Base stations and wireless networks: Is there reason for concern?

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Workshop on Base Stations and Wireless Networks
WHO/HQ, Geneva 13-15 June 2005
The International EMF Project

Established in 1996 to assess the health impact of EMF technologies in frequency range 0 to 300 GHz

Non-ionizing radiation
EMF Project objectives

- Evaluate scientific evidence
  - Report on current status of knowledge
  - Identify gaps in knowledge needing to be filled by focused research to make better health risk assessments

- Promote and facilitate research

- Conduct health risk assessments and risk estimation, and develop policy options

- Provide information on standards and advice to national authorities
Collaboration

International partners (IARC, UNEP, ICNIRP, ILO, IEC, NATO, ITU & EC)

- National partners (> 60)
- WHO collaborating centres
- Independent scientific agencies
Over a century ago people were worried about newly introduced land-line telephones. Was it the health effects they were worried about?

New York City ~1893
Mobile phone networks are replacing land line systems in developing countries: if there are health effects WHO wants them mitigated.
Mobile phones

Many hazards are known: WHO has promoted > $200M research in 10 yrs

Children?
Public concern about base stations, has continued for some years in many countries. Possible health consequences being the main reason....
Base stations on WHO buildings
Emissions from base stations are self limiting.

Network of base stations at the centre of hexagonal cells
Microcells are also installed, both and inside buildings, in locations with high numbers of mobile phone calls.
Wireless Local Area Networks (LANs) are now common in schools, airports, business centres and residential buildings.
Our perceptions can be wrong. This is why we need good science to confirm the facts.
RF fields and health

At high levels RF exposure causes heating ... affecting behaviour, endurance etc...

Forms basis of ICNIRP international guidelines and most national standards...established short-term acute effects

Major question for base stations and wireless networks:

Are there health effects of long-term low-level exposure to the RF fields emitted by these new technologies?
Workshop will review the evidence and address:

- What are the current and future wireless technologies?
- What RF exposures do people receive from these technologies?
- Is there evidence of health effects from long-term, low-level RF exposures?
- What further research is needed, if any?
- What international standards exist or are being developed?
- What have national authorities done in response to this issue?
- How can we provide effective communication to all stakeholders on this issue?
- What policy options can be recommend for national authorities?
Outputs

- Summary of presentations on our home page
- Rapporteur report summarizing conclusions and recommendations
- Proceedings of key papers
- Peer-reviewed journal publication
- Fact or information sheets for the general public
- Brochure for local authorities with practical advice related to mobile phone base stations and wireless networks
Further information

Home page: www.who.int/emf/