What is wrong with mobile phones?

Prof. Simon Rogerson

Originally published as ETHIcol in the IMIS Journal Volume 13 No 5 (October 2003)

Cell phones have become one of the icons of modern living symbolising a world of the instantaneous, of the connected and of the disposable. But behind the iconic triviality lie serious issues which affect individuals and society alike.

Cell phones have become the ultimate designer fashion accessory with costly price tags. There is both marketing and peer pressure, particularly on the young, continually to update their phones in order to keep up with trends. This is socially divisive. There is also an associated environmental issue. The average shelf life for a cell phone is currently 18 months. By 2005 it is estimated that 130 million cell phones will be thrown away annually representing 65,000 tons of waste a year. This is an environmental hazard.

On the one hand these new instruments of communication demand increased levels of literacy and technical literacy skills. On the other hand they are having significant impact on the use of language. We are seeing a simplification of language which endangers our linguistic culture and heritage, and results in a loss of nuance, meaning and subtle shades of difference.

A number of health issues need to be addressed. There is a contradictory literature concerning microwave transmissions from handsets and ground stations. This is particularly concerning regarding children. Small keypads can cause problems for those with limited dexterity. There is some evidence to suggest repetitive strain injury is a problem for those who frequently send text messages. Finally the use of cell phones and text messaging in particular can become a compulsion or even an addiction.

Trends in use raise some interesting issues. Carrying active cell phones provides a mechanism for surveillance and tracking by third parties. As we increase the use of our mobiles we become more vulnerable to receive a new form of spam - the junk text message. This is becoming an increasing problem.

Using cell phones (even with hands-free facilities) whilst driving presents new dangers. A driver’s concentration is diverted to the conversation with the person on the phone. This is different from conversation with in-car passengers as in this situation both driver and passenger are aware of road conditions and temper their conversation accordingly. Given the "street value" of cell phones, users are increasingly at risk from mugging when using phones in public spaces. The use of mobiles in public spaces raises another issue.

Such conversations intrude into others "quiet spaces" and infringe on the privacy of others. This has led to a new concept of "mobile free zones" on trains. There is increasing pressure for us to remain in mobile contact when away from the office. The electronically-enabled culture of instantaneous response to the demands of employers and clients has become the norm. We can no longer leave work at the office.

But impacts are not always obvious and direct as illustrated by this extract from the autumn 2002 online edition of *Seeing is Believing.*

> "Cell phones may have revolutionized the way we communicate, but in Central Africa their biggest legacy is war. Nearly 3 million people have died in Congo in a four-year war over coltan, a heat-resistant mineral ore widely used in cell phones, laptops and playstations. Eighty percent of the world's coltan reserves are in the Democratic Republic of Congo. The mountainous jungle area where the coltan is mined is the battleground of what has been grimly dubbed "Africa's first World War", pitting Congolese forces against those of six neighbouring countries and numerous armed factions. The victims are mostly civilians. Starvation and disease have killed hundreds of thousands and the fighting has displaced 2 million people from their homes. Often dismissed as an ethnic war, the conflict is really over natural resources sought by foreign corporations - diamonds, tin, copper, gold, but mostly coltan. At stake for the multitude of heavily armed militias and governments is a cut of the high-tech boom of the 1990s, which sent the price of coltan skyrocketing to peak at US$400 per kilo. Coltan -- short for Colombo-tantalite -- is refined into tantalum, a "magic powder" essential to many electronic devices. The war started in 1998 when Congolese rebel forces, backed by Rwanda and Uganda, seized eastern Congo and moved into strategic mining areas, attacking villages along the way. The Rwandan Army was soon making an estimated US$20 million a month from coltan mining. A May 2002 report from the United Nations Security Council said the huge coltan profits are fuelling the war and allowing "a large number" of government officials, rebels and foreigners "to amass as much wealth as possible." The fighting rages on despite peace treaties signed in the summer of 2002."

Such technological developments as cell phones need to be assessed for potential risks and benefits. The identification of risks then requires effective action which might include development modification and instruction in proper use of those for which it is intended. Overall we must always strive to take a balanced view of technological advances and potential of these amazing human endeavours.

Please send your views on ethical and social responsibility issues and cases of ethical dilemmas to:

Professor Simon Rogerson
Director
Centre for Computing and Social Responsibility
Faculty of Computing Sciences and Engineering

De Montfort University
The Gateway
Leicester
LE1 9BH
Tel:(+44) 116 257 7475
Fax:(+44) 116 207 8159
Email:<srog@dmu.ac.uk>
Home Page: (http://www.ccsr.cse.dmu.ac.uk)