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**COMMUNICATION FROM THE COMMISSION TO THE COUNCIL, THE  
EUROPEAN PARLIAMENT, THE EUROPEAN ECONOMIC AND SOCIAL  
COMMITTEE AND THE COMMITTEE OF THE REGIONS**

**The European Union's policy approach to the ITU World Radiocommunication  
Conference 2012  
(WRC-12)**  
(Text with EEA relevance)

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## 1. THE EUROPEAN AND GLOBAL DIMENSIONS OF SPECTRUM POLICY

This Communication seeks to inform the European Parliament and the Council about those items on the agenda for the forthcoming World Radiocommunication Conference (WRC-12) which are of relevance to European Union policies. It also proposes the common policy objectives to be pursued.

A strategic and coherent spectrum policy is an important tool underpinning a modern information society and facilitating a wide range of policy objectives. Accordingly, the Digital Agenda for Europe<sup>1</sup>, one of the flagship initiatives of the EU 2020 strategy, identified a coordinated spectrum policy as a key element in achieving our goals for economic growth and innovation, with the aim of providing all of Europe with access to fast broadband.

In recognition of the importance of radio spectrum, the European Parliament and the Council established in Directive 2002/21/EC of 7 March 2002 on a common regulatory framework for electronic communications networks and services<sup>2</sup> (hereinafter the "Framework Directive") provisions for the Commission to propose a Radio Spectrum Policy Programme to frame the development of spectrum policy<sup>3</sup> within the European Union. This is reinforced by the new provision<sup>4</sup> requiring the Radio Regulations of the ITU (International Telecommunication Union) to be respected, which clearly makes it necessary for the EU to maintain close coordination in international fora on spectrum in order to promote its interests.

The World Radio Conference is the venue for adapting the Radio Regulations, that codify cross-border aspects of the use of the radio spectrum, determining which uses have to adapt to other uses across an international border. All EU Member States are also ITU members and play an active part in adapting the Radio Regulations. The European Union is a 'Sector Member', a status similar to industry organisations. The next conference will take place in Geneva from 23 January to 17 February 2012.

For previous WRCs, the Commission has provided the European Parliament and Council with a Communication<sup>5</sup> setting out the EU policy interest in certain agenda items.

Based on several years of preparatory work, WRC-12 will conclude with the adoption of modifications to the ITU Radio Regulations. Each WRC can by necessity only consider a small subset of the Radio Regulations, setting out the spectrum bands to be discussed and the scope of the possible outcomes. These agenda items are defined at the previous WRC. Several agenda items are important for the Digital Agenda for Europe, such as 1.17 on the digital dividend, 1.2 and 1.19 on a regulatory system more open to innovation and 1.5 on electronic news gathering, but other items also have implications. The final document will be signed by the EU Member States, which will also submit a joint declaration for inclusion in the Final Acts of the WRC, stating that they will apply the revised ITU RR adopted at the conference in accordance with their obligations under the Treaty on European Union and the Treaty on the Functioning of the European Union.

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<sup>1</sup> COM(2010) 245 A Digital Agenda for Europe.

<sup>2</sup> OJ L 108, 24.4.2002, amended by Directive 2009/140/EC, OJ L337, 18/12/2009 .

<sup>3</sup> Ibid, Article 8a(3).

<sup>4</sup> Ibid, Article 9(1).

<sup>5</sup> See for the last WRC: COM(2007) 371, The ITU World Radiocommunication Conference 2007.

Given this background, it is necessary to bridge the gap between the growing strategic and policy-driven nature of EU spectrum policy and the technical and regulatory negotiations at the WRC, and to do so with the full understanding that the technical positions of our negotiating partners may well serve as expressions of policy aims, industrial policy or other interests. An innovation-friendly and adaptive international regulatory system is very much in the interests of the European Union.

## **2. EUROPEAN PREPARATIONS FOR WRC-12**

EU Member States negotiate in the ITU as independent members of the organisation. In practice, they choose to develop their technical positions together within CEPT (*Conférence Européenne des Postes et Télécommunications*<sup>6</sup>), before negotiating with the rest of the world on the basis of consolidated European positions ('European Common Proposals'). While CEPT is effective in developing the detailed European negotiating positions required for a technical-regulatory conference like WRC, it must be recalled that Member States are bound by their obligations under the EU Treaties and by the *acquis*.

Therefore, the development of technical positions in CEPT needs to be complemented by the consideration of overall EU interests in the negotiations. To support this, and in line with the provisions of the framework directive, the Commission has requested the Radio Spectrum Policy Group (RSPG), a high-level advisory body of Member States' representatives, to provide an Opinion advising the Commission of the European policy interests at stake at this conference. The RSPG adopted its Opinion on 10 February 2011. In addition, a workshop<sup>7</sup> co-organised by CEPT and the Commission took place in Brussels on 10 June 2010 with wide participation from stakeholders.

Member States must develop common actions and closely cooperate throughout the negotiation process in order to ensure that decisions are taken that support Union policies and initiatives.

For this purpose, the Commission will support the coordination of policy approaches on the basis of the endorsement of EU policy objectives by Parliament and Council in advance of WRC-12 and will monitor Europe's involvement in the process.

## **3. SUGGESTED POLICY ORIENTATIONS FOR WRC-12**

There are 25 individual agenda items of varying importance, ranging from the cross-border coordination requirements for the digital dividend (1.17) and spectrum for the development of Galileo (1.4 and 1.18) to a project for high-altitude communication balloons (1.20). The following is an attempt to structure the agenda items into subject groups and link them to the relevant EU policy objectives, taking into account the advice from the RSPG.

### **AGENDA ITEMS AND THEIR IMPORTANCE FOR EU POLICIES**

#### **Agenda item 1.17 Digital Dividend / Policy: Internal Market**

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<sup>6</sup> CEPT is an association of 48 postal and telecommunication administrations, which works in particular on spectrum matters.

<sup>7</sup> [http://ec.europa.eu/information\\_society/policy/ecomms/radio\\_spectrum/manage/intl/wrc/index\\_en.htm#ws\\_wrc12](http://ec.europa.eu/information_society/policy/ecomms/radio_spectrum/manage/intl/wrc/index_en.htm#ws_wrc12).

This agenda item concerns cross-border coordination of the use of spectrum in the upper part of the digital dividend (790–862 MHz). This is particularly relevant where the spectrum is not used for terrestrial broadcasting on either side of the border, as digital broadcasting already benefits from protection under the ITU Geneva-06 agreement. In the EU, this band has been technically harmonised to enable the provision of wireless broadband, and will be crucial to the effort to roll out such services in a cost-efficient manner. Harmonisation takes effect from the moment a Member State decides to discontinue high-power broadcasting in this band. A separate proposal for a common date for finalising this process is contained in the proposal for a Radio Spectrum Policy Programme<sup>8</sup>. The effective use of part of the digital dividend along the EU's eastern border is hampered by the use of a dated aeronautical navigation system in the same band on the other side of the border. That system is now approaching the end of its life, and the EU should aim for fair coexistence between future uses on either side of the borders, enabling full use of the 790–862 MHz band for wireless broadband throughout the EU.

#### **EU policy objective**

The EU should support regulatory provisions for the balanced coexistence between wireless broadband and the diminishing use of aeronautical radionavigation systems on its eastern border, with the aim of enabling wireless broadband to cover effectively the entire territory of the EU. All obligations to protect digital broadcasting under the GE-06 agreement should remain in force and no further obligations should be added at the conference.

#### **Agenda items 1.4/1.18 Galileo / Policy: Trans-European Networks**

The Galileo satellite navigation system is Europe's initiative for a state-of-the-art global satellite navigation system, providing a highly accurate, guaranteed global positioning, navigation and timing service. It will underpin critical infrastructures and important public services such as search and rescue as well as commercial uses and consumer satellite navigation receivers.

Galileo will use spectrum in various bands and two agenda items are directly relevant. Under agenda item 1.18, the aim is to create a harmonised global primary allocation in 2483.5–2500 MHz for use by satellite navigation systems out of the existing regional patchwork of primary and secondary allocations. Studies have shown that systems like Galileo can share the band whilst protecting existing, including sensitive radar systems coming under the regulatory provision 'no harmful interference, no protection'. For the 5000–5030 MHz band already allocated to satellite navigation systems and used by Galileo's mission uplink, see agenda item 1.4 below.

#### **EU policy objective**

Galileo is an important European project and the EU has to safeguard the frequencies necessary for its operation from interference from other radio services. The EU should also support the additional band 2483.5–2500 MHz for future enhanced services

#### **Agenda items 1.4/1.7 SESAR (Single European Sky ATM Research) / Policy: Transport Policy, Space Policy**

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<sup>8</sup> The ordinary legislative procedure is ongoing.

Europe has one of the densest air traffic in the world. The EU's Single European Sky Air Traffic Management (ATM) Research programme (SESAR) aims to develop a next-generation air traffic management system capable of ensuring the safety and fluidity of air transport worldwide over the next 30 years. The EU aim as regards spectrum is to enable the smooth introduction of the systems envisaged under the programme. The project is now in its development phase, with deployment expected to begin in the period 2014–20.

Agenda item 1.4 concerns the introduction of more modern aviation safety communications systems. This agenda point will address the regulatory provisions necessary for aviation use in the 960–1164 MHz band. These are intended to support the introduction of applications in air traffic management that are data-intensive and support the transfer of safety-critical information. Compatibility between such systems proposed for operation in the frequency band 960–1164 MHz and systems standardised by ICAO (International Civil Aviation Organisation) will have to be ensured through ICAO standards. These systems as well as GSM and UMTS (and other foreseen broadband systems) below 960 MHz require adequate protection. Regulatory limits on aviation use should also ensure the protection of satellite navigation receivers operating in the 1164–1215 MHz band, intended by GPS, Galileo and the Russian GLONASS for safety of life applications.

The aviation sector is developing a wireless local area network system in the range 5091 – 5150 MHz for surface applications at airports, which is being standardised in various international fora and is supported under SESAR, with a completion deadline of 2013. The proposed new aviation allocation in the band 5000 – 5030 MHz would be included in this activity.

However, an allocation to aviation use in the 5000–5010 MHz band should only be considered if requirements for such systems cannot be satisfied in the 5091–5150 MHz band, and provided that there is no harmful interference with Galileo in the 5000–5030 MHz band (noting particularly Galileo's critical uplink) and the radio astronomy service in the 4990–5000 MHz band. To safeguard signals to future Galileo receivers no new aviation allocation should be proposed in the band 5010–5030 MHz, where studies have concluded compatibility is not possible.

Agenda item 1.7 concerns the current and planned use of satellite services, in particular the need for the band 1525–1559/1626.5–1660.5 MHz to be shared in a transparent and equitable manner so that long-term availability for aeronautical satellite services can be ensured.

#### **EU policy objective**

At WRC-12 the EU should preserve Europe's capability to develop and implement the best possible system in an effective and transparent manner. The same aim should guide EU policy under agenda item 1.7 regarding SESAR satellite use and ensure that the satellite component of SESAR can serve its purpose.

#### **Agenda items 1.7/1.13/1.25/7 Communications satellites / Policy: Internal Market, Space Policy**

European companies are world leaders in the provision of satellite communication: broadcasting, fixed-satellite services and mobile-satellite services all play an important role in providing services to many areas of our economy and society. Their continuing ability to do so will have to be maintained, while ensuring that spectrum is efficiently used.

**EU policy objective**

The EU should oppose any division of the 21.4–22 GHz band and associated orbital slots into national ITU member state assignments, which would limit its usability. The EU should, as stated before, defend a position that provides mobile satellite services with the spectrum necessary to deliver services for air traffic management in Europe.

**Agenda item 1.3 Unmanned Aerial Systems (UAS)**

While military applications may be better known, the ITU is concerned with the use of UAS in non-segregated airspace, i.e. where manned and unmanned aircraft may operate at the same time. UAS can provide important civilian/public protection functionalities: it can play a vital role in areas such as fire-fighting, agricultural monitoring, border and coast guard services, but can also assist relief efforts world-wide (identifying migration flows during droughts and floods). As these functionalities require UAS to share airspace with conventional aeroplanes, it is important that they can operate safely and in full compliance with air traffic management rules. However there are concerns that some spectrum being considered for the UAS terrestrial component would prevent ubiquitous deployment of future Galileo receivers in the 5010–5030 MHz band, or more importantly interfere with Galileo’s critical uplink in the 5000–5010 MHz band.

**EU policy objective**

The EU should support the identification of spectrum required for the safe operation of UAS in non-segregated airspace. Spectrum options for UAS outside the range 5000–5030 MHz are therefore preferable from the EU’s perspective.

**Agenda item 1.2 Flexibility in the international regulatory system / Policy: Internal Market; agenda item 1.19 Software-defined and cognitive radio / Policy: Internal Market**

Decisions at a WRC can have an impact over a very long time frame. If the international regulatory system becomes too rigid, it can have a detrimental effect on Europe’s capability to introduce new and innovative services and flexible authorisation systems such as shared use. The EU is at the forefront of modernising spectrum management, so it is important to future-proof ITU regulations whenever possible by having them contain an element of flexibility, for example permitting a mix of fixed and mobile networks in cellular systems.

Software-defined radio, which results from the capability of a radio transmitter to change its signal characteristics via software, has to comply with the rules that apply to the service and the band it operates in. It seems to be recognised that no regulatory provisions would be needed at global level to manage this. Cognitive radio systems (which identify spare spectrum allocated to other uses and uses software-defined radio technology to opportunistically use such vacant spectrum) are a more complicated matter and their potential use has raised concerns about their reliability in not causing interference. While it is important to allow such technologies to be implemented, the introduction of cognitive radio systems must not unduly impede any primary spectrum use. The Radio Regulations do not appear to be a suitable instrument to address such concerns.

**EU policy objective applicable to both items**



The EU should retain its capability to modernise European spectrum management and encourage the ITU to work towards more flexible approaches. On software-defined and cognitive radio, no change in the Radio Regulations seems called for.

### **Agenda item 1.22 Emissions from short-range devices / Policy: Internal Market**

Many bands for short-range devices (SRD), radios which transmit over metres rather than kilometres, are harmonised in the European Union. There are a wide variety of such devices, ranging from car remote controls to sophisticated medical equipment. Cumulatively, they are of great importance for the EU's economy and society. These devices have by definition only limited cross-border interference potential, and the Radio Regulations would not be an appropriate instrument to regulate any interference concerns that could be occasioned by imports of unregulated devices.

#### **EU policy objective**

The EU should resist additional constraints being introduced in the Radio Regulations for short-range devices, given the limited cross-border implications and the fact that EU legislation provides sufficient flexibility for defining SRD parameters. The EU should encourage similar band use by other ITU members outside the EU to increase existing economies of scale.

### **Agenda items relevant to scientific research and combating climate change**

A number of agenda items are of interest for the EU's research and climate change policies, including: agenda items 1.6 on passive services in the 275–3000 GHz band; 1.11 on space research in the 22.55–23.15 GHz band; 1.12 on a space research service in the 37 GHz band; 1.16 on lightning detection; 1.24 on meteorological satellites; and 1.15 on oceanographic radars in 3–50 MHz.

The spectrum considered in agenda item 1.6 is above that used for communications purposes and is generally viewed as intended for scientific research. Passive services as in 1.6 and 1.24 can be used for purposes such as earth observation, which plays a major role in our efforts to combat climate change and ensure the security of citizens, in particular in the framework of the EU's GMES project. They are usually very sensitive to other uses and may need specific protection against interference from those uses. The services under the other agenda items, while less sensitive, will need adequate protection from interference by other users.

WRC-12 may also serve to widen the understanding of these needs among our negotiating partners, so that the relevant services, which are also important for weather forecasting, disaster prediction and mitigation, are more widely understood to provide benefits in areas outside Europe as well.

#### **EU policy objective**

The EU should promote the new allocations required and protect scientific services in the relevant bands. In particular, services helping to combat climate change and ensure the security of citizens should be protected.

### **Agenda item 1.5 Tuning ranges for Electronic News Gathering**

The availability of spectrum for news events where and when required is a very important aim as such. This requirement varies greatly in time and location, and the Commission concurs with the view expressed by the RSPG that an ITU-R Recommendation listing possible tuning ranges will provide guidance to manufacturers while providing spectrum managers with the necessary flexibility to make spectrum available at short notice, and that no allocation through the WRC is required.

#### **EU policy objective**

The EU should maintain that the Radio Regulations should not be changed under this agenda item, but should encourage the work of ITU-R to identify tuning ranges through an ITU-R Recommendation, leading to increased de-facto harmonisation.

For the following items, the outcomes will have little impact on overall policy objectives.

#### **Agenda item 1.9 Maritime mobile service and agenda item 1.10 Safety systems ships and ports**

These two items concern changing the channelling arrangement for existing maritime services to enable the introduction of new digital technology. This represents an updating of the worldwide regulatory system to reflect developments already underway.

#### **Agenda item 1.23 Amateur service and agenda item 1.20 High Altitude Platform Stations**

There are no EU interests involved.

#### **Agenda item 1.21 Radars in the 15.4–15.7 GHz band**

This is a band adjacent to important radio astronomy services and any change in use will have to be considered carefully. Studies are continuing leading up to the conference.

#### **Agenda item 8.2 Agenda for the next WRC conference**

Each World Radiocommunication Conference establishes the agenda for the next conference. This will be of great importance for EU policy, in particular broadband policy. It is in the EU's interest to support initiatives at future WRC conferences which relate directly to particular European Union policies.

In preparation of WRC-15, the Commission will work with all relevant stakeholders to identify the specific spectrum needs of such policy areas to be supported at the conference.

In the Commission's view an agenda item on wireless broadband should not be restricted to a specific band. The EU approach to WRC-15 should be based on a careful assessment of how efficiently the wireless broadband industry has used the substantial amount of spectrum made available through EU legislation, and on the societal and/or economic value the present services in those bands represent given the spectrum they occupy. In this context, the inventory envisaged in the Radio Spectrum Policy Programme will be important, as it will clarify uses including those outside electronic communications services.

#### **EU policy objective**

The next WRC-15 agenda, which will be set in 2012, should address potential spectrum needs arising from important EU policies. In particular, it should include an item to respond to possible capacity constraints on the provision of wireless broadband in line with the aims of the Digital Agenda for Europe.

#### **4. UNITY OF ACTION OF THE MEMBER STATES AND THE EU**

Spectrum has a strong EU policy dimension, as it affects the internal market in general as well as research, transport, climate change or trans-European networks, areas that are subject to shared or concurrent competence. In all these areas however, situations could arise where the Union has an exclusive competence, in particular when common rules may be affected, which could be the case here because of the binding effect of the Radio Regulations. In the case of WRC-12, this could apply to at least two agenda items, 1.17 on the digital dividend and 1.22 on short-range devices, as there is existing EU legislation in force for the spectrum bands concerned and changes in the Radio Regulations could directly affect their scope. Beyond that and more generally, a coordinated approach is required in order to ensure the unity, consistency and effectiveness of action of the Union and the Member States for all issues and agenda items where the EU domain could be affected.

From this perspective it is necessary to ensure that, during WRC-12, agreed policy objectives are promoted and defended by Member States acting, where necessary, on behalf of the EU. To this end and in view of the current status of the EU at the ITU, a solution could be for the Member State ensuring the Council Presidency to coordinate the relevant agenda items at the conference, in close coordination with the Commission, and for its representative to speak for the Union where necessary. This would be without prejudice to the possibility for the Commission, if necessary and where appropriate, to make a proposal to the Council in order to establish the position to be adopted on behalf of the EU, in accordance with Article 218 (9) TFEU.

At a later stage, it could also be envisaged to re-examine the status and the role of the European Union in the ITU. This could be an issue for the next ITU Plenipotentiary Conference, scheduled in 2014.

#### **5. CONCLUSION**

The European Parliament and the Council are called on to endorse the common EU policy objectives identified in this Communication to be achieved at the World Radiocommunication Conference in 2012.