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Q.3 Answer from the IPDC Forum

RADIO SPECTRUM POLICY GROUP
Public consultation ON
Wireless Access Platforms
for
Electronic Communications Services
(WAPECS)

In view of the interest expressed in this subject, the RSPG has decided to issue this document for public comment in parallel with the ongoing discussion in the RSPG. The contents should therefore be viewed as "work in progress" and do not necessarily represent the views of Member States. Comments received, from both Member States and other interested parties, will be considered in developing an RSPG Opinion on WAPECS. The deadline for comments is 15 September 2005. The intention is to develop a draft Opinion for consideration by the RSPG at its next meeting in late November 2005.

1. Introduction

The public consultation on WAPECS aims at collecting views in order to prepare an opinion of the Radio Spectrum Policy Group's (RSPG) in response to the European Commission's Request for an Opinion on the spectrum implications of Wireless Access Platforms for Electronic Communications Services (document RSPG04-45 and RSPG04-44).

In January 2004, the European Commission requested the RSPG to develop and adopt an Opinion on a coordinated EU spectrum policy approach for wireless electronic communications radio access platforms, to be addressed to the European Commission. The objective is to ensure that spectrum is available across a wide variety of services and applications to meet the requirements of the Lisbon agenda, and to comply with the overall policy goal of developing the EU internal market and European competitiveness. This project has become known as WAPECS (Wireless Access Platforms for Electronic Communications Services).

Matching market demand to service delineation has always been a challenge to spectrum managers. In today's environment, however, fixed, mobile and broadcast services are all converging, demand for certain services (such as mobile and Internet) has grown far beyond earlier predictions, and developments in radio technology have led to far more efficient methods of sharing spectrum amongst a wide range of users. Rapid innovation has created a need for speedier access to spectrum for individuals and service providers than is possible under traditional methods. This points to the need for greater flexibility in the management of spectrum resources for wireless electronic communications, while maintaining harmonisation where necessary. At the same time, convergence between fixed, mobile and broadcasting services means that spectrum originally intended for distinct services is now being used for services which compete against each other. This requires spectrum to be handled in a coherent way. Wherever possible, constraints attached to the usage of specific radio spectrum bands must be removed and spectrum management made more relevant to the rapid development of new markets and services.

With these objectives in mind, a possible working definition of WAPECS is as follows:

> "Wireless access platforms for electronic communications services (WAPECS) are the platforms used for radio access to electronic communications services, regardless of the bands in which they operate[1], or the technology they use."

Therefore different WAPECS platforms can provide mobile, portable, or fixed access, for a range of electronic communications services, using the term "services" in the sense of

[1] Recognising the obligations on Administrations under the ITU Radio Regulations

the Framework Directive 2002/21[2] (e.g., IP access, multimedia, multicasting, interactive broadcasting, datacasting), under one or more frequency allocations (mobile, broadcasting, fixed), deployed via terrestrial and/or satellite platforms using a variety of technologies to seamlessly deliver these applications to users. WAPECS will play a direct role in the information society development.

Consultation question 1: Do you agree with this operating definition of WAPECS? Do you consider that the WAPECS concept should include spectrum intended for private, as well as public, applications?

Consultation question 2: Do you consider that the term "platform" should be more closely defined? If so, what definition do you propose?

Particularly for converged applications, WAPECS may use frequencies from various allocations. For instance, broadcasting spectrum can support down-link mobile applications (either without a return channel, or with a return channel in another frequency band allocated to mobile service) and vice-versa (e.g., datacasting, multimedia, interactive broadcasting within the mobile service allocation). It is envisaged that WAPECS could operate on either a licensed or an unlicensed basis.

For converged applications including broadcasting a number of constraints on the use of broadcasting spectrum are imposed by national policies and international agreements and to ensure media pluralism and cultural diversity.

The term "WAPECS" is used to signal a move away from narrowly defined applications, for which specific spectrum is reserved. Under this broader definition of WAPECS, digital technologies are stimulated to deliver all applications/services within their capabilities, making use of any frequency band, but subject to technical coexistence rules which are tailored to each specific band.

[2] The Framework Directive defines "electronic communications service" as "a service normally provided for remuneration which consists wholly or mainly in the conveyance of signals on electronic communications networks, including telecommunications services and transmission services in networks used for broadcasting …" However, the Framework Directive also covers electronic communication networks, which are not limited to commercial use.

The WAPECS concept can be illustrated as shown in Figure 1:

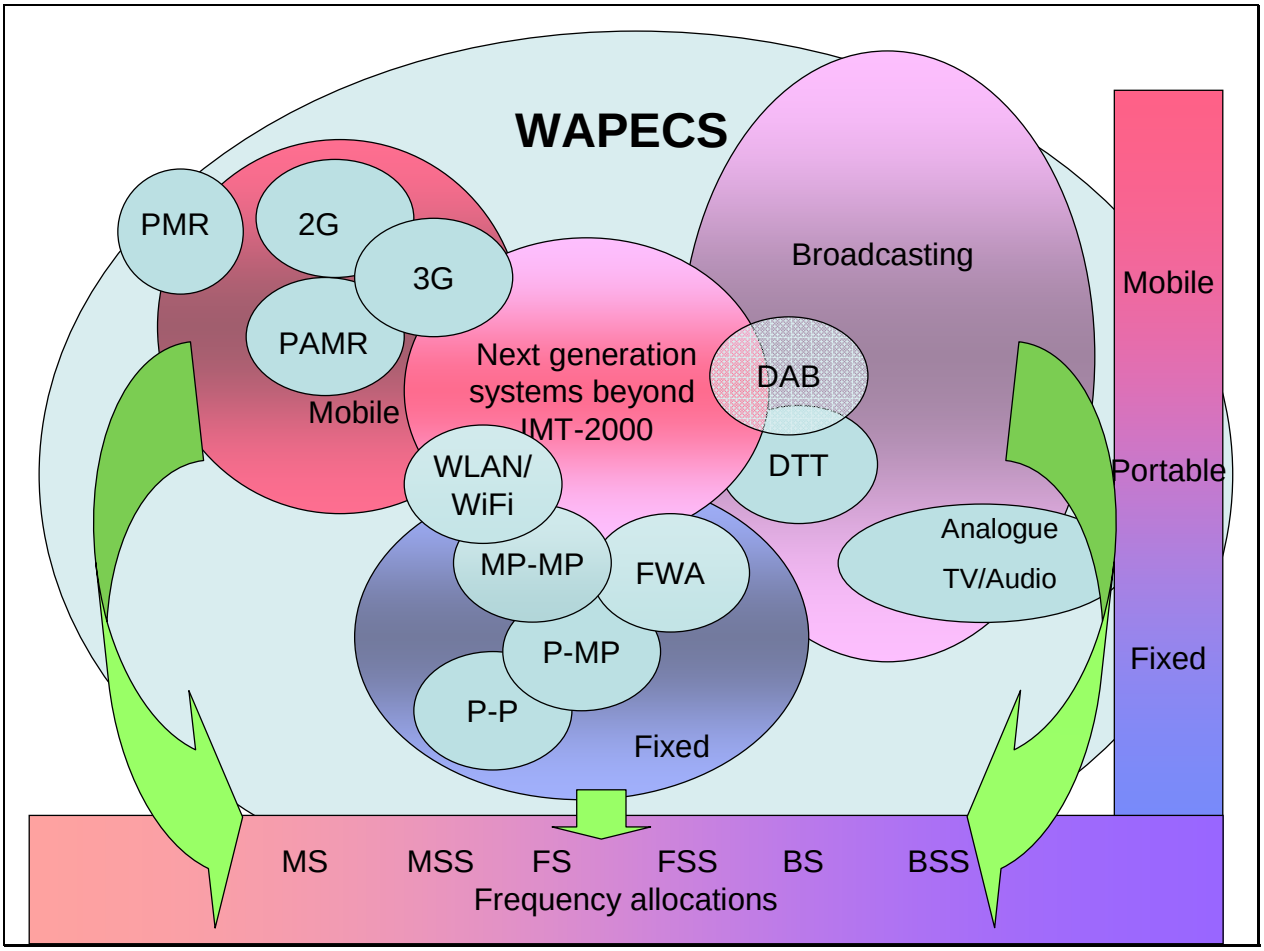

Figure 1. WAPECS Concept

Abbreviations in Figure 1			
2G	Second generation mobile	MP-MP	Multipoint to Multipoint fixed links
3G	Third generation mobile	MS	Mobile Service
BS	Broadcasting Service	MSS	Mobile Satellite Service
BSS	Broadcasting Satellite Service	P-MP	Point to Multipoint fixed links
DAB	Digital Audio Broadcasting	P-P	Point to Point fixed links
DTT	Digital Terrestrial Television	PAMR	Public Access Mobile Radio
FS	Fixed Service	PMR	Professional (Private) Mobile Radio
FSS	Fixed Satellite Service	WAPECS	Wireless Access Platforms for Electronic Communications Services
FWA	Fixed Wireless Access	WLAN	Wireless Local Area Networks

2. Survey of Member States

During February – April 2005 the RSPG consulted Member States via a questionnaire seeking information on current and intended usage on a proposed list of wireless platforms, which fall under the definition of WAPECS and which was formulated to identify:

- the relevant frequency bands for WAPECS;
- the range of licensing approaches which have or could be used
- the rights that have been applied
- the obligations that have been applied
- some spectrum related challenges

Member States were also requested to describe the challenges, constraints and possible solutions they expect in meeting the requirement for greater flexibility in spectrum use and technologically neutral regulation during the next 5 years.

The results of the questionnaire circulated to national spectrum management agencies indicate that there is a wide range of frequency bands which could be used for WAPECS. While there is a relatively high degree of commonality among Member States, there are also applications and allocations which are specific to one or a small number of Member States. The identification of frequency bands in this Opinion as being actually or potentially suitable for WAPECS is not intended to be exclusive, or to imply that other bands cannot or should not also be used for WAPECS. There are a number of frequency bands which a minority of Member States were interested in using for WAPECS, but which were not supported by a majority of questionnaire respondents – e.g. 2500 – 2690 MHz. A short summary of the results of the survey follows and a more detailed summary of the survey is contained in **Annex 1**.

a) Broadcasting bands

of the spectrum currently allocated to broadcasting, three bands are considered suitable for WAPECS, these bands having been identified for T-DAB (i and iii), DVB-T (i and ii):

i) 174 – 230 MHz

ii) 470 – 862 MHz

iii) 1452 – 1479.5 MHz.

The primary approach to licensing in these bands is through beauty competitions or direct award to public broadcasters. The single common licensee right is coverage and the licensee obligations that have been applied across Europe are coverage and rollout requirements and technology to be used.

Spectrum challenges and constraints

Spectrum challenges are seen to be how to overcome problems of congestion and service convergence. The main constraints on the use of broadcasting spectrum are universally seen to be imposed by national policies and international agreements and to ensure freedom of information and cultural plurality.

One additional band, 40.5 – 43.5 GHz was mentioned by a number of Member States, some treating it as a broadcast band and others as a fixed service band. This is a fairly newly opened band and the majority of Member States have not licensed services in this band. It is intended to have coverage as both a right and an obligation. Congestion and service convergence are also seen as potential challenges. No common constraints could be identified.

b) Fixed services

In the case of spectrum currently allocated to fixed services[3] the bands identified for WAPECS included

Fixed Point-to-point bands below 6 GHz

5925 – 6425 MHz, 3600 – 4200 MHz, 1375 – 1400 MHz, 1492 – 1517 MHz, 1427 – 1452 MHz and 1350 – 1375 MHz

Point-to-multipoint bands (excluding MWS)

3400 – 3800 MHz, 24.5 – 26.5 GHz

Point-to-multipoint bands (MWS)

24.5 – 26.5 GHz.

The main techniques used to licence the first two categories are beauty competitions and first-come-first-served approach. For point to multipoint systems, licensee obligations that have been applied across Europe are coverage and rollout requirements. A few Member States allow tradable rights.

Spectrum challenges and constraints

In the case of fixed services the spectrum challenges faced are the problems of congestion and demand for spectrum exceeding supply. The two spectrum constraints identified are regional agreements and sharing issues.

[3] Note that some frequencies assigned for use by the core network will not be available for WAPECS in the short term.

c) Mobile services

In spectrum currently allocated to land mobile there was a considerable degree of commonality and a wide range of bands considered suitable for WAPECS including:

i) 380 - 400 MHz[4];
ii) 410 - 430 MHz;
iii) 450 - 470 MHz;
iv) 870 - 876 MHz;
v) 880 - 921 MHz;
vi) 925 - 960 MHz;
vii) 1710 - 1785 MHz;
viii) 1805 - 1880 MHz;
ix) 1900 - 1980 MHz;
x) 2010 - 2025 MHz and
xi) 2110 - 2170 MHz.

In addition, other bands will become available for mobile services in the future, e.g. 2500 - 2690 MHz.

A number of different approaches have been taken to licencing these bands and these range from straightforward assignment to specific parties (e.g. digital trunked radio (band (i)) to Government services), first-come-first-served, auctions and beauty competitions. The most common licensee right is coverage with three or four Member Sates permitting tradable rights. Licensee obligations reflect the current services in the spectrum and include EIRP limits, technology use, rollout and coverage obligations.

Spectrum challenges and constraints

Spectrum challenges experienced in these bands include congestion, demand exceeding supply and in some areas the lack of equipment standards. Spectrum constraints are regional agreements followed by sharing issues and safety of life issues.

d) Licence-exempt Bands

In spectrum currently allocated to SRDs, a wide range of frequency bands was identified for WAPECS, the majority being for licence-exempt operation. Four bands in particular had a high degree of commonality across Europe:

i) 1880 - 1900 MHz (DECT)
ii) 2400 – 2483.5 MHz (RLANs)
iii) 5150 - 5350 MHz (RLANs)
iv) 5470 - 5725 MHz (RLANs)

[4] Note that the usage of this band relies on the fact that, for NATO countries, there was an agreement between the military and the civil authorities to accommodate the emergency services in military frequency bands subject to certain conditions such as sharing.

The common licensee right is coverage. Licensee obligations include EIRP limits, technology use and equipment standardization.

Spectrum challenges and constraints

In common across these four bands the spectrum challenges identified were congestion, equipment standards and service convergence, although some Member States did not identify any constraints. Regional agreements were seen as the key spectrum constraint followed with some sharing issues in the RLAN bands.

3. The issues to be considered in the Opinion of the RSPG

1. The availability of radio frequency spectrum has an important role to play in ensuring the achievement of the Lisbon agenda and the e-Europe Action Plan. E-Europe is part of the Lisbon strategy to make the European Union the most competitive and dynamic knowledge-based economy with improved employment and social cohesion by 2010. This depends on the widespread availability and take-up of broadband, for both business and citizen-consumers. The action plan identifies spectrum as an important area:

   "Spectrum policy: The Commission will use the new regulatory framework for radio spectrum policy to ensure spectrum availability for, and efficient spectrum use by, wireless broadband services (e.g. W-LANs) and to co-operate with Member States with regard to the introduction of such services".

2. The rapid convergence caused by increasing use of digital technologies – for example, between fixed and mobile services, and between mobile and broadcasting services – is putting pressure on spectrum management policies. For those platforms that use radio spectrum to deliver the new converged services to the consumer, it is important that spectrum regulation also converges and is coherent across all the affected frequency bands.

Consultation Question 3: What, if any, constraints should there be on the provision of services using spectrum primarily in the broadcast domain?

3. A number of constraints have the potential to limit the use of particular bands for WAPECS. These constraints include:

   (a) Legacy issues arising from the initial assignment of frequencies. The most important of these is the differing economic values assigned to different blocks of spectrum, where both might be equally suitable for WAPECS. In some cases the

value has been decided by the State, where the spectrum was assigned by beauty contest or on a first-come, first served basis with a pre-determined licence fee. In other cases, the value was determined by the market, in the context of an auction;

(b) Limited flexibility in existing licences, particularly arising from regional and international agreements. Spectrum rights of use may require spectrum to be used for a particular purpose, even though demand may be higher if used for another purpose. This can result in spectrum being effectively wasted. The problem can be compounded by long licence durations, which make it difficult to change the rules quickly. Notwithstanding, in relation to the change of use it is noted that the current EU legislation framework requires that where radio frequency use has been harmonized, any transfer of rights of use of radio frequencies shall not result in change of use of that radio frequency .

(c) Excess of technological prescriptions in some existing licences. Licences or rights of use may be over-specific in prescribing the exact type of equipment to be used in a particular band, thereby hampering innovation (e.g. transition from 2G to 3G)

(d) Services of General Economic Interest: Some spectrum needs to be safeguarded for particular services of general economic interest, safety-of-life, etc.

Consultation Question 4: What specific rules should be introduced or maintained to safeguard the delivery of Services of General Economic Interest in the future? Is it most appropriate to deal with these issues through the regulation of spectrum, or through other instruments such as competition law or state aid policy?

Challenges for European Regulators

4. The following challenges need to be addressed by European regulators:

i) Ensuring access to adequate amounts of spectrum to meet the needs of consumers and business in the future environment without disadvantaging services of general interest (such as public-sector broadcasting) and without picking technology winners. This may involve removing exclusivity from current uses of particular bands in order to prevent congestion, while respecting the principle of non-discrimination;

ii) Balancing flexibility with harmonisation: removing undue regulatory constraints on the services to be offered and the technologies to be used wherever possible, while distinguishing between licensed and unlicensed bands and identifying what technical co-existence requirements (channelling arrangements, interference thresholds) must be met;

iii) Facilitating standardisation where necessary to allow the relevant frequency bands to be exploited and to allow the single European market to benefit from economies of scale;

Consultation Question 5: How do you think changes in spectrum policy will impact on the requirement for standardisation? What policy will best ensure the timely availability of standards?

iv) Identifying transition arrangements which ensure that legacy issues are dealt with smoothly and that equitable burden sharing takes place between incumbents and newcomers in order to promote innovation.

Consultation question 6: Are there any other challenges that the RSPG should consider?

Long Term Policy Goal

5. It is envisaged that the long-term policy goal should be towards converged and coherent spectrum regulation, and this would require technological neutrality, service neutrality and coherent authorization mechanisms, taking into account that harmonization may be beneficial from the point of view of inter-operability and roaming capabilities.

6. As regards technological neutrality, for each frequency band which has been identified by CEPT as a harmonised band, any technology that is technically compatible with other services at the band edges and which supports seamless access to services may be used by an operator, with a view to ensuring technological neutrality and flexibility in future use of the spectrum.

7. As regards service neutrality, any service covered by WAPECS may be provided in any frequency band designated for WAPECS, as long as an effective and efficient use of spectrum is not endangered. No service should have exclusive use of any band, although in exceptional cases (for example, where services of general economic interest such as public broadcasting or emergency services are involved), an operator or operators may have an obligation to provide some specific service in a specific band or sub-band and to ensure media pluralism and cultural diversity.

8. As regards coherent authorization, it would be beneficial to have co-ordination at European level on issues such as ‘sunset’ clauses or reviews, authorization conditions, particularly if a frequency band(s) has been identified as a high priority for WAPECS.

9. A broad range of regulatory approaches could be adopted to further the WAPECS agenda. These range from maintaining the status quo (which is well understood by spectrum management authorities and industry and would provide certainty, but which lacks flexibility and discourages innovation), to a totally "laissez-faire" approach (which would be highly flexible and allow innovation, but would risk inefficient and fragmented use of spectrum). The best approach to minimising and harmonising constraints in the use of spectrum may be to adopt a neutral approach to both services and technologies. This would require adherence to defined interference limits. This would facilitate both flexible use of spectrum and single market cohesion, although issues of potential interference would have to be carefully controlled and monitored.

Consultation question 7: What is your view on the above-mentioned issues and more specifically on how to achieve the right balance between "minimising and harmonising constraints" presented above?

Consultation question 8: Are there any other long term policy goals that the RSPG should consider?

4. Next Steps

10. If implemented overnight in a "big-bang" approach, the move towards WAPECS-friendly spectrum management has the potential to cause disruption in the market and possibly discourage investment in the short term. On the other hand, simply allowing existing licences to run their course, and changing them to more flexible rights of use as they expire, would delay the benefits of innovation and unduly penalize consumers. The implementation packages, detailing specific actions to be taken as part of the transition will be necessary to ensure that sufficient spectrum is made available at the same time to avoid congestion, hoarding and allegations of unequal treatment. The setting of implementation dates for specific actions could act as a guideline and indication to regulators and interested parties, thus facilitating the adjustment of business plans and national transition. Such implementation dates should not prevent Member States from implementing earlier if they see fit and taking account of local circumstances.

11. The following could be possible areas for action at EU level:

    - The Radio Spectrum Committee should be asked to prepare a mandate for CEPT asking for a detailed report on the frequency bands initially identified as most suitable for WAPECS, stating where it would be

appropriate to remove constraints and where it would not, and what technical coexistence rules would have to be observed.

- The Radio Spectrum Committee should also, for each of the frequency bands referenced above, report back to the RSPG on each of three classes of issue which may hinder the development of WAPECS:

  i. technical issues related to the use of the spectrum;
  ii. non-technical issues at national level;
  iii. non-technical issues at EU/international level.

- Member States should regularly exchange views and information on progress towards WAPECS

Consultation Question 9: Do you think that these steps form an adequate basis for achievement of the European objectives in this area? Are there any other steps that are required?

ANNEX 1

Survey of Member States on WAPECS concept

The following tables briefly summarise the responses received to the questionnaire.

Broadcasting

	T-DAB	DVB-T	DVB-H	DRM	MWS	Satellite radio	Satellite TV	SIT/SUT
Number of countries that responded	17	21	1	10	8	7	7	3
Main frequency bands	174 – 240 MHz, 1452 – 1479.5 MHz	174 – 230 MHz, 470 – 862 MHz	470 – 862 MHz	Large number of options	40.5 – 43.5 GHz	1479.5 – 1492 MHz proposed by 5 countries. Number of other options	Number of options no clear preference	No clear preference
Method of licensing	To broadcasters and beauty contest equally preferred	Beauty contest main approach	F.C.F.S.[5]	F.C.F.S. main approach	Majority not made a decision	Licence exempt	Licence exempt	Licence exempt
Local geographic allocation?	More for local	More for local	Local	More for local	More for local	Majority not a local	Majority not a local	All not a local
Licensee rights	Coverage.	Coverage except POR and UK tradable rights	Coverage	Coverage	Coverage	Coverage	Coverage	Coverage
Licence duration	No common response / no decision	No common response / no decision	No decision	No common response / no decision	No common response / no decision	Generally none because licence exempt	Generally none because licence exempt	Generally none because licence exempt
Obligations that apply[6]	Coverage, technology, rollout[7].	Coverage, technology, rollout[6].	Limited responses to conclude	Technology, coverage, EIRP limit	Coverage[8]	Limited responses to conclude	Limited responses to conclude	Limited responses to conclude
Entry fees	Combined	Combined	Limited	Combined	Combined	Admin fee	Admin fee	Admin fee

[5] F.C.F.S. = First come first served
[6] Top 3 mentioned obligations in descending order
[7] Netherlands initially at least 80% broadcasting (Max 20% data)
[8] Note only two replies to this question and coverage was the only obligation chosen by both

	T-DAB	DVB-T	DVB-H	DRM	MWS	Satellite radio	Satellite TV	SIT/SUT
	admin and spectrum fee / Admin fee equally preferred	admin and spectrum fee slightly preferred	responses to conclude	admin and spectrum fee slightly preferred	admin and spectrum fee slightly preferred			
Spectrum challenges[9]	Congestion & service convergence (equal top)	Congestion (main challenge), service convergence	Service convergence	Service convergence, congestion, spectrum demand exceeds supply	Congestion, service convergence	Service convergence, congestion	Service convergence, congestion	Insufficient replies to decide between the options
Spectrum constraints[10]	Regional agreements (main), International agreements	Regional agreements, International agreements	International agreements	International agreements (main)	Limited responses to conclude	International agreements	International agreements	International agreements

Fixed links

	Point to point below 6 GHz	Point to multipoint excluding MWS	MWS (point to multipoint)	Multipoint to multipoint
Number of countries that responded	9	17[11]	9	6
Frequency bands	Main bands mentioned: 5925 – 6425 MHz, 3600 – 4200 MHz, 1375 – 1400 MHz, 1492 – 1517 MHz, 1427 – 1452 MHz and 1350 – 1375 MHz	Main bands mentioned: 3400 – 3600 MHz, 24.5 – 26.5 GHz	Main band mentioned: 40.5 – 43.5 GHz	Number of options no clear preference
Method of licensing	All used F.C.F.S.	F.C.F.S. and Beauty contest	Majority of countries not yet decided	Majority of countries not yet decided

[9] Top 3 or top 2 (if they were significantly above other challenges) mentioned spectrum challenges in descending order
[10] Generally top 2 in descending order
[11] 18 countries provided replies on point to multipoint in total

	Point to point below 6 GHz	**Point to multipoint excluding MWS**	**MWS (point to multipoint)**	**Multipoint to multipoint**
Local geographic allocation?	Majority local	Local preferred	Local preferred	No preferred approach
Licensee rights	Coverage except Austria change of use.	Most coverage. Austria just tradable rights, Denmark and Netherlands tradable rights as well as coverage.	Most coverage. Austria just change of use, Portugal also tradable rights.	Most coverage. Slovakia also has tradable rights and Austria change of use.
Licence duration	10 years most common	10 years most common	Limited responses to conclude	Maximum period quoted 10 years
Obligations that apply[12]	EIRP limit, equipment standard (equal)	Coverage, rollout	Rollout, coverage	Rollout
Entry fees	Combined admin and spectrum fee preferred by majority	Combined admin and spectrum fee slightly preferred, followed by spectrum fees	Combined admin and spectrum fee slightly preferred	No preferred approach
Spectrum challenges[13]	Spectrum demand exceeds supply, congestion	Congestion, Spectrum demand exceeds supply (equal top)	Service convergence (main)	No clear spectrum challenge
Spectrum constraints[14]	Regional agreements, international agreements and sharing equal	Regional agreements, sharing	Sharing (main)	Regional agreements

[12] Top 3 mentioned obligations in descending order. Top 2 if they are significantly above other mentioned obligations.
[13] Top 3 or top 1 / 2 (if they were significantly above other challenges) mentioned spectrum challenges in descending order
[14] Generally top 2 in descending order

Land mobile

	Emergency TETRA	**Civil TETRA**	**Wideband / Broadband PAMR**	**DMO**	**IMT-2000**	**GSM**
Number of countries that responded	20 countries provided responses for PMR / PAMR				20	20
Main frequency bands	380 – 400 MHz	410 – 430 MHz, 450 – 470 MHz, 870 – 876 MHz, 915 – 921 MHz			1920 – 1980 MHz / 2110 – 2170 MHz (core band), 1900 – 1920 MHz, 2020 – 2025 MHz, 2010 – 2020 MHz	880 – 890 / 925 – 935 MHz, 890 – 915 / 935 – 960 MHz, 1710 – 1785 / 1805 – 1880 MHz
Method of licensing	Allocated to Government	F.C.F.S.	Auctions slightly preferred	Limited responses to conclude	Auctions and beauty contests equally preferred for core bands and future 2.5 GHz band	Main method beauty contest
Local geographic allocation?	Majority not a local allocation	Preference for local allocation	Preference for not being local allocation	No preference	Most indicated non local	All not local with the exception of Latvia, Luxembourg and Slovenia
Licensee rights	All coverage	Most coverage. Only UK proposed coverage, tradable rights and change of use and Austria tradable for 450 / 870 MHz bands	Most coverage Austria tradable rights and Portugal coverage and tradable rights	Most coverage UK also tradable rights and change of use	Most coverage Only Austria tradable rights in some bands, Hungary tradable rights, Portugal coverage and tradable rights	Most coverage. Exceptions Austria and Hungary tradable rights
Licence duration	Slight majority for 10 years				20 years most favoured.	No favoured duration
Obligations that apply[15]	Limited responses to conclude	EIRP limit, technology (both equal)	Rollout, EIRP limit	EIRP limit, technology (both equal)	Rollout, coverage, technology	Technology, coverage, rollout
Entry fees	Admin fee	Spectrum fee	Combined	Limited	No one approach preferred.	Either spectrum fees or

[15] Top 3 mentioned obligations in descending order

	Emergency TETRA	**Civil TETRA**	**Wideband / Broadband PAMR**	**DMO**	**IMT-2000**	**GSM**
		slightly preferred approach	admin and spectrum fee preferred	responses to conclude	Most common spectrum fees or combined admin and spectrum fees.	combined admin and spectrum fees
Spectrum challenges[16]	Limited responses to conclude	Congestion, spectrum demand exceeds supply, insufficient use of spectrum	Congestion, spectrum demand exceeds supply, service convergence	Limited responses to conclude	Congestion, spectrum demand, equipment standard	Congestion, spectrum demand exceeds supply (note also insufficient use of spectrum commented on by 3 countries)
Spectrum constraints[17]	Limited responses to conclude	Regional agreements	Regional agreements, sharing	Regional agreements, safety of life	Regional agreements	

[16] Top 3 or top 2 (if they were significantly above other challenges) mentioned spectrum challenges in descending order
[17] Generally top 2 in descending order

Short range devices

	DECT	**Non specific short range devices**	**RadioLANs, HIPERLANs**
Number of countries that responded	12	4	18
Frequency bands	1880 – 1900 MHz	Wide range of frequency bands proposed	2400 – 2483.5 MHz, 5150 – 5350 MHz, 5470 – 5725 MHz
Method of licensing	Most licence exempt	Most licence exempt	Most licence exempt
Local geographic allocation?	Most not a local geographic allocation	All no local geographic allocation	No clear preference for local or non local
Licensee rights	Coverage	Limited responses to conclude	Mainly coverage
Licence duration	None generally indicated	No duration for licences	None generally indicated
Obligations that apply[18]	EIRP limit, equipment standard, technology	Limited responses to conclude	EIRP limit, equipment standard
Entry fees	Neither admin or spectrum fees – generally no fee	Limited responses to conclude	Majority of cases neither admin. or spectrum fees. Half indicated there were no fees.
Spectrum challenges[19]	Congestion, equipment standard. More identified no challenges	Limited responses to conclude	Congestion, equipment standard, service convergence
Spectrum constraints[20]	Regional agreements	Limited responses to conclude	Sharing, regional agreements

[18] Top 3 mentioned obligations in descending order. Top 2 if they are significantly above other mentioned obligations.
[19] Top 3 or top 1 / 2 (if they were significantly above other challenges) mentioned spectrum challenges in descending order
[20] Generally top 2 in descending order

ANNEX 2

THE PUBLIC CONSULTATION

Acknowledging the importance of radio spectrum for significant industrial and economic activities and in order to ascertain the views of spectrum users, the RSPG is conducting a public consultation according to article 5 of the radio spectrum policy group decision[5], via the RSPG website, on 24 June 2005, with a **closing date for comments of 15 September 2005**. Comments are to be sent to the RSPG Secretariat (infso-rspg@cec.eu.int) and responses will be published on the same web site[21] except otherwise specified by the respondent.

Scope

The purpose of the consultation is to seek the views from all interested parties on the spectrum implications of WAPECS. Views are sought on the following questions:

Q.1 Do you agree with this operating definition of WAPECS? Do you consider that the WAPECS concept should include spectrum intended for private, as well as public, applications?

Q.2 Do you consider that the term "platform" should be more closely defined? If so, what definition do you propose?

Q.3 What, if any, constraints should there be on the provision of services using spectrum primarily in the broadcast domain?

Terrestrial Broadcast Spectrum, such as the Bands III, IV and V, are identified by ITU-R and bound by treaties across all three ITU-Regions. Therefore, in order to safeguard the future provisions for global circulation and operation of user terminals making use of this spectrum, care must be taken to prevent such terminals from transmitting into this broadcasting spectrum as planned by the RRC-066 without officially agreed and proven interference mitigation techniques being implemented.

Therefore in order to ensure a maximum level of innovation within the emerging mobile phone and TV/Multimedia market, attempts to impose national regulatory constraints and barriers for mobile/portable broadcasting services across EU Member State boarders should be avoided in order to enable the free movement of citizens and their seamless exploitation of such services.

Q.4 What specific rules should be introduced or maintained to safeguard the delivery of Services of General Economic Interest in the future? Is it most

[21] http://rspg.groups.eu.int/consultations/index_en.htm

appropriate to deal with these issues through the regulation of spectrum, or through other instruments such as competition law or state aid policy?

Q.5 How do you think changes in spectrum policy will impact on the requirement for standardisation? What policy will best ensure the timely availability of standards?

Q.6 Are there any other challenges that the RSPG should consider?

Q.7 What is your view on the long term policy goals mentioned above and more specifically on how to achieve the right balance between "minimising and harmonising constraints" presented under point 9?

Q.8 Are there any other long term policy goals that the RSPG should consider?

Q.9 Do you think that these steps form an adequate basis for achievement of the European objectives in this area? Are there any other steps that are required?