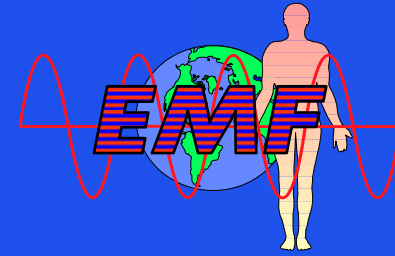


# Welcome to WHO Workshop Electrical hypersensitivity



## Many thanks to:

**Prof. Ludek Pekarek, Dagmar Pisarikova, Pavel Sisteck and Lukas Jelinek at the National Reference Laboratory for Non-Ionizing Radiation**

## Sincere thanks to our co-sponsors:

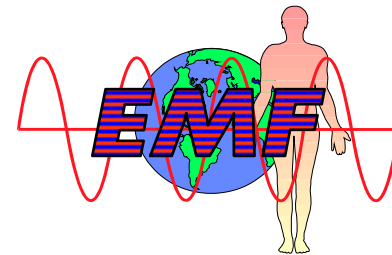
- ✓ **Ministry of Health, Czech Republic**
- ✓ **European Commission Coordinated Action (EMF-NET)**
- ✓ **European Cooperation in the Field of Scientific and Technical Research (COST 281)**
- ✓ **International Commission on Non-Ionizing Radiation Protection (ICNIRP)**

**Prague 25-26 October 2004**

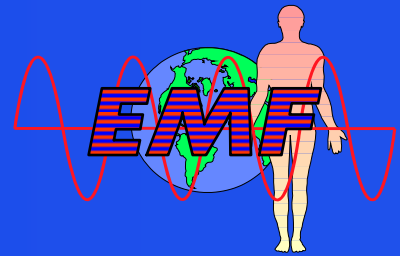


# Electrical hypersensitivity: Is EMF involved?

**Dr Mike Repacholi**  
**Coordinator, Radiation and**  
**Environmental Health Unit**  
**World Health Organization**  
**Geneva**



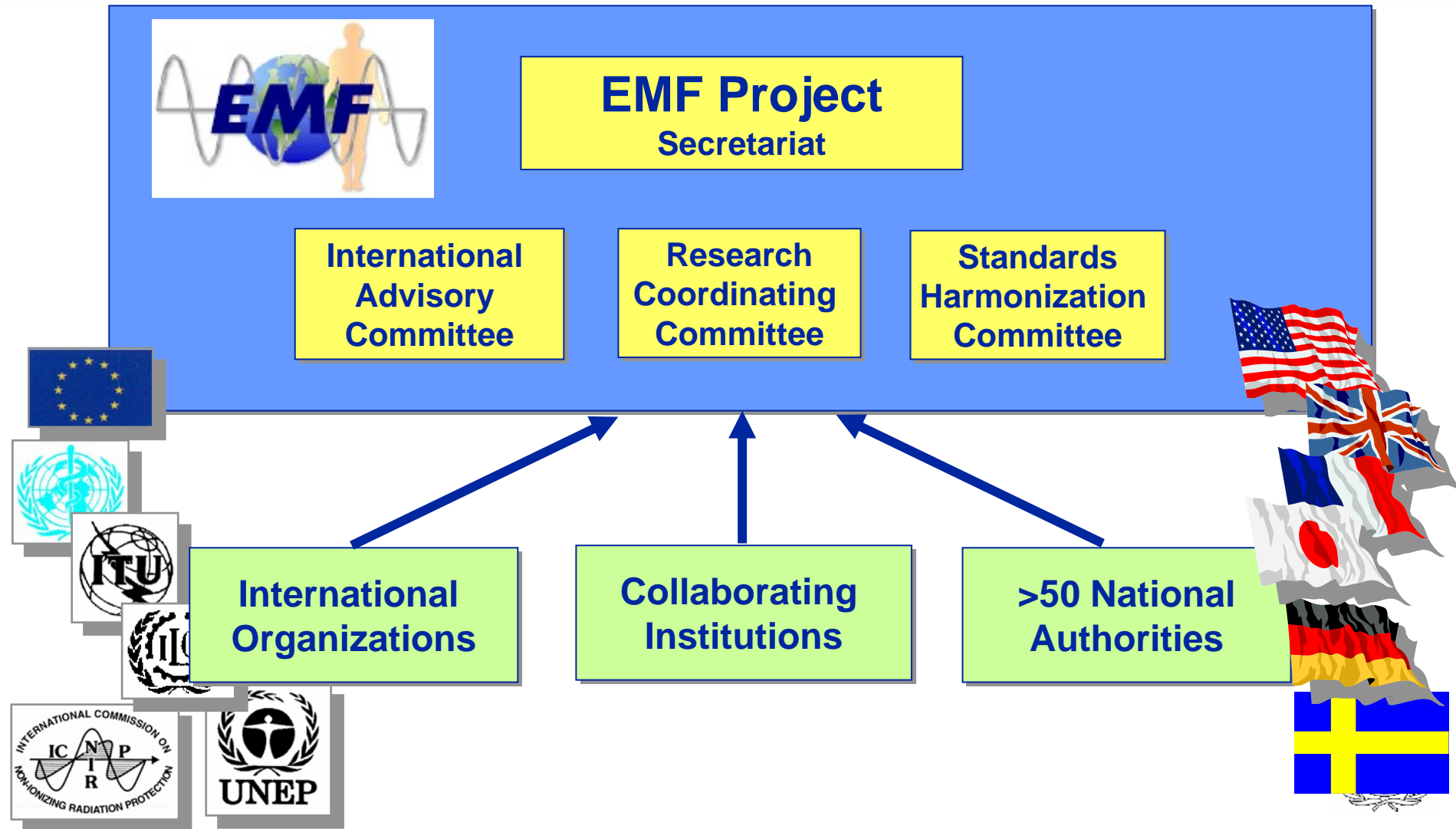
# *International* **EMF** *Project*



- Established in 1996
- To assess health and environmental effects of exposure to electromagnetic fields in the frequency range from 0 to 300 GHz
- A multinational, multidisciplinary effort to create and disseminate information appropriate to human health risk assessment for EMF
- Coordinated by WHO



# Structure



# Scientific Reviews

What we know...

## Objectives

- To provide a **status report** on current knowledge related to possible health effects of EMF
- To identify **gaps in knowledge** that need further research leading to better health

What we don't know...



# International Scientific Reviews

## Frequency-related



- Static and low-frequency fields, Bologna, 1997
- Intermediate frequency fields, Maastricht, 1999
- Radio frequency fields, Munich, 1996
- RF pulse-modulated fields, Erice, 1999



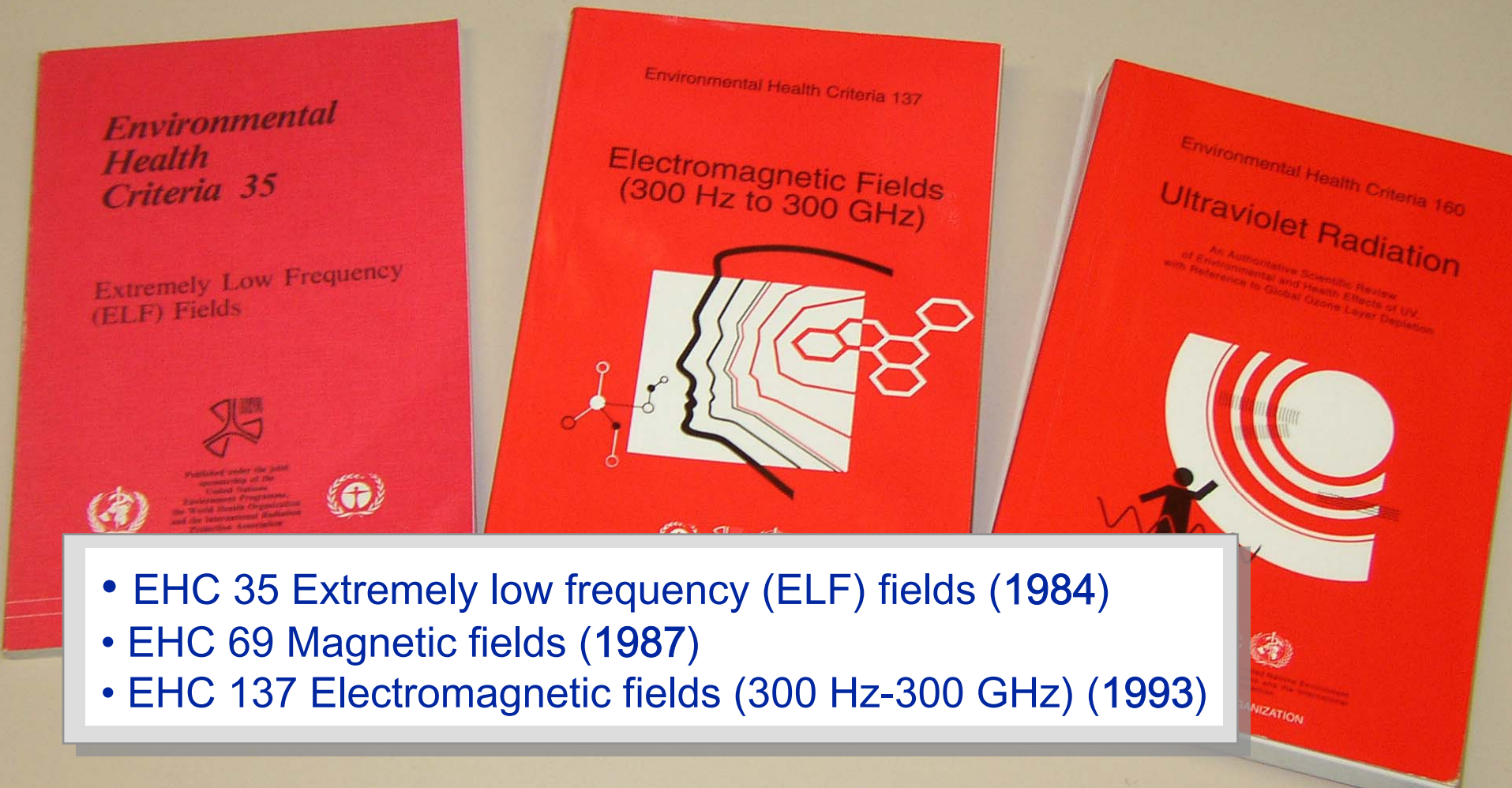
# International Scientific Reviews

## Specific topics

- Psychosocial impacts of EMF exposure, Graz, 1998
- Environmental impacts of EMF, Ismaning, 1999
- Adverse temperature levels in the human body, Geneva, 2002
- Applying precaution to EMF, Luxembourg, 2003
- Children and EMF, Istanbul, June 2004
- Hypersensitivity, Prague, October 2004
- Mobile phone base stations and wireless networks, Geneva, June 2005?



# WHO Health Risk Assessment



- EHC 35 Extremely low frequency (ELF) fields (1984)
- EHC 69 Magnetic fields (1987)
- EHC 137 Electromagnetic fields (300 Hz-300 GHz) (1993)

# WHO Research Agenda

## Research needs

- identified when the evidence for a health risk is judged **suggestive, but insufficient** to meet the criteria for assessing health risk....EHS??
- established on the basis of **unconfirmed effects** having implications for health, and **replication** of key studies to confirm effects

**Goal:** To promote studies that demonstrate a reproducible effect of EMF exposure that has the likelihood to occur in humans and has a potential health consequence



# Electrical hypersensitivity: Questions

- EHS is certainly real for people affected, but is it due to EMF exposure?
- People over the world are affected although certain countries more than others

Symptoms but not a syndrome:

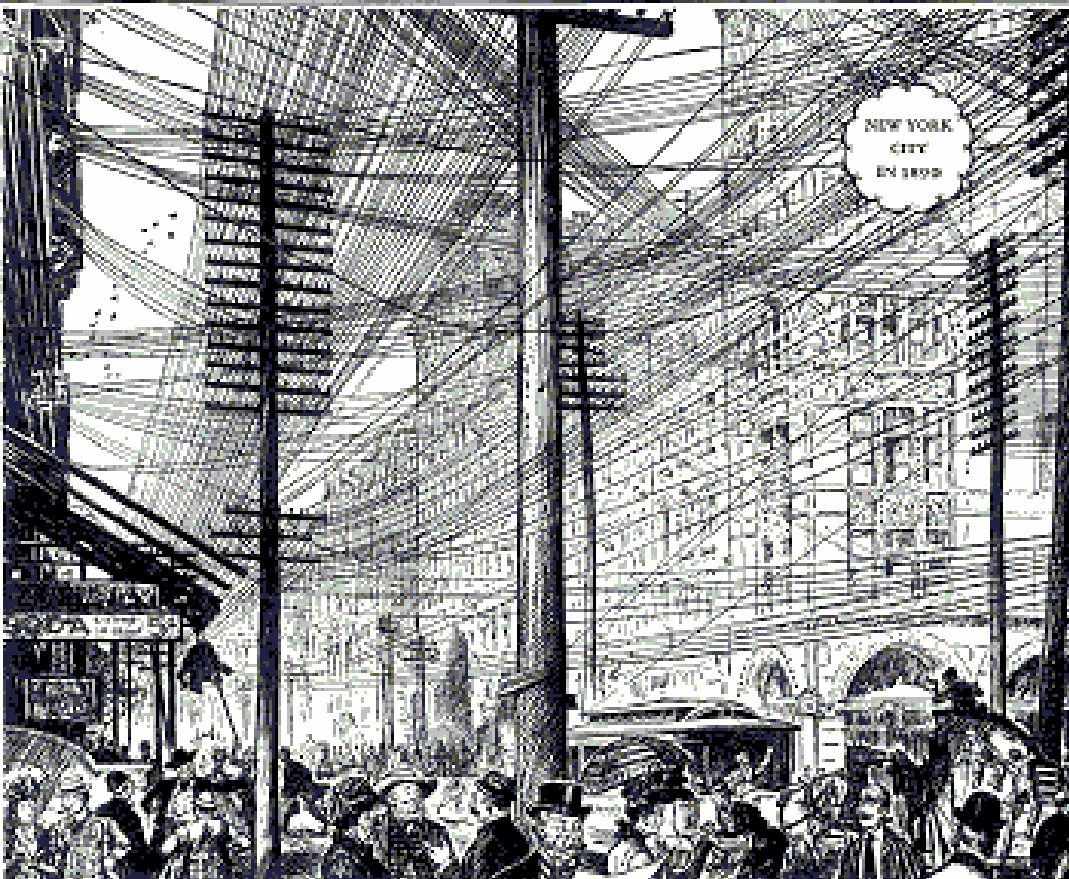
- Nervous system symptoms (e.g. headache , fatigue, stress, sleep disturbances)
- Skin symptoms (e.g. facial prickling, burning sensations, rashes)
- Various body symptoms (e.g. pain and ache in muscles)
- Eye symptoms (e.g. burning sensations)

Symptoms similar to those from other environmental factors such as multiple chemical sensitivity (MCS)



# Technology is advancing

**New York 1893**



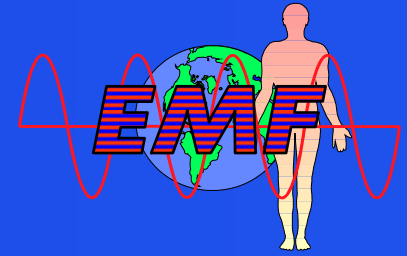
**Today**



# Base stations in beautiful Prague



# Workshop



## Motivation

- ✓ Rapid increases in EMF exposure from new technologies
- ✓ Need to assess whether EHS is due to EMF or other factors
- ✓ Significant public concern about EMF effects

## Need a specialized workshop to

- Assess EHS in a valid scientific manner ....ONLY
- Identify any research needed to fill gaps in knowledge
- Recommend policy options for national authorities...
- Determine how best to help EHS individuals?



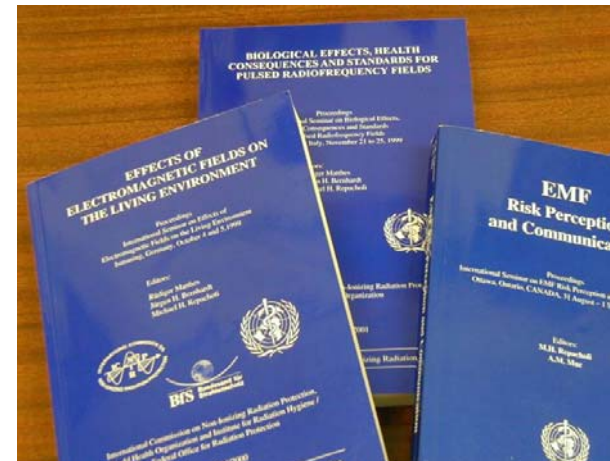
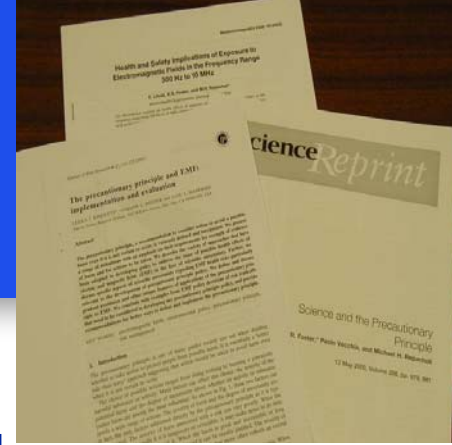
# Workshop speakers

**Emphasis given to presenters with specialization in areas related to EHS but not associated with EMF...will facilitate enlightened discussion with EMF specialists**



# Workshop outputs

- Book of abstracts of all presentations
- Summary report to peer-reviewed journal
- Proceedings of speaker presentations
- EMF Project web site
- WHO Fact Sheet and Press Release for a press conference with UN Press Corps
- Contribution to EHC reviews



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