



UMTS Forum response
to the RSPG public consultation on “The introduction of Multimedia Services in particular in the frequency bands allocated to the broadcasting services”

UMTS Forum welcomes the opportunity to respond to the Radio Spectrum Policy Group opinion on “The introduction of multimedia services in particular in the frequency bands allocated to the broadcasting services”.

The Forum represents a significant group of spectrum users, which are directly interested in the development of public mobile networks, including UMTS/IMT-2000 and, especially, the related spectrum topics. The UMTS Forum gathers many different players involved in third generation mobile systems, including equipment manufacturers, operators, administrations, service providers and software developers.

UMTS Forum would like to provide some general comments as well as more specific comments on the UHF, L Band, MSS at 2 GHz and IMT-2000 spectrum.

General comments

- The UMTS Forum welcomes this consultation and the opportunity to respond. The Forum supports that by the end of this year the RSPG agrees an opinion on the issues raised in order to advance the regulatory environment for the introduction of new multimedia broadcast services in Europe.
- The UMTS Forum believes that there is a market opportunity for mobile multimedia broadcast services and favours a spectrum policy that sustains fair competition in terms of technology and service provision.
- Wherever possible some spectrum should be made available for mobile multimedia broadcast network(s) to enable the provision of the new services prior to analogue switch off.
- There are a number of terrestrial and satellite technologies that have the capability to provide mobile multimedia broadcast services. Examples of these include UMTS/IMT-2000 (FDD & TDD), DVB-H, MediaFLO, DMB, DAB, and mobile satellite broadcast services, etc.
- The UMTS Forum supports the harmonization of spectrum for mobile TV and this should be continued to be pursued across Europe.

VHF Band III (174-230 MHz)

The allotment planning and the envelope implementation mask concept in general provides for flexibility in the implementation of other services than T-DAB and DVB-T within the plan but the spectrum available in the VHF band and the fact that most of the band is planned with 1.75 MHz channels limits the use of this band for nation-wide mobile broadcasting systems.

For interactivity associated to mobile broadcasting systems in the VHF band such as the ones mentioned above the return channel will use traditional mobile telecommunication channels such as



GSM, GPRS, 3G etc. and therefore allocation of spectrum for the return channel with guard bands within the broadcast-ing band is not relevant.

UHF (470 – 862 MHz)

- Ideally more than one national multiplex per country should be made available in order to provide a competitive environment and a sufficient number of services for the users that should make possible the mobile multimedia services success.
 - o At least one multiplex should be made available as soon as possible.
 - o Additional multiplex(s) should be provided as soon as there is spectrum availability in a market demand basis.
 - o The planning criteria for mobile broadcast networks is different to that of fixed broadcast networks and any spectrum conditions should be developed with this in mind.
- Some industry players believe that there should be a debate on whether other mobile technology modes, such as FDD & TDD, and the associated impact on the channelisation arrangements.
- Europe-wide harmonisation of the spectrum to support mobile multimedia networks should be supported. Common and unique frequencies for mobile multimedia networks within a country, and ideally across Europe, eases roaming, acquisition time, spectrum efficiency and reduces costs, equipment and network deployment complexity, cross border interference, etc.
- It is proposed that EC RSCOM liaises with CEPT/ECC, and considers issuing a mandate if appropriate, to:
 - o Identify the appropriate spectrum layers taking into account result of the RRC-06 (ideally a minimum of two multiplex coverage per country based on 8MHz channel raster each and with the possibility of the SFN one being harmonized across EU);
 - o Define the terms and goals of the relevant technical and interference studies necessary for each layer and start conducting the appropriate technical studies;
 - o Target timeline for availability of each spectrum layer and draft appropriate ECC decision to support this;
 - o Build an appropriate regulatory and competition environment for spectrum licensing across Europe

L Band (1452 – 1492 MHz)

- UMTS Forum believes that this band could be an important alternative for the mobile multimedia broadcast networks due to its availability on a Europe wide basis and supports the RSPG to take the measures needed to assure this availability.
- Multiple mobile multimedia networks can be supported within this band, as a complement to other mobile multimedia networks in UHF spectrum, for example in densely populated areas to provide additional capacity and could become significant as the availability of UHF spectrum might be delayed as long as 2012.
- It is noted that CEPT identified the upper 12.5 MHz of the allocation for S-DAB¹ use (1479.5-1492 MHz), while the remaining part (1452-1479.5 MHz) is managed by the Maastricht Special Arrangement, and that development of S-DAB in 1467-1492 MHz is also possible

¹ ECC/DEC(03)02 on the designation of the frequency band 1479.5–1492 MHz for use by Satellite Digital Audio Broadcasting systems



under the Maastricht Special Arrangement.² Satellite mobile multimedia networks can also be supported in this band.

- Activities at the European level (EC / ECC) should be initiated to ensure that such spectrum is effectively used and optimized for new mobile broadcast networks, wherever possible. The opportunity to harmonise this spectrum should not be lost.
- The process for updating the channel arrangements for the band 1452-1479.5 MHz should be simple and in a manner appropriate for mobile multimedia applications. A full scale review of Maastricht is not favoured but rather some form of simple and quicker European supplementary approach within the framework of Maastricht such as a multi-country addendum / ECC decision etc to "re-interpret" the arrangements.
- It is noted that in order to most effectively and efficiently support mobile networks the channelisation scheme in the band 1452-1479.5 MHz should be reviewed and re-interpreted to enable nationwide channels to be made available.
- It is also noted that some of the mobile broadcast technologies currently operate at wider channel bandwidths rather than 1.7 MHz which is currently detailed under Maastricht in the band 1452-1479.5 MHz. Licensing of this spectrum should be designed to enable the option for different channel bandwidths in an efficient manner.
- There is already a spectrum mask under Maastricht which is for T-DAB systems in 1452-1479.5 MHz. This should be considered as the basis for other technologies taking into account the potential for wider channel widths.

2 GHz MSS spectrum:

The conditions of use of this spectrum are under review at the EU and CEPT level. This spectrum could provide a valuable resource to implement pan European satellite-based mobile multimedia services.

IMT-2000 Spectrum

- It is noted that IMT-2000 technologies (TDD & FDD) have the capability to provide mobile TV services.
- The UMTS Forum supports identification of a new coverage Extension Band on lower frequency bands for IMT-2000. The new coverage Extension Band should be allocated on a primary basis to Mobile Multimedia services in all three ITU Regions and identified for terrestrial IMT2000.

² See Annex 2 to the MA-02 Special Arrangement on the sharing of the band 1452-1479.5 MHz between T-DAB and other services