Presenting a new COST acti
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As early as 1992 the European Commission responded to public doubts and concerns caused by the increased use of energy and radio technologies by launching COST Action 244 aimed at promoting the exchange of scientific knowledge in the area of biological effects of electromagnetic fields. Four years later, this action was followed up by the Action COST 244 bis.

Both actions have been hugely successful in establishing a multilateral scientific network providing a substantial contribution to risk assessment in this area.

Dr. Arne Lemberg, chairman of Action COST 244 bis, and Dr. Ulf Bergqvist together with the steering committee made great efforts to continue this work by setting up a new action.

The group's efforts have been successful. In early 2001, the COST TIST office in Brussels decided to launch a new action following COST 244 bis, with emphasis on the "Potential health implications of mobile communication systems."

A Memorandum of Understanding on future cooperation was adopted and opened for signature in March 2001 to all countries interested in joining. Participation in the action is also open to non-EU countries. Until now 19 countries have signed. (The full-text MoU may be found on the website of COST 281 Action http://www.cost281.org).

COST 281 Action welcomes the participation of other countries. Interested parties please contact the COST 281 secretariat.

In a first step, COST TIST granted funds of Euro 85,000 for the COST 281 Action. On January 28, 2002, this budget was increased by further Euro 10,000 and now is Euro 95,000.

Inaugural Management Committee Meeting of the COST 281 Action

On September 25, 2001, the management committee of the COST 281 Action consisting of delegates from all participating countries held its inaugural meeting in Brussels.

Because of the sudden death of Dr. Ulf Bergqvist on September 11, 2001 – the "motor" and designated chairman of the new action – Peter Wintlev-Jensen from the COST TIST chaired the first part of assembly.

In his opening speech, Mr. Wintlev-Jensen gave a survey of the objectives and the mission of COST actions in general. He emphasized that it is the European Commission's policy to encourage and to support coordinated research initiatives. COST 281 is one of more than hundred currently-existing projects in this area.

In the following, he addressed the expectations of the European Commission towards the COST 281 project.

Mainly, COST 281 is responsible for providing timely peer-reviewed scientific advice and to identify new areas of interest for scientific research. The impartiality and independence of the organisation are crucial.

During the conference, all participants of the new COST 281 Action had the opportunity to introduce themselves, their respective positions, special fields of interest, and their expectations of the new action.

The following election of the chairpersons and the steering committee was unanimous.

All candidates accepted the election. The task of the steering committee will be to establish permanent working groups. Related proposals may be submitted before the next meeting of the steering committee. In his acceptance speech, the new chairman, Dr. Norbert Leitgeb, emphasized the importance of the new COST 281 Action adding that he was willing to continue the work done by Dr. Ulf Bergqvist in the preparation of COST 281 Action and of the MoU.

BEMS	The BioElectromagnetics Society
CENELEC	Comité Européen de Normalisation Electrotechnique
EBEA	European BioElectromagnetics Association
EU	Europäische Union
EC	European Commission
IARC	International Agency for Research on Cancer
ICNIRP	International Committee on Non-Ionizing Radiation Protection
ICOH	International Commission on Occupational Health
IEC	International Electrotechnical Committee
IEEE	Institute of Electrical and Electronic Engineers
ILO	International Labour Organisation
UN	United Nations
URSI	Union Radio-Scientifique Internationale
WHO	World Health Organization

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In order to allow in-depth discussion on the schedule of work for the future, participants decided to abstain from lengthy presentations of their research activities, which instead will be submitted in writing to the secretariat. Information will be included into the database of COST 281.

During the subsequent discussion on the programme, time schedule and organisation of the action's activities, Leitgeb pointed to the crucial significance of the COST 281 principle to act strictly as an independent, unbiased organisation.

Official statements on behalf of COST 281 will be issued exclusively by the steering committee, based upon the decisions made by the management committee. COST 281 is to act as a forum for discussion as well as an advisory agency for the EU CEC and other support-seeking organisations.

The steering committee will provide a list of projects to be decided upon during the next management committee meeting scheduled for May 2-5, 2002.

There was agreement upon the fact that one of the tasks of COST 281 Action is to initiate short-term missions (STM) addressing current scientific issues, as already successfully done by the former COST 244 bis Action. As a first STM initiative, a commentary on the Hyland Paper to the STOA (Science and Technology Options Assessment Panel) of the European Parliament has been presented. Tom McManus announced that there will be an official request for this expertise from the Irish government. The commentary can be found on www.cost281.org.

Cooperation with other organisations

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

On the initiative of the EC Joint Research Centre (JRC), on March 1, 2001, a conference took place in Ispra (Italy) aimed at exchanging views on the cooperation between COST 281 and the JRC following the former COST 244 bis initiative. The subject was the continuation and extension of studies of the STM "Mobile communication base stations – exposure to electromagnetic felds," reported on by the STM working group.

The joint study performed by researchers from several European countries showed that it is a must to harmonise site selection and measurement methods in order to achieve a harmonised quantification of the GSM contribution to the electromagnetic environment in the different EU member states.

The current CENELEC/WG 1 project "Mobile phones and base stations" is focused on the development of a standard concerning the commissioning of base stations. This standard is urgently required to improve risk communication at EU level. The project offers the possibility to establish cooperation between JRC, CENELEC and COST regarding the launch of a common EU standard. The main purpose of the cooperation with the JRC will be to create an EU-level reference system

- for implementing CENELEC standards on human exposure to EMF radiation
- for EU-wide harmonisation of EMF human exposure monitoring
- for harmonising interpretation and presentation of data and methods of risk communication.

Signature countries

- Austria
- Belgium
- Bulgaria
- Croatia
- Denmark
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Lithuania
- Norway
- Poland
- Spain
- Sweden
- Switzerland
- United Kingdom

Management committee

- Norbert Leitgeb, Austria, chairman
- Maila Hietanen, Finland, vice-chairwoman
- René de Sèze, France, second vice-chairman
- Gerd Friedrich, Germany, scientific secretary

Steering committee

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

Past activities of COST 281

Workshop "Physical effects of pulsed RF fields at microscopic and molecular dimensions (microdosimetry)," December 2001 in Dresden (Germany)

This workshop dealing with the topic area of biophysical mechanisms of RF interaction with biological systems with special reference to the potential modulation-dependent effects of exposure to pulsed fields (mobile phoning) was a follow-up to two previous workshops held in December 2000 in Bad Münstereifel and in May 2001 in Washington. Topics of discussion during this conference were

- 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 caused by nonlinearities of the biological system.

Joint scientific EU-Japan-Korea-United States workshop

Following two previous related conferences, on October 29-30, 2001, the EU CEC hosted a joint congress in Brussels with representatives from Japan, Korea and the United States. The purpose of the event was to coordinate activities in the area of worldwide EMF research, as well as to present and discuss the scientific background of the current debate on EMF health concerns and various associated political issues from an international point of view.

In particular, the workshop dealt with the state-of-the-art debate on the topic areas mobile phoning and health; emerging technological developments (for example 3G/UMTS technology); scientific information as a basis for risk communiation and the development of relevant strategies; national and international prospects for future research connected with the health aspects of the use of electromagnetic fields (EMF), and possibilities of cooperation.

Electromagnetic fields and health – which regulatory framework do we need within the European Community?

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

1.What knowledge do we need?

- Scientific Committee on Toxicity, Ecotoxicity and the Environment: Activities in 2001 and new recommendations
- WHO International EMF Project: Presentation and results
- new technologies and new risks: current survey and prospects for future research
- science and development of exposure standards: the ICNIRP approach

2. What rules do we need?

- presentation and follow-up of community initiatives
- product reliability and electromagnetic fields
- precautions, safety and standardisation
- free movement, product safety and health protection within the community
- legal basis of activities in the area of electromagnetic fields.

Scientific commentary on concerns regarding health hazards of weak EMF

On request of the Irish Department of Public Enterprise, the COST 281 Action has presented a commentary on a paper prepared for the European Parliament by Dr. Hyland. The report of COST 281 is to provide a balanced scientific contribution to the ongoing debate and can be found on the COST 281 website. (The Hyland paper can be found on the website of the European Parliament.)

Announcements

First COST 281 Management Committee Meeting

The COST 281 management committee will have its first meeting on May 4-5, 2002, in Rome:

- May 4, 10 am to 7 pm: MCM and workshop "Emerging Technologies"
- May 5, 9 am to 3 pm: MCM and workshop "Mobile comunication and children"

Prior to the MCM there will be a COST 281/EBEA forum on May 2-3, 2002:

- May 2, 10:30 am to 6:30 pm: Forum on European Project Status
- May 3, whole day: Consortia meetings
- May 4, 9 am to 10 am: Final discussion of COST281/EBEA forum.

For further information please see the special announcement on www.cost281.org; contact: La Sapienza University of Rome, Dept. of Electronic Engineering, cost281-rome@mail.elettra2000.it

Short-term mission "Children's head exposure to mobile communication system EMF"

Detailed information about the exposure of children's heads to the emissions of mobile communication system headsets is of crucial importance for risk assessment. The COST 281 Action has issued an offer for cooperation aimed at finding answers to the following questions:

1. How do relevant dosimetric parameters change with child development, especially

a) head shape and other anatomical traits, and

b) electrical and other physical parameters?

2. How does the local SAR change with age:

a) in the skull,

b) in the brain / in parts of the brain?

3. Are there significant differences between children and adults which have to be considered especially regarding radiation protection?

In the meantime, the short-term mission chaired by Luc Martens (Belgium) has begun its work. A workshop to be held on May 5 is to be the official launch of the project (for further details please see the special announcement on www.cost281.org).

Short-term mission "Emerging Technologies"

In recent years, a great number of new technical developments has been introduced to the market such as, for example, the electronic surveillance of goods using anti-theft devices, radiofrequency identification for access control, as well as new technologies in medical therapy and diagnostics. Considerable progress has been made in the use of different electronic communication systems, for example wireless networks, "Body-LAN," "Bluetooth" or new frequencies and coding for mobile radio communication such as the well-known Universal Mobile Telephone System (UMTS).

What all these technologies have in common is the use of electromagnetic fields which are, however, distinguished according to the type of applied exposure:

- near-body, relatively high power, short duration,
- away from the body, continuous exposure, and
- near-body, small power.

The workshop planned to be held on May 4 in Rome will analyse and update results of the 1999 workshop; further planned topics are emerging technologies with an emphasis on UMTS and future 4G technologies.

Here, different aspects have to be considered:

- applied techniques,
- practical experiences,
- new aspects of mobile communication applications, and
- effects on limit values.

During the workshop there will be discussion on the question whether current scientific knowledge requires specific risk assessment and risk management, respectively, regarding health implications of new technologies used in mobile phoning (for example maximum SAR, location of base stations).

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

For further information see the announcement on www.cost281.org; contact: Gerd Friedrich, Forschungsgemeinschaft Funk e.V., e-mail: info@fgf.de

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