The 700 MHz band in Sweden

Developments and co-existence

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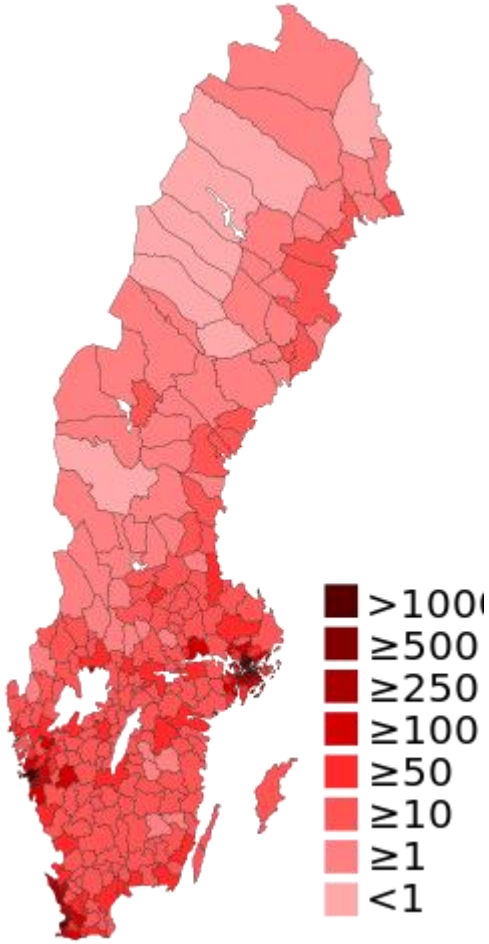
Why the 700 MHz band? (1)

- **Swedish geography and population density**



Why the 700 MHz band? (2)

- **Finland moving forward with 700 MHz band in 2017**

Developments and co-existence

I. Recent developments in the 700 MHz band in Sweden

II. Co-existence issues and experiences from the 800 MHz band

… and looking forward to the 700 MHz band

Recent developments in the 700 MHz band (1)

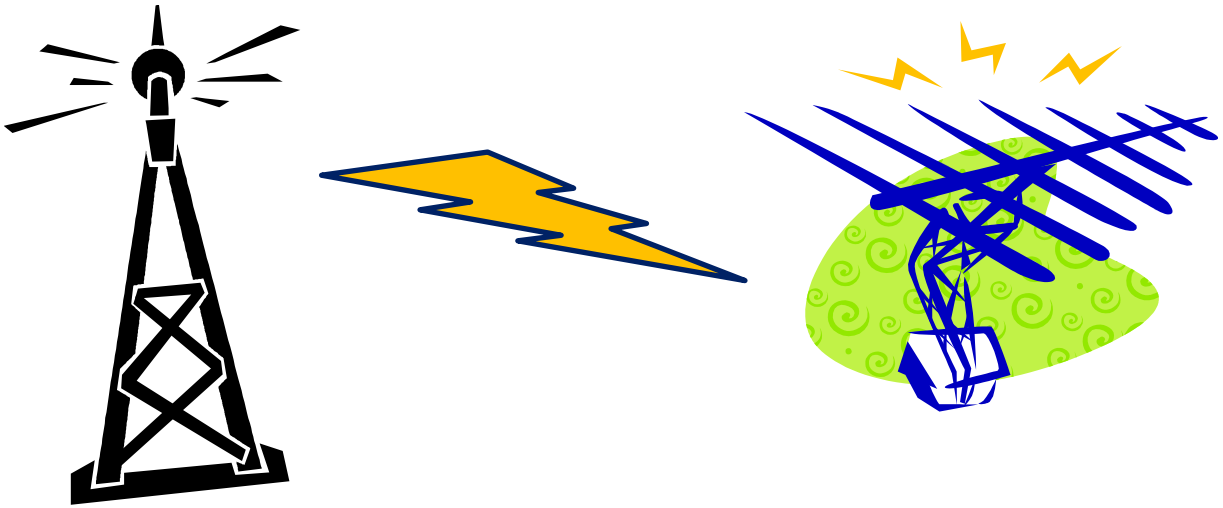
- **Government Decision of 27 February 2014**
  - 700 MHz band to be released for “services other than broadcasting” from April 1, 2017
  - Terrestrial TV broadcast to use Band III (174–230 MHz) and remaining part of Band IV/V (470–694 MHz) after 1 April 2017

Recent developments in the 700 MHz band (2)

- **Future of terrestrial TV broadcast networks**
  - Immediate initiation of re-planning of Bands III and IV/V, inc. co-ordination with neighbouring countries
  - 5 national DVB multiplexes + 1 semi-national multiplex foreseen after re-planning
  - Accelerated upgrade of terrestrial TV broadcasting networks to DVB-T2 and MPEG-4

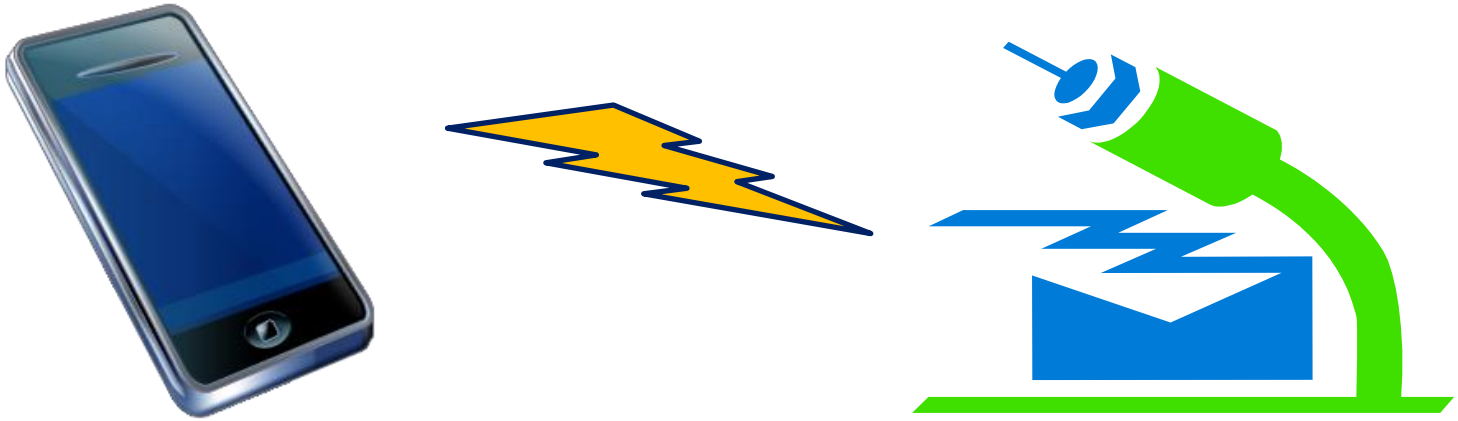
Co-existence issues (1)

1. **Harmful interference to terrestrial TV reception from LTE base stations**



Co-existence issues (2)

2. **Electromagnetic disturbance in co-axial cable receivers from LTE terminals**



Experiences from the 800 MHz band (1)

- **Co-existence between LTE base station transmissions and terrestrial TV broadcast receptions**
  - 800 MHz band assigned in 2011
  - Requirements for 800 MHz band licence holders:
    - Not to cause harmful interference to fixed broadcast TV reception
    - Investigate, identify and remedy harmful interference ASAP and without cost to TV viewer
    - Establish a common contact point to receive interference complaints from TV viewers

Experiences from the 800 MHz band (2)

- **Experiences so far (2011–2014)**
  - Fewer complaints than expected
  - Most complaints remedied by distribution of 800 MHz filters
  - Measurements by PTS in certain cases; no actual harmful interference could be detected
  - Many complaints in fact resulting from TV viewers' faulty equipment or antenna installations

Experiences from the 800 MHz band (3)

- **Co-existence between LTE terminal transmissions and co-axial cable reception equipment**
  - Electromagnetic disturbances in cable equipment are not harmful interference
    - Legal issue
    - Technical issue
  - Major cable TV operator in Sweden ceased transmissions in the 800 MHz band

Looking forward to the 700 MHz band…

- **Conclusions from experiences of the 800 MHz band deployment**
  - Harmful interference to terrestrial TV broadcasting reception may be a minor problem
  - But what about electromagnetic disturbances in co-axial cable reception equipment?
    - Risk or reality?

Thank you for your attention