

# mobile inSite

news, issues and science on mobile  
telecommunications deployment

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## Editorial

**Welcome to the May 2011 edition of *Mobile InSite*, the Mobile Carriers Forum's newsletter on news, science and policy decisions about mobile telecommunications networks.**

The rapid uptake of mobile broadband in Australia is placing greater strain on current mobile infrastructure and requires an increase in base station deployment to meet consumer demand. This edition of *Mobile InSite* highlights the need for the mobile industry and the Australian Government to continue their efforts to educate the public about mobile phone technology to ensure they can be confident in its safety.

[Our article](#) on the most recent results from the Federal Government's survey of mobile phone base stations shows telecommunications carriers are operating their antennas and base stations at

levels well below the allowable safety limits set by Australia's standards setting body ARPANSA. Emissions from the most recently tested base stations were recorded at levels around 300 times lower than the standard limit for public exposure. ARPANSA's rolling survey is an important process to verify base station safety, but there is more the government can do ensure public confidence.

The British Government's [new information leaflet](#) on mobile phones and base stations is an excellent example of how active government information and education programs can alleviate public health concerns. Their updated leaflet says there is no immediate need for concern when using mobile phones or having a base station in your area because, despite much research, there is no convincing evidence that either will cause harm.



For carriers to maintain their low exposure levels, more high speed 3G mobile phone base stations are needed, according to [our report](#) on a French study of more than 3.5 million calls from 2G and 3G networks. The study confirmed that the closer a user is to a base station the less exposed they are to electromagnetic radiation from their handset because it uses less power to connect to the network.

## Editorial

The International Agency for Research on Cancer's (IARC) assessment of the radio waves emitted by radio frequency transmitters including mobile phones, base stations, Wi-Fi, microwaves and TV and radio broadcasts is the focus of our [lead article](#). IARC regularly runs assessments by panels of independent experts of the carcinogenic hazards posed to humans by a variety of agents, mixtures and exposures, in order to provide advice to health authorities around the world.

The IARC review in 2011 is a key step in assessing the scientific evidence; however, none of the likely classifications of probable, possible or undecided are going to provide the definitive

answers on mobile phones and health risks which some members of the public are looking for.

The IARC evaluation will only identify the potential for radio frequency fields to cause cancer in some circumstances and they do not consider the likelihood of the harm occurring within the exposure limits of current safety standards. Dr Michael Repacholi from ICNIRP, the international standard setting body, explains in [our report](#) that current ICNIRP safety limits are protective of all people.

Other articles covered in this edition include the ACMA's acknowledgement of the efforts of service providers during the recent natural disasters in Australia, a recent German study

has shown the appearance of a phone mast not it's signals may affect sleep quality, claims of a cancer cluster caused by a phone tower in a Spanish town were dispelled after a an epidemiological study, and a French case study has found cooperation and negotiation with community groups is better than relying on scientific experts to support tower installations.

As always we appreciate any feedback from our stakeholders within industry, government and the community about any of the stories in this edition.

### **Matt Evans**

Program Manager

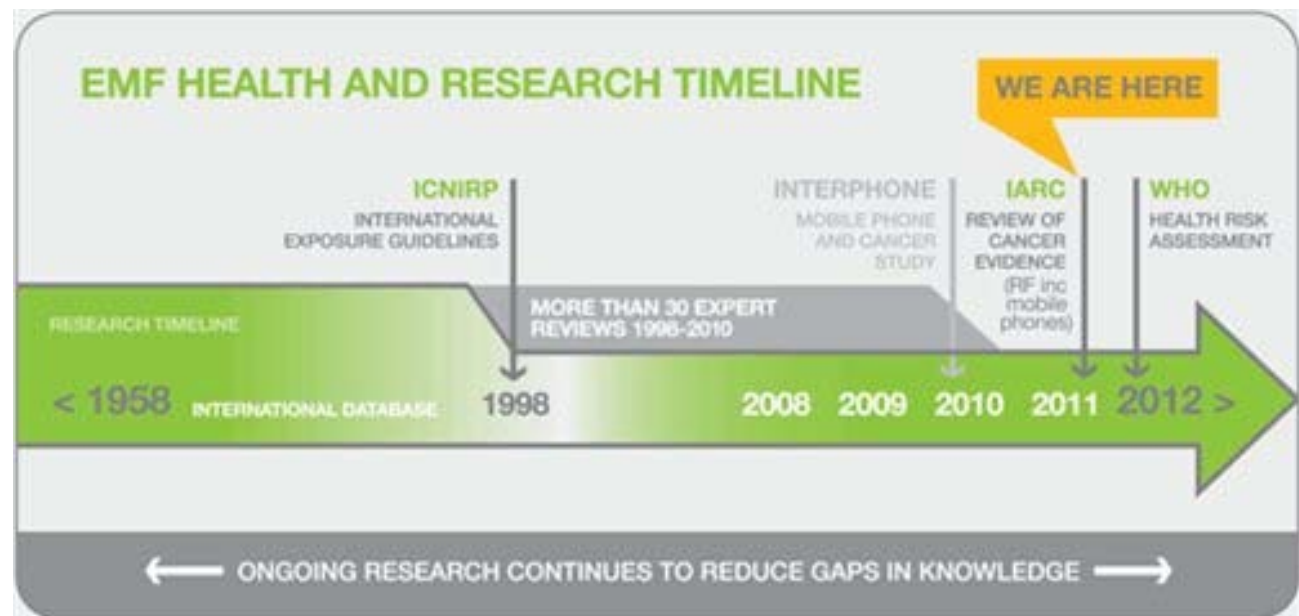
Mobile Carriers Forum

## Experts to review the cancer hazard of radio frequency emissions

Later this month the radio waves emitted by radio frequency transmitters including mobile phones, base stations, Wi-Fi, microwaves and TV and radio broadcasts will be assessed by the International Agency for Research on Cancer (IARC) who will decide if they have the potential to cause cancer.

IARC regularly runs assessments by panels of independent experts of the carcinogenic hazards posed to humans by a variety of agents, mixtures and exposures, in order to provide advice to health authorities around the world.

Since its first evaluation of ultraviolet light in 1971, IARC has reviewed more than [900 agents](#) with cancer causing potential. This includes alcoholic beverages, asbestos, benzene, formaldehyde, coffee, hair colouring products,



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## Experts to review the cancer hazard of radio frequency emissions

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paracetamol, power line magnetic fields, and shiftwork that involves disruption to normal sleep patterns.

The [8-day meeting](#) to evaluate RF electromagnetic fields, which includes mobile phones, microwaves and radar, will be held from 24 to 31 May 2011 at IARC headquarters in Lyon, France.

By the end of the meeting the [expert panel](#) will decide if the exposures from radio frequency transmissions including mobile phones, base stations and TV and radio broadcasts are 'probably' or 'possibly' carcinogenic to humans, or if there isn't enough evidence to make a decision. IARC has only ever classified one agent it has reviewed as a non-carcinogen, so this classification is unlikely.

AMTA Chief Executive Officer, Chris Althaus, said: "The IARC review in 2011 is a key step in assessing the scientific evidence; however, it is unlikely to provide any definitive answers on mobile phones and health risks which some members of the public are looking for."

"The public will expect answers on whether or not radio frequency transmissions including mobile phones and their base stations are a cancer hazard and none of the likely [classifications](#) of probable, possible or undecided is going to provide this certainty."

IARC evaluations only identify the potential for radio frequency fields to cause cancer in some circumstances and they do not consider

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## Experts to review the cancer hazard of radio frequency emissions

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the likelihood of the harm occurring within the exposure limits of current safety standards. Therefore, the evaluation may identify the potential or lack of knowledge about a cancer hazard even when risks are very low at current exposure levels, Mr Althaus said.

“Whatever IARC decides, it is likely to increase concern for some consumers and they will be looking for health agencies and governments to provide them with advice on what action to take following the review,” Mr Althaus said.

“While it will not provide clear-cut answers for the public, it may identify areas of research needed to provide these answers in the future.”

In the interests of transparency IARC will allow a number of observers with relevant scientific credentials, including industry observers, to attend these meetings, but they cannot influence or lobby the expert panel members.

It is expected the classification outcome will be published soon after the working group meeting finishes.

Following the IARC evaluation, the World Health Organization (WHO) and national health agencies will review the science in regard to cancer risk and for all other health consequences from human exposure to RF fields, including what advice to give to the public and if any actions are needed to reduce the risks.

The current [WHO fact sheet on mobiles and health](#) says, a large number of studies have been done over the past two decades to assess whether radio signals pose a potential health risk and to date no adverse health effects have been established.

The most recent update on brain cancer risks from IARC the [World Cancer Report 2008](#) says:

“With reference to radio frequency, available data do not show any excess risk of brain cancer and other neoplasms associated with the use of mobile phones.”

Additional information: [www.emfexplained.info](http://www.emfexplained.info)

## ACMA acknowledge carriers performance during recent natural disasters

**The Australian Communications and Media Authority (ACMA) have praised Australia's mobile carriers for their efforts in recent natural disasters.**

In a [statement](#), ACMA Chairman, Chris Chapman acknowledged the carriage service providers' endeavours to maintain and re-establish vital mobile telecommunications after Cyclone Yasi and during the flood crisis in Queensland and Victoria.

"More broadly, the ACMA has received regular briefings from the major telecommunications providers during the recent run of natural disasters, outlining their preparatory actions, assistance to emergency services, customer support and infrastructure restoration," Mr Chapman said.



"Given the severity and overlapping demands placed on the telecommunications sector by these recent natural disasters, the ACMA applauds the sector for responding quickly and appropriately. With the combination of power outages, access difficulties and damage to physical infrastructure, the telecommunications providers should be recognised for their dedicated and responsive endeavours."

However, Mr Chapman also noted there were still areas of improvement in the industry's response.

"In such natural disasters, it is nonetheless important to examine how responses can be further improved." Mr Chapman said.

In their submission to the flood inquiry, Optus thanked the state government and Emergency Management Queensland for allowing Optus engineers quick access to flooded areas, but said communication between the government and industry could still be improved to allow them quicker access.

"Due to the critical nature of the services telecommunications providers provide in these times of disaster, telecommunications providers

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## ACMA acknowledge carriers performance during recent natural disasters

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need to be granted immediate priority access into areas which are provided to other utilities,” the [Optus submission](#) said.

“Optus believes that proper preparation, planning and engagement from State and Local Government will ensure better communication between telecommunications providers and government authorities during the critical hours during and after a disaster event.”

AMTA Chief Executive Officer, Chris Althaus, said the ACMA’s assessment of the mobile telecommunications carriers performance in disasters was important because it had recently been questioned by the Police Federation of Australia.

“Unfortunately, bitter experience has shown that commercial communications services almost always fail the police and emergency services,” the Police Federation claimed in a [recent article](#).

But the Queensland Floods Commission of Inquiry has heard [complaints](#) from several police officers that they were heavily reliant on their personal mobile phones during the flood crisis.

“Several police officers told the inquiry they relied on their personal mobile phones during the floods, as their radios weren’t working and some police stations lost power and landlines,” the Sydney Morning Herald [reported](#).

However, [current debate](#) between industry and emergency services has lost sight of what is in the best interest of the public, according to Mr Althaus.

“AMTA and its members consider it vital that the partnership between industry and emergency services continue to evolve and leverage the specific expertise and capabilities of both parties to maximise the benefits of advanced mobile telecommunications services.”



A temporary Optus satellite provides vital communications after Cyclone Yasi.

## British Department of Health promote base station safety in new leaflet

**The Department of Health in the UK has updated their health advice for mobile phone base stations, in a new leaflet that offers the public further assurances of base station safety.**

The new leaflet provides a more comprehensive account of the current scientific consensus compared to their 2005 publication '[Mobile phone Base stations and Health](#)', which was based on the Stewart report, produced for the British Government by a group of independent experts led by Sir William Stewart in May 2000.

"The group looked at recent research, took evidence from scientists, and listened to the views of the public at open meetings around the UK," the [2005 leaflet](#) states.

"Their conclusion was that: 'The balance of evidence indicates that there is no general risk to

the health of people living near base stations, on the basis that exposures are expected to be small fractions of guidelines.'"

Whereas the new publication offers a more convincing assessment of the current scientific evidence:

"There is no immediate need for concern when using mobile phones or having a base station in your area. This is because, despite much research, there is no convincing evidence that either will cause harm," the [new leaflet](#) reads.

"The levels of radio waves emitted from base stations in places where the public have access are generally found to be hundreds or thousands of times below the health and safety guideline limits."

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## British Department of Health promote base station safety in new leaflet

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The Health Department said the leaflets will be distributed through phone retailers, doctors' offices, libraries, book, music and electronics retailers, post offices and supermarkets in the UK.

"It is essential that we provide people with the evidence on this issue to allow them to make an informed choice about using their mobile phone," said Dr. Liam Donaldson, England's former chief medical officer.

The new leaflet also suggests if people are concerned about radiation emitted from mobile phones then they can take steps such as texting and using hands free kits to limit their exposure.

Some [media](#) and activist sites, such as [Powerwatch](#), have viewed the precautionary advice in the leaflet as a change in the government's stance.

However, the new publication mostly restates the department's previous advice and follows other countries preference for taking a precautionary approach to health advice for children.

"As a precaution, the UK Chief Medical Officers advise that children and young people under 16 should be encouraged to use mobile phones for essential purposes only, and to keep calls short. If you are concerned, you can take steps to reduce your exposure such as using hands free kits or texting," the [new leaflet](#) says.

Similarly the 2005 leaflet '[Mobile phones and health](#)' also offered precautionary advice for children.

"The expert group has therefore recommended that in line with a precautionary approach, the widespread use of mobile phones by children

(under the age of 16) should be discouraged for non-essential calls."

But in regards to Base Stations, the Health Department appears to be dismissing the need for a precautionary approach, now siding with the weight of scientific evidence.

"Gaps in scientific knowledge led the Stewart Group to recommend a precautionary approach to the use of mobile phones and base stations until more research findings become available," the 2005 leaflet said.

While the updated advice states, "Research focusing on mobile telephony over the last ten years has shown no convincing evidence that the radio signals from mobile phones and base stations cause adverse health effects."

## Government survey continues to find mobile phone base station emissions well within safety standards

**The most recent results from the Federal Government's survey of mobile phone base stations has found their radio frequency emissions continue to fall well below Australia's safety limits.**

The results from two more base station sites: [Heidelberg Heights](#) and [Roxburgh Park](#) in Melbourne's northern suburbs are the latest from the Australian Radiation Protection and Nuclear Safety Agency's (ARPANSA) [annual rolling survey](#).

The results have again shown that Australia's telecommunications carriers are operating their antennas and base stations at levels well below the allowable limit, said MCF Program Manager Matt Evans.

He said the results revealed that the maximum level of RF emissions from these base stations (operating at full power) determined from measurements at locations around each site was

just 0.265 per cent of the [ARPANSA Standard limit](#) for public exposure for the Heidelberg Heights base station and 0.315 per cent for the Roxburgh Park base station. These levels are around 300 times lower than the safety standard.

"This testing managed by the Government continues to show the significant additional margin of safety between the maximum power of a base station and Australia's safety standards," Mr Evans said.

The base stations sites tested are [selected](#) to cover all carriers, technologies, geography and type of installations and also if they caused significant community concerns.

Local councils were invited to nominate base stations to be checked along with suggested sites by members of the EME Reference Group. This group includes representatives from

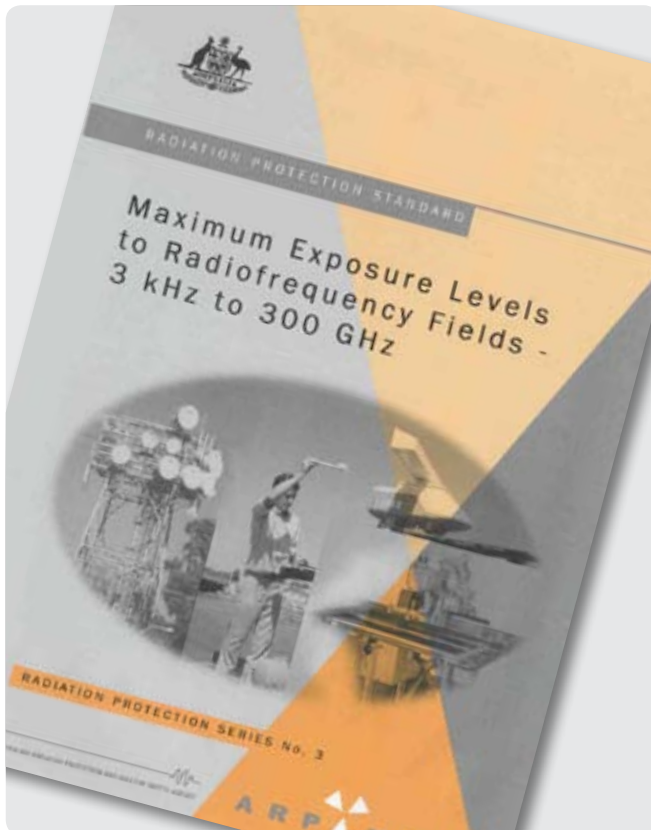
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Radiofrequency levels at Heidelberg Heights were recorded at 0.265 per cent of the safety limit

## Government survey continues to find mobile phone base station emissions well within safety standards

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consumer organisations, the telecommunications industry, the health sector, academic organisations, other government organisations and community groups.

It was established to allow community input into the Committee on Electromagnetic Energy Public Health Issues (CEMEPHI) a body that coordinates Australian Government action on electromagnetic energy public health issues.

“We hope these clear and unambiguous results offer reassurance to those people who have concerns about base stations safety in other cities and towns around Australia,” Mr Evans said.

“However, the MCF acknowledges that some people are genuinely concerned about base station safety and we are committed to addressing these concerns responsibly through active community and local government consultation.”



Radiofrequency levels at Roxburgh Park were recorded at 0.315 per cent of the safety limit.

## More 3G base stations will reduce mobile phone exposures

**More high speed 3G mobile phone base stations would significantly reduce electromagnetic radiation exposure to mobile phone users, researchers in France have found.**

Their analysis of more than 3.5 million calls from 2G and higher frequency 3G networks, in Lyon and Paris, found overall that mobile phone technologies operate at much lower EME levels than the internationally recommended exposure limits.

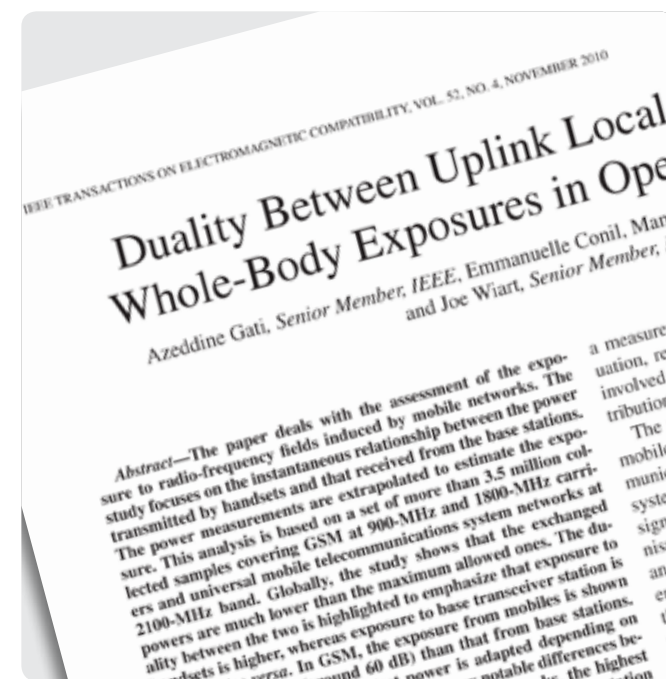
The researchers used network probes installed at the base station controllers in 2G networks and at the radio network controller in 3G networks, and from specially designed 'trace mobiles' that can register the transmitted and received powers during a call.

The [study](#), conducted by researchers at France Telecom lead by Dr Azeddine Gati, confirmed that mobile phones tend not to operate at maximum power levels during everyday use.

"Globally, the study shows that the exchanged powers are much lower than the maximum allowed ones," the researchers said.

An earlier [study](#) by the same research lab looked at the output of phones in everyday use and found that for a person walking around Paris, their mobile phone operated predominately around 1 per cent of full power and only operated at full power for less than 5 per cent of the time.

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The study confirmed that mobile phones tend not to operate at maximum power levels during everyday use.

## More 3G base stations will reduce mobile phone exposures

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In order to avoid network interference, improve handset battery life and available call time, mobile phones and their base stations constantly adapt to the minimum power required to maintain a quality calls – this is known as adaptive power control.

The study also confirmed that the closer a user is to a base station the less exposed they are to the handset because it uses less power to connect however they also found significant differences between 2G and 3G networks.

“Although the handset power is adapted depending on the receiving conditions, the analysis shows notable differences between 2G and 3G networks,” the researchers said.



Azeddine Gati

“The higher the exposure to the base stations (good coverage) is, the lower the exposure to mobile phones is. This is particularly true in 3G systems because of the wide dynamic

range of handsets and the fast power control. Nevertheless, this observation holds in 2G systems as well.”

In some cases with good 3G network coverage the exposure from the mobile phone handset was the same as the base station.

“The results underscored that exposure due to the base stations is clearly much lower than exposure to mobiles, but for 3G-UMTS measurements, the fast power control and the mobiles high sensitivity adapt the transmitted power so that the induced local exposure becomes considerably reduced and, in some cases, equivalent to base stations,” the researchers concluded.

## ICNIRP Chairman Emeritus says no reason for governments to lower limits

**In a recent [interview](#), Chairman Emeritus of ICNIRP Dr Michael Repacholi explained the research and science behind international safety standards and why there is no need to lower current standards.**

The International Council for Non-Ionizing Radiation Protection (ICNIRP) guidelines form the basis of [World Health Organisation](#) (WHO) recommendations to governments and have been widely adopted around the world in national safety standards. They form the basis of the Australian safety standard which is set by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA).

Despite some suggestions that the ICNIRP limits are out dated, Dr Repacholi said the limits are still relevant 15 years after their initial publication.

“Some 2-300 million dollars of research has gone in to the last 10-15 years to try and find if there are any effects below the ICNIRP safety limits and after all the research we still haven’t found any effect.”

Dr Repacholi’s view of some countries setting safety standards below the ICNIRP limits is that it is unnecessary.

“Wireless and WiFi are thousands of times below the standard so there is no purpose of being precautionary,” Dr Repacholi said.

“Don’t reduce limits on the basis of precaution or concerns that people have, because it’s been found through different surveys that by doing that you actually increase concern amongst the public.”



Dr Repacholi said after 10-15 years of research we still haven’t found any health effects below the ICNIRP safety limits.

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## ICNIRP Chairman Emeritus says no reason for governments to lower limits

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In this recent interview, Dr Repacholi also explained the extensive process of health risk assessments, such as the ICNIRP safety limits, which can take a number of years to complete.

“Generally there are committees that have different areas of expertise to be able to review the scientific literature. They sit down and review each of the studies to identify each of their strengths and weaknesses and the quality of the information they provide,” Dr Repacholi said.

“Then they synthesise this information to identify whether there are adverse health effects occurring at different levels of exposure. Once you have that data then you can identify the levels and incorporate safety factors that will allow you then to produce the exposure limits.”



Dr Repacholi said a number of top scientific agencies, such as the WHO, ICNIRP, the European Commission and national committees, are constantly reviewing the literature.

“The public can be reassured that there are many groups looking at the science to see if there are

any effects that have come out that are likely to change our view on the safety of RF [Radio frequency].”

Former leader of the World Health Organisation’s [EMF project](#) and Past President of the Australian Radiation Protection Society and Australian College of Physical Sciences and Engineering in Medicine, Dr Repacholi is one of the world’s leading authorities on health and safety issues related to mobile telecommunications.

Dr Repacholi became the first Chairman of ICNIRP at its inception in 1992 and in May 1996 he was honoured for his work by being elected Chairman Emeritus. In this office he has the status of an observer at ICNIRP meetings with no voting rights.

## Just seeing a mobile phone tower near your home can cause sleep problems

**The sight of a mobile phone tower near your home may impact on your sleep quality, according to new German research. But the mast's radio signals are not to blame.**

Scientists from the Sleep Medicine Competence Centre at the Charité University of Medicine in Berlin found the presence of a mobile phone mast could have a psychologically negative influence on some members of the community, which may impact their sleep quality.

The [study](#), the first experimental field study to investigate the effect of mobile phone base stations on sleep in a large representative population sample in their home environment, found no evidence the signals used by mobile phone masts cause any disturbance to sleep.

“The results of the present study support the hypothesis that mobile phone base stations have a negative impact on objective and subjective

sleep quality in subjects who are concerned that mobile phone base stations might negatively affect their health. However, the observed effect does not seem to be mediated by short-term electromagnetic field exposure, but rather evolves from attitudes towards and worries related to mobile phone base stations,” the researchers concluded.

Over 12 nights 397 participants aged 18 to 81-years-old from 10 German sites, where no mobile phone service was available, were exposed to fake and real mobile phone mast signals while their sleep was monitored at their homes. The participants' health was observed during the experiment, and they were required to complete questionnaires about the quality of their sleep and their opinion about mobile communications.

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The Charité University of Medicine in Berlin where scientists from the Sleep Medicine Competence Centre found the presence of a mobile phone mast could have a psychologically negative influence on some members of the community.

## Just seeing a mobile phone tower near your home can cause sleep problems

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The researchers found people concerned about possible health risks from mobile phone masts had significantly worse sleep quality, even when the mast was not operating.

“Results provide no evidence for short-term physiological effects on objective and subjective measures of sleep. Laboratory studies on possible impacts of electromagnetic fields of mobile phone base stations on sleep did not show any evidence of a sleep disturbing effect,” the researchers said.

They added that the phenomenon known as the ‘nocebo effect’ may explain the reason why some people experience negative health symptoms even when a mast is not operating.

The nocebo effect – the evil twin of the better-known placebo effect – might contribute to a host of 21st-century ailments, from food allergies to

obesity, chronic fatigue, back pain and electro sensitivity, scientists suspect.

In the case of the nocebo, it is negative expectations that become self-fulfilling prophecies.

There have been a number of [research papers](#) and cases which support the occurrence of this effect in relation to mobile phone technologies and health concerns.

Twenty tenants of an apartment building in Saint-Cloud, a wealthy inner suburb of Paris, complained of headaches, nosebleeds and sleep disturbance after three mobile phone network relay antennas were installed on the façade of their building.

However, the antennas were not connected to the network or electricity grid at the time of the complaints.

## Cooperation and negotiation are better than expert support for mobile phone towers

**A French social scientist has reviewed a well-publicised issue involving mobile antennas on the roof a school in the western suburbs of Paris and found cooperation and negotiation with community groups are better than relying on scientific experts to support installations.**

Professor Marcel Calvez of the Université Européenne de Bretagne [reviewed](#) a number of case studies, one involving Ernest-Bizet school complex in the Saint-Cyr-l'Ecole quarter of Paris to assess why there was such strong disagreement between experts and the local community.

In 2001 the deaths of two children from cancer raised concern with mothers about two mobile phone base stations placed on the school's roof.

The mothers conducted a door-to-door survey and found 11 cases of cancer or other rare



diseases in children under 14-years-old in the community.

“By offering residents a plausible explanation for health problems which they would otherwise have been considered chronic, the survey spread awareness of the problems and increased the

number of people concerned with the health effects of cell towers,” Professor Marcel Calvez said.

The newly elected mayor of Saint-Cyr-l'Ecole, Philippe Lavaud, contacted the French health department which asked the INVS (French Institute of Health Vigilance) to investigating the alleged cancer cluster.

The case received [national media attention](#) and in 2002, the INVS concluded that “...the pathologies did not form a cluster and that the various cancers could not be explained by passive exposure to mobile phone masts radiations.”

To calm growing public fears Orange and SFR turned off their mobile phone antennas on the school, [French newspapers](#) reported in March 2003.

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## Cooperation and negotiation are better than expert support for mobile phone towers

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The mayor, who ordered the on-going health investigation to be extended to the whole district, described the suspension as “a victory for the precautionary principle.”

The local council also prohibited the siting of base stations within a 300 metre radius of homes and tried to cancel contracts with carriers agreed by the previous administration.

However, no case of childhood cancer has been reported since 2002, but in 2005, the activists challenged the methods and results of the INVS study and demanded a second investigation.

“Individuals with different biographies act together at a local level, convinced of the reality of health risks. Even if this conviction is rejected by the experts, it deserves attention as a collective representation expressing a certain order of reality,” Professor Calvez said.

Professor Calvez identified five elements necessary for this collective concern to form:

### **1. The presence of an atypical health problem**

“Unquestionably, cases of rare diseases among children are one of these configurations of atypical diseases, as cancers are commonly associated with adults and not with children,” Professor Calvez said.

### **2. The aggregation of cases**, that is, the pulling together of different individual cases to form a public health problem

“This condition depends on the social networks local people participate in. The structure of the social networks allows various fragments of information to be connected.”

In Saint Cyr, the network consisted of the informal gathering of mothers at the school gate.

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## Cooperation and negotiation are better than expert support for mobile phone towers

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**3. The attribution of a cause** in the near environment, that is, the formation of a collective conviction that an environmental health risk is the cause.

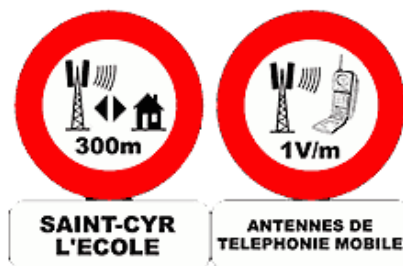
“Once the health problem is considered as real, the activists look at their environment to find an explanation.”

**4. A plausible connection** between the health problem and the alleged cause

Activists make use of the Internet to find “experts who have a marginal position in the scientific community or who are critical to the official expertise.”

**5. Cultural consonance** of the complaint

“The fears expressed by children’s mothers make their discourse on risks culturally plausible because current representations view mothers as being ‘naturally’ attentive to potential threats to their children and ‘naturally’ driven to protect them. In addition, the public is likely to support



The local council introduced arbitrary restrictions in response to strong community concerns.

activists because they can easily identify with the mothers’ protection role,” Professor Calvez said.

Government epidemiologists rejected the data collected by the local mothers on the grounds of a lack of good scientific method, such as, how they defined the population and how the data was collected.

For the activist, this rejection is a way of “claiming a monopoly of rationality,” Professor Calvez explained.

These are two different worldviews that prevent any agreement on the definition of the problem he said.

“To get out of this blocked situation requires calling into question the dichotomy between the experts and the public,” Professor Calvez concluded.

“Unless expertise is considered to be a professional monopoly, it should be possible to take into account the local expertise based on experience in the definition of the problem situations and in the process of public decision. However, the value attributed to local expertise needs to be discussed according to explicit criteria.”

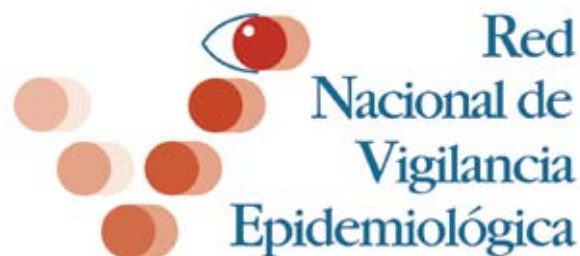
“Moreover, public authorities must be able to mobilize manifold models of cooperation and negotiation which exceed oppositions between experts and activists.”

## Mobile phone mast not the cause of an alleged cancer cluster in Spanish town

**Claims of a cancer cluster in a town near Madrid caused by a mobile phone base station, have been ruled out after a study found no increased incidence of cancers in the town.**

The [study](#) published by the Centro Nacional de Epidemiología (Spanish National Centre for Epidemiology), found that the tumour types and rates identified in the study, were at levels expected in the larger Spanish population.

Residents from the town's old quarter believed an electric transformer installed in the 1970s and a mobile phone mast erected in 1990, caused an increase in the number of cancer cases, such as breast, bowel and lung cancer, in people living nearby.



After radio exposure levels were measured and found to comply with national standards, the residents requested an investigation be carried out in order to dispel all doubts and fears regarding the installations.

A house-to-house survey was conducted in the area surrounding the mast and the transformer.

The study found no significant increases in the cases of cancer in locations identified by residents.

“This work demonstrates that there is no relation between living in the proximity of a transformer and or mobile phone antenna,” said Dr Francisco Vargas of the University of Madrid in a [weekly bulletin](#) on the study (translated from Spanish).

“The results are one more step in the state of the scientific knowledge that must help to diminish the fears of effects of emission from electromagnetic fields.”

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## Mobile phone mast not the cause of an alleged cancer cluster in Spanish town

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MCF program manager Matt Evans said the public often falsely suspect a cluster when they see several neighbours or co-workers have been diagnosed with cancer.

“Each year cancer registries in the United States receive more than a 1000 requests to [investigate suspected cancer clusters](#). Research has found that most of these requests were based on assumptions from the public and not on any statistical analysis or knowledge,” Mr Evans said.

In a similar case, the residents of the town of Cranlome in Northern Ireland believed there was an unusually high incidence of cancer in the vicinity of a 150-foot mobile phone base-station erected in 1989.

However, the Northern Ireland Cancer Registry investigated the claims and found the town of Cranlome did not have statistically higher rates of cancer than the whole District or Northern Ireland.

In 2006, media reports that several cases of brain tumours were related to rooftop mobile phone towers on an RMIT university building in Melbourne, sparked panic. But again on closer review a comprehensive independent report found no statistically higher rates of cancer for people working in the building.

Although most people thought there was an undeniable cluster of cancers in the RMIT building, the expected cancer rate for all

malignant cancers was 6.75 compared to the 7 cases identified.

Also environmental reports of the RMIT building found all readings of air and water quality, of radiofrequencies and of potential contaminants were well within national safety guidelines.

“The perceived environmental exposures suspected of causing clusters are usually found to not exist or are at low levels that are not known to cause disease,” MrEvans said.

“Unfortunately cancer in general is more common than people realise and most suspected cancer clusters are solved through consultation with those involved and education about the true nature of cancer clusters.”

## Mobile phone health book is alarmist and conspiratorial says review

**An online review of *Disconnect: The Truth About Cell Phone Radiation, What the Industry Has Done to Hide It, and How to Protect Your Family* has called the book “an alarmist and conspiratorial account of the issue of cell phones and health.”**

“Far from sticking to the facts, *Disconnect* totally misrepresents key findings of some of the most important cell phone studies,” Dr Lorne Trottier said in his [review](#) published on the [EMF & Health](#) website.

“If you are expecting an objective review of the often confusing scientific data in this area, you should avoid this book,” Dr Trottier said.

*Disconnect* was written by Dr [Devra Davis](#) American epidemiologist who has written a number of books on environmental health

concerns. Her previous book *The Secret History of the War on Cancer* alleges the leaders of industries that made cancer-causing products, and sometimes also profited from drugs and technologies for finding and treating the cancer, have either overlooked or suppressed information.

The recent launch of her latest book has resulted in a large amount of [publicity](#) – particularly in Canada – and Dr Trottier is the President of the Board of the [Montréal Science Centre Foundation](#).

*Disconnect* focuses almost exclusively on studies that support its alarmist conclusions while either ignoring or falsifying information about studies showing no harm, Dr Trottier says

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The **TRUTH** About Cell Phone **RADIATION**,  
What the **INDUSTRY** Has Done to Hide It, and  
How to **PROTECT** Your **FAMILY**



**Disconnect**

NATIONAL BOOK AWARD FINALIST  
**DEVRA DAVIS**

Foreword by David Servan-Schreiber, author of *Anticancer*

## Mobile phone health book is alarmist and conspiratorial says review

*Continued from previous page*



Dr Lorne Trottier, President of the Montreal Science Centre Foundation

He says the book completely ignores the fact that most of the world's major public health organizations do regular expert reviews of the scientific literature. Virtually every one of these expert reviews has come to the same conclusion as the World Health Organization "that current evidence does not confirm the existence of any health consequences from exposure to low level electromagnetic fields."

"Instead, Davis implies that there is a massive worldwide conspiracy to discredit alarmist studies."

"Such a massive conspiracy, involving some of the world's most prestigious health science organizations, is simply not plausible," Dr Trottier says.

"The goal of alarmists is to scare enough members of the public about the dangers of EMF in order to sway politicians to do their bidding," Dr Trottier explains.

"Disconnect is a good example of the kind of material used by the EMF alarmist movement. It is highly selective and totally biased in discussing only studies that support its point of view, it rejects contrary studies accepted by the majority of mainstream scientists as the product of some vast conspiracy, and it completely misstates the findings of key studies that find no harm from cell phones.

"Disconnect is designed to bamboozle and scare the lay reader, not to inform," the review concludes.

## 'Wi-Fi hurts trees' researcher wishes study was never publicised

**A study suggesting Wi-Fi signals hurt trees received widespread media coverage late last year, and lead to tree experts and even the studies head researcher to caution about its unverified results.**

Various news sources [reported](#) that Wi-Fi signals could be the cause of tree damage in urban areas, based on the research from Wageningen University in the Netherlands.

The researchers took two lots of 25 small ash trees and placed them in two small cabinets and exposed one cabinet of trees to various kinds of radiation for three months.

The trees were exposed to six sources of radiation with frequencies ranging from 2412 to 2472 MHz and a power of 100 mW at a distance of just 50cm.

Trees placed closest to the Wi-Fi access points developed a 'lead-like shine' on their leaves that was caused by the dying of the upper and lower epidermis.

This would eventually result in the death of parts of the leaves, the study found.

However, the research was only part of a "preliminary experiment", according to head researcher André van Lammeren an associate professor of plant cell biology, and it hasn't been written up, let alone peer-reviewed and published in an academic journal.

"We have to be very careful what kind of conclusion can be drawn," Dr. van Lammeren told the [Wall Street Journal](#). He also said he wished the study was never publicised.

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Officials from the city of Alphen aan den Rijn commissioned the study after finding unexplained abnormalities on their trees.

## 'Wi-Fi hurts trees' researcher wishes study was never publicised

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The Dutch government's Antenna Agency, which provides information on the health effects of electromagnetic fields, released a [statement](#) urging caution on the unpublished findings.

"Based on the information now available, [we] cannot conclude that the Wi-Fi transmission signals cause damage to trees or other plants. [This] takes into account previously published studies showing no effect," the agency said.

"The researchers from Wageningen University indicate that these are initial results and they have not been confirmed in a repeat survey. [They] warn strongly that there are no far-reaching conclusions from its results."

Other researchers are also sceptical of the findings.

"If you dose anything heavily enough, you'll get an effect," said David Mladenoff, a forest

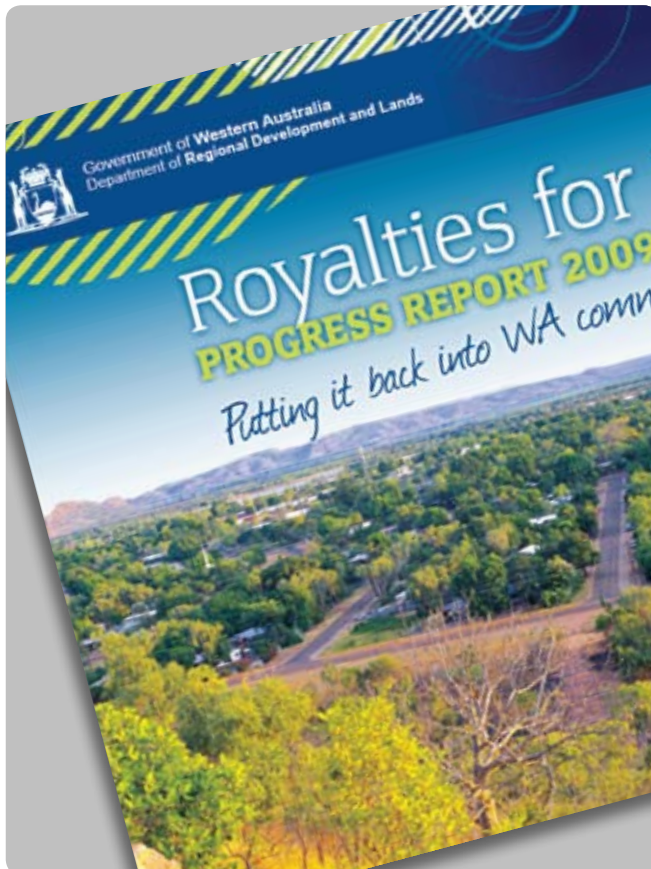
ecologist at the University of Wisconsin-Madison. "This is very far from being able to say this is any sort of significant cause to concern people about urban trees."

Marvin Ziskin, a Professor of radiology and medical physics at Temple University, told [CBS News](#) that trees and plants have been exposed to similar radio signals for a very long time with no adverse effect.

"Stuff like this has been around a long time... there's nothing new about Wi-Fi emissions," said Prof Ziskin. "Scientifically there's no evidence to support that these signals are a cause for concern."

The [World Health Organization](#) (WHO) has also investigated the issue and found no cause for concern.

## In Brief



### Mobile Carriers Forum wants changes to WA development approval process

In April the Mobile Carriers Forum wrote to West Australian Minister for Planning Honourable John Day MLA, to ask for immediate changes to the development approval process to speed up approval for critical mobile network infrastructure.

Policy updates could help streamline deployments in the WA Government's \$39.2 million State Government [Royalties for Regions](#) – funded [Regional Mobile Communications Project](#) (RMCP).

The RMCP project aims to improve mobile phone coverage throughout major roads, highways and communities, located in regional, rural and remote WA.

In order to cater for exponential demand for mobile broadband services, the three mobile network carriers are progressively upgrading facilities on more than 1900 sites across Western

Australia. In addition, the carriers will continue to make a significant investment in network infrastructure which is estimated to be in excess of \$150 million in WA in 2011.

In its letter to the Minister this week, MCF Program Manager Matt Evans explained that projects such as the RMCP required an efficient development approval process, which should be extended to deployment by the carriers of mobile networks across the State.

Specifically, the MCF is strongly encouraging the Minister to review and update the State Planning Policy for Telecommunications Infrastructure (SPP 5.2) which has not been updated for many years, to ensure that telecommunications infrastructure can be deployed to meet the needs of consumers in all parts of WA in a timely manner. Critical to the success of the RMCP and carrier plans for WA is an expedited approval process for new telecommunications towers and poles, similar to the recent changes in NSW.

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### Role reversal sees community support for a mobile tower end VCAT objection

In an unusual turn of events, a petition signed by more than 250 Forrest residents in support of a mobile phone base station has led four residents opposed to the tower to withdraw their objection.

Forrest resident Jim Speirs started the petition in November last year after learning four residents had lodged an objection to a 50-metre Telstra tower with the Victorian Civil and Administrative Tribunal (VCAT).

Earlier attempts to improve coverage in the Forrest area, located in south-west Victoria's Otway Ranges, were cut short when some residents objected to an Optus tower in the centre of town.

Mr Speirs said good mobile phone coverage was important to the town, especially in emergencies such as bush fires.

"I think everyone who's signing these papers is very disappointed because they thought after the big kerfuffle about the tower in the town, they expected they'd have a tower before summer," Mr Speirs said.

"I'd say that virtually 99 per cent of people in Forrest are in favour of this tower, plus there's people who have passed through, tourists, bike riders, who've been concerned there's no mobile service."

One of the tower's objectors, Alice Morell said they didn't want to delay mobile phone coverage for the area and decided to abandon the VCAT objection because of the unlikely chances of success.

"We think it is disappointing that such a beautiful area will now have the negative visual impact of

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the 50-metre tower, given that the expert advice we received indicates that alternative locations were available,” Morell said.

However fellow Forrest resident Carol Brooks said she couldn’t comprehend Alice Morell’s objection to the tower’s location.

“It is understandable that the site for the Optus tower which was to be erected in the heart of Forrest was rejected by the community, but the proposed Telstra tower is more than two kilometres from Forrest and in dense bushland,” Brooks Said.

“People bushwalking, bike-riding, horse-riding, fishing, sightseeing, etc. need to feel secure in the knowledge that in the event of an accident they are able to contact emergency services.”

## Slender Indians at more risk to mobile phone radiation, claims government report

An Indian government report has suggested international safety limits may not be as protective of Indians as they are to Europeans because of their leaner bodies and the country’s tropical climate. However, many of the report’s claims are at odds with the consensus of scientific opinion by health authorities around the world that there is no solid evidence mobile phone base stations are harmful to health.

“The hot tropical climate of the country, low body mass index (BMI), low fat content of an average Indian as compared to European countries and high environmental concentration of radio frequency radiation may place Indians under risk of radio frequency radiation adverse effect,”

Dr R. S. Sharma, a specialist in fertility and contraception from the Indian Council of Medical Research, wrote in the report.

An eight-member inter-ministerial committee produced the [58-page report](#) which suggests a precautionary approach in the absence of solid evidence.

“There were some studies that suggested links between various health disorders and cellphones and towers, but they are inclusive. So it was decided – on a precautionary principle – that some steps can be taken to reduce exposure to radiation,” Arvind Duggal, a member of the panel from the Department of Biotechnology, said when he explained the reports unusual findings to [The Mint](#) newspaper.

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The report says India uses the same international safety limits as used in Europe, but conditions like population density and socio-economic factors in India may not have been considered in this standard.

Therefore it recommended the safety limit for radiation emitted from mobile phone towers be reduced by one-tenth the current value, and cites the unpublished and highly criticized [Bio-initiative report](#) to support a lower safety limit.

“It is important that safety standards be rational and avoid excessive safety margins. To establish rational standards that will make future safer, the RF exposure limits in India may be lowered to 1/10th of the existing reference level,” the report says.

“I’m not sure how the particular figure (one-tenth) was arrived at. You should ask the chairman for that,” Arvind Duggal also told *The Mint*.

In a [written response](#) to parliamentary questions, the Minister of State for Communications & Information Technology Shri Sachin Pilot said studies carried out by Indian Council of Medical Research (ICMR) could not establish conclusive evidence on the safety or risk of radio frequency radiation emitted from mobile phones and mobile phone towers.

“Inter-Ministerial Committee in its report has indicated that most of the laboratory studies were unable to find a direct link between exposure to radio frequency radiation and health; and the scientific studies as yet have not been able to confirm a cause-and-effect relationship between radio frequency radiation and health.”

The recommendations submitted by the committee will be used to set a national policy and guidelines on electromagnetic frequency (EMF) radiation for mobile phone towers and handsets in India.



Arvind Duggal from the Department of Biotechnology said the panel decided to take a precautionary approach in the absence of solid evidence.