



**SAP REG Contribution In Response To The RSPG Consultation On The Draft
“Opinion on the Introduction of Multimedia Services in Particular in the Frequency Bands
Allocated to the Broadcasting Services”**

SAP REG, whose members¹ include most major satellite operators and manufacturers serving Europe, is pleased to contribute to RSPG’s public consultation on its draft Opinion “*on the Introduction of Multimedia Services in Particular in the Frequency Bands Allocated to the Broadcasting Services*”, published on the 15th of May, 2006.

1. Introduction

SAP REG indeed welcomes this opportunity to contribute to RSPG’s consultation, as it measures the high market interest expressed for multimedia services (that include inter alia mobile TV, digital radio services, mobile content distribution, interactive applications) to mobile users, and the role that the Satellite Industry could play in this sector. In particular, SAP REG would like to draw the RSPG’s attention to the fact that a number of innovative satellite based initiatives, precisely aiming at the provision of such services to European consumers, are currently under development in some of the frequency bands being considered in its draft Opinion. We believe that such initiatives, relying on efficient and state-of-the art technologies such as hybrid satellite/terrestrial architectures, are indeed uniquely positioned to address the mobile multimedia market in addition to other terrestrial based initiatives – to the ultimate consumer benefit – beyond inherently contributing to a number of policy objectives related to the development of the internal market, through their unrivalled ability to cover the entirety of the European territory from their first day of operation.

As such, SAP REG is confident that the RSPG would opine in favour of measures towards sufficient resources to be harmonised in Europe for the accommodation of these services, beyond maintaining the necessary regulatory certainty in the frequency bands which are already dwelling the development of near term satellite systems operations in Europe. In particular, we believe that, when harmonisation measures are to be considered in particular frequency bands, due consideration should be given to the relatively large amount of substitute spectrum allocations for terrestrial services, as listed in Table 1 of the draft Opinion, if compared with the limited frequency resource allocated to satellite services.

This contribution elaborates upon SAP REG’s views pertaining to the L band (§2) and the S band (§3), as a rationale to some proposals for amendments of the draft Opinion under consultation (§4).

SAP REG also notes that MSS bands other than those specifically mentioned in the draft Opinion (i.e. the 1.5/1.6 GHz bands and 1.6/2.4 GHz bands) could also offer the opportunity to provide multimedia services. At the current time, there is no common view within SAP REG to propose that these other MSS bands be explicitly included in the Opinion. However, a regulatory framework similar to that envisaged in the 2 GHz MSS bands should be considered for the other MSS bands in the future.

¹ SAP REG members include Alcatel Alenia Space, Aeromobile, Connexion by Boeing, EADS Space, Europa-Max, Eutelsat, France Telecom, Hispasat, Hughes Network Systems, ICO Global Communications, Inmarsat Ventures PLC, Intelsat, New Skies Satellites N.V., Ondas Media, SES Global, Telespazio, Terrestar, Thuraya, Viatis Satellite Radio and WorldSpace.

2. L band (1452-1492 MHz)

At international level, WARC-92 allocated the band 1452-1492 MHz on a primary basis for use by the broadcasting-satellite service (sound) systems and complementary terrestrial broadcasting (S-DAB). The introduction of S-DAB services is limited to the upper 25 MHz of spectrum, as a result of ITU Resolution 528.

In Europe, this allocation was used as a basis for the development of a T-DAB plan in the frequency band 1452 – 1479.5 MHz, under the premises of the Maastricht Special Arrangement, 2002, whereas the remaining 12.5 MHz of the L band allocation (1479.5 – 1492 MHz) were designated for S-DAB use, as a result of the adoption of CEPT Decision ECC/(03)/02 (the “S-DAB Decision”).

SAP REG observes that, four years after the MA-02 Conference, the market has not been as responsive as was expected and envisioned in 2002 towards the acceleration of T-DAB services up-take, as also noted by the RSPG in its draft Opinion². On the other hand, it now becomes clear that, after the success of S-DAB services in North America (with already more than 10 million subscribers in about 5 years of operation), **S-DAB services are now developing in Europe, with some players planning to start services in the near-term**. Extensive market research conducted over the past years indeed reveal the existence of a business opportunity for S-DAB services in Europe which is comparable to the U.S. success.

SAP REG believes that this development should form the basis of a re-consideration of the amount of frequency resource which should be harmonised for the accommodation of satellite systems, which we consider will play a key role in the development of mobile multimedia services in Europe, at stake in the draft Opinion. Together with the S Band, discussed in the next section of this contribution, the L band is indeed basically the main global satellite allocation which could serve as a basis for the accommodation of further mobile multimedia satellite initiatives. **The above CEPT ECC S-DAB Decision was adopted on the basis that 12.5 MHz of spectrum was recognised as being a minimum spectrum requirement to ensure economic viability of one S-DAB system in Europe**, as was acknowledged in various European fora³, and supported by past and existing industry positions. This amount is indeed consistent with what is being used today in various places around the world for the accommodation of such systems. In the US, both Sirius Satellite Radio and XM Satellite Radio, although using different system architectures, were each granted rights of use amounting to 12.5 MHz in exclusive portions of the 25 MHz US S-DARS allocation at S band (2320 – 2345 MHz), whereas we note that the US and Europe show similar economic metrics. In this proceeding, the FCC had indeed concluded “that 12.5 MHz of spectrum is necessary to offer enough channels for an economically viable satellite DARS system”⁴.

With this, SAP REG notes, and concurs with, RSPG’s preliminary position that “[The Maastricht Special Arrangement] now seems unduly restrictive”⁵, whereas this Arrangement has indeed not played the expected role of accelerating T-DAB service up-take in Europe. We believe on the contrary that, in view of the limited amount frequency resource allocated to satellite services, if compared with the number of satellite initiatives aiming at contributing to the development of mobile multimedia satellite services in Europe, **European decision makers should take the opportunity of this RSPG Opinion to consider the eventuality that the frequency band 1467-1479.5 MHz be also harmonised in Europe for satellite mobile multimedia systems in the L band, in conformity with the original ITU WARC-92 global allocation.**

² See first paragraph in section 3.3 of the Opinion

³ See e.g. Doc. CEPT/ECC (02)68 containing an exchange of correspondence between the ECC Chair and the Director-General of the European Commission DG Information Society, in the framework of the preparation of the MA-02 Conference: “Re-planning will result in a limitation of the number of rights of use to be granted for radio frequencies, in the case of S-DAB operators. In practical terms, this means that there will only be enough spectrum for one S-DAB platform” (letter DG INFSO/A3/JMD/2002, 5th paragraph)

⁴ See paragraph 41 of 1997 DARS Order

⁵ See second bullet point in § 3.3 of the Opinion

3. S band (1980-2010 MHz / 2170-2200 MHz)

SAP REG welcomes the identification of this frequency band in the context of this Opinion. SAP REG believes that this frequency is particularly well suited for satellite-based mobile multimedia services and current developments in this area confirm this belief. On going activities conducted in a coordinated manner in the Community context and at CEPT level should enable the establishment of stable regulatory framework for Mobile Satellite Service, which is key in view of the massive investment required. It is highlighted that CEPT/ECC has adopted in July 2006 a Report to an EC mandate on the use of the 2 GHz MSS, as well as a set of regulatory instruments that are in their final approval stage, after more than two years of intense regulatory activities within CEPT.

In particular, **SAP REG would like to support current activities at community level regarding the identification of the 1980-2010 MHz / 2170-2200 MHz for MSS systems, possibly using Complementary Ground Components, towards the adoption of legally enforceable texts by the end of 2006.** SAP REG also considers that fair competition conditions, taking due account of current EU and ITU regulations, have to be applied all over Europe for the access to, and assignment of, the frequency rights to candidate operators. The RSPG may wish to give some guidance and support in these respects.

4. Proposed amendments to the draft Opinion

Consistent with the above, SAP REG would like to put to RSPG's consideration the following proposals for editions to its draft Opinion:

3.3 1452 – 1492 MHz (L-Band)

At international level, WARC-92 allocated the band 1452-1492 MHz on a primary basis for use by the broadcasting-satellite service (sound) systems and complementary terrestrial broadcasting (S-DAB), but limited the introduction of S-DAB services to the upper 25 MHz of the allocation as a result of ITU Resolution 528

In Europe, the use of the band 1452 – 1479.5 MHz by digital sound broadcasting is subject to the Maastricht 2002 Special Arrangement, which planned that use with a fixed channel arrangement of 1.712 MHz bandwidth, with the specific characteristics of T-DAB, on the basis of allotments. Very few countries have introduced digital sound broadcasting services using T-DAB in this band, and where these services have been introduced, take-up has been limited.

The band is potentially available and could be made readily available for multimedia services using T-DAB or other technologies throughout most of Europe, noting that some interests were expressed towards the accommodation of pan European satellite based mobile multimedia services in the frequency band 1467-1479.5 MHz, supplementary to the on-going development of satellite operations in the frequency band 1479.5-1492 MHz, already harmonised for such use in Europe by ECC/DEC/(03)02 decision, The latter Decision has been implemented by 11 EU Member States and another three EU Member States have committed to implement it. The further harmonisation of the sub-band 1467-1479.5 MHz for satellite use, could indeed enable multiple entry of S-DAB services in Europe, in conformity with the original WARC-92 global allocation. These S-DAB systems are expected to use complementary terrestrial components using the same allocation, to enhance coverage. ITU regulations require administrations to protect the reception of satellite services in other countries, which would result in limiting the availability of these sub-bands for other terrestrial broadcasting services.

The main limitations arising from the international regulatory context in the band 1452 – 1492 MHz are:

- Mobile uplink transmissions in this band require guard bands with sound broadcasting, hence make their coexistence and coordination difficult.

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- The Maastricht Special Arrangement was developed on the basis of the T-DAB system. However, this Arrangement now seems unduly restrictive. It may therefore need to be reviewed to ensure that other technologies and services are not unduly precluded from use of the band, [noting in particular that some interests are seeking access to the frequency band 1467-1479.5 MHz for the introduction of satellite mobile multimedia services in Europe, supplementary to other on-going developments in the frequency band 1479.5-1492 MHz.](#)
- The requirement on each country to provide protection for the potential reception of satellite broadcasting services in other countries limits the availability of the band 1479.5 – 1492 MHz for terrestrial broadcasting services.

Table 1 – Spectrum options

Frequency Band	Advantage	Timing of availability	Rules and constraints	Europe-wide availability of common spectrum	Possible action
1452-1492 MHz (L-Band)	Availability. Significant spectrum amount	Early – unused in most countries	Maastricht Arrangement limits to T-DAB (or systems within that mask). Some licensed T-DAB use but very limited. ITU satellite allocation and existing filings in the band 1467- 1492 MHz. CEPT ECC/DEC/(03)02 decision for satellite use in the band 1479.5-1492 MHz. On-going development of S-DAB services in this band limit other usages	High	Confirm mask approach Review possibility of accommodating wider-band terrestrial and/or satellite technologies within Maastricht framework or consider more radical review
2 GHz MSS	Significant spectrum amount	Early – currently unused	CEPT ECC/DEC/(97)03 Decision on MSS CEPT ECC Decision on spectrum designation for MSS with complementary ground component. Sent in public consultation by CEPT in July 2006. CEPT ECC Recommendation implementing a Milestone Review Process. Sent in public consultation by CEPT in July 2006. Draft EC Decision under discussion in RSC.	High	Retain flexibility in current discussions. Finalize CEPT and EC framework on spectrum designation for MSS with CGC by end 2006.

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- 4.6 The RSPG considers that there are other frequency bands allocated to the broadcasting service which should be investigated with a view to facilitate the deployment of [terrestrial and satellite](#) mobile multimedia services in a shorter timeframe (notably 1 452 – [1 479.5](#) MHz).

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- 4.8 The RSPG considers that several actions could be considered at European level in order to facilitate the introduction of multimedia services, in a manner consistent with the objectives identified above and with the principles of the WAPECS Opinion. These actions would enable administrations to issue new licenses in a similar timeframe under a coherent authorisation regime to enable economies of scale, minimizing the applicable constraints, taking into account the expected revised television without frontiers directive.

- In the 1452 – 1479.5 MHz band, the Maastricht Special Arrangement seems unduly restrictive and should therefore be reviewed urgently to ensure that other terrestrial and satellite technologies and services are not unduly precluded from use of the band. In particular, actions should be considered towards the harmonisation of the frequency band 1467-1479.5 MHz for the development of satellite mobile multimedia services.
- In bands 174 – 230 MHz and 470 – 862 MHz, a minimum amount of [7-8] MHz should be made available to allow the provision of multimedia services, as requested by market conditions and permitted by analogue switch-off
- In the bands 1479.5 – 1492 MHz, 1980 – 2010 MHz and 2170 – 2200 MHz, the existing international framework and the work achieved or in progress at CEPT and EU level could enable the deployment of pan-European multimedia services. Further work should be done in the frequency bands 1980 – 2010 MHz and 2170 – 2200 MHz, so that, overall, appropriate regulatory certainty can be offered in these bands to accompany such on-going or planned developments.

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