

Questionnaire on cross-border coordination issues regarding 700 MHz spectrum clearance and migration of broadcasting service below 694 MHz

4th release of the questionnaire

Background

The 694-790 MHz frequency band ('700 MHz band') has been technically harmonised in Europe through an EU implementing decision¹ pursuant to the Spectrum Decision. A Decision² of the European Parliament and of the Council has defined a timetable to make available the 700 MHz band in Europe for wireless broadband electronic communications services ('ECS').

The Good Offices programme of the RSPG is focusing on 700 MHz band re-planning and clearance, particularly to identify at an early stage where there are potential issues of cross-border co-ordination.

A questionnaire issued first in November 2016, second in February 2017 and third in July 2017 enabled to get information from all EU countries as well as from countries outside EU but bordering EU, about:

- current status of national roadmap for clearance and details of the plan at a high level,
- up-to-date information on bilateral/multilateral negotiations with regard to re-planning of broadcasting frequencies below 694 MHz.

The responses have been published on the RSPG website (<http://rspg-spectrum.eu/2017/02/responses-to-the-questionnaire-on-cross-border-coordination-regarding-700-mhz/>).

Some results of the questionnaire have been summarized in several maps shown in the attached document. **You are invited to check this information and correct any error or ambiguity.**

The questionnaire is reissued for response before 10th January 2018 in order to enable each country to update the information and to report progress on 700 MHz band re-planning and clearance.

Since the deadline for cross-border agreement between EU countries is 31st December 2017, an additional question has been added in this new version of the questionnaire in order to have detailed information on any case where such agreement between EU countries would not be signed, including the nature of the difficulty and the planned date for signature.

You are invited:

¹ Commission Implementing Decision (EU) 2016/687 of 28 April 2016 on the harmonisation of the 694-790 MHz frequency band for terrestrial systems capable of providing wireless broadband electronic communications services and for flexible national use in the Union

² Decision (EU) 2017/899 of the European Parliament and of the Council of 17 May 2017 on the use of the 470-790 MHz frequency band in the Union

- **To confirm that all necessary cross-border agreements have been signed with other EU countries or to respond carefully to question n°9.**
- **To specify clearly the expected target date for the end of migration of television below 694 MHz even in the absence of a formal decision**, in order to avoid any "chicken and egg" for deciding such date taking into account the migration in neighbouring countries and to identify any risk of domino effect.
- **To pay attention, in relation with Question 1, to the obligation, in accordance with the article 5.1 of the 700 MHz decision, to draw up a national roadmap before 30th June 2018.**
- **To provide any additional relevant information on the expected target date for the end of migration in neighbouring countries outside EU**, in case they do not respond by themselves to the questionnaire and given the importance of such information to assess the risk of a domino effect.
- **To specify clearly the start of migration** (often not specified in the previous responses to the questionnaire) taking into account that the time for migration should not be underestimated, in particular when there is a need to change transmission/coding broadcasting technology.
- **To consider transition plans facilitating the migration of television below 694 MHz and the deployment of 700 MHz for mobile in case there are diverging dates of migration with some of your neighbours (see question 10).** For example, one may consider the transitional use of TV Channels in the 700MHz band by the country where migration to mobile is occurring later than their neighbor. Such transitional use could occur outside the 2x30 MHz or preferentially in the terminal receive band rather than in the base station receive band.

You are invited to highlight the changes to the responses, compared to 2nd release, through relevant means (ie, revision mark or highlighting the modified text) in order to simplify the treatment of the responses.

Questions

1. What is the status of developing a national plan (in accordance with article 5.1 of the 700 MHz decision setting a deadline to 30th June 2018 for drawing up a "national roadmap") for the clearance of the 700 MHz band?
2. What is the expected or agreed timetable for the migration of television below 694 MHz and for the awards of the 700 MHz band?
3. Do you expect the 700 MHz frequency band for terrestrial systems capable of providing wireless broadband electronic communications services to be available by the date specified in the European Parliament and Council decision on the 700 MHz band? If not, please, explain.
4. What is the total number of DVB-T/T2 multiplexes in operation / licensed ? What are the expiration dates of current DVB-T/T2 licences?

5. What DTT transmission technology and video coding standard are used in your country and do you expect an evolution of the DTT platform in order to allow the release of the 700 MHz band? If yes, do you expect:
- an evolution of the technology (transmission and/or video coding standard)?
 - an evolution in the total number of programs and in the number of programs/ per mux ?
 - HD or UHD transmissions in future DTT platforms? Changing coverage of population/territory ?
 - an evolution in coverage by single SFN (e.g. SFN extension or SFNs merging)?

Explain the reasons for modifications, i.e. how does it help 700 MHz band clearance, and describe the transition period (time period, simulcast, part of the spectrum used...).

6. What are, in high-level description, your objectives for cross-border coordination in terms of planning principles for the band 470-694 MHz:
- number of nationwide MUX/ number of local/regional MUX,
 - type of transmission / coding,
 - MFN, SFN or mixed SFN/MFN,
 - % population/territory coverage,
 - reception mode (fixed reception, portable, mobile),
 - assignment/allotment coordination and reference network,
 - others?

Please use the Table 1 to describe the objectives and provide additional elements as necessary. Table 1 can be completed with additional text, ie to cover “others”.

TABLE 1

	% of population /territory coverage, No of stations	type of reception mode (fixed, portable, mobile)	Assignment/ Allotment coordination and reference network	MFN, SFN or mixed SFN/MFN	Type of transmission / coding
Nationwide MUX 1	90%/85%	Fixed	Assignment	Mixed	DVB-T2 (256 QAM, 32K) / MPEG-4
Nationwide MUX 2	93%/-	Mob	Allotment (RN 1)	MFN	DVB-T2 (256 QAM, 32K) / MPEG-4
Nationwide MUX 3	-/80%	Portable	Allotment (RN 2)	SFN	DVB-T2 (256 QAM, 32K) / HEVC
Regional/ Local MUXs	45 stations	Fixed	Assignment	MFN	DVB-T2 (256 QAM, 32K) / HEVC
...

7. For each country (EU and non-EU) with which coordination is necessary (please, provide names of country), what is the current coordination status for the clearance of the 700 MHz band:
- Not yet initiated
 - Coordination request but no response
 - Discussion on general principles
 - Discussion on the new plan
 - New plan generally agreed but further discussion on technical characteristics of transmitters
 - Coordination completed
 - Signed agreement

In addition, specify if the negotiation with this neighbour is covered by a regional cluster (WEDDIP, NEDDIF, SEDDIF, ...)

TABLE 2

Ex : Country X		
Name of country	Status of coordination	Regional cluster
United Kingdom	e)	WEDDIP
France	f)	WEDDIP
...		

8. Is there any cross-border difficulty which may prevent your country to sign cross-border agreements before the end of 2017
- In the case of an EU neighbour: does your county plan to submit a request to the 'good offices' group?
 - In the case of a non-EU neighbour: give the expected date for an effective agreement and indicate any need for EU-level assistance.
9. In case you did not sign the necessary cross-border agreement with an EU country, could you specify:
- The reasons why it has not been signed before 31st December 2017?
 - If relevant, the detailed technical elements which have prevented reaching agreement?
 - The information about next bilateral meetings and any planned date for signature of the cross-border agreement?
10. Did you identify any significant timing discrepancy for allowing the use of the 700 MHz band for mobile with neighbouring countries which could create issues of interference from DTT to Mobile networks? Did you discuss with this neighbouring countries transition plan to alleviate this interference?
11. Could you provide any further information on the implementation of the 700 MHz band such as which 700 MHz national options (outside the 2x30 MHz) would be implemented and whether compensation mechanisms will be used to migration broadcasting below 694 MHz?