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RSPG Secretariat

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RADIO SPECTRUM POLICY GROUP

23rd Progress Report of the RSPG Sub-Group

on cross-border coordination

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The Sub-Group has held one meeting, 21st January in Roma, at the kind invitation of the Italian administration. The list of participants is attached in annex 1. The detailed report of the meeting is attached in annex 2.

TV, T-DAB and FM interference around Italy

For the details of the interference situation, please refer to the meeting report in annex 2:

- **For TV interference**, there is **no more interference to channels in operation in neighbouring countries except with Croatia** where some interference remains on 5 channels. All these channels being used by local broadcasters, interference will cease when these Italian broadcaster will switch off, in accordance with the migration plan.
- **For TDAB interference**, AGCOM is requested by law to develop a T-DAB plan fully in line with Italian international rights (GE-06 + coordination agreements). However, this can be done only after successful results of ongoing negotiations which aimed to optimize the GE-06 initial plan taking into account that planning was sometimes based on allotments and on DTV rather than DAB. Once the plan is developed, Italy would be in a position to migrate the existing TDAB transmissions not respecting the international rights to the agreed Italian channels. This will solve the interference to Slovenia and Croatia. **In this respect, a meeting for the Adriatic cluster should be envisaged as early as possible (eg, end of February) and all concerned EU countries, including Greece, should send relevant experts to this group in order to be in a position to agree rapidly a new plan.**
- **For FM interference**, the sub-group concentrated on the protection of priority channels declared by neighbouring administrations (Croatia, Slovenia, Malta). Technical discussions have highlighted some large differences between propagation models used by administrations. Models fitting the measurement results should be used. It is important to identify a suitable solution for those cases being analyzed.

Review of the progress in the implementation of the 700 MHz band within EU

Transition issue between Italy and Croatia

An Italian Decree is being prepared to enable the advanced switch off in May of local broadcaster and it is expected that local broadcasters would apply for having the financial compensation as early as possible. **This would enable to eliminate in May 2020 the channels required by Croatia to ensure the transition of broadcasting below 694 MHz. Italy reported that all the list of the channels that**

will be switched off in advance in the whole Italian territories will be sent to the good Offices and to neighbouring countries before 30th of March.

Update of the information on the progress of implementation of the 700 MHz band

The sub-group received updated response to the questionnaire from Italy and Romania.

Croatian roadmap has not yet been published and is under consideration by the government. The authorization may be granted before the end of this year but the deadline in the draft roadmap remains 2022. The 700 MHz spectrum will be available in the continental part and the date of availability in the Adriatic part depends on resolving the transition issue described above.

In Hungary, the beginning and end of migration will be February and August 2020 respectively. The 700 MHz MFCN authorization procedure has been suspended due to ongoing litigation and it is unclear when the authorization could be granted.

The sub-group decided to present to the Plenary updated maps regarding migration of broadcasting and MFCN authorization timing in a separate document.

Review of the cross-border negotiation with countries outside EU

Romania requested assistance from the EU regarding the availability of the 700 MHz band due to the broadcasting in the 700 MHz band in Ukraine. **A letter to the sub-group Chairmen was received from Ukraine** clarifying that the plan for migration is 2020 but stressing their difficulties in terms of financing the migration cost evaluated to 4 million dollars for the major broadcaster. Romania has now decided to launch the 700 MHz authorization procedure before 30/06/2020 in spite of the cross-border issue with Ukraine, with a date of entry into force of the authorizations on the 1st January 2021.

Information from the **Russian Federation** is still showing large uncertainties on the migration of DVB-T outside the 700 MHz band. However, there is no important risk of interference from TV to mobile service in the 700 MHz band since there are no Russian TV transmitters in operation in this band at the border and since the plan from Russia is to introduce mobile services in the 700 MHz band.

Belarus is preliminary planning the migration in 2021, but has difficulties in terms of financing the cost of migration.

Lithuania mentioned additional cross-border coordination difficulties for the 3.4/3.6-3.8 GHz band and the 1427-1518 MHz with the **Russian Federation**.

Only limited progress have been made in formalizing agreements with countries in **North Africa**.

Although there are uncertainties in migration time in **Albania, Serbia and Bosnia and Herzegovina**, those countries are cooperating well with their neighbouring EU countries.

Regarding **Turkey**, which has ended its broadcasting migration below 694 MHz, the Commission indicated that there is some progress in the territory of Cyprus where the Government of **Cyprus** is prevented from exercising effective control regarding the freeing of the 700 MHz band.

Next meeting

The next meeting is planned on 19th May 2020 in Romania.

ANNEX 1

List of participants

Emilia Ulelay	Hungary
Verena Hindges	Germany
Danijel Vidakovic	Croatia
Eva Spina	Italy
Donato Margarella	Italy
Adrian Galea	Malta
Igor Funa	Slovenia
Liliana Andrei	Romania
Dan Constantinescu	Romania
Mindaugas Zilinskas	Lithuania
Eric Fournier	France
Paul Lippens de Cerf	CE

ANNEX 2

REPORT

RSPG SUB-GROUP

« GOOD OFFICES »

ROMA, 21st JANUARY 2020

1. New EU regulatory framework, RSPG decision and RSPG RoP in relation with the good offices

The Commission representative explained the modification of the EU regulatory framework in relation to the good offices, notably the Article 28 of the Code and the consequential revision of the RSPG Decision and of the RSPG rules of procedure (RoP).

Based on Article 2(3) of the new RSPG decision and Article 28 of the EEC Code, the article 8 of the RoP (“Cross-Border Coordination and Good Offices”) states that with regards to the availability of harmonised radio spectrum, the Group may issue an opinion to propose a coordinated solution to a problem or dispute between Member States, and the European Commission may adopt a decision upon request by any affected Member State.

It is also emphasized that the Code creates an obligation for Member States to respect relevant international agreements, including the ITU Radio Regulations and other agreements adopted in the framework of the ITU applicable to radio spectrum

As it appears in response to an action from the September meeting, the decision of the Italian Court of Cassation confirming the legal protection under Italian law to an Italian FM broadcaster authorized in Italy, against interference caused by a Slovenian FM broadcaster authorized in Slovenia and using a Slovenian GE-84 right, might be enforceable in Slovenia in accordance with European rules regarding the recognition and enforcement of judgments. Slovenia and Italy are still discussing to find solutions with the two concerned broadcasters, and it was noted that the situation could possibly ultimately result in an EU legal case.

2. Situation regarding interference around Italy

TV interference issues

Actual interference from Italy to Croatia

Italy is investigating the reduction of interference on all interfered channels :

- Channel 21 (65/78 dB μ v/m measured interference): the broadcaster applied a reduction of power of 6 dB. Since this is not sufficient, Italy is studying another project.
- Channel 39 (59/65 dB μ v/m measured interference): The ministry is waiting for a draft project and has recently sent a reminder to the broadcaster

- Channel 41 (up to 70 dB μ v/m measured interference) : a new project has been implemented during the summer period of 2019 (no details available), Italy asked Croatia new measurements
- Channel 45 (53 dB μ v/m measured interference) : simulation from Italy did not show interference, the transmitter being outside the coordination area (Campania). No action initiated.

The table from the previous meeting was updated:

Allotments	Canale	Operatore	Impianto presunto	Provincia	Regione provenienza interferente	Remarks
D05	39	Video Tolentino	Montefalcone e Colbuccaro	MC	Marche Sud	a new project has been requested, a reminder has been done on 14-1-2020
D07	21	TV7 Tele Norba	Pomarico	MT	Basilicata	6dB has been reduced, on 14-1-2020 a new project has been requested
D07	21	Rete Sole	Monte Subasio	PG	Umbria	all the test points are respected
D07	45	Media TV	Camposauro	BN	Campania	all the test points are respected
D08	41	Tele Venezia	Monte Madonna	PD	Veneto	a new project has been approved on 12-3-2019
D08	41	TVP Italy	Forte Montagnolo /Monte conero	AN	Marche Nord	a new project has been approved on 23-7-2019
D08	41	TVP Italy	Forte Montagnolo /Monte conero	AN	Marche Nord	a new project has been approved on 23-7-2019
D08	41	Tele Capri	Camposauro	BN	Campania	all the test points are respected
D09	45	Tele Libera Cassano	Roseto Capo Spulico	CS	Calabria	all the test points are respected

The meeting noted that all these channels being used by local programme, interference will cease when the broadcaster will have to switch off, in accordance with the migration plan.

Concerning Channel 51 (San Marino), Italy did not receive the requested detailed information from San Marino on the characteristics of the stations in the Italian territory. The interference will be solved at the end of 2021 with the migration of broadcasting below 694 MHz.

Request from Croatia to Italy to make available additional channels to enable transition to the final plan

Italy explained that a Decree is being prepared to enable the advanced switch off in May of local broadcasters. It is likely that local broadcasters would apply for having the financial compensation as early as possible. Therefore, it is expected that it would be possible in May to protect the first Croatian MUX operating on channels 21, 22, 23, 43 at the Croatian coast and the second MUX including transition of other multiplexes in operation (e.g. Pay TV) on the channels 27, 34, 41, 29 and 35. Second multiplex will be on air in May 2020.

Italy is invited to **confirm before 30th March** the protection of these channels which are necessary for the transition in Croatia, so as to enable Croatia to plan for the switch off of the remaining 700 MHz transmitters (e.g. Pay TV). Italy reported that all the list of the channels that will be switched off in advance in the whole Italian territories will be sent to the good Offices before 30th of March. Croatia emphasized again that Pay TV multiplexes are licenced until end 2021 and will negotiate to switch off the 700 MHz band in advance only if the channels from the second phase (27, 34, 41, 29 and 35) are interference free, so Italy is kindly asked to concentrate to the elimination of the interference on the above mentioned channels.

Other countries

Slovenia, Malta and France confirmed that they currently do not experience any television interference problems.

TDAB interference issues

The possibility for AGCOM to develop the T-DAB plan fully in line with Italian international rights (GE-06 + coordination agreements) depends on the successful results of ongoing negotiations which aimed to optimize the GE-06 initial plan taking into account that planning was sometimes based on allotments and on DTV rather than DAB.

Once the plan is developed, Italy would be in a position to migrate the existing TDAB transmissions not respecting the international rights to the agreed Italian channels. This will solve the interference to Slovenia and Croatia

In this respect, the meeting noted that the negotiation is not progressing fast in the Adriatic cluster. It was mentioned that Greece had not been able to discuss a draft optimized plan due to the lack of technical expert.

A meeting for the Adriatic cluster should be envisaged as early as possible (eg, end of February) and all concerned EU countries, including Greece should send relevant experts to this group in order to be in a position to agree rapidly a new plan.

T-DAB interference between Italy and Slovenia

The interference problem will not be solved by modifying existing transmitters using Slovenian rights in bordering areas, and solving interference imply that transmitters migrate as early as possible to the new plan.

T-DAB interference between Italy and Croatia

Croatia was tasked to react to proposed new projects on 3 transmitters using channels 12A , 12B and 12C. However, Croatia noted that many other transmitters are using blocks 12A (EuroDAB Italia), 12B (DAB+RAI), 12C (*DAB ITALIA*), 12D (C.R. DAB UMBRIA) and 10A (DAB+RAI, UMBRIA DAB, TRENTINODAB1) in SFN so that changing only these 3 transmitters will not significantly change the interference situation. Italy reported that these three transmitters are corresponding to the worst cases. Croatia currently use for test channels 10A, 10C, 11C. Italy does not use these blocks in the coordination zone, but interference are received notably from Umbria (at a level of 30 dB μ V/m). Italy is requested to investigate how to mitigate interference. Croatia cannot put DAB services in commercial operation until reported interference on channels 12A, 12B, 12C, 12D and 10A are resolved, which might be conditioned by the migration of Italian DAB transmitters to the new plan in 2022. In that respect Croatia again kindly requested Italy for additional effort in resolving present interferences which prevent development of digital terrestrial radio in Croatia.

FM interference issues

FM interference between Italy and Slovenia

Slovenia prepared some additional simulations for comparing the existing situation and the proposed projects from Italy for the sites of Muggia (Italian site) and Beli Kriz (Slovenian site). These simulations showed that even without interference the coverage of Beli Kriz would be reduced and the Slovenian territory close to Muggia would still be severely interfered. Slovenia also considered that in real operation the assumption of 25 dB antenna discrimination will not be effective due to ground reflections and increase sidelobes in other directions. For Slovenia, the only possibility, given that Muggia is few hundred meters from the border, is to change the frequency by at least 200 kHz.

Italy will examine possibilities to change the frequency and report to the next meeting. Italy pointed out that some solutions may also be in reducing the number of frequencies transmitting the same Slovenian programme. Slovenia indicated that there are open to optimization of the spectrum but that the overall coverage of FM broadcasters should not be affected.

It is essential that a solution is found on this first Slovenian priority channel.

FM interference between Italy and Croatia

Croatia has reported no improvement in the interference situation since the last Good Office in September 2019, as measured and recorded in the updated consolidated list of priority sound broadcasting stations of neighbouring countries of Italy for which harmful interference must be mitigated (file R18-RRB18.3-C-0005!R1-A2-R1-N1!XLS-E_HRVrev2019v1.0).

Concerning the interference to Biokovo (89.7 MHz), Croatia made their own simulations to be able to identify whether there are differences with Italian calculations. Results are similar to the results presented by Italy at the previous meeting when using the same propagation model (P.1546 for 50% location and 1% of the time). However, Croatia considered that this model does not provide accurate results for propagation over warm sea and carried out further simulation using Fresnel-Deygout method ("IRT2D"), used in cross-border coordination negotiation in the region, with results about 20 dB above the P.1546 propagation model. Measurements were confirming that this model provides more reliable results.

Croatia also questioned the validity of some data for Italian FM transmitters where they believe the power is sometimes higher. Italy confirmed that all the real data are in line with the data provided to Croatia.

The following table compares the results of the Croatian simulation using Fresnel-Deygout and the measurements with the initial calculations from Italy. Italy is invited to use these values to consider mitigation solutions to reduce the interference to an acceptable level, possibly with changing the FM broadcasting frequencies. **It is essential that a solution is found on this first Croatian priority channel.**

Interfering Stations	FREQ.	Test point measurement	Simulated Interfering Field Strength Value dBuV/m (1546 50%L 1%T)	Simulated wanted signal field strength 89.7 MHz Simulation dBuV/m (1546 50%L 1%T)	C/I SIMUL. (dB)	Simulated Interfering Field Strength Value dBuV/m (P.1546/IRT2D)	Measured Interfering Field Strength Value dBuV/m Year (2018/2019)
Radio Italia anni 60	89.6	17°22'20"E 42°57'28"N	20	72.0	52		
Radio Italia anni 60	89.6	16°05'40"E 43°00'57"N	18	61.0	43		
Radio Italia anni 60	89.6	16°49'52"E 42°44'00"N	22	73.0	51		
Radio KISS	89.7	16°05'40"E 43°00'57"N	39	61.0	22	39/35	74/71

KISS ¹							
Play Capital	89.7	17°22'20"E 42°57'28"N	34	72.0	38	41/65	76/73
Play Capital	89.7	16°01'38"E 43°29'46"N	41	64.0	23	46/67	71/64
Play Capital	89.7	16°05'40"E 43°00'57"N	44	61.0	17	50/68	74/71
Play Capital	89.7	16°49'52"E 42°44'00"N	39	73.0	34	44/55	63/58
Play Capital	89.7	16°19'07"E 43°34'50"N	38	72.0	34	46/66	74*
Radio Italia anni 60	89.8	16°19'07"E 43°34'50"N	25	72.0	47		

* Measurement done in 2017

FM interference between Italy and Malta

Malta stated that based on its latest measurements, the Italian station RMC101 (101 MHz) is not received anymore. The following provides an update to the cases of harmful interference considered at the previous 'good offices' meeting.

Frequency (MHz)	Action Taken by Italy	Comments by Malta
91.7	Radio Amore 91.7 MHz has replaced the antenna system of own station located in M.Te Lauro area	Interference still present. Average interference level of 67.2 dB μ V/m. Radio DJ (91.8 MHz) is also being received. Average level of 65.3 dB μ V/m.
92.7	R 101 92.7 MHz has updated the transmission system of own station located in M.Te Lauro area	R 101 received regularly since November 2019.
101.0	Radio Agira 101.0 MHz has replaced the antenna system of own station located in Castello Agira (Enna) area New projet for RMC101	Radio Freccia (100.9 MHz) is the main station causing interference. Average level of 59.3 dB μ V/m.
101.0	RDS 101 MHz has reduced the power of 6dB of own Syracuse station.	This station is not captured.
103.7	Radio Luna One 103.65 MHz has changed the frequency from 103.65 to 103.6 MHz and has reduced the power of 3dB of own Avola radio station.	Radio Luna One has not been captured since November 2019. More measurements are required to determine the status of this

	interference.
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FM interference between Italy and France

Italy presented new calculations in terms of C/I for the proposed scenario where the existing interfered programme would be moved to another existing FM site in Bonifacio with a new antenna. Italy stated that, under this scenario, the coverage in terms of C/I is approximately the initial coverage without interference

France is invited to analyse this new proposal and will report to the next meeting.

3. Update of the responses to the questionnaire on the 700 MHz band and update of the maps

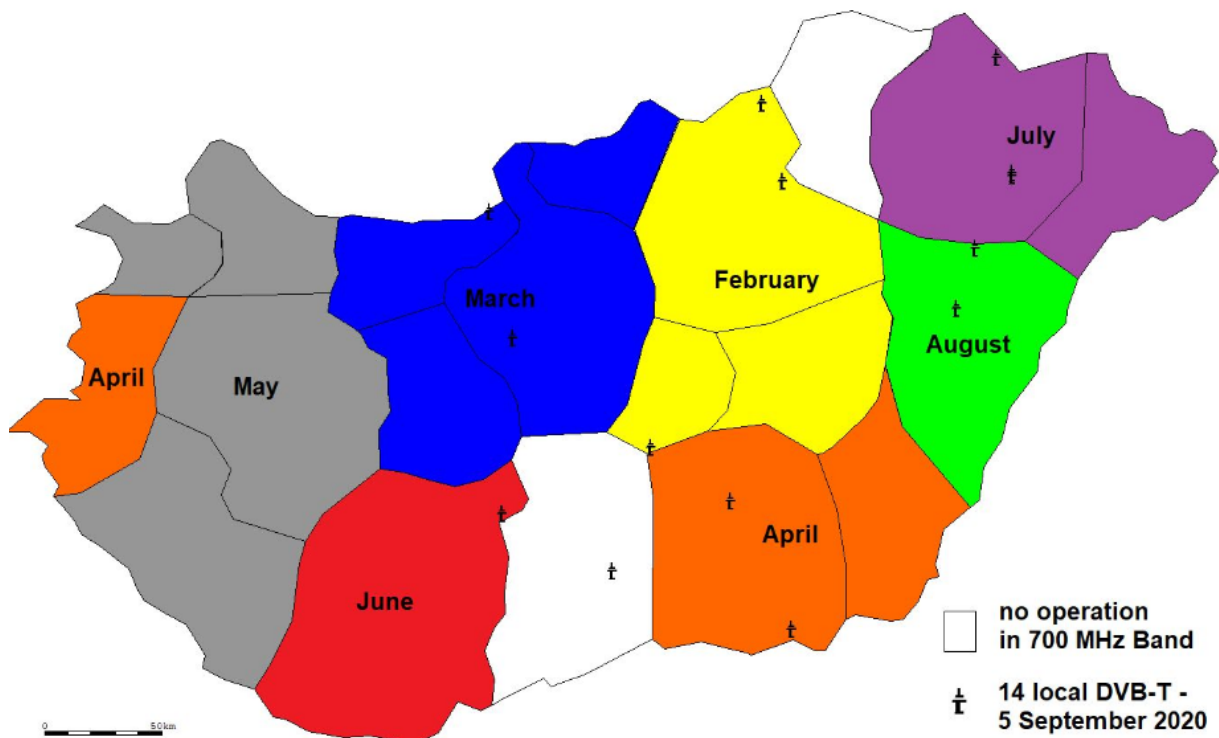
Updated responses to the questionnaire were received from Romania and Italy.

- It was noted that Romania has now decided to launch the 700 MHz authorization procedure before 30/06/2020 in spite of the cross-border issue with Ukraine.
- Italy has started (13/01/2020) to implement the first phase of the migration, with the switch off of the channels 50-53 in the area of Sardinia, Lazio, Tuscany and Liguria to permit France to use in advance the uplink part of the LTE in 700 MHz band. In these areas the process will end up before end of May 2020.

Croatian roadmap has not yet been published and is under consideration by the government. The authorization may be granted before the end of this year but the deadline in the draft roadmap remains 2022. The 700 MHz spectrum will be available in the continental part and the date of availability in the Adriatic part depends on resolving interference caused by Italian local broadcasters, preventing migration of existing Croatian public and pay TV MUXs to the channels below 694MHz. If the roadmap is not published before June 2020, the Chairs invite Croatia to write to the European commission to explain the reasons of the delays.

Hungary informed the meeting that the beginning and end of migration will be February and August 2020 respectively (see figure below). The 700 MHz MFCN authorization procedure has been suspended due to ongoing litigation and it is unclear when the authorization could be granted.

Clearance of 700 MHz Band in Hungary in 2020



Other information was exchanged during the meeting.

The meeting decided to present an update of the maps for the questions related to the beginning and end of the migration and for the authorization date. Additional information will be asked to Turkey and Montenegro administrations.

3. Cross border negotiations with countries outside EU

Russian Federation

A bilateral meeting took place in October 2019 between Lithuania and Russia. Russia is preparing the migration of DVB-T outside the 700 MHz band. The initial deadline for publishing the plan was end 2019 but it has been delayed until May. It is therefore not clear when they will move out of the 700 MHz band. The representative from EC stated that they have no additional information from their side.

The conclusion from the previous meeting remains: there is no important risk of interference from TV to mobile service in the 700 MHz band since there are no Russian TV transmitters in operation in this band at the border and since the plan from Russia is to introduce mobile services in the 700 MHz band. However, uncertainty remains.

Belarus is preliminary planning the migration in 2021, but has difficulties in terms of financing the cost of migration

Lithuania stated that they have additional coordination difficulties in the frequency band 3.6-3.8 GHz where Russian is asking for excessively stringent protection requirement even more severe than the RR limit applicable to the band 3.4-3.6 GHz. Russia is additionally arguing that their use of the band is covered by Article 48 of the ITU Constitution (Defence installations) in order not to provide additional information. Russia suggested to postpone the decisions on this band until the 1st of July 2020 when they prepare a new coordination proposal for the whole band 3.4-3.8 GHz.

Lithuania is considering notifying stations under the fixed service which is primary in the RR in the band without specific restrictions. Lithuania also explained cross-border difficulties in the L band where Russia use this band for aeronautical telemetry and telecommand.

Ukraine

The letter received from Ukraine in response to the request from the good offices sub-group Chairmen clarifies that the plan for migration is 2020 but stresses their difficulties in terms of financing the migration cost evaluated to 4 million dollars for the major broadcaster.

Romania will proceed with the authorisation in the first semester and the authorizations will be applicable on 1st January 2021. Romania is therefore hoping that Ukraine will migrate before that date so as to enable operators to use the 700 MHz band at the borders without delay.

North Africa

Discussions took place between Libya and Malta (+Italy) during WRC-19 and subsequently by email, concerning the draft frequency coordination agreement for the sub-700 MHz band. Although Libya concurred with the draft agreement, it will be difficult to have this agreement formally signed.

No discussions took place with Tunisia or Algeria.

Albania

Italy met Albania and other concerned countries in Rome on 16-17 October 2019. Albania stated that they will probably sign the Adriatic cluster agreement and will make all possible effort to migrate before June 2022.

Some information was given about Serbia, which operates one TV station in the 700 MHz band close to the border of Croatia and Hungary. Serbia is expected to cooperate in case of interference and Bosnia and Herzegovina, which still operate analogue TV in the 700 MHz band, also expressed its willingness to cooperate in case of interference.

Turkey

The EC representative indicated that Turkey has apparently completed its migration and will verify this information. There is also some progress in the territory of Cyprus where the Government of Cyprus is prevented from exercising effective control regarding the freeing of the 700 MHz band.

5. Date of next meeting

The next RSPG “good offices” meeting is planned on 19th May in Romania.