phone. Such devices would help them find missing children more quickly. They also hoped phones might aid public safety, as members of the public would take photos of crime scenes and suspects.¹¹ Concerns were raised about child pornography and use of phones by paedophiles.

After the launch of the camera phone, several negative reports appeared in the Irish media:

- Catholic Secondary Schools Parents Association raised concerns regarding the “inherent risks” in allowing pupils to take instant photos in “inappropriate settings”. It demanded a blanket ban on use of such mobiles in school.¹²
- The use of mobile phones is banned in the Dáil (Parliament) of the Republic of Ireland. The advent of camera phones has led to increased unease at the presence of mobiles in Parliament buildings. Security staff have been directed to strictly enforce the ruling in future.¹³
- Several London restaurants have banned camera phones amid fears that customers could be photographed dining with someone with whom they should not be dining.
- Dublin (Ireland’s Capital City) gyms have enforced a strict ban on the use of camera phones. Managers wish to prevent client embarrassment of being secretly snapped on equipment or in changing rooms.¹⁴

The Japanese experience has been marked more by mischievous than malicious use. Widely reported cases include the surreptitious “shooting up” women’s skirts in public places. Such activity is now an offence, carrying penalties of six months in jail or a €4,250 fine if phone users are convicted.¹⁵ The numbers arrested and charged under the law are small.¹⁶

Mindful of the dangers, J-Phone MMS mobiles have set up their phones so that the camera speaks the words, such as “Yutan” (“You did it”, in Japanese) when the shutter is released. It is not always audible, and some underground shops are offering to undo the sound mechanism. In Europe, the phones merely make a clicking noise similar to that of a shutter opening and closing on a normal camera. On some models this may be switched off.

Privacy Literature

Any discussion of privacy is hampered by the problems surrounding the notion of privacy itself. The concept of privacy is extremely hard to explain. Repeated analysis has served more to complicate the issue than to resolve it, a problem frequently admitted to by philosophers and academics. Inness (1992) states that when we look to philosophical literature on privacy: “we find chaos; the literature lacks an accepted account of privacy’s definition and value”.

So what is privacy? When we speak of privacy, we usually refer to a person’s “right” to privacy. From a Kantian perspective, it is argued that we have a moral right to privacy as a negative right to “freedom from undue intrusion into personal affairs and information”. The Rawlsian proponents of privacy argue that it is a basic liberty protected under Rawls’ Principle of Equal Liberty. Hartman quoting a recent survey on privacy in fifty countries claims “nearly every country in the world regards privacy as a fundamental human right in their constitution, either explicitly or implicitly” (Hartman, 2001).

If we accept privacy as some sort of basic right, the problem then is to what degree should people’s privacy be protected? Most people would agree for a need to preserve some degree of personal privacy. But, where the line should be drawn is very problematic. Philosophers have tried to address this problem by categorising the different levels on which people participate in different parts of society. This is similar to what van den Hoven refers to as “separate spheres” (Purlieu, 1999). The suggestion is that information should be seen as internal to a particular

sphere of justice or sphere of life and should not be allowed to travel freely across its boundaries. For example, personal information about my home-life should not be freely available to my work colleagues against my will.

A more practical view of the right to privacy is that we have a right not to be hurt by people infringing on our privacy. This would lead to the conclusion that it is legitimate for people to take our picture, as long as we are not hurt. In this instance though, we have to agree on what constitutes actual hurt. Legal cases in recent years show this to be open to interpretation.

Legal Literature

A statutory definition of privacy is not available in Ireland. However Mr Justice Henchy of the Irish Supreme Court quoted with approval the U.S. Supreme Court definition “a right to be left alone”. He stated that,

a right of privacy inheres in each citizen by virtue of human personality, and that such right is constitutionally guaranteed as one of the unspecified personal rights by 40.3.1

The concept of privacy has also been described by Mr Justice Doyle as being akin to an “unspecified natural right”. Mr Justice Hamilton stated,

that the nature of the right to privacy must be such as to ensure the dignity and freedom of an individual in the type of society envisaged by the Constitution, namely a sovereign and democratic society...in certain circumstances the exigencies of the common good may require and justify such intrusion and interference.

The legal right to privacy is not absolute, and may be restricted for reasons of state security, public order, morality or other requirements of the common good.

In Ireland there is no statutory regulation of camera phones. However, other legislation may provide legal insights. The Data Protection Act 2001, that “regulates the collection, processing, keeping, use and disclosure of personal data” in which personal data is defined as “data relating to a living individual who can be identified either from the data or from the data in conjunction with other information in the possession of the data controller”, may have an application here.

Depending on the situation, the Censorship of Publications Acts 1929 to 1967 may have an application to the use of camera phones. These Acts restrict the publication of indecent pictures. Pictures or accompanying text messages may be defamatory. The right to a good name is a constitutional right and is protected by the Defamation Act 1961 and the ordinary principles of tort.

METHODOLOGY

Those believed to be the main stakeholders were identified, and interviews were conducted with some of these to gain insight to the issues that may exist. Given the study’s limited scope, some stakeholders were not interviewed.

Interviews were semi-structured. This was deemed most appropriate as issues identified in the literature review informed interview questions. Given time and resource limitations, most interviews were carried out by telephone.

Stakeholders

The following were identified as stakeholders:

1. *Manufacturers of mobile phones.* Representatives of four leading phone manufacturers participated.
2. *Mobile phone operators.* Ireland has three licensed mobile operators, Vodafone, O₂ and Meteor, two of whom took part.
3. *Government departments and regulatory bodies.* Irish governmental departments with responsibility for telecommunications, legislation and law enforcement took part: the Department of Communication and the Department of Justice. Two semi-state bodies charged with overseeing data and telecommunications in Ireland were interviewed. The Data Protection Commissioner oversees data protection compliance. COMREG is the telecommunications licensing authority.
4. *Members of the legal profession.* Expert legal opinion was sought from members of the Irish Bar Association and the Law Society.

The following were identified as stakeholders whose input was not sought on the grounds that issues relating to these stakeholders are clear from the literature review.

5. *Retailers of mobile phones.*
6. *Other stakeholders* – such as the Gardai, managers of public and private businesses and venues such as pubs, clubs, schools and colleges.
7. *Mobile phone users.*

ANALYSIS

Manufacturers of Mobile Phones

Manufacturers are aware of, but not surprised by, the negative reports and concerns about camera phones. Ms Rebecca Horbury, Product Manager for Siemens Mobile in Ireland pointed out that there was negativity toward mobile phones after their initial launch and this manifested itself in the banning of mobile phones from certain environments. Some US cities introduced fines for those who used phones “inappropriately”. There are continuing moves to bring laws designed to prohibit and prevent car drivers from using their mobile phones when driving. Similar legislation may be needed for camera phones.

Manufacturers believe that individual users are responsible for the way in which they use their telephones. Mr David Stoneham, Director for Corporate Social Responsibility at Nokia sums up the attitude of mobile phone manufacturers,

“As happens quite often in new technologies, innovation in handsets also brings new ways of using the devices. The imaging functionality in mobile phones provides a new dimension to everyday communications, which like any other form of communication, can be misused or even abused, according to e.g. personal choice, accepted practice, legislation. In reality, in these situations normally only a tiny fraction of users if any choose to use products for this purpose, as opposed to the many benefits these products bring. Nokia strongly recommends people using phones with imaging functionality, as with any camera; use them with discretion and in accordance with local laws, regulations and customs.”

Mr Frank Healy, Partner Manager at Ericsson’s Business Mobility World, also emphasised the idea of responsible usage. The camera phone is a camera, and people know what is acceptable behaviour with a camera.

“It’s the individual who has responsibility regarding their use. It’s no different than a small camera. [Like] People setting off fire extinguishers, you don’t ban them because people misuse them...people are people...there are always those who misuse technology.”

Mobile Operators

Of the two operators interviewed, one requested and was granted anonymity. This operator described the initial success of the camera phone. The respondent claimed not to have encountered any negative effects from the camera phone. When asked about possible legal implications of the Irish Data Protection Act 2001, she replied that she was not aware of any implications with regard to the camera phone.

When prompted [by means of reference to press articles that appeared in the weeks leading to the interview] to elaborate on the claim that no negative effects were encountered thus far, the operator replied as follows:

“Well, before we launched the product we engaged in a number of research programmes. So we are aware of possible issues that could arise. But if we were to address these issues, then we would become legally responsible.”

The O₂ representative also confirmed the company was aware of a number of privacy issues. These issues corresponded to the issues raised earlier in the study. O₂ had undertaken extensive market research prior to launch but claimed no negative issues had since emerged.

Of significance was the existence of O₂’s Acceptable Usage Policy.¹⁷ The O₂ representative also alluded to its position regarding ethical usage:

“There is a personal level of responsibility that we ask all our customers to adhere to when using camera phones and all mobile communications technology. Exchanging

communication with others generally involves using common sense regarding the content material and being polite and courteous. The vast majority of O₂'s customers understand what is appropriate when sending or receiving messages.”

This policy [Acceptable Usage Policy] appears to be broad and open to interpretation as to what constitutes grossly offensive, indecent, obscene and menacing content. The operator also has at their disposal the use of an International Mobile Equipment Identifier and may use the equipment to disconnect users who breach the Acceptable Usage Policy. This is significant, as the operator has the potential to assume the role of a self-regulator.

Government Departments and Regulatory Bodies

The Department of Communications, Marine and Natural Resources is the Irish government department with responsibility for regulatory and market reform.¹⁸

Mr O’Sullivan, an official at the department, indicated that issues of privacy had not been brought to his attention. Not unlike a number of unnamed officials in the Department of Justice, Mr O’Sullivan felt that the issue was very new and time would have to elapse before one could recognise potential problems and devise solutions. However, he did believe that the storage of pictures could be an issue for the Data Protection Act.

Another official, Mr Aidan Hudson, also stated his belief that the Data Protection Act was an appropriate mechanism from which to examine potential legal difficulties.

Mr Sean Sweeney, Compliance Section, at the Office of the Data Protection Commissioner, pointed out that many media reports regarding the Irish Data Protection Act (1988) were erroneous.

“The Act does not cover the collection and use of personal, private data for personal use. You can’t request a copy of private information from a private individual. So the Act has no role to play there. By extension, the Act therefore does not cover the use of mobile camera phones for personal use.”

However, the use of camera phones for business is covered by the Act. If a company provides staff with a phone,¹⁹ any data on that phone, data that can be processed, is covered by the Act.

“If I walk down the street, taking pictures of crowds, with my business phone, those images do not contravene the Act. If I know the people, or if I approach individuals, I need to get their express permission (obtained fairly and with peoples’ knowledge – a requirement of the Act). I must ask permission to take a picture or pictures. Data must be fairly obtained and collected and only with full knowledge.”

If there is a picture on a business phone, then those in the picture are entitled to a copy of it. If a copy isn’t available, a detailed written transcript of the picture will suffice. If someone uses a camera phone in a bank, it is the bank’s responsibility to ensure that data is hidden from public view. If someone succeeded in obtaining a picture, then it would be the bank that falls foul of the Act.

Legal Analysis

The legal literature suggests that a picture taken in a public place or where there is no expressed or implied assertion of the right of privacy may not breach the constitutional right of privacy. In addition, constitutional rights are general matters of public law and do not give rise to private obligations between individuals.

That said, if the physical taking of the photograph is intrusive or if it gives rise to damage, i.e. intrusiveness by other members of the public, it may constitute a tort of nuisance, for which the courts will order the private individual to pay compensation.

While no case law exists in Ireland on the abuse of camera phones and misuse of their content, a number of English cases may cast light on the practical application of the legal principles previously outlined (See Appendix 1).

Our legal analysis, while describing a number of interesting and associated issues, confirms the prevalent view: uncertainty and absence of legislative direction.

DISCUSSION

When we began this exploratory study on the ethical and legal implications of camera phones, we found an absence of specific academic literature. In order to guide our research, we turned to a study of media reports on the topic to identify any recurring themes. A cursory examination indicated that where reservations were expressed, the key concerns centred on privacy, particularly where camera phone users infringed an individual's privacy.

A detailed investigation confirmed our initial impressions. We then turned to an investigation of both academic and legal literature on privacy. The academic literature displayed considerable confusion concerning the definition of privacy, but indicated that privacy is almost universally recognised, in some form, as a fundamental human right. This helped to underline the significance, if not the clarity of the topic. A review of the Irish legal literature supported a view of privacy as a constitutionally guaranteed, personal right of the citizen. This review also indicated an absence of statutory regulation of camera phones. However, other acts, particularly the Data Protection Act 2001, appear to have some implications for their use.

We then identified and conducted interviews with some of the major stakeholders, namely the phone manufacturers, phone network operators, government departments, regulatory bodies and members of the legal profession. The manufacturers and operators, while aware of potential ethical and legal problems arising from misuse of camera phones, appeared reluctant to accept any direct responsibility. They supported the view that individual users are responsible for the way they use their camera phones, and, if they misuse them, the legal system should provide the remedy.

Interestingly, we found some confusion and contradiction from our contact with the government and legal areas. There appeared to be an acceptance among government sources that privacy issues related to camera phones could be resolved under the Data Protection Act. However, it

emerged from our study that this Act has no application to the use of camera phones for personal use, but it does have consequences for individuals using camera phones provided by their employers for business use.

A number of other interesting legal issues also arose. In particular, the question was raised whether the network operator would share responsibility with the sender of defamatory picture messages.

CONCLUSION

The study has demonstrated the significance of the topic and identified considerable confusion and contradiction among the stakeholders on many of the issues. We feel that, as camera phones become more widespread, the issue of privacy will become increasingly important. Privacy's common theme, in both ethical literature and Irish case law, emphasises "a right to be left alone". This simplistic principle, while supporting the concept of a universal right of privacy, does not account for the conflicting rights and responsibilities of the various stakeholders in the use of camera phones.

LIMITATIONS

The camera phone is a new phenomenon in the Irish mobile phone market. At the time of writing, such phones have only been available for five months. It is early days for camera phone use and misuse, and people's perceptions of the difficulties that may arise.

The study therefore is limited in its scope. It is an exploratory study only, with the focus of research on those who already have an appreciation of camera phone technology and the possible implications of its use. The authors' believe that the next logical step would be to talk directly to those most likely to either misuse camera phones or be the victims of their misuse – the members of the public. Further research could also incorporate other stakeholder groups not included in this study.

ACKNOWLEDGEMENTS

We would like to thank the participants of this study for their time and valuable insights.

In particular, we would like to thank our lecturer, Dr Bernd Stahl, for his guidance and the encouragement he gave us to take our class study and submit it to this publication for consideration.

APPENDIX 1

Regina v Press Complaints Commission ex parte Stewart Brady, [1997] EMLR 185

Nov. 18 1996, Court Of Appeal.

Applicant: Moors murderer, patient at Ashworth Hospital. Article and photo in The Sun newspaper. An indistinct photo taken with a long lens camera; claim that the photo was an invasion of privacy. Complained to Press Complaints Commission. Complaint failed, since photo was taken without intrusion or harassment or any exploitation of the vulnerability of the subject.

R v Brentwood Borough Council, ex parte Peck, [1998] EMLR 697

Feb. 19 1998, Court Of Appeal.

Applicant suffered from severe depression: applicant had walked through the town with knife in his hand, detected by council employee on CCTV. Cameras successful since they were installed, a public release each year informing people of their success. Anglia TV sought and got copy of the tape in question with the person's head masked. In addition a photo was taken from the footage of the incident was published in a local free newspaper. Broadcast Complaints Commission subsequently upheld complaints by the applicant. Even though an action is inherently legal (as CCTV coverage is), it can nevertheless operate oppressively.

This is a parallel to the Irish case of Hanahoe, where a legal search of the Plaintiff's premises was conducted by the Gardai. However a leak to the media concerning the search constituted a Tort.

Creation Records Ltd & Others v News Group Newspapers Ltd, [1997] EMLR 444

HC, Chancery Division, Apr 25, 1997.

Plaintiff devised a set for the cover of a pop group's forthcoming album. For this purpose photos were taken of the group by J at the set (as was agreed). Defendant had heard of the project and commissioned a freelance photographer, named S, to stay at the hotel and take photos of the shoot, one photo turning out very similar to that which J had taken.

Held; In favour of the Plaintiff. Pictures constituted a breach of copyright and a breach of confidence. Furthermore, it was no defence to say he had openly taken photographs, that those present must have realised what he was doing and that no attempt was made to stop him.

(Similar to the ongoing – at time of writing - case Catherine Zeta Jones and Michael Douglas v Hello Magazine, Plaintiffs had an a contract with OK Magazine for all photos at their wedding, Hello Magazine went ahead however and took photos most from long range, subsequently turned out badly when published, Plaintiffs suing for distress (bad pictures) and breach of confidence (in the sense that existing exclusive contract was neutralised by the illicit photographs).

BIBLIOGRAPHY

Barlow, J. (1995). "Private Life in Cyberspace", in D. G. Johnson & H. Nissenbaum, (Eds.), *Computers, Ethics, and Social Values* (pp. 310 – 314). Upper Saddle River: Prentice Hall

Benkler, Y. (2001). "The Battle over the Institutional Ecosystem in the Digital Environment", *Communications of the ACM* (44:2), 84 – 90

- Hartman, L. (2001). "Technology and Ethics: Privacy in the Workplace", *Business and Society Review* (106:1), 1 – 27
- Inness, J. (1992). *Privacy, Intimacy and Isolation*, Oxford Industry Press
- MacQueen, H. (1997). "Copyright and the Internet", in L. Edwards & C. Waelde, *Law & the Internet* (pp. 3- 11). Oxford: Hart Publishing
- Mawhood & Tysver (2000). "Law and the Internet", in D. Langfort (Ed.), *Internet Ethics* (pp. 96 – 125). London: MacMillan
- Moor, J. (2000). "Toward a Theory of Privacy in the Information Age" in R. M. Baird, R. Ramsower & S. E. Rosenbaum (Eds.), *Cyberethics* (pp. 200 – 212). New York: Prometheus Books
- Pourciau, L. (1999). *Ethics and Electronic Information in the Twenty-First Century*, Purdue University Press, 1999
- Shim, J., Simkin M. & Bartlett G. (2000). "Netlaw", *Communications of the Association for Information Systems*, 4 (6), 2 – 24.
- Terrett, A. (1997). "A Lawyers Introduction to the Internet" in L. Edwards & C. Waelde, *Law & the Internet* (pp. 13- 26). Oxford: Hart Publishing
- van den Hoven, M. (1999). "Privacy or Informational Injustice?" in L. J. Pourcieau, (Ed.), *Ethics and Electronic Information in the 21st century* (pp. 139 – 150). West Lafayette, Indiana: Purdue University Press
- Varian, H. & Shapiro, C. (1999). *Information Rules, A Strategic Guide to the Network Economy*, Harvard Business School Press
- Velasquez, M. (1998). *Ethical Principles in Business* (4th ed.) Upper Saddle River, New Jersey: Prentice Hall

ENDNOTES

¹ Frenchman Louis Daguerre is one several people credited with inventing photography.

² A camera phone also known as a picture phone, is a mobile device with the capacity to take, store and transmit, using Multimedia Messaging System (MMS) technology, a low-resolution digital image.

³ *The Sunday Tribune* (18 February 2002) reported that An Garda Síochána would accept photos taken by camera phones as evidence to be submitted to the Director of Public Prosecution in criminal cases. Judges in specific cases will, however, have the final word in determining their validity for use in court.

⁴ See literature review.

⁵ Hutchison Whampoa, one of the world's leading owners and operators of telecommunications and Internet infrastructure, has not ruled out the possibility of introducing mobile porn services in Ireland. However Vodafone, who reportedly have held discussions with adult content providers in the UK, indicated that they had no plans to roll out adult services in Ireland (electronicnews.net).

⁶ See literature review.

⁷ See literature review.

⁸ The MMS (Multimedia Messaging Service) is such a unique multimedia service, which you can send and receive complex messages with; you can transfer pictures - either black and white or colour, voice and sound, text and tones - all in one message, using an MMS-capable mobile phone.

⁹ They believed that poor picture quality would limit MMS applicability and marketability beyond the gadget-mad and novelty purchasers. Wireless Application Protocol (WAP) was the much hyped but ultimately unsuccessful 'killer app' of the 1990s. The protocol allows certain phones to access websites that are WAP enabled. Problems of connection speed, compatibility with web IP and the size of phone monitors contributed to the WAP's predictions falling short.

¹⁰ Cameras Everywhere, BBC Online

¹¹ The Sunday Tribune (18 February 2002) reported that An Garda Síochána would accept photos taken by camera phones as evidence to be submitted to the Director of Public Prosecution in criminal cases. Judges in specific cases will, however, have the final word in determining their validity for use in court.

¹² Secondary schools set to limit use of mobile camera phones, by Sean Flynn, *The Irish Times*, January 1, 2003

¹³ Dail to get tough on use of mobile phones, by Mark Hennessy, *The Irish Times*, January 14 2003

¹⁴ Gym sees fit to ban snappy new mobile phones, by Roisin Ingle, *The Irish Times*, January 13 2003

¹⁵ In Japan, phones make mischief, *International Herald Tribune*, September 9, 2002

¹⁶ In February 2003 a Japanese man was arrested for taking lewd photographs of schoolgirls with a camera phone, according to the country's Mainichi newspaper. The paper reported that Toyokazu Hamano was arrested for breaking a law forbidding people from creating a public nuisance. Hamano reportedly took the pictures by holding his camera phone underneath the girls' skirts as they were ascending an escalator in a train station.

¹⁷ *Our Acceptable Usage Policy demands that our customers not send messages likely to cause distress or any other material which is grossly offensive, indecent, obscene, menacing or in any other way unlawful — this would include respecting the privacy of others. We advise that particular care should be taken to avoid any material, which is offensive to people of grounds of gender, race, colour, religion or other similar categorisation. Similarly, we ask customers to be sensitive to the fact that children have access. Customers may be committing an offence by the inappropriate use of a camera phone.*

O₂ does not condone the irresponsible use of camera phones. With the arrival of IMEI (International Mobile Equipment Identifier) barring, we will consider disconnecting any phone that we believe is being used fraudulently [Sic]/illegally. This includes the misuse of camera phones. When a phone's IMEI is barred, it cannot be used again on the O₂ network.

O₂ understands the concerns of public authorities and owners managers of public facilities etc and we will work with these to ensure the misuse of camera phones is minimised.

¹⁸<http://www.marine.gov.ie/display.asp>

¹⁹ Some companies do not have a clear policy regarding personal use of company mobiles. If the phone is supplied by a company to staff, then in the absence of clear guideline regarding personal use, all use is deemed to be business related.