

## **DRAFT v.3**

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### **Abstract of presentation “UMTS-Forum IMT-2000 spectrum activities”**

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The presentation prepared by UMTS-F for ITU-BDT Sub-Regional Seminar in Ljubljana discusses different aspects of the actual issues of spectrum for IMT-2000 and systems beyond.

A key work area in the UMTS Forum is the frequency spectrum, which is the most essential resource for GSM/UMTS. Its Spectrum Aspect Group (SAG) is highly efficient because of its expertise and experience, to influence not only international bodies like CEPT or ITU but also National Administrations and the Financial Community.

UMTS-F supports the world-harmonised spectrum for telecommunication systems. According to the actual technological state of the art, only the spectrum harmonisation gives the opportunity for unifying of systems and easy achieving of global roaming, which results in improvement of subscriber's comfort and in increasing of operator's revenues.

A new spectrum will be necessary in the next future. New multimedia applications like messaging, conferencing, gaming and video/audio on demand will require more bandwidth. It is expected that those applications will become more and more popular and compensate decreasing revenues generated by voice only telephony. The presented spectrum scenarios indicate the reasonable spectrum amount per operator for effective providing of mobile services.

Wireless LANs and UMTS systems will be complementary and together will achieve the optimal trade-off between data throughput, mobility and range.

The next step for opening up the new spectrum is the development of frequency plans for 2.6 GHz band. ITU-R considers actually seven scenarios for spectrum arrangements in this band. In its discussions UMTS-F levels the interests of industry and operators for this band and presents common proposals to the international regulatory bodies.

UMTS-F SAG delivered significant contributions for spectrum definition process for IMT-2000 spectrum, which resulted in the WRC-00 decisions. Therefore SAG is actually only one group with proved competence on the field of spectrum requirements estimations and of spectrum amount calculations.

Currently the SAG is studying spectrum issues for system beyond IMT-2000. The work began with the investigation of services that will be offered to the UMTS customers in the future. It will be continued with estimation of the traffic characteristics, subscriber behaviour and resulting network load and asymmetry ratios at the different network levels. The new calculation methodology, which allows to estimate the relation between the required data rates and there from resulting necessary frequency bandwidth for IP networks should be developed as substitution for Erlang-formulas, which are not applicable for IP networks.

The results of those works should be delivered to the ITU-R WP8F, which began the investigation of spectrum for systems beyond IMT-2000 according to the decisions of WRC-03.