



# NEWSLETTER

February 2002

COST281: "Potential Health Implications from Mobile Communication Systems"

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## A new COST Action is presenting itself: COST 281

**History:** As early as in 1992 the European Commission took up public health concerns by installing the COST action 244 on biological effects of electromagnetic fields which after 4 years was continued by COST action 244bis. Both actions succeeded in establishing a network of scientific multilateral contacts and contributing to health risk assessment in this field. Consequently, under the patronage of the former steering committee of the COST 244bis a group chaired by Dr. Ulf Bergqvist began work to set up the basis for a new action. The group's efforts were successful. In early 2001, the COST TIST office decided to set up a new COST action this time concentrating on "Potential Health Implications from Mobile Communications Systems".

The "Memorandum of Understanding" was adopted and opened for signing in March 2001 (The exact wording of the MOU can be found on the web site [www.cost281.org](http://www.cost281.org)).

In the meantime it has been signed by **19 countries:** Austria, Belgium, Bulgaria, Croatia, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Lithuania, Norway, Poland, Spain, Sweden, Switzerland and the United Kingdom.

COST 281 actions is encouraging further countries to participate. Interested persons are invited to contact the COST 281 secretariat for further details.

In a first step COST TIST granted an amount of € 85,000 for enabling COST 281 to maintain a secretariat, to carry out meetings and seminars, to organize steering committee and management committee meetings and to perform some scientific short-term missions. On January 28, 2002, the budget was increased by € 10,000 to a total amount of € 95,000.



## Inaugural Management Committee Meeting of COST281 Action

The Inaugural Management Committee Meeting of COST281 Action took place on September 25, 2001, in Brussels. However, right at the start there were bad news: Dr. Ulf Bergqvist, known as one of the motors of the new action, had died only few days before.

Mr. Peter Wintlev-Jensen from COST TIST office chaired the first part of the meeting. In his survey lecture, he reviewed the objectives and the mission of COST actions in general and stressed the policy of the European Union's Commission aimed to encourage and support initiatives launching coordinated research action. COST 281 is one of more than hundred currently existing projects in this area (see details: [www.cost281.org](http://www.cost281.org)).

In the following, he went into the expectations of the EU Commission towards COST 281 action. COST 281 is mainly meant to provide early peer-reviewed scientific advice, to identify needs for scientific research which, among other things, must be impartial as well as independent.

At the meeting, all participants of the new Cost 281 Action got the opportunity to present themselves, their respective position and special field of interest as well as their expectations towards the new action.

## Election of chairpersons and steering committee

On initiative of the chairman of the former COST 244bis action Arne Wennberg the following persons were proposed and elected by unanimous vote:

- Norbert Leitgeb, Austria, as chairman
- Maila Hietanen, Finland, as vice-chair
- René de Seze, France, as the second vice-chair
- Gerd Friedrich, Germany, as scientific secretary

As a next step participants agreed on establishing a steering committee consisting of ten members in total. Consequently, the assembly proposed and elected the following representatives (by unanimous vote):

- René de Sèze, France
- Gerd Friedrich, Germany
- Yngve Hamnerius, Sweden
- Maila Hietanen, Finland
- Norbert Leitgeb, Austria
- Tom Mc Manus, Ireland
- György Thuroczy, Hungary
- Paolo Vecchia, Italy
- Luc Verschaeve, Belgium
- Joe Wiart, France

All candidates accepted the election. The task of the steering committee will be to establish permanent working-groups. Proposals on this issue can be brought forward before the next management committee meeting. In his speech, Norbert Leitgeb stressed the importance of the new action 281 adding that he was willing to continue the work done by Ulf Bergqvist in preparation of COST 281 action and the MoU.

To allow in-depth discussions on the future working plan participants agreed not to launch into lengthy presentations of their research activities but instead to submit written information to the secretary to be included in the COST 281 data-base.

## Programme discussion, overall time schedule and organisation of the action's activities

Norbert Leitgeb pointed to the importance of the COST 281 principle to strictly act as an independent and unbiased organisation; however, this intention still needs to be confirmed by efforts to promote good and reliable scientific work.

Statements on behalf of COST 281 should be issued exclusively by the steering committee based upon decisions of the management committee. COST 281 should serve as a forum for discussion and as a "watch dog" providing advice to EU CEC and other support-seeking organisations.



The steering group shall provide a list of actions to be decided upon at the next management meeting which will be held in Rome on May 2-4, 2002. All participants agreed that the new action should be based on the "aim of action" presented by Ulf Bergqvist in Helsinki during the EBEA congress in September 2001.

It was agreed that COST 281 should encourage Short Term Missions (STM) to respond to current demands as successfully done by the former COST 244bis action. As a first STM initiative a commentary on the "Hyland report to the STOA of the European parliament" has been presented. Tom McManus announced that there will be an official request for this expertise by the Irish Ministry. (Meanwhile this report is finished and can be found at [www.cost281.org](http://www.cost281.org).)

### Relationship between COST 281 and other activities

The assembly confirmed the need for maintaining good relations with other organisations such as WHO, ILO, IARC, ICNIRP, CEN/CENELEC, IEEE, IEC, ICOH, URSI, BEMS, EBEA, and other COST actions.



### Cooperation with JRC

On initiative of the EC Joint Research Centre (JRC) a kick-off meeting took place in Ispra on 1<sup>st</sup> March 2002 to exchange views on cooperations between COST 281 and JRC on the issue initiated by the former COST 244bis, STM "Mobile telecommunication base station – exposure to electromagnetic fields". A joint study performed by researchers from several European countries pointed out that there is a need for harmonisation in terms of site selection and measurement methods in order to achieve a harmonised quantification of the GSM contribution to the electromagnetic environment in different EU Member States. The current project of CENELEC/WG1, "Mobile phones and base stations", is focused on the development of the "putting into service" standard for base stations. This standard is urgently needed to improve risk communication at EU level. It offers an opportunity for establishing a fruitful synergy between JRC, CENELEC and COST 281 for supporting a common EU standard. The key objective of the JRC collaborative action will be to create a reference system at EU level for the:

- Implementation of CENELEC standards related to human exposure to EMF radiation
- EU-wide harmonisation of EMF human exposure monitoring activities
- Harmonisation of data interpretation, presentation and risk communication methods



### COST 281 activities

Workshop "Physical Effects of pulsed RF Fields at Microscopic and Molecular Dimensions (Microdosimetry)" in December 2001 in Dresden [Germany]

This workshop on biophysical mechanisms of RF interaction with biological systems with special interest for potential modulation-dependent effects from exposures to pulsed fields used in mobile telephony was a follow-up of two other workshops held in Bad

Münstereifel in December 2000 and in May 2001 in Washington. At this meeting were discussed

- the dielectric structure and RF-relevant properties of cells and membranes
- energy absorption in tissue
- energy absorption and transfer in molecular systems
- heating of microstructures
- RF-demodulation by non-linearities of the biological system



### Joint EU-Japan-Korea-US Scientific Workshop.

As a follow-up event to two earlier meetings, the EU CEC hosted a joint meeting with representatives from Japan, Korea and the USA in Brussels, October 29 – 30, 2001. Its objective was to coordinate activities in the field of worldwide EMF research. The purpose of the workshop was to present and discuss the scientific background of the current debate on EMF health concerns as well as of various associated political issues aiming for an international perspective. Specifically, the workshop addressed the „state of the art“ concerning mobile telephony and health; emerging technological developments (e.g. 3G/UMTS technology); scientific information as a basis for risk communication and the development of relevant policies; national and international outlooks for future research related to health aspects of electromagnetic fields (EMF), and possibilities of co-operation.



### Electromagnetic Fields and Health – Which Regulatory Framework for the European Community?

This conference was organized in cooperation with the Academy of European Law on November 30, 2001, in Luxembourg. The following topics were presented and discussed:

#### I. Which knowledge?

- The Scientific Committee on Toxicity, Ecotoxicity and the Environment: 2001 activities and new recommendations
- The Who International EMF Project: presentation and results
- New Technologies and New Risks: Current survey and perspectives for future research
- Science and Development of Exposure Standards: The ICNIRP approach

#### II. Which rules?

- Presentation and follow-up of the community initiatives
- Product liability and electromagnetic fields
- Precaution, safety and standardisation
- Free movement, product safety and protection of health in the community
- Legal basis aspects for community actions in the area of electromagnetic fields





Scientific comment on individual statements of concern about health hazards of weak EMF

At the Irish Department of Public Enterprise's request to comment on a submission prepared by Dr. Hyland for the European Parliament, from a scientific point of view the COST 281 action prepared a report in order to provide a balanced scientific view of the debate. This paper is available on the Cost281 website. (Hyland's paper can be found on the website of the European Parliament.)



## ANNOUNCEMENTS

The first COST 281 Management committee meeting

The Management Committee of COST 281 will have its first meeting in Rome from 4 to 5 May 2002:

4<sup>th</sup> May from 10:00 a.m. to 7:00 p.m.: MCM and Workshop "Emerging technology"

5<sup>th</sup> May from 9:00 a.m. to 3:00 p.m.: MCM and Workshop "Mobile communication and children"

Prior to the MCM meeting from 2<sup>nd</sup> to 3<sup>rd</sup> May 2002 a COST 281/EBEA Forum will take place:

2<sup>nd</sup> May from 10:30 a.m. to 6:30 p.m.: Forum on European Project Status

3<sup>rd</sup> May whole day devoted to Consortia Meetings

4<sup>th</sup> May from 9:00 a.m. to 10:00 a.m.: Final discussion of COST 281/EBEA Forum

For more information see the special announcement on [www.cost281.org](http://www.cost281.org) or contact "La Sapienza" University of Rome, Dep. of Electronic Engineering, [cost281-rome@mail.elettra2000.it](mailto:cost281-rome@mail.elettra2000.it)



Short Term Mission "Children's Head Exposure to Mobile Communication System- EMF"

For risk assessment detailed information on the exposure of children's heads to the emissions of mobile communications headsets are of crucial importance. Therefore COST 281 action issued an offer for cooperation to clarify the following questions:

1. In which way change the parameters of importance for dosimetry with children's development, in particular a) shape and other anatomical details and b) electrical and other physical parameters?
2. How does the local SAR change with age: a) in the skull b) in the brain and in parts of it?
3. Are there for children significant differences to adults that need specific consideration in terms of radiation protection?

In the meantime, the STM began work, chaired by Luc Martens (Belgium). A workshop taking place on **May 5**, will be the official "kick-off" for the short term mission (for separate announcement and details see [www.cost281.org](http://www.cost281.org)).

Short Term Mission "Emerging Technologies"

During the last few years, technical developments like electronic article surveillance for anti-theft devices, radio frequency identification for access-control or warehousing and inventory tracking came to the market, as well as new technologies in medical therapies and diagnostics. Further progress was made in deploying various electronic communication systems, for instance wireless networks, "body-LAN", "blue-tooth" or new frequencies and coding for mobile radio communication as the very popular Universal Mobile Telephone System (UMTS).

All these technologies have in common that they use electromagnetic fields, differing though in the kind of exposure they apply:

- \* near-body, relatively high power, short duration
- \* away from body, continuous exposure
- \* near-body, low power

The workshop at the **4th of May 2002** in Rome shall review and update the results of the 1999 workshop and investigate emerging technologies putting the stress on **UMTS** and coming "**4 G-technologies**".

Different aspects have to be considered:

- Techniques
- Practical experiences
- New aspects of using mobile communications
- Impact on limits

During the workshop it should be discussed if the currently available scientific evidence requires the adoption of a emerging-technologies-specific risk assessment and risk management regarding health hazards from the use of mobile phones (e.g. maximum SAR, location of base stations).

The results of the workshop will be gathered serving as a platform for a short-term mission of COST 281.

For more information see the special announcement on [www.cost281.org](http://www.cost281.org) or contact Gerd Friedrich, Forschungsgemeinschaft Funk e.V., e-mail: [info@fgf.de](mailto:info@fgf.de)

COST 281 Secretariate:

Gerd Friedrich  
Forschungsgemeinschaft Funk e.V.  
Rathausgasse 11a  
D-53111 Bonn  
Tel.: +49-228-726 220  
Fax: +49-228-726 2211  
E-mail: [friedrich@fgf.de](mailto:friedrich@fgf.de)  
<http://www.cost281.org>