

**Say no to roll out of untested 5G and secure much lower electro-magnetic radiation (EMR) safety recommendations for 2G, 3G and 4G, as well as all other types of artificial electro-magnetic fields having negative biological and health effects.**



**Report by the Danish Attorney-at-law Christian F. Jensen suggests that the roll out of 5G may breach the following conventions and directives:**

**The European Convention on Human Rights (ECHR).**

Art. 2 – the right to life and the positive obligations of the state.  
Art. 8 – the right to respect for private and family life.

**The UN's Convention on the Rights of the Child.**

**Environmental regulations.**

**The Precautionary Principle in EU law.**

**Directive on the conservation of wild birds.**

**The EU directive on the conservation of natural habitats and of wild fauna and flora.**

**The Bern convention.**

**You can download the Danish legal report from [www.environmentalactionhub.com](http://www.environmentalactionhub.com)**

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We work with campaigners from groups on Facebook: STOP 5G Frome, Somerset and surrounding Villages - 5G free Hastings - Stop 5G in Bath and North East Somerset - Bristol Residents Against 5G Technology-Take Action, Prevent the 5G Roll-out - Stop 5G Isle of Wight - 5G FREE BRACKLEY

**5G is a potentially even more unsafe version of the un-tested 2G, 3G and 4G that new science has proven a potentially serious health hazard.**

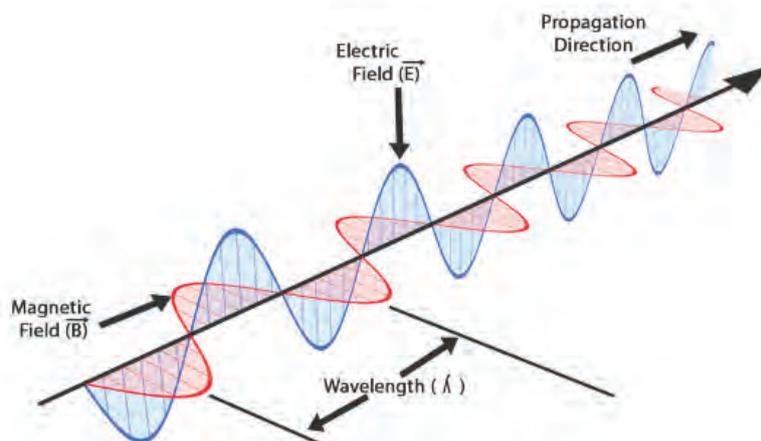
Before yet another version of toxic radiation pollution is released on all life forms in our area we demand that our paid civil servants and politicians look into that no version of "G" was ever tested before release and how new science, and populations with brain fog, headache, fatigue and sleeping problems, have raised awareness of that the safety recommendations are way too high.

5G is not specified to a standard where any predictions for its safety can be analysed and we demand that the EU Precautionary Principle is finally applied because it is clear that, with 5G, the telecom related industries mean to increase both the frequencies and power emissions to new heights and we presume to make the conclusion that exponentially much more of unhealthy radiation is not acceptable.

Predictable damages: Damage to the eyes - cataracts, retina - Immune system disruption - Metabolic disruption - Damage to sperm, negative impact on fertility - Skin damage - Collapse of insect populations - Rise in bacterial resistance and bacterial shifts - Damage to plants and trees - Damage to our genes, the DNA molecules.

**EMR – Electromagnetic Radiation**

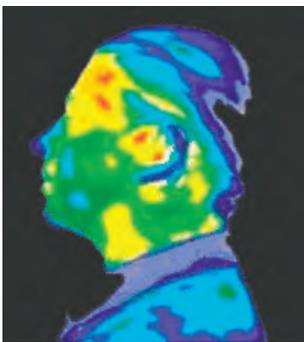
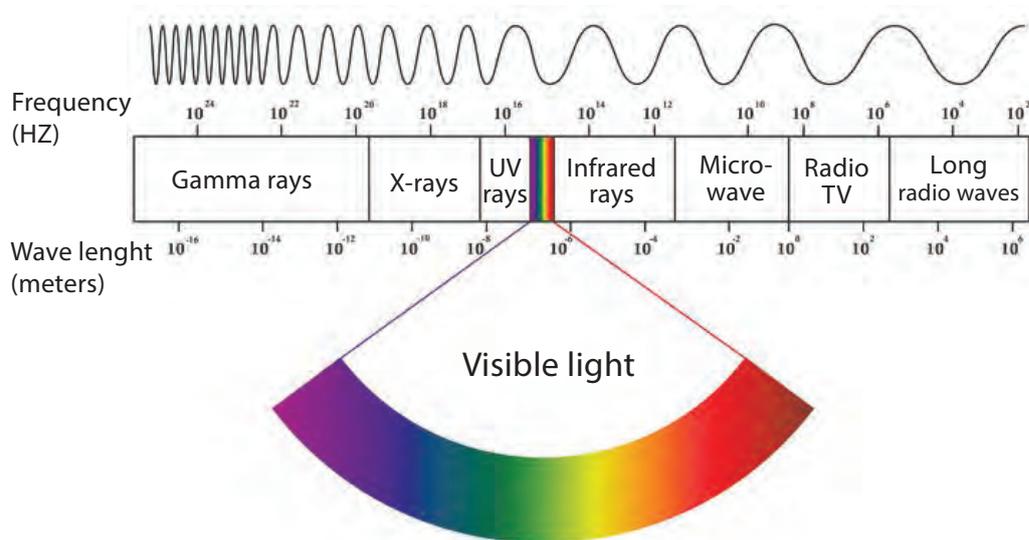
refers to the waves of a electromagnetic field, radiating through space, carrying electromagnetic radiant energy. The waves are synchronized oscillations of electric and magnetic fields that propagate near the speed of light.



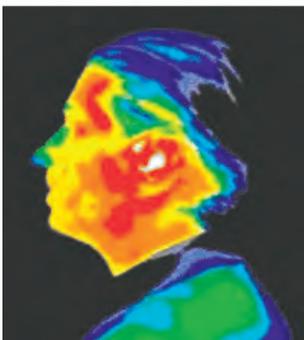
Electromagnetic waves are emitted by electrically charged particles undergoing acceleration and they carry energy, momentum and angular momentum away from their source particle and can impart those quantities to matter with which they interact. The effects of EMR upon chemical compounds and biological organisms depend both upon the radiation's power and its frequency.

## Ionizing and non-ionizing radiation

High frequency EMRs are known as ionizing radiation, since individual photons of high frequency have enough energy to ionize molecules or break chemical bonds. These types of radiation, like nuclear radiation and x-rays, have the ability to cause chemical reactions and damage living cells beyond simple heating of tissue, and the dangers are well known.



Thermographic image of the head with no exposure to harmful cell phone radiation.



Thermographic image of the head after a 15-minute phone call. Yellow and red areas indicate thermal (heating) effects that can cause negative health effects.

EMR at lower frequencies is known as non-ionizing radiation, because its photons do not individually have enough energy to ionize atoms or molecules or break chemical bonds. Industry, and official bodies such as ICNIRP and Public Health England, claim that the effects of this type of radiation on chemical systems and living tissue are caused primarily by heating effects from the combined energy transfer of many photons and are therefore negligible. However thousands of studies, from as far back as WW2 to the present day, show that damaging effects of non-ionizing radiation can occur via non-thermal effects, and can be very serious.

**Bioinitiative.org writes:**

Human beings are bioelectrical systems. Our hearts and brains are regulated by internal bioelectrical signals. Environmental exposures to artificial EMFs can interact with fundamental biological processes in the human body. In some cases, this may cause discomfort, or sleep disruption, or loss of wellbeing (impaired mental functioning and impaired metabolism) or sometimes, maybe it is a dread disease like cancer or Alzheimer's disease. It may be interfering with ones' ability to become pregnant, or carry a child to full term, or result in brain development changes that are bad for the child. ...We have good evidence these exposures can damage our health, or that of children of the future who will be born to parents now immersed in wireless exposures. The global conversation on why public safety limits for electromagnetic and radiofrequency fields remain thousands of times higher than exposure levels that health studies consistently show to be associated with serious health impacts has intensified since 2007. Roughly, 1800 new studies have been published in the last five years reporting effects at exposure levels ten to hundreds or thousands of times lower than allowed under safety limits in most countries of the world.

**Problems with Existing Public Health Standards (Safety Limits)**

In the past, scientists and engineers developed exposure standards for electromagnetic radiation based what we now believe are faulty assumptions that the right way to measure how much non-ionizing energy humans can tolerate (how much exposure) without harm is to measure only the heating of tissue (for – induced currents in the body). In the last few decades, it has been established beyond any reasonable doubt that bioeffects and some adverse health effects occur at far lower levels of RF and exposure where no heating occurs at all; some effects are shown to occur at several hundred thousand times below the existing public safety limits where heating is an impossibility.

**Scientist Martin L. Pall writes:**

(PhD Professor Emeritus of Biochemistry & Basic Medical Sciences Washington State University)  
There is substantial evidence for the cumulative nature and eventual irreversibility of the neurological/neuropsychiatric effects, of the reproductive effects, the mutational DNA effects, the cardiac effects, of some but not other of the hormonal effects; any causation of ADHD and autism may add additional concerns. ...Obviously 4G and 5G will make the situation much worse. Similarly it is expected that the deterioration in brain function that we are already seeing may seal our fate if we fail to act rapidly and vigorously. ...In the face of these types or risk, the only reasonable course is to move with great vigor to stop new exposures and lower current exposures. One can still access the internet, using wired connections. And we can lower cell phone tower and cell phone radiation substantially. Smart meters, if needed, can work via wired connections."  
Extracts from "5G: Great risk for EU, U.S. and International Health! Compelling Evidence for Eight Distinct Types of Great Harm Caused by Electromagnetic Field (EMF) Exposures and the Mechanism that Causes Them".

[www.radiationresearch.org/wp-content/uploads/2018/06/EU-EMF2018-6-11US3.pdf](http://www.radiationresearch.org/wp-content/uploads/2018/06/EU-EMF2018-6-11US3.pdf)

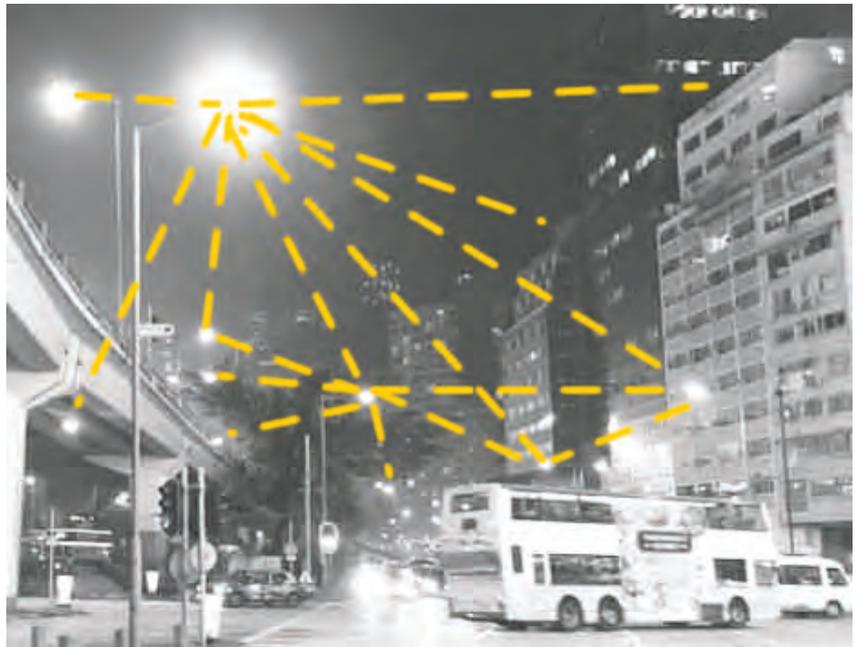
**Physicians for Safe Technology write:**

(There might be) significant tissue heating generated by 5G technology with rapid short bursts of data transfer on a device, ..."The results also show that the peak-to-average ratio of 1,000 tolerated by the International Council on Non-Ionizing Radiation Protection guidelines may lead to permanent tissue damage after even short exposures." In addition, there is convincing emerging scientific evidence causing great concern for the environment, with harm to mammals, insects and bacteria, prompting scientists around the world to call for a moratorium on 5G.

<https://mdsafetech.org/5g-telecommunications-science/>

## What is 5G?

We have looked for consistency in immediately available specifications on 5G so that we could explain it in this awareness brochure. Unfortunately, we have not found any clear and consistent specification from parties responsible for the 5G rollout that we could refer to as basis for discussion. We therefore resort to share extracts from various scientific sources and point out that it should really be the responsibility and legal obligation of those responsible for the 5G rollout to prove it is safe.



## We suggest that answers are unequivocally demanded to questions like for example:

What happens when a 5G beam misses its target and hits biological matter?

What is the cumulative effect?

Do the 5G beams pollute with side or spill radiation?

With what data transmission volumes and specifications do 4G, 3G and 2G and other EMRs support the 5G beams?

What are the development and implementation stages and what are the specifications? How are the stages financed?

What are the obstacles for the compatibilities of the planned participants in the overall 5G system? Is there an overall budget and business case for the entire development?

How do you place responsibility and insure the 5G system for liability?

Have you produced a risk assessment specification?

What do you consider trade secrets in relation to the 5G project?

Do you have a test specification, including health and ecosystems, for the 5G system?

## The history of "G" from Wikipedia:

**1G - 1982-1990:** Frequency modulated system using frequency division multiple access (FDMA). Channel capacity: 30 kHz, Frequency band: 824-894 MHz, Data speed: 2.4 kbps

**2G (2.5G) - 1980:** Based on GSM. Bandwidth: 30-200 kHz, Data rate: up to 144 kbps. e.g. GPRS, CDMA and EDGE. Data speed: 64-144 kbps

**3G - 2000:** Based on GSM, uses Wide Band Wireless Network. Data speed: up to 14 Mbps (and more using packet switching.) Range: 2100 MHz, Bandwidth: 15-20 MHz, Data speed: 2 Mbps

**4G:** LTE (Long Term Evolution) is developed to accommodate the QoS and rate requirements set by forthcoming applications. Downloading speed: 100 Mbps. Data speed: 10 Mbps - 1 Gbps

**5G - late 2010s:** Provides large broadcasting of data in Gbps. Suggested parameters:

Network Capacity: 10000 times current network. 400 times faster.

Peak Data Rate: 10 Gbps, Cell edge Data Rate: 100 Mbps, Latency <1 Mbps

Band width: 4000 Mbps, Band width: 1-2 Ghz, Frequency: above 0.8 – 120 GHz

**ijert.org writes:**

5G (WPAN) is transmitted via ultra wideband networks (UWB) using short-range radio technology, achieving higher bandwidths at low energy levels (UWB network) for relaying data from host devices to devices in the immediate vicinity, i.e., distances of approximately 10 metres. Each network will be responsible for handling user-mobility. Your device will make the final choice among different wireless/mobile access network providers for a given service. It uses Smart Antennae that supports radio positioning via angle of arrival (AOA) and the transmission is designed to improve the capacity of wireless systems by providing improved safety through position-location capabilities. This technique rejects interference through spatial-altering-position location through direction-ending measurements and developing improved channel models through angle-of-arrival channel sounding measurement.

(Red. So the antennas and devices use their info about each's location to find the best route and circumvent obstacles. Surely this means that in order to function 5G cannot work without 4G to provide data about position and to track other devices and antenna.)

<https://www.ijert.org/research/introduction-about-5g-mobile-technology-IJERTV6IS060397.pdf>

<http://pdfs.semanticscholar.org/1633/c8606a5a04b922c03ccaa502d522a86180d4.pdf>

**Electronicsforu.com writes:**

(Red.: Future mobile devices equipped with 5G technology will have:)

Wearable devices with artificial intelligence (AI).

Internet Protocol version 6 where the IP address is assigned according to location and the connected network.

The ability to connect the user to different wireless access technologies, like 2.5G, 3G, 4G or 5G mobile networks, as well as Wi-Fi and WPAN (wireless personal area network)—or even any other technology to be developed in the future. This is basically a concurrent data transfer path technique.

Smart radio. In order to share the same spectrum efficiently during a wireless transmission scheme, the system will adaptively find (search) unused spectrum. This dynamic radio resource management will be achieved in a distributed fashion and rely on software defined transmission. High altitude stratospheric platform station (HAPS) system. This is based on beam division multiple access (BDMA) and group relay techniques.

<https://electronicsforu.com/technology-trends/introduction-5g-technology>

**Physicians for Safe Technology write:**

5G uses high frequency electromagnetic radiation with Gigahertz (GHz) wavelengths (primarily) in the millimeter range. These high frequency tiny wavelengths penetrate only the outer layer of the skin, unlike 2G, 3G and 4G technology which passes through the body. Major health concerns with exposure to 5G are to skin, eye and adverse systemic metabolic signaling through skin sensors, as well as heat effects. Some in (the US) Congress have seriously questioned the lack of independent research on 5G safety. 5G can travel a few miles but is easily blocked by objects, trees and plants thus poles are planned for every 300 feet in cities.

Mechanisms of Harm: 4G emissions can cause oxidation of tissues (93 of 100 studies), 5G radiation can have its effect through heat (tissue destruction), through a resonance effect of increased vibration in an object the size of the wavelengths, and at low power levels through signaling of skin structures that can affect metabolism, the nervous system, the endocrine system, the reproductive system (declassified military studies).

Amount of Testing Done: 4G technology has been tested by the military and by international scientists with an abundance of studies showing broad harm to animals, humans, plants, insects and bacteria. 5G technology has been studied by some in the military showing broad harm and some newer studies are showing damage to insects, tissue burns and overheating with streaming of data, but there has been no safety testing of 5G before it is rolled out.

**The physicians also include a long list of links to peer reviewed reports which is constantly updated. <https://mdsafetech.org/5g-telecommunications-science/>**

### **The National Center for Biotechnology Information writes:**

Extreme broadband wireless devices operating above 10 GHz may transmit data in bursts of a few milliseconds to seconds. Even though the time- and area-averaged power density values remain within the acceptable safety recommendations for continuous exposure, these bursts may lead to short temperature spikes in the skin of exposed people.

<https://www.ncbi.nlm.nih.gov/pubmed/?term=SYSTEMATIC+DERIVATION+OF+SAFETY+LIMITS+FOR+TIME-VARYING+5G+RADIOFREQUENCY+EXPOSURE+BASED+ON+ANALYTICAL+MODELS+AND+THERMAL+DOSE>



### **You can test your environment for EMR**

by using for example a TriField TF2 EMF & RF Meter. This meter detects all three types of electromagnetic field (EMF) pollution: AC magnetic, AC electric, and RF/microwave.

Frequency Range: 20 MHz – 6 GHz (the announced maximum level with 5G in the first year; later developments will use up to 120 GHz)

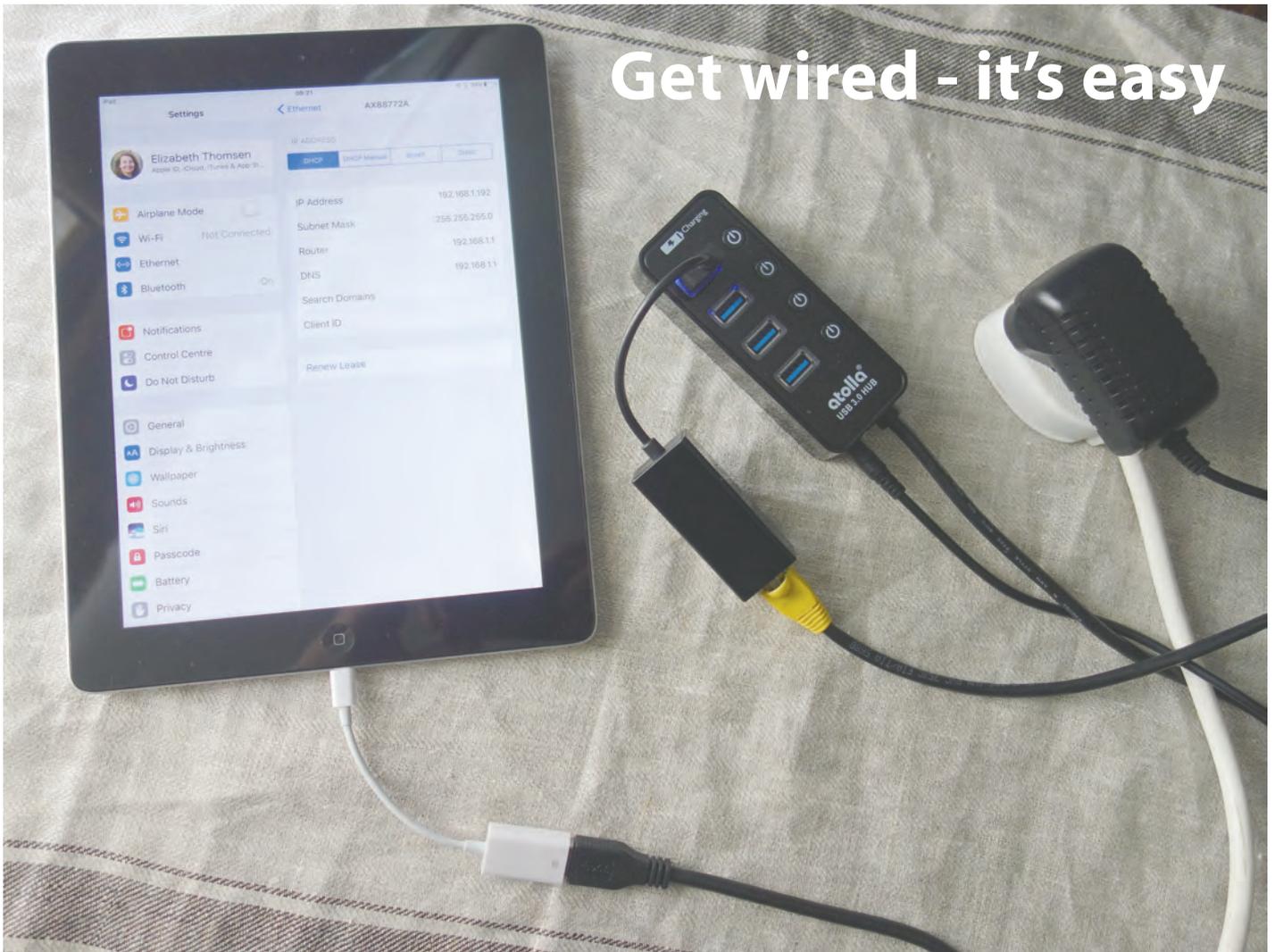
### **Rainer Nyberg writes:**

**(Professor emeritus (pedagogy), Vasa, Finland, 26th March 2014)**

EMR is created by mobile phones, telephone base stations, cordless home phones, Wifi-modems and routers, USB-modems, cordless baby alarms, iPads and other tablets and laptops using wifi. We need to protect the children. Warn your school, parents, teachers and young people.

A standard mobile phone transmits - even when inactive - pulsating radio frequencies in all directions that penetrate your hand, body, brain, concrete walls. The pulsations are at least a thousand times more powerful than the pulsations in the nerve cells that control the entire human body - and our ability to think and learn.

Close your wifi down and change your technology (Laptop, Ipad and other devices) to wired via ethernet cable. Mainly use your landline for phone calls, and keep your phone away from your head and body and use a wired headpiece when you speak on it. Children should only use iPads or mobile phones in an emergency and not be near mobiles or iPads that are online via phone signal or wifi. Always remember that these devices are harmful even when inactive, so keep them at a distance to your body and limit the amount of time you are exposed to them.



**"Against the background of the scientific results in item 1.2 above (Red.: in the report) there remains in my assessment no reasonable doubt that the 5G-system is an industrial activity, which poses danger to humans."**

Danish Attorney-at-law Christian F. Jensen

**The Danish legal report and this brochure can be downloaded**

from [www.environmentalactionhub.com](http://www.environmentalactionhub.com). Read much more information here and see our new film with a wide range of scientist and campaigners from our network. Please subscribe to our maillist on the website, so you can get notified of campaigns and petitions where your participation is essential.

**Please read and sign  
the scientist's appeals:**

[www-5gappeal.eu](http://www-5gappeal.eu)

[www.5gspaceappeal.org](http://www.5gspaceappeal.org)

**Turn your wifi off**

You can access your internet, while wired, using your power sockets in every room - it's easy.

