

Sleep Disorders, EEG-Changes, Altered Cognitive Functions – Is There a Connection With the Exposure to Mobile Communication RF Fields?

Scientific Workshop organized by the FGF (Forschungsgemeinschaft Funk e.V.; Research Association for Radio Applications) in cooperation with the Ministry of Environment, Baden-Württemberg, Germany

Stuttgart (Germany)

Tagungshotel der Deutschen Telekom

November 05 to 07, 2007

Scope of the Workshop

The installation of mobile phone base stations or of other types of transmitters in residential areas often leads to complaints of residents who claim to suffer from various, often unspecific symptoms due to Radiofrequency (RF) emission. A similar situation is observed regarding the use of cordless phones (e.g. DECT telephones) in homes. Often, sleep disorders are claimed to be an immediate consequence of permanent field emissions. Although these fears to date could not be proven scientifically, they must be taken seriously and have to be carefully examined.

This situation has not considerably changed since four years ago a FGF workshop in cooperation with the Ministry of Environment Baden-Württemberg and COST 281 took place under the title “Can electromagnetic fields used in mobile communications provoke sleep disorders?” in Immenstaad (Baden-Württemberg, Germany), 7. - 10. December 2003. (For presentations and results please see:

http://www.fgf.de/fup/tagung/thema/FGF-Schlaf-Workshop_2003.pdf (in German),
<http://www.fgf.de/english/fup/meeting/thema/Short-report-FGF-sleepworkshop2003.pdf> (in English),

http://www.cost281.org/documents.php?node=55&dir_session=,

Somnologie - Schlafforschung und Schlafmedizin, Volume 9, Number 4 / November, 2005:

<http://springerlink.com/content/q22353766852/?p=fa86fa98af6c47f1879dbd10e1310062&pi=5.>)

During the general discussion of this meeting the invited experts agreed on the following statements:

- Biological effects may not be equated with health effects.

- Whenever possible, dose-effect relations have to be determined.
- Good statistics and dosimetry with generally accepted standards should be asserted for sleep research.
- Studies should be as far as possible independently replicated to gain scientific validity.

Research in this area went on and brought out significant new results. Participants of the workshop will present the current state of research and evaluate the progress that has been achieved.

Since the main foci have slightly changed, the workshop topics will include sleep research as well as influences of RF fields on the EEG of awake persons, on cognitive functions such as reaction time and behavioral parameters, and on regional blood flow in human brain regions. Of special interest is the repeatedly reported effect of pulsed - but not continuous wave - RF fields on EEG and cognitive functions, at least from the results of one research group. Additionally, a main part of the workshop is dedicated to the progress in dosimetry for human laboratory as well as epidemiological studies.

The workshop is meant to bring together representatives of the working groups which recently have worked on these topics, and shall offer broad space for discussing their results. Specialists from sleep and cognitive research should specifically evaluate methodology and results of studies and, if necessary, give recommendations on follow-up investigations. RF dosimetry specialists shall evaluate field application technology of experimental set-ups and provide a realistic assessment of present and future exposure of the general population from base stations, mobile phones, and similar devices.

The results of the workshop will be presented in a consent report. Possibly, scientifically based recommendations on follow-up experiments and/or studies shall be derived.

Provisional course and contents of the workshop:

- 1. Medical basis of EEG, cognitive functions and sleep**
- 2. Exposure conditions in residential areas close to base stations (GSM, UMTS, DECT, WLAN, WiMAX, ...) and terminal equipment**
- 3. Dosimetry for experiments with human volunteers**
- 4. Presentation of results from laboratory and epidemiological studies**
- 5. General discussion**

Participation in this workshop is mainly by invitation. Additionally, you are invited to send an abstract for presentation or to declare your interest for participation. Abstracts will be reviewed by a scientific committee. The number of participants is limited to 55 persons.

- Deadline for application (abstracts): August 20, 2007
- Deadline for application (participants): August 27, 2007
- Contact: Lutz Haberland, haberland@fgf.de

Speakers and participants accepted for the workshop will be informed by September 3rd, 2007.

Reference List (especially for the time period after 2003)

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