

AGREEMENT

on frequency coordination of digital terrestrial television (DTT)

in the frequency band 470-694 MHz between

Administration of Croatia and Administration of the Republic of Serbia

Preamble

Article 1

This document describes a bilateral coordination agreement between Administration of Croatia and Administration of the Republic of Serbia (hereinafter: Agreement). Furthermore, it expresses in particular the convergence of will between both parties, indicating an intended common course of action.

Background

Article 2

In relation with decisions of the WRC-15 about usage of radio frequency band 694-790 MHz (allocation of this band on co-primary base to the Broadcasting and the Mobile Service) following provisions of the 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 (hereinafter: Decision (EU) 2017/899), Administration of Croatia and Administration of the Republic of Serbia decided to perform the re-planning of the frequency band 470-694 MHz in order to enable future use digital terrestrial television (hereinafter: DTT) networks and to facilitate the re-farming of the frequency band 694-790 MHz for terrestrial systems capable of providing wireless broadband electronic communications services.

Administration of Croatia and Administration of the Republic of Serbia decided to use commonly agreed principles as presented in Multilateral Framework Agreement between the administrations of Albania, Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Greece, Former Yugoslav Republic of Macedonia, Hungary, Montenegro, Romania, Serbia, Slovenia, Turkey and Ukraine on the frequency plan for the future digital terrestrial television in the frequency band 470-694 MHz which shall be signed on 6th December 2017, in order to facilitate the re-planning process and achieve a compatible frequency plan between the concerned administrations within the defined geographical area of SEDDIF.

Objectives

Article 3

Administration of Croatia and Administration of the Republic of Serbia successfully facilitated bilateral frequency coordination activities in order to implement the relevant broadcasting spectrum reallocation, with a view to:

- achieve mutual compatibility of the DTT spectrum resources to be used in the UHF band and avoid mutual harmful interference;
- facilitate any consequential modifications to the Geneva 2006 (hereinafter: GE06) Plan.



Distribution of channels

Article 4

Administration of Croatia and Administration of the Republic of Serbia agreed on distribution of channels, where respective areas and their assigned channels are specified in the Annex 1 and the Annex 2 of this Agreement.

Technical parameters of assignments

Article 5

Administration of Croatia and Administration of the Republic of Serbia agreed on the use of radio-frequencies for the assignments with technical parameters given in the Annex 3 - for Administration of the Republic of Serbia and the Annex 4 – for Administration of Croatia of this Agreement.

The detailed technical parameters for these assignments are recorded on the CD/DVD, one for each Administration, in electronic format (Terrasys notices) in the files:

- “HRV_Plan_2017_new_assignments.txt“ for Administration of Croatia
 - “SRB_Plan_2017_new_assignments.txt“ for Administration of the Republic of Serbia
- which are given in the Annex 5 of this Agreement.

ITU coordination and notification

Article 6

Administration of Croatia and Administration of the Republic of Serbia agree that they will not object to coordination requests for the use of radio-frequencies subject of the Annex 3 and the Annex 4 of this Agreement, submitted to the ITU in the application of the Article 4 of GE06 Agreement.

Transition period

Article 7

The implementation of the agreed DTT requirements will be done gradually in the transition period which will start on the date of signing the Agreement.

Administrations shall inform each other on the date of bring into use of assignments subject to this Agreement at least 2 (two) months before the respective station will be put into operation.

As the Republic of Serbia has not yet officially decided about the usage of the 694-790 MHz frequency bands for terrestrial systems capable of providing wireless broadband electronic communications services, and noting the request of Croatia in the light of the Decision of the European Parliament and the Council (Decision (EU) 2017/899) regarding the use of the 470-790 MHz frequency band in the EU, both Parties should agree before June 30th, 2020 on a final date of the transition period.

Administration of Croatia and Administration of the Republic of Serbia will contribute, with their best effort to conduct a smooth transition according to this Agreement, with the least possible adverse effects for the audience of DTT.

Revision of the Agreement

Article 8

With the consent of the other signing Administration, this Agreement may be modified at the request of one of the signatory Administration where such a modification becomes necessary in the light of administrative, regulatory or technical developments.

An Administration cannot withdraw unilaterally from this Agreement.

Language of the Agreement

Article 9

This Agreement exists in two original versions in English. Each Administration holds one original.



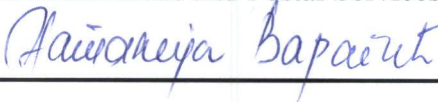
Entry into force

Article 10

This Agreement will enter into force on the date of the signature.

Budapest

Date 05 December 2017

For Administration of Croatia	For Administration of the Republic of Serbia
<p>Ivančica Sakal</p> <p>Croatian Regulatory Authority for Network Industries</p> <p></p> <hr/>	<p>Zoran Branković</p> <p>Regulatory Agency for Electronic Communications and Postal Services</p> <p></p> <hr/>
	<p>Natalija Varagić</p> <p>Regulatory Agency for Electronic Communications and Postal Services</p> <p></p> <hr/>

Attachments:

- Annex 1: Channel distribution of the new DTT plan of Administration of Republic of Serbia
- Annex 2: Channel distribution of the new DTT plan of Administration of Croatia
- Annex 3: Technical parameters of assignments of Administration of the Republic of Serbia
- Annex 4: Technical parameters of assignments of Administration of Croatia
- Annex 5: CD/DVD with HRV and SRB TerraSys files

Layer	AVALA	BESNA KOBILA	CER-MALJEN	COT-VENAC	DELI JOVAN	JASTREBAC	KIKINDA	KOPAONIK	RUDNIK-CRNI VRH(J)	SOMBOR	SUBOTICA	TORNIK-OVCAR	TUPIZNICA-CRNI VRH(P)	VRSAC	KOSOVO I METOHIJA	KOSOVO I METOHIJA C	KOSOVO I METOHIJA G
MUX1	22	35	39	24	43	25	24	34	43	24	24	39	25	25	21		
MUX2	28	39	32	30	23	27	30	32	26	43	43	36	22	31	31		
MUX3	33	29	34	34	29	45	46	22	29	34	46	30	31	33	46		
MUX4	37	33	37	40	39	33	40	41	46	40	40	41	37	37	48		
MUX5	45	43	47	41	41	42	29	24	47	39	29	24	28	45	44		
MUX6	42	38	42	48	24	38	32	28	35	48	48	23	44	42		47	37

GE06D channels
New channels

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Allotment Layer	D1	D2		D3	D4	D6	D5	D7	D8	D9
		D2-E	D2-W							
1	36	39		25	<-25	30	28	21	33	21
2	44	43		34	40	46	23	22	23	22
3	26	<-26		36->	36	<-36	43	45	43	45
4	23	<-23		48	<-48	34->	34	27	34->	34
5	21->	21		<-21	42->	42	39	41	<-41	28
6	38->	38	28	28	<-28	29	<-29	35	29	<-29

GE06D channels

New channels

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AB

Station #	Site name	Adm	Allotment name	t adm ref_id	Geo coordinates	ERP [W]	Hant [m]	Heff [m]	Freq [MHz]	Channel No.	Pol
1	AVALA	SRB	AVALA	AVALA 5 new	20°31'12.0"E 44°41'47.0"N	200000	160	500	602	37	H
2	AVALA	SRB	AVALA	AVALA 6 new	20°31'12.0"E 44°41'47.0"N	200000	160	500	642	42	H
3	B VISNJICEVO	SRB	KIKINDA	B VISNJICEVO 2 new	20°40'45.0"E 45°26'59.0"N	10000	110	109	498	24	H
4	B VISNJICEVO	SRB	KIKINDA	B VISNJICEVO 3 new	20°40'45.0"E 45°26'59.0"N	10000	110	109	546	30	H
5	B VISNJICEVO	SRB	KIKINDA	B VISNJICEVO 5 new	20°40'45.0"E 45°26'59.0"N	10000	110	109	674	46	H
6	B VISNJICEVO	SRB	KIKINDA	B VISNJICEVO 7 new	20°40'45.0"E 45°26'59.0"N	10000	110	109	626	40	H
7	BAJINA BASTA	SRB	TORNIK-OVCAR	BAJINA BASTA 2 new	19°26'36.0"E 43°56'32.0"N	2000	30	835	546	30	H
8	BAJINA BASTA	SRB	TORNIK-OVCAR	BAJINA BASTA 3 new	19°26'36.0"E 43°56'32.0"N	2000	30	835	634	41	H
9	BAJINA BASTA	SRB	TORNIK-OVCAR	BAJINA BASTA 5 new	19°26'36.0"E 43°56'32.0"N	2000	30	835	498	24	H
10	BESNA KOBILA	SRB	BESNA KOBILA	BESNA KOBILA 2 new	22°14'05.0"E 42°31'44.0"N	50000	25	976	538	29	H
11	BESNA KOBILA	SRB	BESNA KOBILA	BESNA KOBILA 3 new	22°14'05.0"E 42°31'44.0"N	50000	25	976	570	33	H
12	BESNA KOBILA	SRB	BESNA KOBILA	BESNA KOBILA 5 new	22°14'05.0"E 42°31'44.0"N	50000	25	976	610	38	H
13	BITOVIK	SRB	TORNIK-OVCAR	BITOVIK 2 new	19°41'33.0"E 43°26'55.0"N	2000	25	892	546	30	H
14	BITOVIK	SRB	TORNIK-OVCAR	BITOVIK 3 new	19°41'33.0"E 43°26'55.0"N	2000	25	892	634	41	H
15	BITOVIK	SRB	TORNIK-OVCAR	BITOVIK 5 new	19°41'33.0"E 43°26'55.0"N	2000	25	892	498	24	H
16	CER	SRB	CER-MALJEN	CER 5 new	19°29'54.0"E 44°36'12.0"N	10000	51	616	618	39	H
17	CRNI VRH J	SRB	RUDNIK-CRNI VRH(J)		21°06'58.0"E 44°00'35.0"N	100000	60	583	650	43	H
18	CRNI VRH J	SRB	RUDNIK-CRNI VRH(J)	CRNI VRH J 5 new	21°06'58.0"E 44°00'35.0"N	100000	60	583	682	47	H
19	CRVENI COT	SRB	COT-VENAC	CRVENI COT 5 new	19°42'30.0"E 45°09'06.0"N	200000	110	536	626	40	H
20	CRVENI COT	SRB	COT-VENAC	CRVENI COT 8 new	19°42'30.0"E 45°09'06.0"N	200000	110	536	578	34	H
21	CVILJEN	SRB	KOSOVO I METOHIJA C	CVILJEN 6 new	20°44'54.0"E 42°10'20.0"N	10000	76	1091	682	47	H
22	DELI JOVAN	SRB	DELI JOVAN	DELI JOVAN 3 new	22°13'39.0"E 44°13'35.0"N	20000	60	888	538	29	H
23	DELI JOVAN	SRB	DELI JOVAN	DELI JOVAN 5 new	22°13'39.0"E 44°13'35.0"N	20000	60	888	618	39	H
24	GOC	SRB	JASTREBAC	GOC 5 new	20°52'42.0"E 43°33'45.0"N	5000	30	833	506	25	H
25	GOLES	SRB	KOSOVO I METOHIJA G	GOLES 6 new	20°58'59.0"E 42°34'07.0"N	10000	90	560	602	37	H
26	GUCEVO	SRB	CER-MALJEN	GUCEVO 5 new	19°10'54.0"E 44°29'16.0"N	2000	25	679	618	39	H
27	JADOVNIK	SRB	TORNIK-OVCAR	JADOVNIK 2 new	19°49'52.0"E 43°16'08.0"N	5000	30	899	546	30	H
28	JADOVNIK	SRB	TORNIK-OVCAR	JADOVNIK 3 new	19°49'52.0"E 43°16'08.0"N	5000	30	899	634	41	H
29	JADOVNIK	SRB	TORNIK-OVCAR	JADOVNIK 5 new	19°49'52.0"E 43°16'08.0"N	5000	30	899	498	24	H
30	JASTREBAC	SRB	JASTREBAC	JASTREBAC 5 new	21°28'14.0"E 43°22'56.0"N	100000	40	1063	506	25	H
31	KIKINDA	SRB	KIKINDA	KIKINDA 2 new	20°27'08.0"E 45°51'42.0"N	100000	150	150	498	24	H
32	KIKINDA	SRB	KIKINDA	KIKINDA 3 new	20°27'08.0"E 45°51'42.0"N	100000	150	150	546	30	H
33	KIKINDA	SRB	KIKINDA	KIKINDA 5 new	20°27'08.0"E 45°51'42.0"N	100000	150	150	674	46	H
34	KIKINDA	SRB	KIKINDA	KIKINDA 7 new	20°27'08.0"E 45°51'42.0"N	100000	150	150	626	40	H
35	KLADOVO	SRB	DELI JOVAN	KLADOVO 3 new	22°30'55.0"E 44°39'21.0"N	2000	25	408	538	29	H
36	KLADOVO	SRB	DELI JOVAN	KLADOVO 5 new	22°30'55.0"E 44°39'21.0"N	2000	25	408	618	39	H
37	KOSMAJ	SRB	AVALA	KOSMAJ 5 new	20°34'58.0"E 44°28'34.0"N	2000	20	386	602	37	H
38	KOSMAJ	SRB	AVALA	KOSMAJ 6 new	20°34'58.0"E 44°28'34.0"N	2000	20	386	642	42	H
39	KRUPANJ JAGODNJA	SRB	CER-MALJEN	KRUPANJ JAGODNJA 5n	19°17'51.0"E 44°20'34.0"N	500	25	644	618	39	H
40	LJUBOVIJA NEMIC	SRB	CER-MALJEN	LJUBOVIJA NEMIC 5 n	19°26'02.0"E 44°10'42.0"N	500	35	611	618	39	H
41	MAJDANPEK-STARICA	SRB	DELI JOVAN	MAJDANPEK-ST 3 new	21°55'51.0"E 44°26'19.0"N	1000	25	314	538	29	H
42	MAJDANPEK-STARICA	SRB	DELI JOVAN	MAJDANPEK-ST 5 new	21°55'51.0"E 44°26'19.0"N	1000	25	314	618	39	H

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Station #	Site name	Adm	Allotment name	t_adm_ref_id	Geo coordinates	ERP [W]	Hant [m]	Heff [m]	Freq [MHz]	Channel No.	Pol
43	MALJEN	SRB	CER-MALJEN	MALJEN 5 new	20°00'50.0"E 44°08'27.0"N	10000	22	757	618	39	H
44	OVCAR	SRB	TORNIK-OVCAR	OVCAR 2 new	20°13'19.0"E 43°53'47.0"N	100000	40	773	546	30	H
45	OVCAR	SRB	TORNIK-OVCAR	OVCAR 3 new	20°13'19.0"E 43°53'47.0"N	100000	40	773	634	41	H
46	OVCAR	SRB	TORNIK-OVCAR	OVCAR 5 new	20°13'19.0"E 43°53'47.0"N	100000	40	773	498	24	H
47	RUDNIK	SRB	RUDNIK-CRNI VRH(J)	RUDNIK 4 new	20°32'43.0"E 44°07'53.0"N	20000	50	802	650	43	H
48	RUDNIK	SRB	RUDNIK-CRNI VRH(J)	RUDNIK 5 new	20°32'43.0"E 44°07'53.0"N	20000	50	802	682	47	H
49	SID	SRB	COT-VENAC	SID 5 new	19°23'18.0"E 45°09'21.0"N	1000	100	200	626	40	H
50	SID	SRB	COT-VENAC	SID 8 new	19°23'18.0"E 45°09'21.0"N	1000	100	200	578	34	H
51	SOMBOR	SRB	SOMBOR	SOMBOR 4 new	19°09'02.0"E 45°46'50.0"N	50000	150	150	690	48	H
52	SOMBOR	SRB	SOMBOR	SOMBOR 5 new	19°09'02.0"E 45°46'50.0"N	50000	150	150	498	24	H
53	SUBOTICA	SRB	SUBOTICA	SUBOTICA 5 new	19°38'10.0"E 46°04'40.0"N	200000	210	214	674	46	H
54	SUBOTICA	SRB	SUBOTICA	SUBOTICA 6 new	19°38'10.0"E 46°04'40.0"N	200000	210	214	498	24	H
55	SUBOTICA	SRB	SUBOTICA	SUBOTICA 7 new	19°38'10.0"E 46°04'40.0"N	200000	210	214	690	48	H
56	TORNIK	SRB	TORNIK-OVCAR	TORNIK 2 new	19°38'44.0"E 43°39'12.0"N	10000	45	783	546	30	H
57	TORNIK	SRB	TORNIK-OVCAR	TORNIK 3 new	19°38'44.0"E 43°39'12.0"N	10000	45	783	634	41	H
58	TORNIK	SRB	TORNIK-OVCAR	TORNIK 5 new	19°38'44.0"E 43°39'12.0"N	10000	45	783	498	24	H
59	VRANJE SV ILIJA	SRB	BESNA KOBILA	VRANJE SV ILIJA 2 n	21°48'35.0"E 42°34'25.0"N	2000	30	788	538	29	H
60	VRANJE SV ILIJA	SRB	BESNA KOBILA	VRANJE SV ILIJA 3 n	21°48'35.0"E 42°34'25.0"N	2000	30	788	570	33	H
61	VRANJE SV ILIJA	SRB	BESNA KOBILA	VRANJE SV ILIJA 5 n	21°48'35.0"E 42°34'25.0"N	2000	30	788	610	38	H
62	VRSAC	SRB	VRSAC	VRSAC 2 new	21°19'54.0"E 45°07'30.0"N	100000	40	350	570	33	H
63	VRSAC	SRB	VRSAC	VRSAC 4 new	21°19'54.0"E 45°07'30.0"N	100000	40	350	666	45	H
64	ZRENJANIN	SRB	COT-VENAC	ZRENJANIN 5 new	20°23'34.0"E 45°22'40.0"N	10000	150	156	626	40	H
65	ZRENJANIN	SRB	COT-VENAC	ZRENJANIN 8 new	20°23'34.0"E 45°22'40.0"N	10000	150	156	578	34	H

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Annex 4

No.	Name of station	channel	ERP (dBW)	Ant. Diagr.	Polarization
1	PSUNJ	21	47	D	M
2	PAPUK	21	46	D	M
3	MOSLAVACKA GORA	21	46	D	M
4	BELJE	23	44,8	D	M
5	BORINCI	23	47	D	M
6	PAPUK	23	46	D	M
7	IVANSCICA	25	44,8	D	M
8	KALNIK	25	44	D	M
9	MOSLAVACKA GORA	25	47,8	D	M
10	VIROVITICA	25	30,2	D	H
11	BELJE	26	44,8	D	M
12	BORINCI	26	47	D	M
13	PAPUK	26	46	D	M
14	IVANSCICA	28	44,8	ND	M
15	KALNIK	28	44	D	M
16	MOSLAVACKA GORA	28	47,8	D	M
17	PSUNJ	28	47	D	M
18	VIROVITICA	28	30,2	D	H
19	BIOKOVO	29	50	D	M
20	BRAC	29	40	ND	M
21	LABINSTICA	29	50	D	M
22	LASTOVO	29	37	ND	M
23	MIRKOVICA	29	46	D	M
24	PLJESIVICA H	29	46	D	M
25	STIPANOV GRIC	29	46	ND	M
26	SRDJ	34	47	D	M
27	SV.ILIJA	34	37	ND	M
28	UCKA	34	53	D	M
29	VELEB.PLJESIVICA	34	44	D	M
30	KRK-KRAS	34	40	ND	M
31	CELEVAC	35	50	ND	M
32	PROMINA	35	43	ND	M
33	UGLJAN	35	33	ND	M
34	MOSLAVACKA GORA	36	47,8	D	M
35	PETROVA GORA	36	43	D	M
36	SLJEME	36	50	ND	M
37	PAPUK	38	44,8	D	M
38	CELEVAC	41	50	ND	M
39	PROMINA	41	43	ND	M
40	UGLJAN	41	33	ND	M
41	MIRKOVICA	42	46	D	M

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42	PLJESIVICA H	42	46	D	M
43	STIPANOV GRIC	42	46	ND	M
44	MIRKOVICA	46	46	D	M
45	PLJESIVICA H	46	46	D	M
46	STIPANOV GRIC	46	46	ND	M
47	IVANSCICA	48	44,8	ND	M
48	KALNIK	48	44	D	M
49	MOSLAVACKA GORA	48	47,8	D	M
50	VIROVITICA	48	30,2	D	H
51	LABINSTICA	23	50	D	M
52	LABINSTICA	33	50	D	M
53	LABINSTICA	34	50	D	M
54	LABINSTICA	41	50	D	M
55	LABINSTICA	43	50	D	M