

Frequency requirements for mobile radio

Our goal:
Secure frequencies for culture and the media.

Our way:
New technology for mobile communications. Equip base stations with antenna arrays (MIMO). Then, the mobile phone industry will not require the frequencies used by culture and media.

Our request:
Government support for research on these proposed antenna arrays.

Problem: Dead spots („Coverage Problem“)

Cause: no network

Solution

More base stations and national Roaming in rural areas

Federal government of Germany provides 1 billion euros



Many small stations are harmless to health (German independent foundation 'Stiftung Warentest', Sept. 2019).

Result

To fix the problem of dead spots, the mobile phone industry doesn't actually require more frequencies

Problem: Lack of capacity („Capacity Problem“)

Cause: increasing usage (e. g. streaming videos)

Preferred solution from the mobile phone industry

Bid for additional frequencies (because it's cheap: spectrum costs per month and per end customer in the sub-cent range)

470-694 MHz in the UHF band or frequencies in the 600 MHz band (currently used for antenna television and microphones/PMSE)



More effective solution

Use better antennas and switch off 3G

Massive-MIMO antenna array  Shutdown of 3G and use of 3G bands with 4G 

Consequences for the mobile phone industry

+ 17% 

Increase in cellular capacities from currently around 1300 MHz for another 224 MHz (= 17%)

Consequences for culture and the media



End of the antenna television and the use of wireless microphones (so-called substitute frequencies are often unsuitable)

Consequences for everyone

+ 300%    

Increase the transmission capacity by 3 to 4 times (+ 300%); mobile phone industry therefore does not need the frequencies that are used daily by culture and media; antenna television and wireless microphones will also have a sustainable future

subsidy, if applicable, switching from 3G to 4G (similar to when changing TV from analog to digital)