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RADIO SPECTRUM POLICY GROUP

22nd Progress Report of the RSPG Working Group

on cross-border coordination

21st Progress Report of the RSPG Working Group

on cross-border coordination

The Working Group has held one meeting, 19th September in Zagreb, at the kind invitation of HAKOM, since the previous RSPG meeting

TV, T-DAB and FM interference around Italy

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

- **For TV interference**, there is **no more interference to channels in operation in neighbouring countries except with Croatia** on channels 21, 39, 41, 45 and 51. Investigations are ongoing.
- Also, **Croatia intends to grant licenses for 5G, including in the 700MHz band, in the 3rd quarter of 2020**. Croatia may switch-off the existing DVB-T MUXs in the 700 MHz band **only if the channels where DVB-T2 MUXs have been introduced are free of interference**. Italy may have a possibility to release in advance of the planned Italian timeline (December 2021 or June 2022) some channels, due to the decision of some regional broadcasters, received during the public consultation regarding the roadmap, to anticipate the switch-off of their programmes, but **clear picture is expected to be known only at the end of 2019**.
- **For TDAB interference**, AGCOM expects to be able to **publish the T-DAB plan fully in line with Italian international rights (GE-06 + coordination agreements) before the end of this year**. Coordination is continuing with neighbouring countries. TV transmission in the VHF band across Italy **will enable the full transition of existing TDAB to the new plan only in June 2022**. However, it is expected that there will be a possibility to migrate the interfering transmissions to the blocks of the new plan which are currently not used by TV. In the meantime, Italy is investigating new projects to limit existing interferences to Slovenia and Croatia.
- **For FM interference**, the discussion is progressing slowly on the protection of priority channels declared by neighbouring administrations with exchange of information to/from Italy. Some solutions are investigated to reduce the interference in such priority channels to all neighbouring countries, but it is noted that the interference situation has not evolved favorably, at least with Slovenia and Croatia, and there is no expectation that the situation may significantly progress in the short term.

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

Concerning the **Croatian roadmap** not yet published, the current draft has been modified and a public consultation will start soon for 30 days. **A publication is expected by the end of December**.

Italy updated their response to the 700 MHz questionnaire, to inform about an update of the national roadmap, the release of the rights of use for national broadcasters and an update of the AGCOM plan, as well as frequency coordination developments with Albania.

Regarding the delay until 2022 of the migration of broadcasting services below 694 MHz in **Poland**, some bilateral discussions took place with **Denmark** which informed officially the working group that the situation has been solved and that they were most pleased with the good will and spirit of cooperation demonstrated by Poland on the matter at hand.

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, while the initial plan was a date of entry into force of the authorizations on the 1st January 2021. **Ukraine** still has digital transmissions in the 700 MHz band and analogue transmissions (with the national public programme), which are affecting the availability of the 700 MHz band for mobile services in Romania. The European Commission contacted the Ukrainian administration on a diplomatic level and Ukraine was invited to attend the good offices meeting, without response. The good offices noted that the lack of availability of the 700 MHz band in areas bordering Ukraine may not prevent operators to start deployment in other parts of Romania.

There have been several meetings between EU and **Russian Federation** at various levels where the issue of the availability of the 700 MHz band for mobile services was discussed. The EC is wishing to ensure some homogeneity of the discussion between Russia and affected countries (mainly Baltic countries and Poland) and does promote multilateral discussions rather than bilateral meetings. Some compromise solutions on the final plan for below 694 MHz are under discussion.

A meeting between **Italy, Albania and other concerned countries** will be taking place in Rome on 16-17 October 2019.

With respect to **North African countries**, there is no progress.

With respect to **Turkey**, a meeting is planned at the end of October where both Turkish foreign affairs and the National Communication Authority would attend, thus making possible some progress. Some additional discussions may take place during the regular meetings involving the European Commission and the Turkish government.

Next meeting

The next meeting is planned on 21st January 2020 in Roma.

REPORT

RSPG WORKING GROUP
« GOOD OFFICES »
ZAGREB, 19th SEPTEMBER 2019, 9H30

1. Situation regarding interference around Italy

TV interference issues

Actual interference from Italy to Croatia

In September 2019 Croatia finalized its measurement campaign of the TV, FM and T-DAB bands and sent harmful interference reports with details of the measurements to Italy with a copy to the ITU. There were 56 harmful interference reports regarding Croatian TV channels in operation, in particular on channels 21, 39, 41, 45 and 51. Also, there were 45 records for the Croatian TV channels not in operation. Therefore, there is no significant change in the level of interference.

Italy reported that they asked San Marino to provide the detailed characteristics of the main and secondary transmitters for channel 51, but San Marino did not respond to this request as yet. Croatia confirmed that the bearer of the interference shows that the interference is not from the main transmitter in San Marino but from secondary transmitters in Italy. The meeting reminded that for transmitters on the Italian territory, the administration of Italy remains fully responsible of any potential interference and that Italy should get the required characteristics.

Concerning other channels, Italy is still in the process of identifying the interfering sites. Italy still does not have any explanation why their simulations are showing interference levels lower than those measured by Croatia. On this matter during the ITU multilateral meeting held in July 2019, the ITU stated that they will check the Italian simulations. No response has so far been received from the ITU.

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

Italy and Croatia held a bilateral meeting on the 16th July in Rome.

Croatia intends to grant licenses for 5G, including in the 700MHz band, in the 3rd quarter of 2020.

In order to release the 700 MHz band Croatia granted new licenses in July 2019 for two national and one regional multiplexes operating in DVB-T2 and H.265/HEVC standards. The operation started in September 2019 and license holder are required to cover 97% of the country's population by November 2019. Hence, an interference free operation is of great importance for the transition process. Furthermore HAKOM started a negotiation procedure with other operators (Pay TV in particular) in order to negotiate their transition to frequencies below 694 MHz. Pay TV business depends a lot on the quality of coverage, and in order to

provide the service and have satisfied users the respective TV channels need to be free from any harmful interference from Italy. In that respect Croatia stressed the importance to have the availability of the channels as reported during previous meetings (ITU multilateral and “Good Office” meetings).

First MUX operating on channels 21, 22, 23, 43 at the Croatian coast will be on air by November 2019 in simulcast with the existing DVB-T MUXs.

Second MUX and transition of other multiplexes in operation (e.g. Pay TV), will be on air in 2020 (May) on the channels 27, 34, 41, 29 and 35 in simulcast with the existing DVB-T MUXs.

Italy stressed that there should be a possibility to release in advance some channels of phase 1, and even phase 2, due to the decision of some regional broadcasters, received during the public consultation regarding the roadmap, to anticipate the switch-off of their programmes but the clear picture will be known only at the end of 2019.

In the event that the Italian regional broadcasters will anticipate the switch-off, the clearance of the Croatian channels could be achieved for April-May 2020. However, if there is no sufficient early switch-off, the availability of the Croatian channels could be delayed until December 2021 or June 2022

Croatia stated that the 700 MHz band will not be cleared, at least in the Adriatic area, until the existing pay TV MUXs using the 700 MHz band are able to migrate in the above DVB-T2 MUXs (i.e. after interference is eliminated).

Italy should therefore inform Croatia and the good offices about the possibility to release all the necessary Croatian channels before the end of this year, so as to enable Croatia to clarify their transition roadmap. Italy should inform the good offices about any delay.

With regard to the practical implementation of the 700 MHz decision, the representative of the Commission noted that the deadlines imposed by this text might be jeopardised by the delays resulting from the behaviour of the Italian authorities vis-à-vis neighbouring countries. The representative of the Commission expressly stated his concern in this respect.

Other countries

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

TDAB interference issues

AGCOM expects to be able to publish the T-DAB plan fully in line with Italian international rights (GE-06 + coordination agreements) before the end of this year. It is noted that the new AGCOM board has not yet been designated and any delay in such designation may also cause delay in the publication of this plan.

Italy will continue the coordination with neighbouring countries (France, Monaco, Vatican City, Slovenia, Croatia, Montenegro, Bosnia and Herzegovina, Albania, Greece, Malta).

The AGCOM plan is expected to provide for 3 national TDAB blocks and 3 regional TDAB blocks. These regional T-DAB blocks will be different amongst contiguous regions, i.e. if in Friuli blocks 9A, B, C will be used, in Veneto (contiguous region) different blocks will be used. (so that 10 DAB blocks are used for each area and totally 13 blocks for the overall planning). In addition, one VHF TV channel will be available in several regions. It is noted that existing TV transmission in the VHF band across Italy will enable the full transition of TDAB (i.e. blocks 12A, B, C) to the new plan only at the time of the implementation of the new TV plan in the Adriatic area (i.e. December 2021 to June 2022) or at the implementation of the T-DAB plan (i.e. June 2022). However, it is expected that there will be a possibility to migrate the interfering transmissions on blocks 12A, 12B and 12C to the blocks of the new plan which are currently not used by TV. Italy is requested to confirm this possibility at the next good offices meeting.

Italy sent to Croatia and Slovenia the characteristics of all the transmitters currently on air and sited in the Friuli VG, Veneto, Emilia R., Marche, Abruzzo, Molise and Puglia regions and the provinces of Trento, Potenza, Perugia, Avellino, Benevento, Arezzo and Trento.

T-DAB interference between Italy and Slovenia

Italy and Slovenia are currently discussing the protection of Slovenia from two interfering sites, Monte Porzus and Monte Grappa, with the aim of defining new projects for these two sites.

The Italian broadcaster developed a new project for Monte Porzus that is under consideration by Italy and Slovenia. Slovenia stated that the signal levels of the Italian stations are very high (50 to 60 dB μ V/m), due to the proximity of a station such as Monte Porzus (i.e. 3-4 km from the border).

In addition, Italy has reduced by 3 dB the power of all TDAB transmitters in the region of Veneto in blocks 12A, 12B and 12C. Slovenia considers that the interference problem will not be solved by slightly reducing the ERP of the transmitters in the Region of Veneto.

Taking into account the possibility described above to use partly the new plan, the interference situation may be solved next year.

T-DAB interference between Italy and Croatia

After finalisation of the 2019 measurement campaign in September, Croatia sent 17 records of interference for its T-DAB channels not in operation, which confirmed previously reported interference cases in the VHF band III. There is large number of Italian transmitters already operating on channels 12A (network EuroDAB Italia), 12B (network DAB+RAI), 12 C (network *DAB ITALIA*) and 12D (network DAB+RAI), as well as channel 10A. Such uncoordinated operation of T-DAB services in Italy already prevented use of Croatian GE-06 T-DAB channel 12, so Croatia has to put in operation T-DAB on GE-06 DVB-T channel 11. It

is extremely important for Croatia that the present interference is removed in order to be able to grant the license for commercial operation of T-DAB.

Italy was kindly asked to find solutions for the present interference because waiting until the implementation of new T-DAB plan in Italy as late as June 2022 would prevent the development of digital terrestrial radio in Croatia.

Italy has already sent to Croatia several new projects and is waiting an answer from the Croatian side:

- For block 12B (Rai) on Colle Barbiano, the transmitter power has been already reduced by 6 dB on 28-6-2019, but a more complete project, will be implemented in December 2019.
- For block 12C on Bari Santa Teresa, the new antenna system will be implemented at the end of September 2019.
- For block 12A on Maieletta, the broadcaster applied on 29-07-2019 a new project slightly different from the project already sent to Croatia, the new data will be sent to Croatia.

Croatia noted that some other transmitters are using blocks 12A, 12B and 12C and may require Italy to develop new projects.

T-DAB interference between Italy and France.

Measurements have shown that the interference on channel 9 (blocks 9B and 9C used in the South of France) remains limited.

FM interference issues

FM interference between Italy and Slovenia

Italy sent to Slovenia new antenna projects for the sites of Muggia (Italian site) and Beli Kriz (Slovenian site) and the mistake sent with the first project has been corrected due to an error of conversion made by ATDI software. The new project is based on more realistic (20-25 dB) antenna discrimination.

Italy considered that by applying the two new antenna patterns, the two sites can operate simultaneously without reducing their respective service areas. Slovenia considered that the project is not satisfying since the Slovenian area close to the Italian transmitter would not correctly covered due to high interference from the Italian transmitter.

From the elements available to the meeting, it appeared that the new project may improve the interference situation but still with areas in Slovenia which would remain interfered and which are not covered by other Slovenian transmitters.

Slovenia will prepare additional simulations for comparing the existing situation and the proposed projects from Italy, to be considered at the next meeting.

Slovenia also pointed out the need for Italy to address the complete priority list (about 40 cases). The meeting requested Italy to prepare new projects for the priority list.

Moreover as mentioned during the multilateral meeting organised by the ITU (8-9 July, Ljubljana) addressing interferences from Italy, there are some litigation cases initiated by Italian operators against Slovenian stations operating in conformity with the GE84 Plan. The meeting discussed what could be the legal basis of such legal cases and what could be the process for enforcement. The EC representative was invited to provide an analysis of the situation based on the elements of the litigation case which will be provided by Italy.

Italy asked Slovenia to send the list of the litigation cases to avoid to go to the second step of the litigation process. Both parties, Italy and Slovenia, are interested to solve these cases on a bilateral basis.

FM interference between Italy and Croatia

Croatia has sent 874 harmful interference reports with details of the measurements to Italy with copy to ITU which confirmed that there is no improvement in a number of interference cases and the levels of interference from Italian transmitters during 2019.

Regarding the 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), Croatia informed the meeting that 96 new interferers were identified and 91 were not measured anymore, when compared to the reference list. The total number of interference remains, more or less the same, but the difference in records is probably the result of some change of frequencies, identification sign (name) of station and propagation conditions. Croatia will be updating this list.

So far, Croatia has not measured any progress in solving interference cases and has not received an action plan which had to be proposed by Italy to solve the priority cases.

The meeting noted the difference between the results of Italian simulation (ATDI software, P.1546, 1% time) and the level measured by Croatia, with a big difference of about 30 dB. Both parties were invited to investigate the reasons of such difference.

In response to the Croatian request to put under consideration the priority frequencies of Biokovo and Ucka and to have a clear picture of the Italian FM environment, Italy had recently provided to Croatia, EC and ITU all the Italian transmitters that are operating on the priority Croatian frequencies.

- Biokovo (89,7MHz, 98,9MHz, 102,0MHz and 107,9MHz)
- Ucka (96,9MHz, 99,3MHz, 101MHz, 104,7MHz and 106,7MHz).

Italy started to investigate these transmitters starting with Biokovo 89.7. Italy also controlled the actual characteristics of the transmitters which are in conformity with those having been sent.

Interfering Stations	FREQ.	Test point measurement	Simulated Interfering Field Strength Value dBuV/m	Simulated wanted signal field strength 89.7 MHz Simulation dBuV/m	C/I SIMUL.
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 KISS ¹	89.7	16°05'40"E 43°00'57"N	39	61.0	22
Play Capital	89.7	17°22'20"E 42°57'28"N	34	72.0	38
Play Capital	89.7	16°01'38"E 43°29'46"N	41	64.0	23
Play Capital	89.7	16°05'40"E 43°00'57"N	44	61.0	17
Play Capital	89.7	16°49'52"E 42°44'00"N	39	73.0	34
Play Capital	89.7	16°19'07"E 43°34'50"N	38	72.0	34
Radio Italia anni 60	89.8	16°19'07"E 43°34'50"N	25	72.0	47

Croatia thanked Italy for providing the list of co-channel interferers for Biokovo and Ucka, which are to be solved at first step.

Croatia was invited to make their own simulations to be able to identify whether there are differences among the simulation tools.

Without waiting such results, Italy was requested to ensure for all cases where the simulation shows interference, that new antenna projects will be implemented with the maximum possible attenuation in the direction of Croatia (at least 20 dB).

Italy stated that is not feasible, due to the current Italian law, to ask the broadcasters to reduce the power of 20 dB, but Italy intends to proceed on case by case basis with the indispensable collaboration of the interfered broadcaster/Administration.

FM interference between Italy and Malta

Italy and Malta discussed the impact of new implemented Italian projects (see the table below), showing in some cases that the interference has become negligible (92.7, 101 MHz)

and in some other cases remaining interference, including in one case because of interference from other transmitters.

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 69.2 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	This station is now being captured sporadically. More measurements are required to determine the status of the interference situation.
101.0	Radio Agira 101.0 MHz has replaced the antenna system of own station located in Castello Agira (Enn) area	Radio Agira was not captured. Other interfering stations are received, namely: <ul style="list-style-type: none"> • RMC101, on 101MHz (level of 60.6dBμV/m) • Radio Freccia, on 100.9 MHz (average level of 64.2 dBμV/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 is now being captured on 103.6 MHz with a level of 62.9 dB μ V/m.

Malta is continuing to carry out a re-planning exercise of its FM sound broadcasting transmissions, including discussions with affected country as required by international regulations.

FM interference between Italy and France

There is a longstanding interference from FM transmitter to Sardinia on the FM channel 88.3 MHz in Bonifacio, corresponding to GE84 French right. France indicated that one solution from the French side would be to use channel 88.4 MHz instead, although it corresponds to a GE84 Italian right. Italy is studying a solution which would require the move of the antenna to an existing FM site in Bonifacio. Italy will send soon the project to France.

2. 700 MHz band (questionnaire and roadmap)

Concerning the Croatian roadmap not yet published, the current draft has been modified and a public consultation will start soon for 30 days. A publication is expected by the end of December.

It is noted that it may be useful for Croatia to inform officially the European Commission about this new schedule.

Italy updated their response to the 700 MHz questionnaire, to inform about an update of the national roadmap, the release of the rights of use for national broadcasters and an update of the AGCOM plan, as well as frequency coordination developments with Albania.

3. Cross border negotiations with countries outside EU

Russian Federation

The representative from EC explained that there have been several meetings at various levels where the issue of the availability of the 700 MHz band for mobile services was discussed. The EC is wishing to ensure some homogeneity of the discussion between Russia and affected countries (mainly Baltic countries and Poland) and does promote multilateral discussions rather than bilateral meetings.

Lithuania explained that, concerning the final plan, a direction has been taken where Russia would get 10 layers and EU countries 6 layers. Russia reacted positively to this possibility. Russia also confirmed their intention to use the 700 MHz band for mobile but there is no official confirmation or precise schedule. It can be concluded that 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.

Regarding the delay until 2022 of the migration of broadcasting services below 694 MHz in Poland, some bilateral discussions took place with Denmark which had to wait for Poland to release channel 40 (KOSZALIN) and channel 45 (BIALOGARD) for use on the island of Bornholm (allotment ROE), in order to complete the transition. Denmark informed the good offices that *“The Danish Administration has since March 2019 been in close correspondence with the Polish Administration on the matter of the release of channel 40 and channel 45. The European Commission was copied on this correspondence for their information. The Polish Administration has now set up a process that when completed will allow for channel 40 and channel 45 to be released at 31 March 2019 for use on the island of Bornholm, enabling Denmark to meet the 30 June 2020 deadline set forth in Decision (EU) 2017/899. The Danish Administration is most pleased with the good will and spirit of cooperation demonstrated by Poland on the matter at hand.”*

It was confirmed that Hungary will not be affected by the Polish delay.

Ukraine

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.

Ukraine still has digital transmissions in the 700 MHz band and analogue transmissions (with the national public programme), which are affecting the availability of the 700 MHz band for mobile services in Romania as shown in the table below.

Block	DTT channel	Affected county
694-703	49, 50	SV, BT
703-708	50	unaffected
708-713	50, 51	BT, TL
713-718	51	BT, TL
718-723	52	unaffected
723-728	52, 53	SM, MM
728-733	53	SM, MM
733-738	53, 54	SM, MM
738-743	54, 55	SM, MM, TL
743-748	55	SM, MM, TL
748-753	55, 56	SM, MM, TL
753-758	56	SM, MM
758-763	57	unaffected
763-768	57, 58	unaffected
768-773	58	unaffected
773-778	58, 59	SV, BT, GL, TL
778-783	59, 60	SV, BT, GL, TL
783-788	60	MM
788-791	60	MM

Note : BT- Botosani, TL – Tulcea, SV – Suceava, GL – Galati, SM – Satu Mare, MM – Maramures

Public consultation about the MFCN authorization in the 700 MHz band ended last week and the licences are expected to be issued by the end of 2019. The initial plan was a date of entry into force of the authorizations on the 1st January 2021, but mobile operators responded to the public consultation with strong concerns due to Ukraine interference.

The meeting noted that the lack of availability of the 700 MHz band in areas bordering Ukraine may not prevent operators to start deployment in other parts of Romania.

The European Commission contacted the Ukrainian administration on a diplomatic level. The institutional complexity was noted with two independent authorities (broadcasting and MFCN) and a governmental agency. The European Commission will report progress at the next meeting.

M.Zilinskas indicated that Ukrainian authorities did not respond to the invitation to this meeting but that he is aware that Ukraine is developing some compromise transitional solutions.

Hungary noted that they may have similar difficulty if the switch-off date of broadcasting in the 700 MHz band in Ukraine is delayed.

North Africa

No progress has been made since the previous meeting.

Albania

On the 8th and 13th June 2019, Albania sent a note to Italy regarding some issues in connection with the release of UHF channels 46 and 57. A meeting between Italy, Albania and other concerned countries will be taking place in Rome on 16-17 October 2019.

Turkey

The EC representative indicated that a meeting is planned at the end of October where both Turkish foreign affairs and the National Communication Authority would attend, thus making possible some progress. Some additional discussions may take place during the regular meetings involving the European Commission and the Turkish government.

5. Date of next meeting

The next RSPG “good offices” meeting is planned on 21st January 2020 in Roma.