Stop Big Brother listening in to your mobile phone conversation

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A team of University of Surrey scientists led by Professor Ahmet Kondoz has developed new technology which will enable companies and organisations to ensure that their GSM mobile **phone conversations are totally secure and confidential**. Previous attempts to make such conversations totally secure have been successful, but relied on a special GSM data service which resulted in some operational problems. In particular these solutions require expensive dedicated handsets and subscriptions, and calls between different countries could be unreliable. The UniS system is the first true end-to-end secure GSM system which does not rely on this special GSM data service, but rather uses the standard GSM voice service.

Most people do not realise that when they use a mobile phone the wireless part of the link, which is secured by the network operators, is only between the mobile phone and the base station closest to the location of both the caller and recipient. In between, the signal travels through the ordinary phone lines. At this point it is possible for your conversation to be accessed by unauthorised parties. If you ever discuss business-sensitive or secret information on a mobile, what can you do to keep it confidential?

Encryption techniques are not new, but until now it has been impossible to use these with mobile phones. Traditional systems convert voice messages directly into digital data, which is then transmitted. However, current mobile phones have a much lower digital information transmission capacity than landlines. In order to provide good speech

quality at much reduced digital information rates they assume that the signal to be transmitted is speech, and can not therefore recognise or transmit the data signals of encrypted speech.

Scientists at the University of Surrey have overcome this problem with new technology that can modulate the encrypted speech patterns into audio streams that both mobiles and landline technology will accept. The system is the first and only one of its kind in the world, and is being developed by a UniS spin-off company MulSys ltd for various customers.

Professor Ahmet Kondoz, of the UniS Centre for Communication System Research commented, “This is the first true end-to-end GSM secure voice transmission enabling technology which uses the GSM voice channel to transmit encrypted speech. By using the standard GSM voice channel, it will offer unprecedented levels of security and quality of service for mobile secure communications.”

Source: University of Surrey