

WELCOME

To the Panel on WiMax and 3GPP LTE: How are they related?



Panelists

Dr.-Ing. Carsten Ball (Siemens-Networks, Germany)

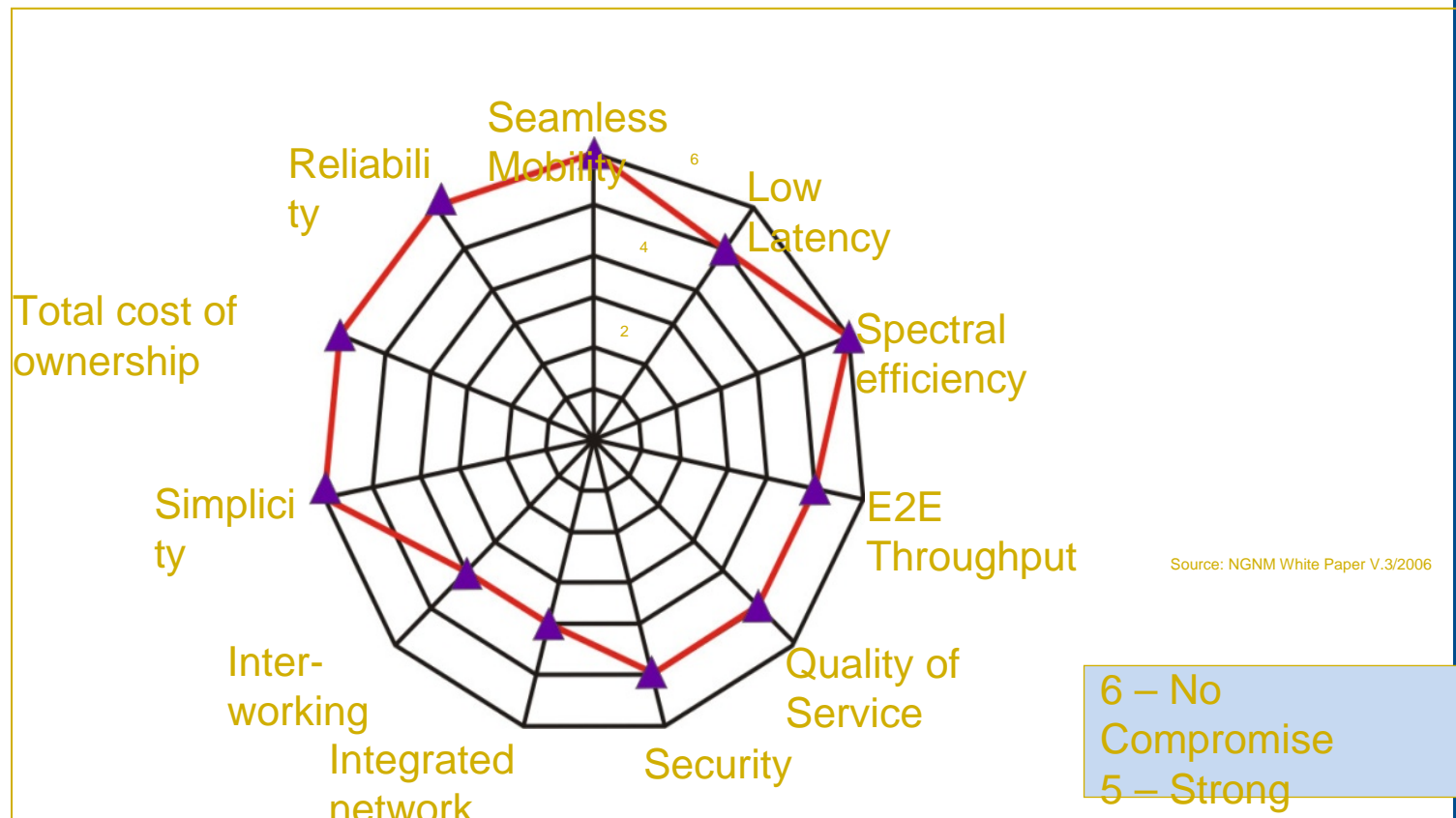
Dr. Michael Meyer (Ericsson GmbH, Eurolab, Germany)

Prof. Rahim Tafazolli, Univ. of Surrey, UK

Dr. Philippe Sehier (Alcatel-Lucent, France)

Prof. Bernhard Walke, RWTH Aachen University, Germany





6 – No
Compromise

5 – Strong
Requirement
4 – Compromise
Possible

Relative Priorities of Key System Characteristics

CPM Text for WRC-07 Agenda Item 1.4

□ Results of ITU-R M.[IMT.ESTIMATE]

- Low user demand: 1280 MHz required in the year 2020
- High user demand: 1720 MHz required in the year 2020

□ Main IMT-Advanced candidate bands: 3400–4000 & 4200-5000 MHz

- provide sufficient spectrum according to ITU-R M [IMT.ESTIMATE]
- Heavily opposed by FSS community
- Current FSS usage is under-utilizing the band

□ Status of sharing studies

- Not yet concluded, final results will be contributed directly to CPM or WRC-07
- Preliminary results on sharing in candidate bands 3400–5000 MHz:
 - Sharing with radar (airborne and shipborne): feasible for non-overlapping adjacent channels, interference mitigation techniques built into IMT-Advanced systems may further improve situation
 - Sharing with FSS earth stations: physical separation required, reasonable magnitude of separation distance only achievable if interference mitigation techniques (e.g., FSS station shielding, notching, etc.) are applied.

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Candidate Bands Overview I

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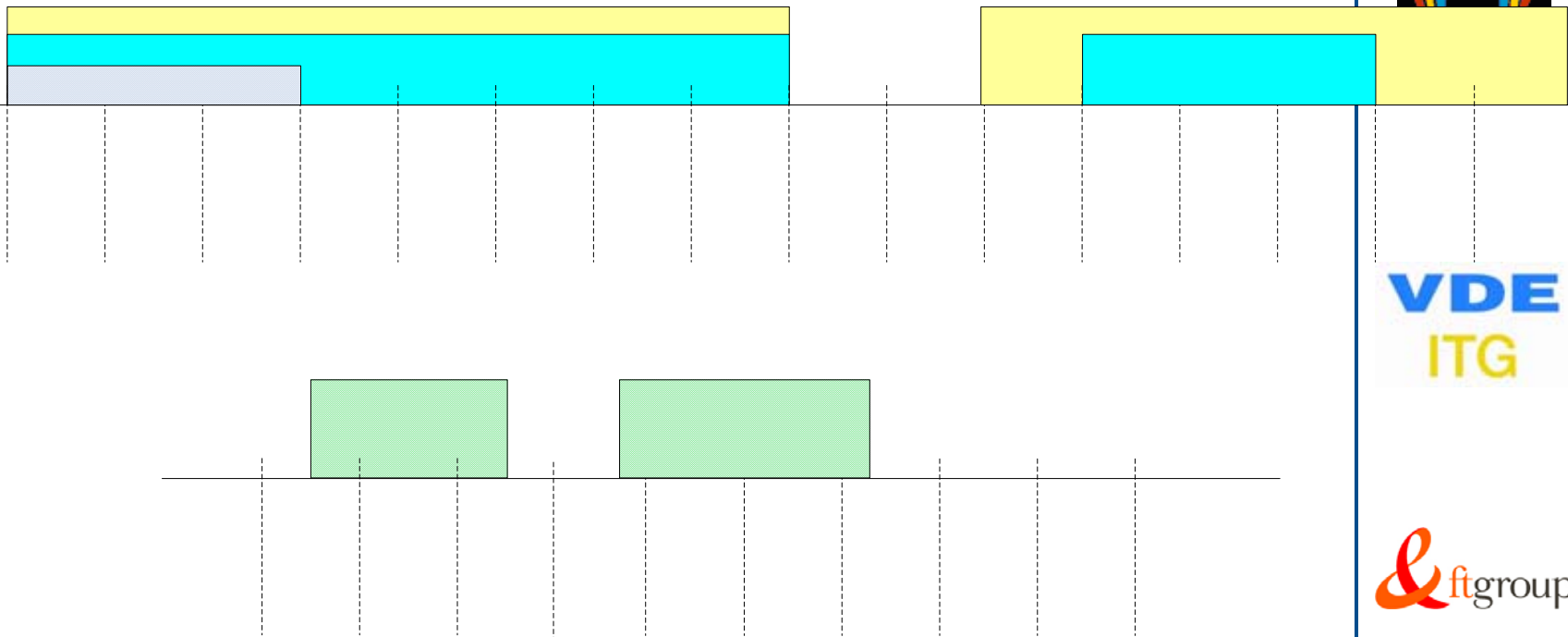
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Candidate Bands Overview II

Results of ITU-R M.[IMT.ESTIMATE]

Low/High user demand: 1280/1720 MHz required in year 2020

Main IMT-Advanced candidate bands: 3400–4000 & 4200–5000 MHz



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Consequences in practice

- ❑ **Additional spectrum may be identified for IMT (i.e., no specific identification for IMT-Advanced)**
 - ❑ Facilitates access to spectrum for e.g. WiMax et.al.
- ❑ **4G systems will only partly operate in globally harmonized spectrum**
 - ❑ Roaming customers may not be able to access the full spectrum that is used in other regions
- ❑ **Spectrum sharing with incumbents will most likely be required**
- ❑ **Impact on design of 4G spectrum sharing capabilities**
 - ❑ Feasible solutions for flexible spectrum sharing are needed **within 2-3 years from today**
 - ❑ Need to address sharing with radar, FSS earth stations
 - ❑ 4G stakeholders need to commit to feasible and agreeable sharing scenarios in time in order to facilitate a positive WRC-07 decision

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Thank You!

Contact:

walke@ComNets.RWTH-Aachen.de

