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Subject: Comments on the work of ECC PT1 under EC Mandate on the 900/1800 MHz bands

Password protected: yes ☐ **no** ☒

UMTS Forum welcomes the EC Mandate to CEPT on the 900/1800 MHz bands from 15th June 2009 and would like to contribute to the related ECC/PT1 work.

UMTS Forum would like to provide the following comments related to the three tasks mandated by the EC :

1. “Verify whether there are other technologies besides LTE developing equipment for 900/1800 MHz that would need to be studied concerning their coexistence with GSM”

Our analysis, among the European harmonised standards and Technical specifications, published and under development by ETSI, shows that in addition of GSM and UMTS, the only new system covered by EN301908 is LTE. There is no other system covered by the European harmonised standard for the 900/1800 MHz frequency bands. Furthermore, the analysis shows that GSM, UMTS and LTE are the technologies used or planned to be used in these bands .

As a result, UMTS Forum is of the view that for reasons of the efficient management of the total workload within ECC/PT1 there is only a need to consider LTE in the studies in the response to this Mandate.

2. Study the technical conditions under which LTE technology can be deployed in the 900/1800 MHz bands

UMTS Forum would like to provide the following elements for consideration in order to facilitate the ECC-PT1 studies in the determination of the technical conditions for the co-existence between LTE and GSM/UMTS in 900/1800 MHz bands:

- 3GPP RAN_4 has recently decided that the new spectrum mask for the 900/1800 MHz frequency bands for LTE BS, the new SEM is aligned with the mask for

UMTS BS. It is recommended to use this new LTE BS SEM in the co-existence study.

- Studies have been performed on the co-existence between LTE and UMTS in the 2 GHz frequency band. The results are reported in 3GPP TR36.942. Additional considerations are required to assess the applicability of those results in the 900 MHz and 1800 MHz bands.
- Simulation results of interference from LTE to GSM can also be found in 3GPP report TR36.942.

UMTS Forum will be pleased to contribute to this ECC/PT1 work.

3. Investigate compatibility between UMTS and adjacent band systems above 960 MHz

UMTS Forum considers that the existing systems should have a priority in the protection of the adjacent band systems, i.e. DME. It has to be noted that the frequency range between 960-977¹ MHz is not currently used by aeronautical DME and that the band between 960 and 977 MHz is part of a band where DME frequency allocations are defined on a national basis and are not part of the ICAO DME channel plan. The guard band ensures a good protection level between both systems. If the DME system is used the band below 970 MHz in the future, the DME systems should be designed so that they take into account the presence of existing mobile systems below (both GSM and UMTS). The band 880-960 MHz has been identified for IMT-2000 at the WRC-2000 and for UMTS in Europe through the ECC DEC/(06)13. Administrations have planned the introduction of UMTS technology in the 900 MHz for a while – for instance, in France, the possibility to re-use the band 900 MHz for UMTS have been introduced in 2004 in GSM licenses. Therefore, the potential development of DME adjacent to the 900 MHz should not impose undue constraint on IMT-2000 systems and it should take into account the current mobile emissions.

The protection of the future adjacent band systems should not create restriction on the operation of the existing systems. UMTS Forum understands that a possible adjacent system is under consideration following the identification of the band 960-1164 MHz for Aeronautical Mobile (R) Service at the WRC-07. The future communication system (LDACS) that will operate under the AMRS umbrella should subsequently be designed for coexistence with the emission masks of GSM, UMTS and LTE. It is interesting to highlight that Agenda Item 1.4 of the WRC-12 intends to address additional regulatory measures that might be required to facilitate the introduction of new AM(R)S systems in the bands 112 - 117.975 and 960-1164 MHz. This AI has been proposed to take appropriate measures to protect ARNS and RNSS Services above 1164 MHz. Therefore, the compatibility studies developed at the CEPT level could be fed to the ITU work in order to ensure sufficient protection of mobile systems when the LDACS systems will be deployed – not expected before 2025. Otherwise, it would be in conflict with the rule that a new system has to develop without constraining adjacent systems (see EC Framework Directive). In addition,

¹ **5.327A** *The use of the band 960-1 164 MHz by the aeronautical mobile (R) service is limited to systems that operate in accordance with recognized international aeronautical standards. Such use shall be in accordance with Resolution 417 (WRC-07).* (WRC-07)

to reduce the risk of flight safety, mission critical use close to the frequency 960 MHz should be avoided.

About the MIDS system, in international regulation, this system work under no protection. This point was mentioned in the ECC report 96.

UMTS Forum considers that it is exceptionally important to ensure the proper and continuous services of the current GSM and UMTS networks providing voice and data based communication services for the more than 572 million consumers in Europe, including over 140 million WCDMA consumers (Source: Informa Telecoms and Media); as well as allowing the introduction of LTE networks, in compatibility with GSM and UMTS, in the bands 900MHz and 1800MHz.

ABOUT THE UMTS FORUM

Mobile broadband is changing the way the world communicates. The UMTS Forum helps all players in this dynamic new value chain understand and profit from the opportunities of 3G/UMTS networks and their Long Term Evolution (LTE).

The UMTS Forum participates actively in the work of the ITU, EC, ETSI, 3GPP and CEPT as well as other technical and commercial organisations globally. It also contributes to the timely licensing and deployment of mobile broadband globally through regular dialogue with regulators and responses to public consultations.

The UMTS Forum supports the interests of its membership with a range of studies, reports and other outputs. Principal focus areas include markets trends, mobile broadband services and applications, key growth markets, spectrum & regulation, technology & implementation. A strong promotional voice is maintained via a high-profile presence at conferences, seminars and workshops as well as regular briefings to the media, analysts and other stakeholders.

Membership of the UMTS Forum draws together everyone with an interest in mobile broadband, including network operators, regulators and the manufacturers of network infrastructure and terminal equipment.