

UMTS Forum Key messages for WRC-07

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Content

- New spectrum for capacity
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New spectrum for capacity



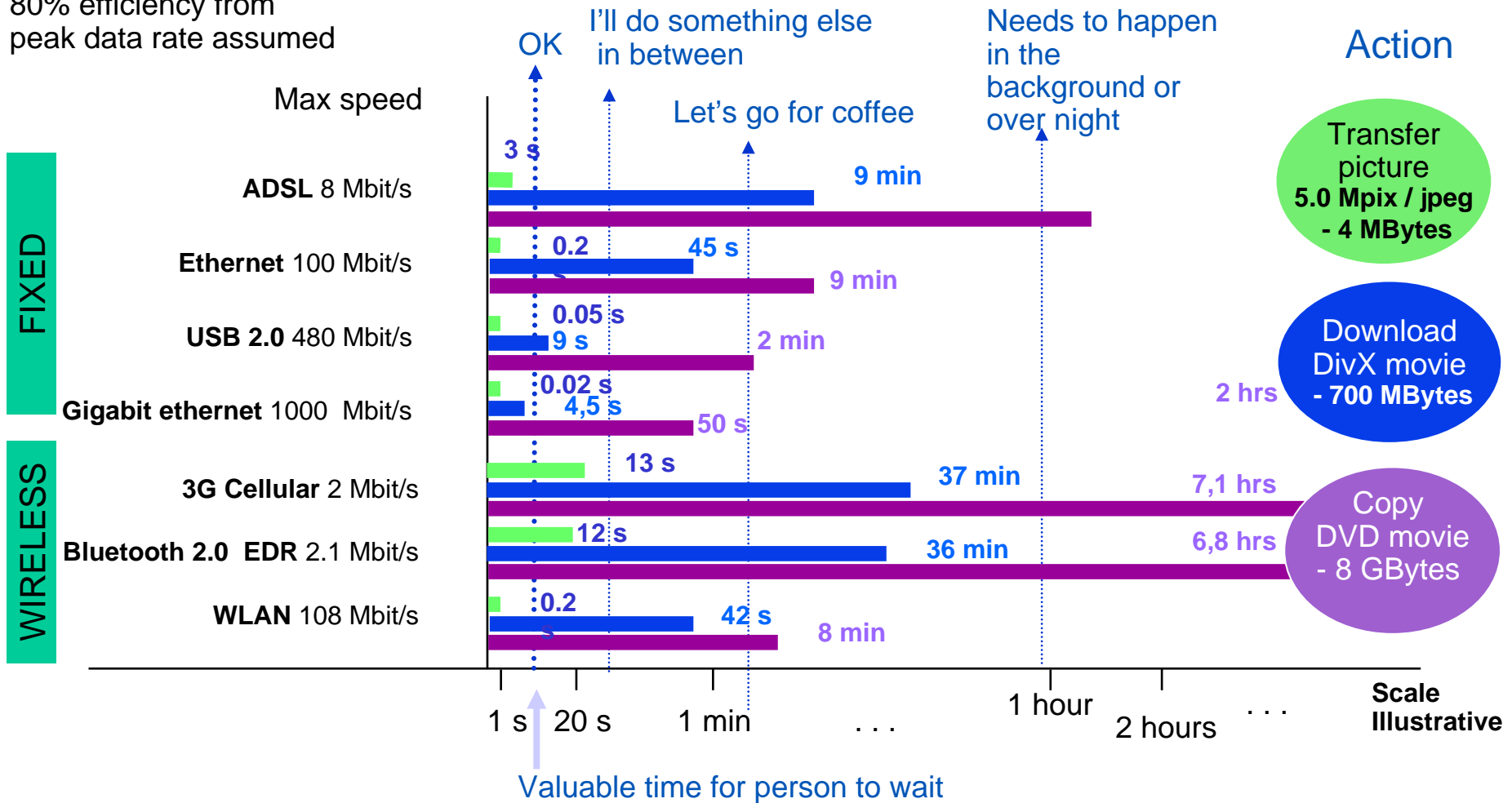
- Mobile market growth continues to be strong in terms of subscribers, traffic, coverage, usage of current services and of development of new services
- Higher data rates enhance the mobile user experience and lead to increased usage
- More spectrum is needed for the very high data rate IMT-Advanced services as a response to increased traffic:
 - UMTS Forum estimates 40 times increase from today to the year 2020 (in 2010: 2x today's traffic, in 2020: 23x the traffic in 2012)
 - EU FMS Smooth Development scenario estimates 30 times increase from the year 2010 to the year 2020.
- The Forum supports the spectrum requirement of 1720 MHz for the mobile communication by year 2020 including the existing IMT-2000 spectrum. The required new spectrum is about 1 GHz. The values are based on the high market setting as in Report ITU-R M.2078 and is also supported by the Forum own studies on the future spectrum requirement.



100++ Mbps wireless connectivity is needed for good user experience

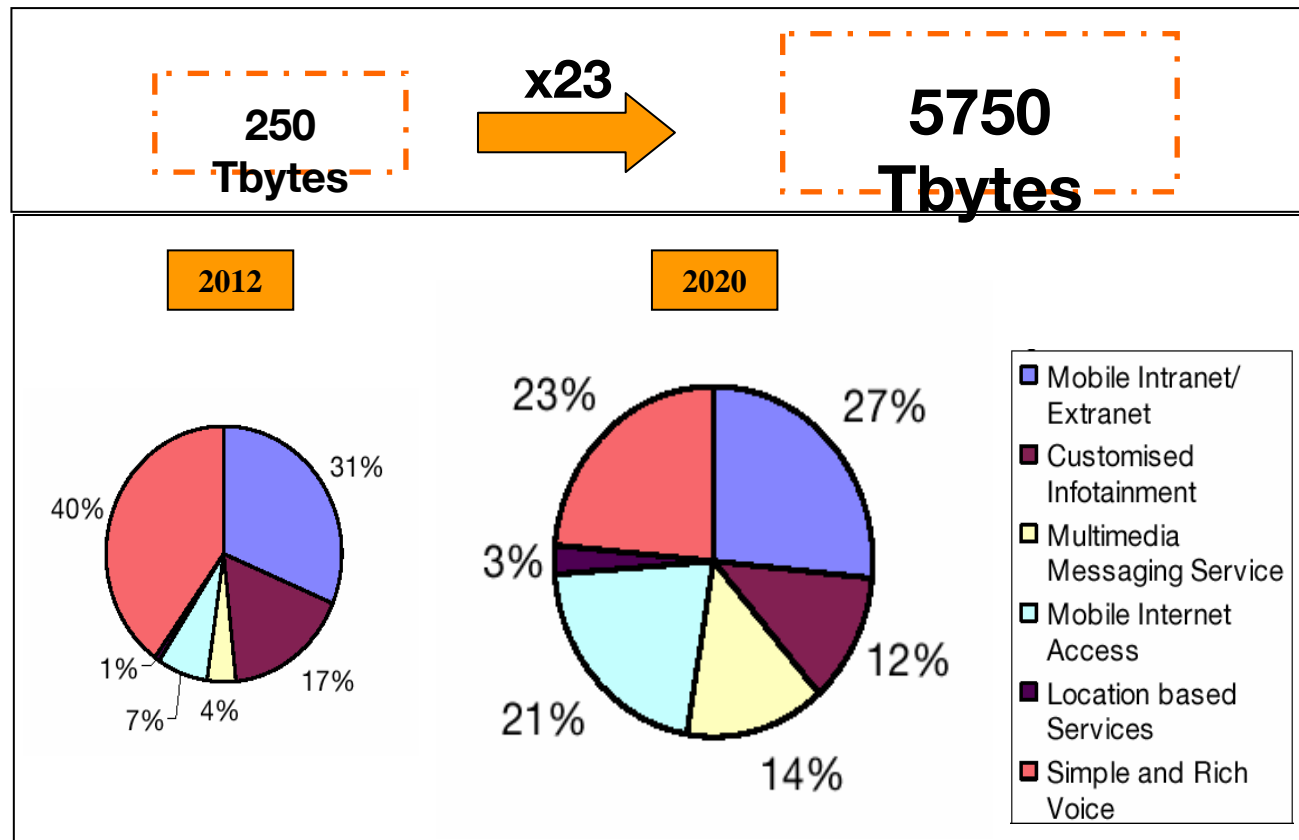


80% efficiency from peak data rate assumed



Mobile market evolution and growth

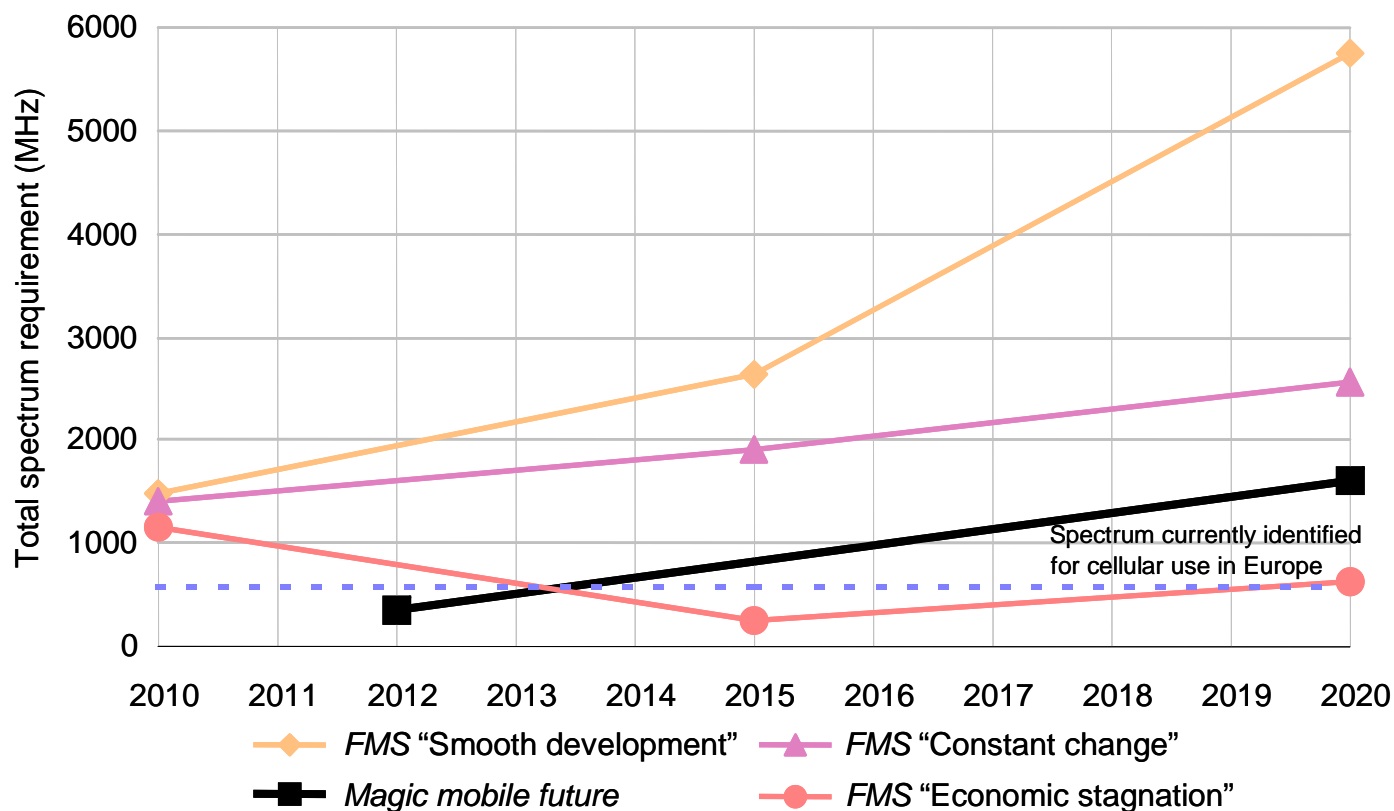
For a representative European country: Total daily traffic of 5750 Tbyte in 2020 → Total traffic /subscriber/day of 495 Mbyte



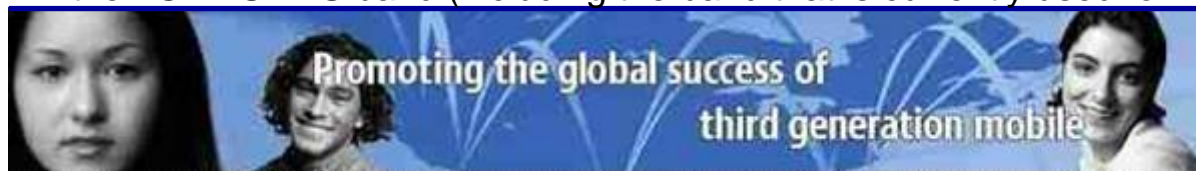
Source: UMTS Forum Report #37 (2005) "Magic Mobile Future 2010-2020"



UMTS Forum Spectrum requirements calculated using the spectrum forecasts in Europe (Report#40)



The spectrum currently identified for cellular use is 585MHz and includes the 900MHz and 1800MHz GSM bands the 2GHz UMTS band (including the band that is currently used for DECT), and the 2.5GHz expansion band.



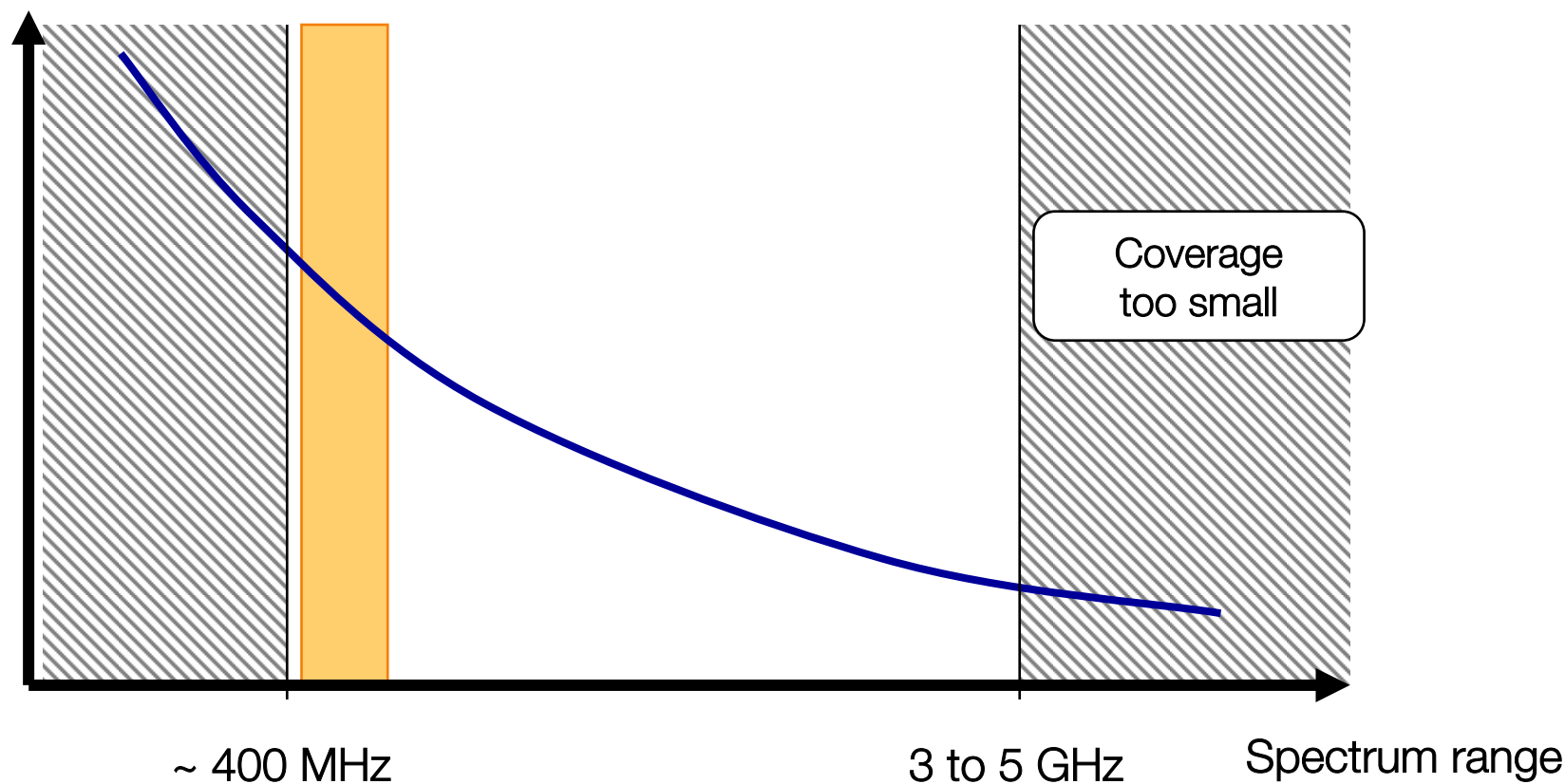
New spectrum for coverage

- Many growth and emerging markets still have a coverage limited to main cities. There is a need for a very cost effective IMT-2000/UMTS coverage solutions, business models and affordable IMT-2000/UMTS devices in these emerging markets
- The Forum supports a globally harmonized solution for the provision of coverage in large areas of low population density. To fulfil this coverage demand globally harmonized sub-band, around 100 MHz should be identified for IMT within the band 470-862 MHz at WRC-07.

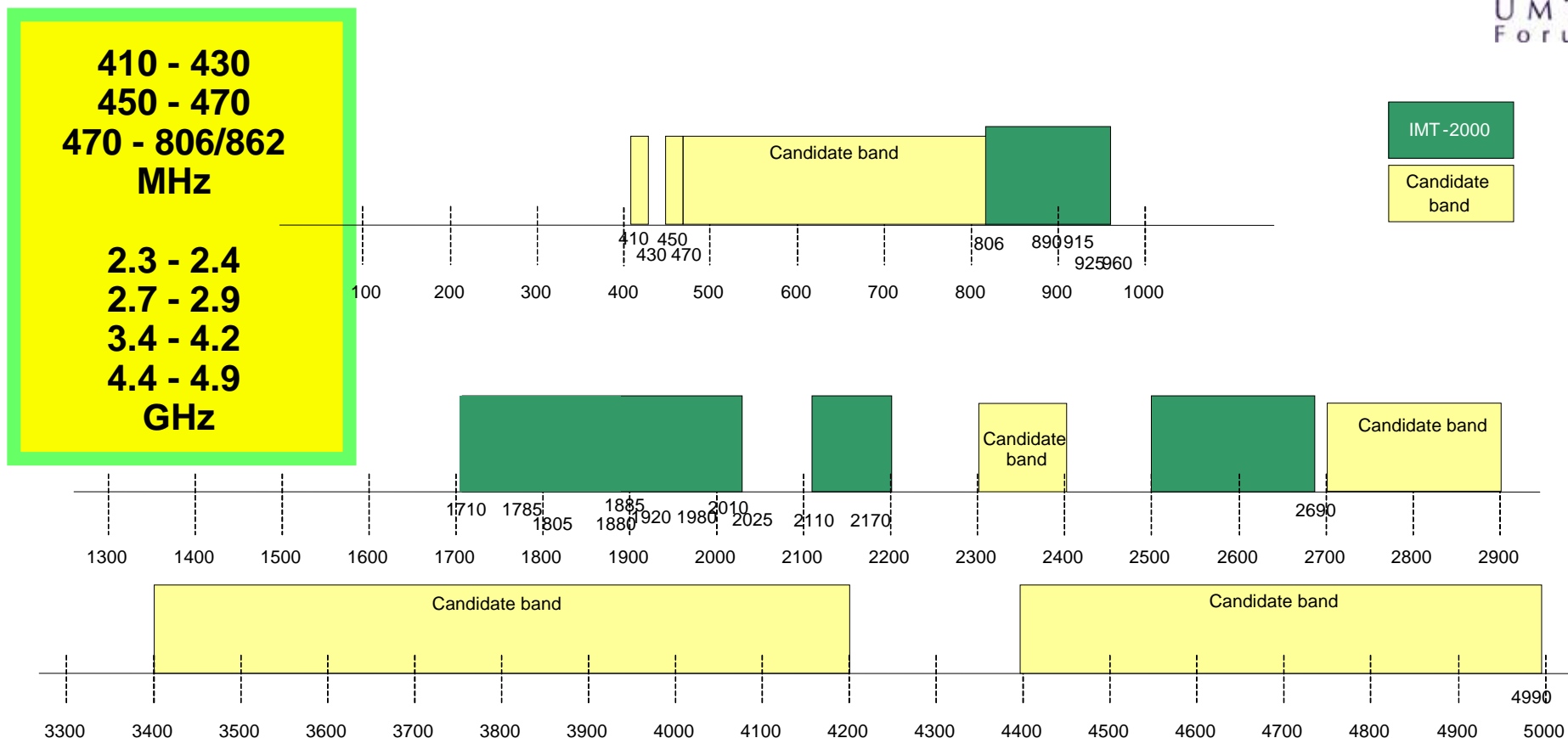


Frequency vs coverage for mobile

Coverage

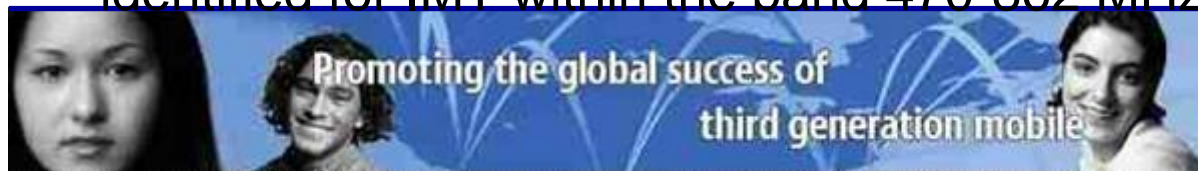


WRC-07 Agenda item 1.4 candidate bands



WRC-07 Agenda item 1.4 candidate bands

- The Forum urges administrations to find a solution that fulfils the 1 GHz spectrum demands. One single candidate band cannot fulfil the estimate spectrum demand.
- Bands for the very high bit rate IMT-Advanced services should be globally common and below 5 GHz. A decision in WRC-07 is necessary to enable deployment of the very high data-rate IMT-Advanced services in the timeframe of 2015-2020.
- Candidate bands 470-862 MHz, 2700-2900 MHz, 3400-4200 MHz and 4400-4990 MHz should be allocated to Mobile Service on a primary basis at WRC-07.
- The Forum supports a globally harmonized solution for the provision of coverage in large areas of low population density. To fulfil this coverage demand globally harmonized sub-band, around 100 MHz should be identified for IMT within the band 470-862 MHz at WRC-07.



WRC-07 Agenda item 1.4 candidate bands



- The Forum supports the identification of the band 3400-4200 MHz for IMT. This band alone does not fulfil the estimate spectrum requirement and, therefore, also the band 4400-4990 MHz should be identified for IMT. This will provide flexibility in implementation of IMT in those countries where parts of the bands are used for other services.
- Spectrum identification based on higher market setting benefits all countries including those that currently do not envisage to implement IMT in the whole spectrum
 - Avoiding national and regional bands, which lead to difficulty in frequency arrangements and consequently lose the merits of globally harmonized spectrum
 - Allowing flexibility for those administrations wishing to implement IMT based on the low market setting scenario within part of the identified spectrum bands for higher market setting and then also benefit from the economies of scale
 - Some countries, subject to heavy rainfall, might have the requirement to share part of the candidate bands with satellite services and therefore part of the bands could remain in the satellite use in those countries.



Conclusions

- About 1 GHz new spectrum below 5 GHz should be identified for IMT in WRC-07
- Identification in WRC-07 would allow implementation of IMT in 2015-2020 timeframe.
- Around 100 MHz harmonized sub-band should be made available for IMT from the band 470-862 MHz to fulfil the coverage demand.
- Candidate bands 470-862 MHz, 2700-2900 MHz, 3400-4200 MHz and 4400-4990 MHz should be allocated to Mobile Service on a primary basis at WRC-07.



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