



Australian
Mobile Telecommunications
Association

mobile inSite

news, issues and science on mobile
telecommunications deployment

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Editorial

On a daily basis MCF member carriers are engaged in consultation with communities around Australia about how best to provide mobile network coverage in a suburb, town or in regional Australia.

Arguments inevitably arise during consultation about whether we should be concerned about possible health effects of radio-frequency emissions from modern communications technology.

In the debate that ensues between those in the community that are for or against a proposed mobile network telecommunications facility, second or third hand material regarding possible health effects is drawn from a myriad of internet, government and industry sources from within Australia and overseas. The vast amount of information makes it difficult for the community to assess the risks.

It is refreshing then that the Australian Centre for Radiofrequency Bioeffects Research's (ACRBR) Science Week, held in late October provided an opportunity for people to hear first hand about the latest news and research into communications technology and health from independent scientific experts.

Over two and a half days members of the public, government and the industry were able to question their own assumptions and hear valuable insights into the latest research on radio communication technology from Australian and overseas experts.

This edition of Mobile InSite and the first edition in 2008 will review the highlights of Science Week. For those who could not make it to Swinburne University, ACRBR captured the proceedings on video and will be making this available on its website.



Matt Evans

Other articles in the November edition of Mobile InSite include a report from an Irish Government Expert Group on the use of mobile phones by children, an update on the industry initiative to improve the visual impact of network infrastructure and the latest research on wireless networks and Wi-Fi.

The MCF wishes you all a safe and happy festive season.

Matt Evans

Program Manager
Mobile Carriers Forum

ACRBR Science Week answers RF health concerns

People concerned about the health effects of communications technology were given the opportunity to speak with some of the leading scientific experts in the field at the inaugural ACRBR Science Week held at Swinburne University during the last week of October.

The ACRBR Science Week, conducted to improve the understanding of the health effects of radio communications, provided a forum for the public to openly discuss their health concerns with scientists and industry leaders.

Executive director of the Australian Centre for Radiofrequency Bioeffects Research (ACRBR) Professor Rodney Croft said the week gave the public the opportunity to ask questions and hear first hand from leading scientific experts about the potential health effects from mobile communications technology.



“There is variable understanding among the public on these issues. Some get through the series of complex messages to arrive at realistic conclusions while a great many take things they read and hear at face value,” Professor Croft said.

The ACRBR 2007 Science Week program is available at:

[WEBSITE LINK](#)

Science Week provided attendees with an update on its multi-disciplinary research program. Presenters spoke about various aspects of radio frequency research, including brain function, cancer, epidemiology, hypersensitivity and base station research. The presenters also provided a basic update on international research, discussing the consensus of research.

“Some misinformation is based on things people have read on the web. Some of this is not very rigorous and it gets sensationalised in the media

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ACRBR Science Week answers RF health concerns

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with inaccurate, attention-grabbing headlines,” Professor Croft explained.

“People are very busy in their everyday lives and do not have the time to pursue the facts and they often rely on what they read on the web.

“My main message out of Science Week is that if people want to be well informed on these issues they can find out from expert bodies, such as the World Health Organisation, and get an authoritative perspective from bodies such as the ACRBR,” Professor Croft said.

ACRBR is Australia’s leading expert group on radiofrequency research. Established in 2004, it specifically focuses on fostering a better understanding of the health effects of radio frequency exposure. ACRBR is overseen by the Federal Government’s National Health and Medical Research Council.



*Executive director
of ACRBR Professor
Rodney Croft*

ACRBR is committed to building a better understanding of the biological and health effects of human exposure to electromagnetic fields (EMF). To this end, the Centre implements a well-directed multidisciplinary research program drawing on the extensive skills, knowledge and experience of scientists from a number of Australian research institutions as well as overseas affiliates.

It takes a lead role in promoting collaboration between all Australian researchers exploring this topic and is training a new generation of scientists to become skilled researchers in this field. Importantly, it seeks to share its independent knowledge and expertise through public engagement and by actively contributing to the development of relevant safety standards and government policy.

ACRBR is planning to make Science Week the centrepiece radiofrequency health event of every year.

Video footage, photos and the expert presentations of this year’s Science Week will be made available on ACRBR’s website before the end of the year.

More information is available at:

[WEBSITE LINK](#)

Industry taskforce improves visual impact of mobile phone towers

Eight months of co-operation between all the Australian mobile phone carriers has resulted in the development of a set of guidelines to improve the visual impact of mobile phone network infrastructure throughout urban and regional communities.

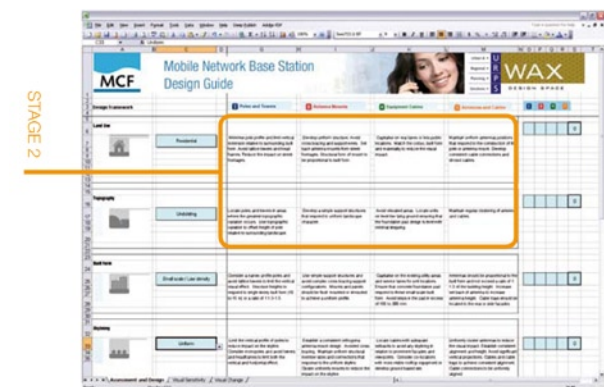
A specially formed Taskforce, set up by the Mobile Carriers Forum (MCF) and including representatives from Telstra, Optus, Vodafone and Hutchison, will now trial design strategies to implement across Australia in early 2008.

The Design and Innovation Taskforce has just released the 'Mobile Phone Base Station Design Guide' to provide carriers with a structured process to achieve better design outcomes for mobile phone towers and antennas.

The MCF Design and Innovation Taskforce technical paper is available at:

[WEBSITE LINK](#)

'The Design Guide allows carriers to follow well defined procedures to achieve the shared industry and public goal of minimising the visual impact of mobile phone towers and antennas.'



The Design and Innovation Taskforce was created in response to increasing concern from the public about the visual fit of network infrastructure in their community.

"Although the visual effect is a concern for some sectors of the community, nearly 95 per cent of Australians expect to be able to make a call on their mobile phone from anywhere at anytime,"

MCF Design and Innovation Taskforce Chairman Howard Game said.

"The Design Guide allows carriers to follow well defined procedures to achieve the shared industry and public goal of minimising the visual impact of mobile phone towers and antennas," Mr Game said.

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Industry taskforce improves visual impact of mobile phone towers

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Use existing vegetation to screen the facility.

The Design Guide Tool will be released following the trial and provides a structured process which can assist Carriers to document and assess the landscape context of a proposed mobile phone base station.

Once all of the information has been inserted describing the landscape context, the Design Guide Tool generates a design framework that provides guiding principles to be used in order to minimise the visibility of the proposed mobile phone base station at the identified site location. This approach is underpinned by the understanding that the more compatible the design is with the landscape, the more the visibility of the mobile phone base station can be ameliorated.

Mr Game said the industry was keen to fast track implementation of the Design Guide.

“So far we have received fantastic feedback about the Design Guide. The deployment teams

that have used the Design Guide are finding it an extremely powerful tool in achieving successful design outcomes,” Mr Game said.

The MCF National Council will tour Australia during a national road show in February to provide training to carriers and their staff on how to effectively use the Design Guide.

A briefing paper on the Design and Innovation Programme is available at:

[WEBSITE LINK](#)



Antennas colour matched and flush mounted to an existing building.

Hong Kong Government study quells Wi-Fi concerns



Survey site for the study at Pacific Coffee.

A comprehensive study released in October by the Hong Kong Government has found exposure levels at public Wi-Fi access points across the state's territories are well below internationally recommended safety limits.

Conducted in response to the increasing popularity of Wi-Fi and concern of its possible health effects, the study found actual measurements around Wi-Fi transmitters were as low as 0.03 per cent of the safety limit.

After taking measurements at over 40 locations, including locations with co-located Wi-Fi transmitters and locations with domestic and commercial exposures, the results showed all measurements were well below the limits set by the International Commission on Non-Ionizing Radiation Protection (ICNIRP).

“The levels of RF radiation measured are very low when compared with the limits as stipulated in the ICNIRP guidelines. It should be noted that the NIR [Non-Ionisation Radiation] levels

measured range from less than 0.003W/m² to 0.02W/m², or 0.03% to 0.2% of the ICNIRP exposure limit of 10 W/m²,” the report states.

The report, conducted by the Hong Kong Government's Office of the Telecommunications Authority (OFTA), can be found at:

[WEBSITE LINK](#)

“Based on the measurement results, it is concluded that Wi-Fi RF exposures in public areas in Hong Kong, including the government premises provided with public Wi-Fi services, are well below the international exposure limits which have been adopted in the CoP [Code of Practice].

“The measurement results also tally with WHO's finding that exposure levels due to Wi-Fi are generally very low. According to the WHO, there is no convincing scientific evidence that the weak RF signals from wireless networks (including Wi-Fi) cause adverse health effects.”

Hong Kong Government study quells Wi-Fi concerns

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The OFTA's brochure on radiofrequency electromagnetic radiation (Chinese & English) is available at:

[WEBSITE LINK](#)

The OFTA also performed theoretical calculations to assess worst case scenario exposure levels from public Wi-Fi access points.

"It is shown that at a distance of 0.1m from the antenna of the AP [Access Point], the maximum NIR level generated by a Wi-Fi access point is 1.3 W/m², which is far below the limit of the ICNIRP guidelines of 10 W/m² as adopted in the CoP," the report states.

According to the OFTA, Hong Kong is at the forefront of the world in the provision of public Wi-Fi service, with over 5200 access points in over 3000 locations in the city.



McDonalds survey site for the study.

Statistics on the number of Wi-Fi access points in Hong Kong can be found at:

[WEBSITE LINK](#)

MCF Program Manager Matt Evans said the study provided reassurance for Australians as the technology and standards used in Hong Kong are very similar to those being used in Australia.

"Wireless networks and Wi-Fi devices operated in Australia conform to the same international safety standards as in Hong Kong.

"The OFTA study confirms what other measurement studies conducted here in Australia and elsewhere around the world have found, that wireless networks operate at extremely low power levels and emit very little energy," Mr Evans said.

Earlier this year, Australian independent EME experts RadHaz Consulting confirmed that Australian Wi-Fi emissions were extremely low. The 2007 RadHaz home pilot study found Wi-Fi emissions 1-metre from a Wi-Fi access point were on average 100,000 times below the Australian safety standard. At a distance of 3-metres the exposure level reduces even further to be 333,000 times below the safety limit.

To put this in perspective it should be noted that the Australian safety standard already has a significant safety margin built into it.

UK Government report clears mobile phone technologies

Mobile phone technologies have not been found to be associated with any biological or adverse health effects, according to the UK's largest investigation into the possible health risks from mobile phone technology.

The six year long Mobile Telecommunications and Health Research (MTHR) program, conducted for the British Government at a cost of \$21 million, concluded there is no evidence of adverse health effects from mobile phone use.

“None of the research supported by the Programme and published so far demonstrates that biological or adverse health effects are produced by radiofrequency exposure from mobile phones,” the report concluded.

The MTHR media release is available at:

[WEBSITE LINK](#)



A significant finding of the report related to the possible biological effect mobile phone use might have other than just simply heating cells and tissue. The report found no evidence of biological effects and the Committee recommended ceasing research in this area.

“A very careful study of stress protein production demonstrated that the previously observed effect was probably due to heating. In the light of this and other recently published studies, the Committee considers that there is no need for further investigation of these phenomena.”

The programme also completed an investigation into radio frequency (RF) levels of picocell and microcell base stations in the community. These small base stations, which are often found on the side of buildings or inside offices, were found to be well within international safety guidelines.

The report committee also noted that it would be difficult to conduct population studies on exposures from mobile phone base stations because of the many and varying levels of RF sources the community are exposed to in everyday life.

“The outcome of such a study would be critically dependent on the ability to assess and classify exposure. However, this is far from straightforward, as for most people

RF exposures will be made up of many components including emissions from base stations, mobile phones (both those used by the

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UK Government report clears mobile phone technologies

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individual and those used in close proximity to the individual, eg phones used by other passengers on a train or bus), cordless phone systems, professional radio communications systems, broadcast TV and radio, pagers and radar installations.

“To complicate matters even further, all of these exposures, including those from mobile phone base stations, will change throughout the day as people go about their daily lives and move from location to location,” the report said.

The report concluded that such a study is not currently feasible for adults, but because there is still significant public concern about base stations, a well designed study might be beneficial.

“... in the absence of a reliable means of assessing personal exposure it has not been considered feasible to carry out a base station epidemiological study on adults.”

However, a study is in progress for children under the age of five which is expected to be completed later this year.

“Exposure assessment is less problematic with younger children (under five years old) as they are likely to spend most of their time in one or two locations. In addition, there will be no direct exposure to mobile phones in this age group.”

The MTHR report can be view at:

[WEBSITE LINK](#)

The research programme also included the largest and most robust studies of electromagnetic hypersensitivity (EHS) undertaken anywhere in the world. These studies found no evidence that the unpleasant symptoms experienced by sufferers are the result of exposure to signals from mobile phones or base stations.

“Taken together with earlier evidence, the new results from well-designed studies supported by

the Programme offer no support that the unpleasant symptoms experienced by electrically hypersensitive people result from exposure to RF signals emitted by mobile phones.”

The MTHR program was established with £8.8M in joint funding from the UK government and the mobile communications industry, as recommended by the Stewart report published in May 2000.

The Stewart Report is available at:

[WEBSITE LINK](#)

The MTHR program oversaw 28 research projects conducted by independent scientists at universities and research institutions around the UK covering areas of epidemiology, human volunteer studies, biological mechanisms, exposure and dosimetry, and risk communication.

Children not at risk finds Irish Government expert group

Despite common misconceptions and conflicting precautionary advice there is no data available to suggest that the use of mobile phones by children might be a health hazard, an expert group of the leading scientific researchers on electromagnetic fields has found.

The specially formed expert group recently published a comprehensive report prepared for the Irish Government Department of Communications, Energy and Natural Resources.

Formed in 2005, the expert group considered the concerns received during consultation with activist groups, industry, government representatives, councils and health authorities.

The report was issued largely in response to public concerns over the health effects of mobile telecommunications and it specifically addressed the key questions raised by the public about mobile phone use and living near base stations.

A media release for the report is available at:

[WEBSITE LINK](#)

The expert group conducted an in-depth scientific review of all the science on mobile phone use by children and found:

“There is no data available to suggest that the use of mobile phones by children is a health hazard.”



Towers where children gather

One of the key concerns looked at was if it was safe for children to use mobile phones and should base stations be located near places that children gather and they concluded:

“There is no scientific basis for, or evidence of, adverse health effects affecting either children or adults as a result of their exposure to RF fields from phone masts.

This applies irrespective of the location of the phone mast. While the maximum exposures from a phone mast will occur at some distance from the mast, and not in its immediate vicinity nor underneath it, the exposures are so low as to make it immaterial where masts are located with respect to schools, playgrounds, health centres or other places where children gather.”

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Children not at risk finds Irish Government expert group

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Thinner Skulls – Developing Brains

One of the common misconceptions that children's skulls are thinner and their brains are still developing and are therefore exposed more than adults was also addressed by the group.

“Recent expert analysis has concluded that there are no major effects due to focussing of the RF field in the head or to other properties of a child's head that might result in higher absorption of RF energy,” they concluded.

The time in children's development that might make them particularly vulnerable to RF exposures to the head is when they are aged two years and younger, the group said.

“Even though children are using mobile phones at a younger and younger age there are few users under the school age of five.”

Conflicting Precautionary Advice

The report noted however that there was conflicting advice about whether or not precautions should be taken by children.

“In the UK and Sweden the authorities recommend a precautionary approach to either minimise use (essential calls only) or minimise exposure (use a hands-free kit). In the

Netherlands the use of mobile phones by children is not considered a problem.”

“Three expert groups have reviewed the question of whether there should be restrictions on children using mobile phones,” the report said.

“Two have recommended that there should be some restrictions, while one has suggested that it would make no difference. Given this disagreement it seems prudent to suggest that mobile phone use should be limited in younger

children. However, there is no specific scientific justification for this advice.”

The report is available at:

[WEBSITE LINK](#)

Finally the report concludes:

“In the case of RF fields the scientific evidence does not suggest that children are more susceptible than adults to such exposure. However, without further research, the absence of an observed effect does not rule out the possibility that RF exposure might have some latent adverse health effect.

“Much of this necessary research is now underway, in coordinated studies across Europe and elsewhere, and more is planned. The results of this work will help answer many of the outstanding questions on the health effects of children's exposure to RF fields.”

Industry leadership on radiation protection strategy



Safety strategies for radiation protection and compliance developed by the Mobile Carriers Forum will be made available to the entire communications industry in an effort to advance the safety of radio frequency technology.

The release of the MCF Electromagnetic energy Regulatory Compliance Strategy (MERCS) was made during a presentation by the MCF at the 32nd annual Australian Radiation Protection Society (ARPS) Conference held in Brisbane in late October.

MERCS is a system designed to demonstrate compliance with the strict standards and regulations for the rollout of mobile phone network infrastructure.

More information about the ARPS Conference is available at:

[WEBSITE LINK](#)

Conducted to advance the knowledge on radiation safety measures, the ARPS conference provided a forum for the MCF to discuss its work on radiofrequency non-ionising radiation.

MCF Program Manager Matt Evans said the conference was an ideal opportunity for the industry to present its tools for safety protection.

“The MCF announced to delegates at the conference that the industry is now making the MERCS System available to all radiocommunications licensees in Australia. The MCF is continuing to work to enhance and strengthen the MERCS system for use by all radiocommunications licensees, not just those operating mobile networks,” Mr Evans said.

“The ARPS Conference offered an important opportunity for the MCF to showcase its work in electromagnetic energy (EME) compliance on

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Industry leadership on radiation protection strategy

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behalf of its carrier members. Specifically, the MCF, through National Council Member Mike Wood, provided an overview to the conference of its worlds best practice MERCS system,” Mr Evans said.

“Conference delegates heard how the MERCS strategy was developed by the mobile phone carriers to demonstrate compliance with regulatory legislation and enabled the management of multiple sources of EME through a set of proven processes, assessment and management systems and NATA accredited service providers.

More information about MERCS is available at:

[WEBSITE LINK](#)

The MCF also provided an overview of its strategy for implementation of the revised Environmental EME Report. Developed by the

Australian Radiation Protection and Nuclear Safety Agency, the Environmental EME Reports ensure that information about mobile phone base stations and levels of EME are clearly provided to interested stakeholders in a meaningful way.

Apart from the telecommunications industry, attendees of the conference were also treated to presentations from radiation safety experts across several fields including medicine, mining and science.

ARPS is a professional society of members engaged in one or more aspects of radiation protection. The Society was founded in 1975 and has more than 250 members engaged in radiation protection activities.

More information about the Australian Radiation Protection Society is available at:

[WEBSITE LINK](#)

Local Government National Assembly to discuss electromagnetic radiation regulations

The Australian Local Government Association (ALGA) will discuss what is needed to ensure councils comply with regulations on electromagnetic radiation at its 14th National General Assembly to be held in Darwin in late November.

This year's theme is 'A Climate for Change' and will address a range of important and topical issues facing local government.

"Local government is an essential part of Australia's federal system. Councils are best placed to take an holistic view of the economic, environmental, social and cultural elements of community life. They have a key leadership role at the local and regional level," Paul Bell, Australian Local Government Association President, said.

"By setting out its National Agenda, local government seeks a more productive partnership with the Commonwealth, states and territories



aimed at promoting community wellbeing in its broadest sense."

A plenary address titled *Electromagnetic Radiation – Councils at risk from regulatory failure* will be held at 4pm on the first day of the National General Assembly.

The National General Assemble program can be found at:

[WEBSITE LINK](#)

The ALGA National Agenda which outlines the views of delegates on major national issues affecting councils and the communities they serve has been developed and refined at the National General Assembly each year.

The National Agenda currently states:

"Local government remains extremely concerned at the failure of federal and state/territory governments to provide an adequate regulatory framework for telecommunications facilities, particularly mobile phone towers..."

This has remained the ALGA's position for nearly 10 years.

The ALGA National Agenda is available at:

[WEBSITE LINK](#)

Local Government National Assembly to discuss electromagnetic radiation regulations

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Mobile Carriers Forum Program Manager, Matt Evans, will attend the National Assembly to discuss any concerns raised by local government.

“The current federal regulatory regime recognises that mobile communications services are like other utilities such as water and electricity, and allow for the development of national mobile services which are demanded by communities throughout Australia. But the regime is not without its checks and balances,” Mr Evans said.

The MCF said it was vital that existing planning laws remain to allow for the growth and development of mobile phone networks. The current planning laws had been rigorously tested and met the demands of the public, customers, local governments and industry.

“Regulations also imposes mandatory public health and safety controls on the operation of networks, and require carriers to engage directly



with local councils and communities about the rollout of proposed new facilities,” Mr Evans said.

In Australia, mobile communications are now taken for granted as an essential communications tool – they are regarded as a basic utility to modern life, he said.

“Since 2001, there have been more mobile services connected in Australia than fixed line services, and more than a quarter of all calls

nationally are made on mobile phones,” Mr Evans said.

“Mobile phone carriers are working cooperatively with Councils so these essential services can be delivered.

“For example, carriers produced ACIF Code Guidelines for Local Government in conjunction with local government representatives in 2006.

“The guidelines are designed to show councils how they can become constructively involved in the decision making and consultation processes associated with the location and design of low impact telecommunications facilities.

“We extend an invitation to Mayors, Councillors and CEO’s of Councils from across Australia to visit us at the MCF booth during the General Assembly to discuss how Councils and Carriers can work more cooperatively for the benefit of communities.

Legislation amendments would harm Australia's growth

Changes to Australia's Telecommunications Act to increase restrictions on the rollout of mobile phone base stations are unnecessary, the Mobile Carriers Forum said in response to a Private Members Bill issued in Parliament in September.

Labor MP Kate Ellis introduced the Telecommunications (Amendment) Bill 2007 to Federal Parliament aiming to ensure mobile phone towers were not positioned inappropriately.

The Telecommunications (Amendment) Bill 2007 is available at:

[WEBSITE LINK](#)

But the MCF said making unnecessary changes to the existing laws would hold back the growth and development of the mobile phone industry.



“Such a move would stymie the rollout of vital mobile phone infrastructure and amending planning processes ran the risk of severely limiting the mobile phone coverage for local communities,” MCF Program Manager Matt Evans said.

Mr Evans said it was vital that existing Federal legislation in relation to ‘low Impact facilities’

Labor MP for Adelaide Kate Ellis introduced the Telecommunications (Amendment) Bill 2007 to Federal Parliament in September.

remain to allow for the growth and development of mobile phone networks. The current planning exemptions and compliance Codes have been rigorously tested and meet the demands of the public, customers, local governments and industry.

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Legislation amendments would harm Australia's growth

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“As the demand for mobile telecommunications grows, the network of base stations needs to be expanded so that the highest standards for reliable mobile telecommunications standards are provided,” Mr Evans said.

Under the proposed bill, mobile phone base stations would not be permitted within 200 metres of schools, hospitals or child care centres.

But Mr Evans said there was no scientific reason to set up exclusion zones around those ‘community sensitive’ areas, and it could put people’s lives at risk.

Mr Evans said base stations sited further from a ‘community sensitive’ location may need to operate at higher power levels – but still within strict safety limits – because exclusion zones could cause poor contact between a handset and a base station and require increased output to establish and maintain a call.

‘exposure levels at base stations around the country were 5000 times below the Australian safety limit...’

“Exclusion zones could also lead to higher dropouts and unsuccessful call set-ups and reduced battery life which could all result in a failed emergency call,” Mr Evans said.

“Exclusion zones could have unintended consequences if someone at a school or childcare centre was prevented from using their mobile phone in an emergency. A mobile phone call can make all the difference in instances where time is of the essence and people do not have access to a fixed line phone.”

Mr Evans noted that more than 64 per cent of calls to emergency services originate from mobile phones.

Ms Ellis’ bill also calls for an audit of mobile phone base stations and the health impacts on nearby residents.

But Mr Evans said numerous reviews by health authorities had already made it clear that mobile phone towers posed no health risk.

“Research by the Australian Radiation Protection and Nuclear Safety Agency found that measurements of exposure levels at base stations around the country were 5000 times below the Australian safety limit in locations where the levels were expected to be at their highest.

“The World Health Organisation also found no scientific evidence that the weak RF signals from base stations causes adverse health effects,” Mr Evans said.

Study shows Next G helps the hearing impaired



National
Acoustic
Laboratories

Australian research shows Telstra's Next G network produces a lower level of interference than the CDMA network for the hearing impaired, and significantly less interference than that found with GSM mobile phones.

The study by National Acoustic Laboratories found Telstra's Next G network was unlikely to create any audible interference for the more than 450,000 Australian's with hearing aids and cochlear implants.

Telstra's Next G network, which operates using WCDMA (Wideband Code Division Multiple Access) technology, is set to take over from the CDMA network which is earmarked to shut down next year.

Telstra's media release is available at:

[WEBSITE LINK](#)

The study suggests that the change over in networks will be a slight improvement for the hearing impaired.

“The conclusion of this exploratory research that is based on the subjective assessment of audible interference is that WCDMA and CDMA signals produce similar levels of interference in hearing aids used in microphone setting. Also the test results indicate that WCDMA produces a slightly lower level of interference than CDMA.”

The study also found that phones on the Next G network outperformed phones on the GSM network.

“Hearing aid users are likely to experience significantly more audible interference from GSM digital mobile telephones than either WCDMA or CDMA digital mobile telephones.”

The National Acoustic Laboratories study is available at:

[WEBSITE LINK](#)

Better Hearing Australia, a not-for-profit organisation providing rehabilitation and help for Australians with hearing impairments, hosted a workshop in September giving people with hearing aids and cochlear implants a chance to trial Telstra's Next G network at Brisbane's Mater Hospital.

Better Hearing Australia National President Alan Keir said the workshop was an important opportunity for people with hearing aids to familiarise themselves with the technology.

“For hearing impaired people, it's very important to minimise the discomfort and inconvenience of using a mobile phone,” Mr Keir said.

Further research on mobile phone interference for the hearing impaired is available at:

[WEBSITE LINK](#)

Cancer cluster story reveals 'plausible explanations'

An episode of the ABC science program *Catalyst* aired in October has investigated the science behind cancer clusters providing 'plausible explanations' for the results of the declared cluster at the ABC Toowong television studios in Brisbane.

Despite a full investigation into the cluster, concern still remains about the unknown cause of the 16 breast cancer cases.

However, the independent panel of experts appointed to investigate the cluster at the Toowong studios found no evidence radio frequency electromagnetic fields were to blame.

The independent expert panel's scientific report can be found at:

[WEBSITE LINK](#)

Catalyst interviewed several scientists, with some offering 'plausible explanations' for the cluster.

Sydney Cancer Centre research director Professor Bruce Armstrong, also the chairman of the Toowong expert panel, suggested shift work could be a possible explanation.

"There is some evidence in the literature that working shift work does increase likelihood of breast cancer," Professor Armstrong said.

The program explained that shift work upsets the body's 12 hour melatonin cycle. Melatonin is formed in the pineal gland in the middle of the brain. It's a powerful anti-oxidant that can prevent DNA damage, a precursor to cancer. And importantly it also regulates oestrogen levels which most types of breast cancer rely on to grow.

A summary and transcript of the *Catalyst* program is available at:

[WEBSITE LINK](#)



*Catalyst reporter
Dr Maryanne Demasi*



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Cancer cluster story reveals 'plausible explanations'

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Another possible explanation for the cluster came from Professor Bill Rawlinson, head of the Virology division at Prince of Wales Hospital in Sydney.

Professor Rawlinson believes a virus in mice, called 'Mouse Mammary Tumour Virus' (MMTV), causes breast cancer in laboratory animals. Professor Rawlinson's team and other international scientists have discovered a similar virus exists in humans.

"We have no direct evidence that the MMTV like virus causes breast cancer in women. In women with breast cancer we find the MMTV like virus in around 40 to 45 per cent of their tumours. The association does not prove causation," Professor Rawlinson said.

The full episode of *Catalyst – Cancer clusters* – is available to watch (.wmv) at:

[WEBSITE LINK](#)

Monash University Occupational and Environmental Health Professor Geza Benke gave a presentation on cancer clusters at the Australian Centre for Radiofrequency Bioeffects Research (ACRBR) Science Week in October.

Professor Benke said there was no evidence to link mobile phones or base stations to the cause of the ABC Toowong cancer cluster.

"An EMC technology report found all the radio frequency levels at mobile phone frequencies at the ABC Toowong site were below limits of detection," Professor Benke said.

"Radio frequency radiation at mobile phone frequencies is not an established carcinogen, but it is often suspected as a cause of cancer clusters."

Professor Benke said cancer cluster investigations are very complex, adding that many alleged clusters fail to be confirmed after investigation.

'An EMC technology report found all the radio frequency levels at mobile phone frequencies at the ABC Toowong site were below limits of detection.'



UK Government to investigate Wi-Fi safety

The UK Government has ordered a full investigation into the use of wireless networks and Wi-Fi devices in homes, schools and offices amid concern over the safety of the technology.

The Health Protection Agency (HPA) will spend two years conducting lab tests and measuring exposure levels before compiling a report on the health risks posed by Wi-Fi and Wireless Local Area Networks (WLANs).

However, chief executive of the HPA Professor Pat Troop said there is no reason to be concerned about Wi-Fi.

“There is no scientific evidence to date that Wi-Fi and WLANs adversely affect the health of the general population. The signals are very low power, typically 0.1 watt (100 milliwatts) in both the computer and the router (access point) and

the results so far show exposures are well within ICNIRP guidelines,” Professor Troop said

The HPA media release is available at:

[WEBSITE LINK](#)

Fears over the potential risks of Wi-Fi have led some schools in the UK to order their removal from classrooms. The Professional Association of Teachers in the UK issued a statement earlier this year calling for wireless networks to be suspended in schools until an inquiry is launched.

Professor Troop said banning the use of Wi-Fi was unnecessary, referring to the current scientific evidence showing no health risks.

“Given this, there is no particular reason why schools and others should not continue to use



*Chief executive of the Health Protection Agency
Professor Pat Troop*



UK Government to investigate Wi-Fi safety

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WiFi or other wireless networks. However there has not been extensive research into what people's exposures actually are to this new technology and that is why we are initiating this new programme of research and analyses.

"We have good scientific reasons to expect the results to be re-assuring and we will publish our findings," Professor Troop said.

The HPA position statement on the safety of Wi-Fi is available at:

[WEBSITE LINK](#)

Locally, the Australian Centre for Radiofrequency Bioeffects Research (ACRBR) announced earlier this year they will conduct a study to measure the levels of electromagnetic fields within a selected group of Melbourne homes.

'We have good scientific reasons to expect the results to be re-assuring and we will publish our findings.'

Measurements will be recorded in a diverse selection of home environments and will include cordless and mobile phones, Wi-Fi devices, wireless LANs, Bluetooth, wireless remote controls and baby monitors.

A summary of the ACRBR research program is available at:

[WEBSITE LINK](#)

In Brief

Consultation for towers over the Christmas & New Year period

Mobile phone network carriers and the Australian Communications Media Authority (ACMA) have agreed to change the consultation guidelines for the rollout of base stations over the Christmas and New Year period to allow councils and the community a greater amount of time to respond.



Whilst not stipulated in the Code for Deployment of Mobile Phone Network Infrastructure, carriers will 'stop the clock' during the holiday season when counting the time period councils and the community have to provide feedback on proposals.

The changes include:

Council Comments – Five business days minimum: Agree that the period between 21/12/07 – 4/1/08 be 'non business days' for the

purposes of ACIF Code Council comments on consultation plans.

This means council plans submitted in the last week of 2007 will have until at least 14/1/08 for comment depending on delivery periods. It's encouraged that carriers advise councils additional time may be available on request.

Community Comments – 10 business days minimum: Agree that the period 17/12/07 – 7/1/08 be 'non business days' for the purposes of ACIF Code Community comments.

This means community consultation plans commencing in the last business week of 2007 will have at least until 21/1/08 for comment. Councils can provide further comment during this period.

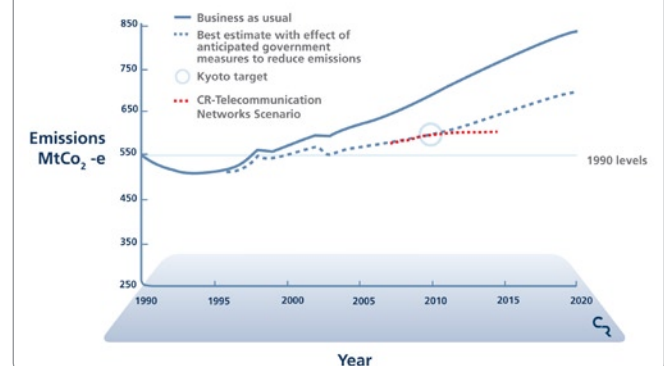
Newspaper Ads – Section 5.6.3: Carriers to consider appropriate timing of newspaper ads having consideration of publication dates and holiday periods. Ads should not be published during the agreed 'non business days' for community consultation 17/12/07 – 7/1/08.

Study finds mobile phone networks can cut greenhouse emissions

Telecommunications networks could help reduce Australia's greenhouse gas emissions by nearly five per cent in eight years, at little or no cost to the consumer, through the use of energy saving technologies.

Carbon emissions could be cut by 4.9 per cent or around 27 million carbon tonnes per year by

Figure i: Combined effect of telecommunication networks Carbon-Opportunities



In Brief

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2015, delivering up to \$6.6 billion a year in cost savings, research commissioned by Telstra from climate change experts, Climate Risk, found.

The Climate Risk media release is available at:

[WEBSITE LINK](#)

Report author Karl Mallon said the telecommunications sector alone could help stabilise emissions in Australia.

“Our analysis found that by harnessing smarter networks and devices it is possible to deliver reduced emissions while also reducing expenditure on energy for the end user,” Dr Mallon told The Age.

Dr Mallon outlined seven major and new technologies that can reduce or avoid the release of emissions.

These include cutting energy use through the remote power management of appliances, such

as microwaves, across broadband networks and presence-detecting services that turn off devices that are on but not being used.

Working remotely, through the use of hand held devices, could help cut emissions generated by workers travelling to and from offices. Dr Mallon also praised video conferencing, which has helped to reduce the need for air travel.

The full report is available at:

[WEBSITE LINK](#)

Mobiles conquer Mt Everest

A mobile phone tower located 6500m up Mt Everest was successfully tested in November, completing a project to provide mobile phone coverage for the 2008 Olympic torch relay which will visit the mountain.



The new base station, and two other China Mobile towers at 5200m and 5820m, provides mobile phone service along the entire Mt Everest climbing route.

Huawei Technologies, a leader in next generation telecommunications network solutions, announced in September it had been selected by China Mobile to install the GSM Base Station on the mountain.

The President of Huawei Mobile Networks Yu Chengdong said the tower would be the highest base station in the world.

“We are delighted to cooperate with China Mobile to build the highest mobile telecommunication network in the world and to help the 2008 Beijing Olympic Torch Relay Team reach the summit of Everest safely,” Mr. Chengdong said.

The Huawei media release is available at:

[WEBSITE LINK](#)