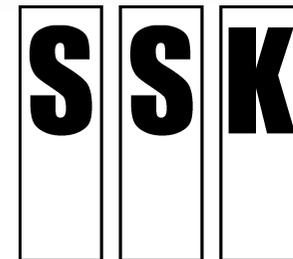


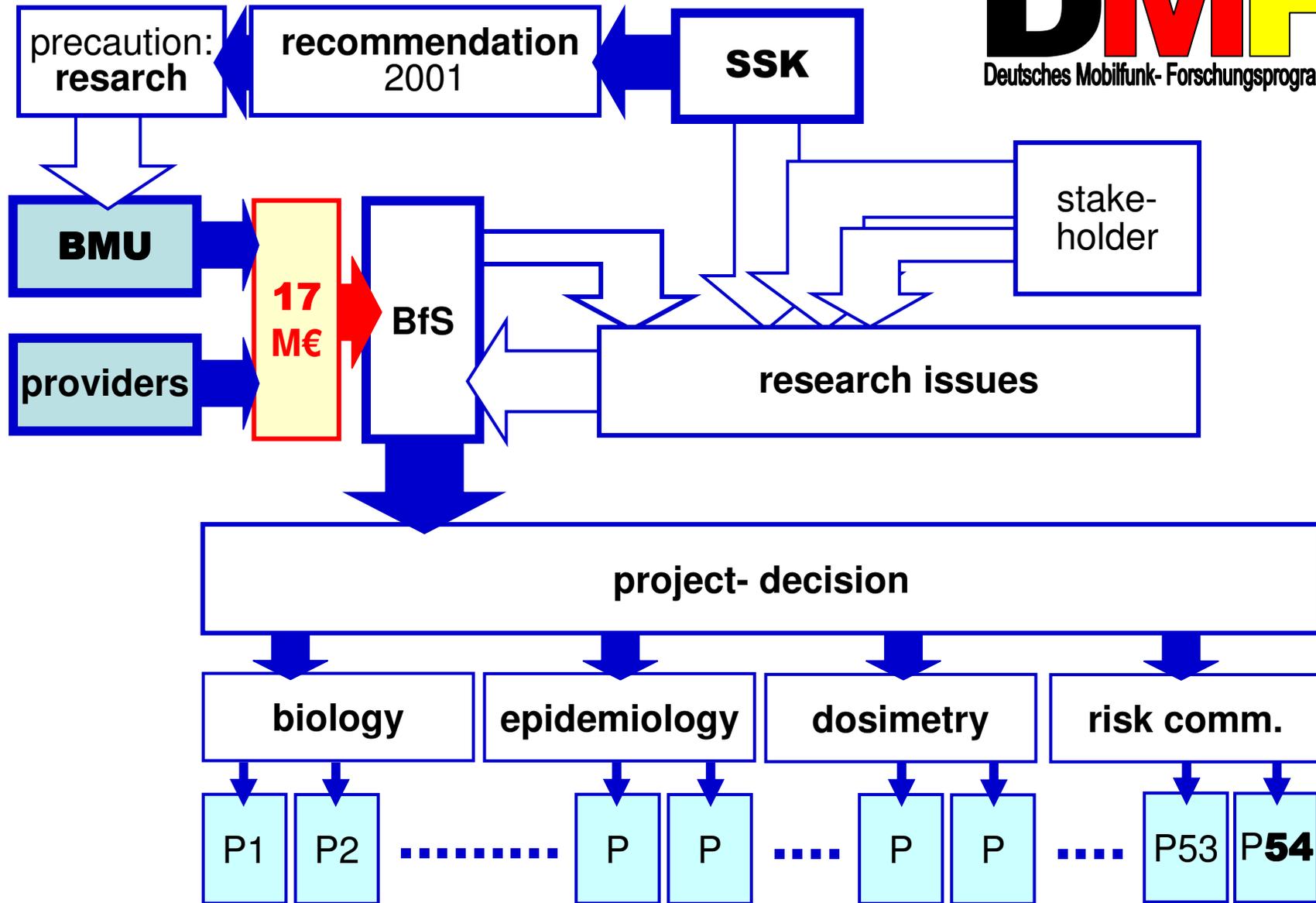


# German Mobile Telecommunication Research Program



## Statement of the Commission on Radiation Protection





# ***situation 2001:***

Exposure limits based on ***thermal*** interaction model.

*This means:*

***energy*** (= temporal ***sum*** of intensities) determines effects.

*This means (below limits):*

- signal ***course*** (pulsation) ***not*** relevant
- results can be ***extrapolated*** (e.g. CW to GSM, UMTS)
- ***thresholds exist***
- ***no*** specific ***long-term*** risk
- ***no cancer*** risk

## ***available data 2001:***

### ***indications towards***

- *electromagnetic hypersensibility***
- *non-thermal* effects**
- effects on *blood-brain-barrier***
- effects on neurophysiological und cognitive processes**
- potential *long-term* effects on blood, immune system, reproduction, development**
- *cancer* initiation and/or promotion**
- *brain tumor risk* from mobile phone use**



***Open question 2001:***



***are there (relevant)  
non-thermal effects?***

## ***Open question 2001:***

***Are there (relevant)  
non-thermal effects?***

***if so, then:***



- signal ***course*** (pulsation) possibly ***relevant***
- ***no extrapolation*** of results
- existence of ***thresholds unclear***
- ***long-term*** risks ***not excluded***
- ***cancer*** risks ***not excluded***

# DMF results: *electromagnetic hypersensitivity*



- hypothesis **not** confirmed
- **convictions** existent: **1,1** to **6%** „EHS“
- symptoms correlated with conviction, **not** with exposure

***no electromagnetic  
hypersensitivity*** (EMF- causality)

# DMF results: *tinnitus* *sleep*



*no causality with  
mobile telecommunication  
fields*

# DMF results: *long-term- exposure*



- laboratory studies (including multi-generation exposure):

**no negative effects**

*e.g. on melatonin, blood-brain-barrier, lymphomes, reproduction, development*

- epidemiologic studies: *up to 10year exposure:*

**no elevated cancer risks**

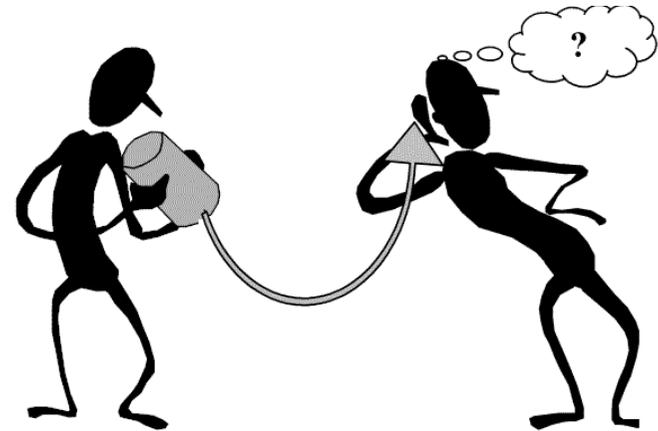
*brain tumors (glioma, meningioma, acoustikus neurinoma), childhood leukämia*

# DMF results: *dosimetry*



- **basis** for improved studies created
- everyday exposure **far below** limits  
(z.B. GSM, UMTS, WLAN, DECT, bluetooth, DVB-T)
- **DVB-T:** also **higher** EMF- levels than **AB**
- **devices:** partly **close to** limit  
(z.B. handsets, baby phones)
- simultaneous use of mobiles: **uncritical** for room-levels
- handset power reduction (*DTX*): may be **deactivated**

# DMF results: *risk communication*



- mobile telecommunication **not** highest concern
- concern about mobile telecommunication:  
**constant** over years
- little **knowledge** on risk communication **efficiency**

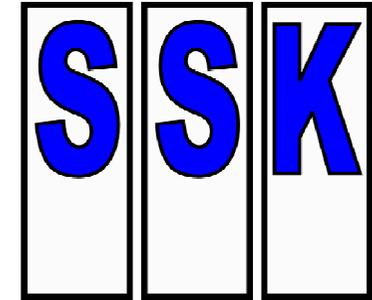
# DMF results: *summary*



- initially reported ***concerns not*** confirmed
- ***no new*** indications for hazards
- ***non-thermal effects not confirmed***
- ***limits*** of 26. BImSchV ***not challenged***

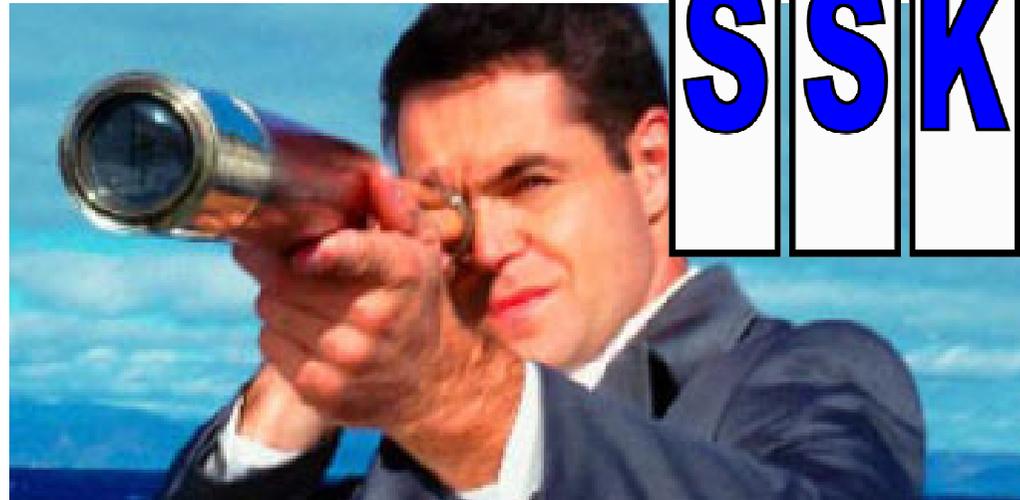
open

## **Questions 2008:**



- **non-thermal** effects?  
(e.g. systematic studies with different crest-faktors)
- independent **reproduction** of results  
(single studies not sufficient for scientific evidence)
- **sensitive** groups?  
(children, pregnant, patients)
- **assessment** of long-term exposure  
(parameters, mechanisms, biologic basis)
- **new technologies:**  
(accompanying emission assessment and monitoring)
- **risk communication**  
(efficiency)

***perspectives***  
***SSK- activities***



- ***overall*** assessment of the state of knowledge  
synopsis of international results  
*(one single study not sufficient for scientific evidence)*
- ***updated*** recommendation