

# Overview of the Future Wireless Landscape

Dr. Johan Nyström

Senior Specialist

Ericsson Research

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- The future of mobile broadband
- Future technology visions: IMT-Advanced
- Standardization
- Spectrum issues
- Competitor landscape

# Mobile broadband is here now

Strong momentum for HSPA



In **all** continents

**>50** countries

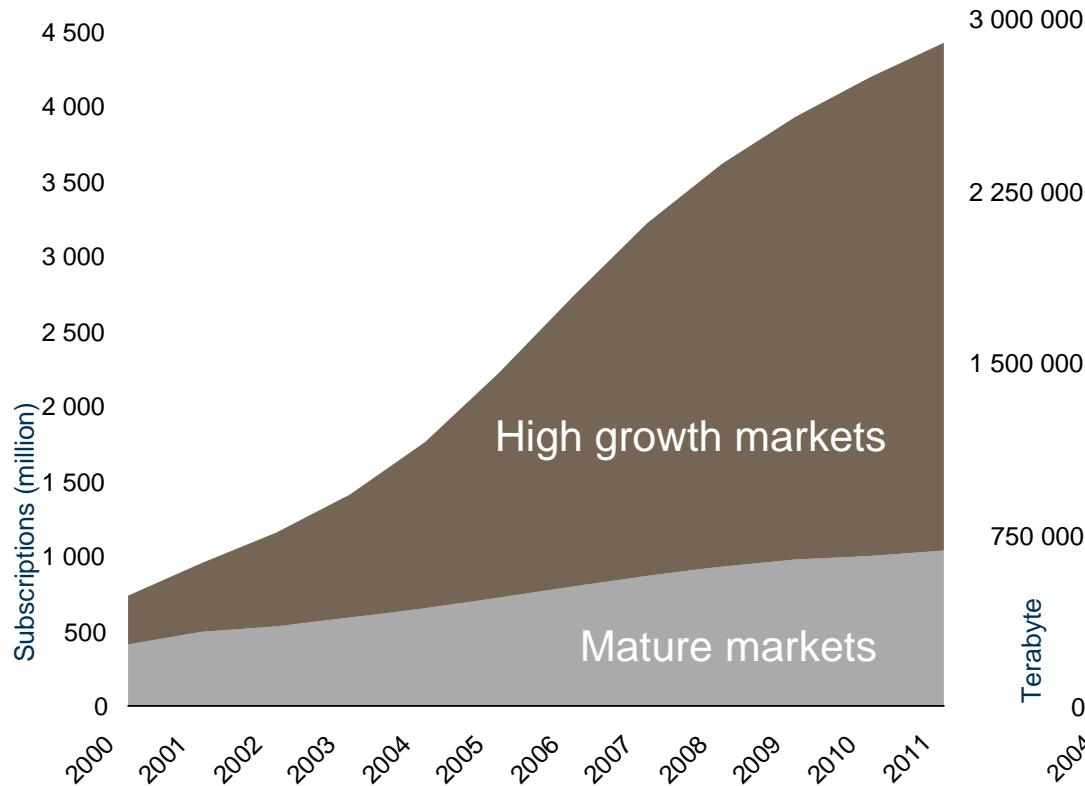
**>250** commercial devices

**>100** commercial launches

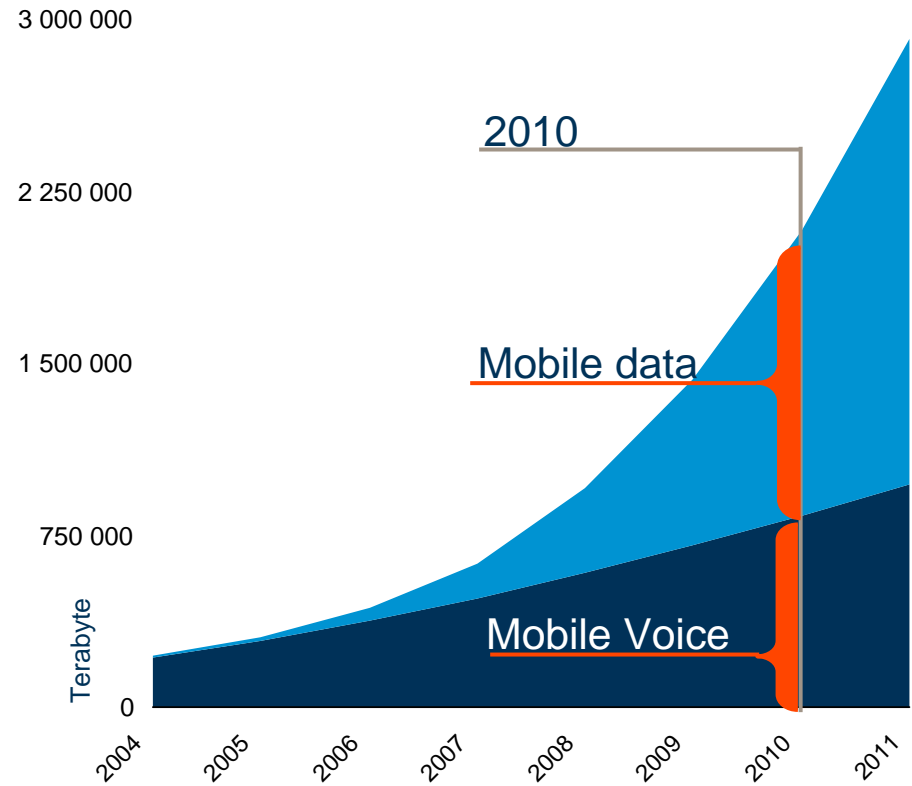
**>500** million subs on HSPA enabled networks

# Mobile broadband is expected to grow fast!

## Global cellular reported subscriptions

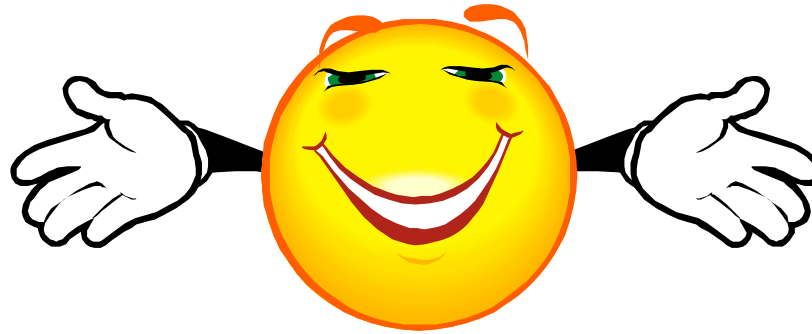


## Traffic in mobile networks



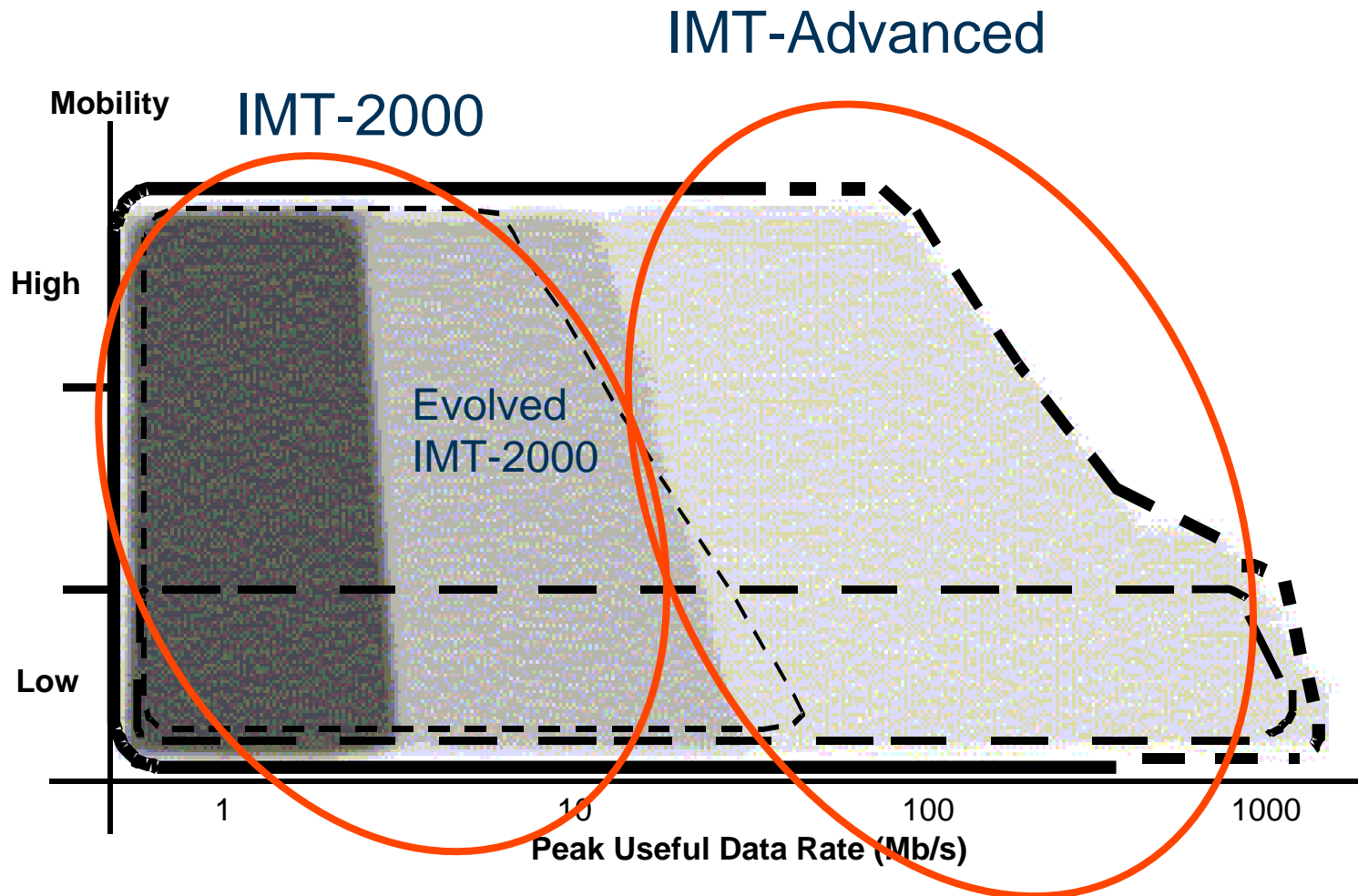
Mobile data to pass voice 2010 ! ( fixed data passed voice 2000)

# Growth potential



- Mobile broadband will grow fast everywhere!!!
  - Especially in areas without a fixed infrastructure
- Mobile broadband can replace fixed internet access
- Mobile broadband will accommodate all services that fixed internet can provide *plus* new ones based on position, mobility, etc
- Especially for the WCDMA family the step is small to mobile broadband
  - For ~10 €/m you can get flat rate HSPA (currently up to 7.2 Mbps) in Sweden => cheaper than fixed!!!

# Towards IMT-Advanced



# Work towards IMT-Advanced

- ITU-R is working with defining the characteristics of IMT-Advanced and the application process
  - Circular Letter, IMT.TECH, IMT.EVAL, etc
  - WINNER has been very active in this work
- Proposals are expected at least from the main standardization bodies
- The WINNER system targets the IMT-Advanced goals



# Standardization bodies

- 3GPP, 3GPP2, IEEE, ...
- Activities are ongoing to prepare proposals to ITU-R for IMT-Advanced
- Proposals are expected from the above organisations, and probably many more!
- We will eventually get a family of IMT-Advanced compliant standards fulfilling the requirements of ITU-R!
  - Just as for IMT-2000
- Ericsson thinks that further evolution of 3GPP LTE is a good way to eventually lead to IMT-Advanced!

# IMT\* spectrum situation

Where can we run our mobile broadband systems?

- In existing IMT-2000 spectrum
  - Especially in the extension band at 2.5GHz
- New spectrum has been identified at WRC'07 for mobile use
  - 136 MHz was globally allocated and identified to IMT
    - 450-470 MHz, 790-806 MHz, 2300-2400 MHz
  - The band 3400-3600 MHz is allocated to mobile service in some countries in all the three Regions
    - Good basis for initial product implementations
  - Mobile systems now in low frequency bands for wider area coverage
    - 698-790 MHz, 790-806 MHz, 806-862 MHz
- Spectrum situation is tricky => we need spectrum flexible systems

\* The identification to IMT-2000 was changed to IMT, and all frequency bands identified in WRC-07 to IMT (to cover both IMT-2000 and IMT-Advanced)

# Old and new competition! New businesses!

- The 'traditional' mobile industry
- Wireless access industry
- Datacommunication industry
- IT industry (Apple, Google, MS, ...)
- Content provider industry
- Different parts of the value chain will be targetted



# Conclusions



- Mobile broadband is here now and is growing fast
- Mobile broadband has a large global potential
- ITU-R is working hard on defining IMT-Advanced
- Some new IMT spectrum at WRC'07
- Standardization bodies are gearing up
- Mobile broadband will attract broad competition from many industries => competition will be tough
- WINNER has been well positioned from the start
  - Active in ITU-R for a long time
  - Targetting the promising technologies
- And let's not forget that around 2012 there will also be around 4 Billion mobile *voice* users!!!



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