

Coordination agreement relating to DTT in the band 470 – 694 MHz between Latvia and Sweden

Warsaw 1 December 2016

VASES 2016/12

Background

The objective of this coordination agreement is to prepare conditions for releasing the UHF frequency range 694-790 MHz from DTT intended to be used for IMT.

Sweden has decided to use the frequency band 694 – 790 MHz for electronic communication services other than broadcasting from June 1st 2018.

Repurposing of this band for IMT in Latvia is expected at later term and predicted for 2022, due to current spectrum needs for DTT and coordination issues with bordering non-EU countries.

The intention during the negotiations has been to find a common final GE06 Plan modification solution enabling to retain at least seven layers in each country, as in the initial GE 06 Plan.

General conditions used for Plan modification

This agreement supersedes the bilateral agreement "Agreement on technical conditions to be observed at the stage of implementation of the digital broadcasting plan Geneva RRC-06" (hereinafter referred to as LVA/S 2006) signed at the RRC by heads of delegations from Latvia and Sweden on 1 June, 2006. Allotments with implementation conditions according to the LVA/S 2006 agreement have been transposed into this agreement. The coordinated and/or notified implementation of these allotments are considered accepted and does not need to be re-coordinated.

Parties agreed to carry out bilateral coordination of implementations, stemming from the most critical allotments, before such plan modifications are notified to the ITU. Allotments under such condition are listed in Table 3 and Table 4.

Parties agreed that in the coordination of implementation of added allotments a cumulative interfering field strength value towards co-channel allotment of 40 dB μ V/m @650 MHz should be considered as normally acceptable. The value for other frequencies should be adjusted by 30 log(f/650), f in MHz.

Parties noted that a number of Plan frequency assignments have been bilaterally modified, however the modifications were not recorded in the Plan. In addition, a number of recorded frequency assignments, stemming from an allotment, do not contain the allotment ID or SFN identification. Parties agreed to apply the following treatment in such cases:

- if a Plan entry was bilaterally modified but the modification was not recorded in the Plan, the modified characteristics shall be used. The recorded target assignment should be ignored;
- if a recorded assignment located inside a co-channel allotment area does not contain allotment ID, it shall be considered as stemming from this allotment and is part of the implementation.
- when submitting Plan modifications to the ITU the parties should include all due data (e.g. allotment ID, SFN identification etc).

Modifications to the GE06 Plan

In order to repurpose use of the band 694-790 MHz a number of modifications have to be done to the existing GE06 Plan in the band 470-694 MHz.

Additions

The following allotments with the associated reference network (RN) are accepted by the above mentioned Administrations as additions to the GE06 Plan.

Latvia

Table 1

Ch	Allotment	RPC	RN
27	CESVAINE	2	2
46	CESVAINE	2	2
35	LIEPAJA	2	2
42	VALMIERA	2	2
27	VIESITE	2	2
40	VIESITE	2	2
47	VIESITE	2	2

Sweden

Table 2

Ch	Allotment	RPC	RN
31	BOLLNAES	2	1
43	BOLLNAES	2	1
34	EMMABODA	2	1
36	EMMABODA	2	1
26	GAEVLE	2	1
43	GAEVLE	2	1
29	HUDIKSVALL	2	1
43	HUDIKSVALL	2	1
48	JOENKOEPING- NAESSJOE	2	1
31	KARLSHAMN- KARLSKRONA	2	1
41	KARLSHAMN- KARLSKRONA	2	1
43	KARLSHAMN- KARLSKRONA	2	1
38	KISA	2	1
42	KISA	2	1
43	KISA	2	1
26	MOTALA	2	1
41	MOTALA	2	1
43	MOTALA	2	1
44	MOTALA	2	1
45	MOTALA	2	1
31	NAESSJOE	2	1

Ch	Allotment	RPC	RN
34	NORRKOEPING	2	1
24	OESTHAMMAR	2	1
32	STOCKHOLM	2	1
21	SUNDSVALL	2	1
24	SUNDSVALL	2	1
26	SUNDSVALL	2	1
24	UPPSALA	2	1
29	UPPSALA	2	1
35	VAESTERAAS	2	1
36	VAESTERAAS	2	1
38	VAESTERVIK	2	1
22	VISBY	2	1
24	VISBY	2	1

The allotments in the "Added channels" column of table 3 and 4 are accepted by the above mentioned Administrations as additions to the GE06 Plan. However, implementation of these allotments require coordination with the other Party before implementation or notification to the ITU. When notifying these allotments the t_remarks field should include "Implementation shall be coordinated with LVA/S" respectively.

Table 3 and 4 also includes names and channels of allotments transposed from the LVA/S 2006 agreement. The coordinated and/or notified implementation of these allotments are considered accepted and does not need to be re-coordinated. Any modification of the implementation of these allotments require coordination with the other Party before implementation or notification to the ITU.

Latvia

Table 3

Allotment	Added channels	GE06 Plan channels
KULDIGA	33	30
		40
		47
LIEPAJA	25	39
RIGA	39 44	
VALMIERA	31 37 39 48	

Sweden

Table 4

Allotment	Added channels	GE06 Plan channels
EMMABODA	26	21 47
HOERBY	27	33
KISA	23 30	
NORRKOEPING	43 47	
OESTHAMMAR	30	21 26 40
STOCKHOLM	21 43 45	23 39
UPPSALA	26 30	21 40
VAESTERVIK	27	30 40 43
VISBY	31	48

The following assignments are accepted by the above mentioned Administrations as implementations of allotments and additions to the GE06 Plan.

Latvia

Table 5

Ch	Assignment	Allotment	Lat	Long	e.r.p. (dBW)	h_{effmax} (m)	Pol	Ant (D/ND)
27	CESVAINE	CESVAINE	56N5812	026E1755	53.0	284	H	ND
27	ALUKSNE	CESVAINE	57N2426	027E0446	37.0	225	H	ND
27	VILAKA	CESVAINE	57N1053	027E3655	33.0	152	H	ND
27	MALE	CESVAINE	57N0500	025E3527	33.0	173	H	ND
46	CESVAINE	CESVAINE	56N5812	026E1755	53.0	284	H	ND
46	ALUKSNE	CESVAINE	57N2426	027E0446	37.0	225	H	ND
46	VILAKA	CESVAINE	57N1053	027E3655	33.0	152	H	ND
46	MALE	CESVAINE	57N0500	025E3527	33.0	173	H	ND
33	KULDIGA	KULDIGA	56N5605	022E0051	50.0	215	H	ND
33	DUNDAGA	KULDIGA	57N3054	022E1956	43.0	236	H	ND
33	VENTSPILS	KULDIGA	57N2335	021E3418	33.0	65	H	D: 260°-320°/10 dB
33	PAVILOSTA	KULDIGA	56N5202	021E1356	33.0	89	H	D: 270°-30°/15 dB
25	AUCE	LIEPAJA	56N2958	022E5040	33.0	125	H	ND
25	PRIEKULE	LIEPAJA	56N3001	021E4748	40.0	164	H	ND

PH
Z. Raman

Ch	Assignment	Allotment	Lat	Long	e.r.p. (dBW)	h _{effmax} (m)	Pol	Ant (D/ND)
25	LIEPAJA	LIEPAJA	56N3049	021E0013	47.0	200	H	D: 220°-340°/20 dB
25	BROCENI	LIEPAJA	56N3602	022E2528	36.0	145	H	ND
35	AUCE	LIEPAJA	56N2958	022E5040	33.0	125	H	ND
35	PRIEKULE	LIEPAJA	56N3001	021E4748	40.0	164	H	ND
35	LIEPAJA	LIEPAJA	56N3049	021E0013	47.0	200	H	D: 220°-340°/20 dB
35	BROCENI	LIEPAJA	56N3602	022E2528	36.0	145	H	ND
47	AUCE	-	56N2958	022E5040	33.0	125	H	ND
47	PRIEKULE	-	56N3001	021E4748	40.0	164	H	ND
47	BROCENI	-	56N3602	022E2528	36.0	145	H	ND
39	RIGA	RIGA	56N5525	024E0812	49.0	366	H	ND
44	RIGA	RIGA	56N5525	024E0812	53.0	366	H	ND
31	LIMBAZI	VALMIERA	57N3157	024E4416	42.0	144	H	D: 230°-280°/6 dB
31	VALMIERA	VALMIERA	57N3136	025E2305	46.0	204	H	ND
37	LIMBAZI	VALMIERA	57N3157	024E4416	42.0	144	H	D: 230°-280°/6 dB
37	VALMIERA	VALMIERA	57N3136	025E2305	46.0	204	H	ND
39	LIMBAZI	VALMIERA	57N3157	024E4416	42.0	144	H	D: 230°-280°/6 dB
39	VALMIERA	VALMIERA	57N3136	025E2305	46.0	204	H	ND
42	LIMBAZI	VALMIERA	57N3157	024E4416	42.0	144	H	D: 230°-280°/6 dB
42	VALMIERA	VALMIERA	57N3136	025E2305	50.0	204	H	ND
48	LIMBAZI	VALMIERA	57N3157	024E4416	42.0	144	H	D: 230°-280°/6 dB
48	VALMIERA	VALMIERA	57N3136	025E2305	49.0	204	H	ND
27	VIESITE	VIESITE	56N2028	025E3304	46.0	187	H	ND
40	VIESITE	VIESITE	56N2028	025E3304	46.0	187	H	ND
47	VIESITE	VIESITE	56N2028	025E3304	46.0	187	H	ND

Sweden

Table 6

Ch	Assignment	Allotment	Lat	Long	e.r.p. (dBW)	h _{effmax} (m)	Pol	Ant (D/ND)
26	Emmaboda	EMMABODA	56N4624	015E3500	47.0	376	H	ND
26	Färjestaden	EMMABODA	56N4059	016E3351	31.0	167	H	D
34	Emmaboda	EMMABODA	56N4624	015E3500	47.0	376	H	ND
34	Färjestaden	EMMABODA	56N4059	016E3351	31.0	167	H	D
36	Emmaboda	EMMABODA	56N4624	015E3500	47.0	376	H	ND
36	Färjestaden	EMMABODA	56N4059	016E3351	31.0	167	H	D
26	Gävle	GAEVLE	60N3754	017E0759	47.0	360	H	ND
43	Gävle	GAEVLE	60N3754	017E0759	47.0	360	H	ND
27	Hörby	HOERBY	55N4822	013E4326	47.0	399	H	ND
27	Örkelljunga	HOERBY	56N1732	013E2122	30.0	105	H	D
23	Kisa	KISA	57N5729	015E3533	47.0	453	H	ND
30	Kisa	KISA	57N5729	015E3533	47.0	453	H	ND
38	Kisa	KISA	57N5729	015E3533	47.0	453	H	ND
42	Kisa	KISA	57N5729	015E3533	47.0	453	H	ND
43	Kisa	KISA	57N5729	015E3533	47.0	453	H	ND

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F. Roman

Ch	Assignment	Allotment	Lat	Long	e.r.p. (dBW)	h_{effmax} (m)	Pol	Ant (D/N)
34	Norrköping	NORRKOEPING	58N4037	016E2814	47.0	424	H	ND
43	Norrköping	NORRKOEPING	58N4037	016E2814	47.0	424	H	ND
47	Norrköping	NORRKOEPING	58N4037	016E2814	47.0	424	H	D: 100°-120°/7 ¹
21	Bergshamra/Vaxtuna	STOCKHOLM	59N3629	018E3623	33.0	117	H	D
21	Mölnbo/Tallstugan	STOCKHOLM	59N0100	017E2436	33.0	156	H	ND
21	Norrtälje	STOCKHOLM	59N4522	018E4217	30.0	73	H	D
21	Stockholm/DN	STOCKHOLM	59N1936	018E0124	27.0	115	H	ND
21	Stockholm/Nacka	STOCKHOLM	59N1754	018E1035	48.0	336	H	D: 10°-200°/5 dB
21	Södertälje	STOCKHOLM	59N1326	017E3726	36.0	174	H	D
32	Bergshamra/Vaxtuna	STOCKHOLM	59N3629	018E3623	33.0	117	H	D
32	Mölnbo/Tallstugan	STOCKHOLM	59N0100	017E2436	33.0	156	H	ND
32	Norrtälje	STOCKHOLM	59N4522	018E4217	30.0	73	H	D
32	Stockholm/DN	STOCKHOLM	59N1936	018E0124	27.0	115	H	ND
32	Stockholm/Nacka	STOCKHOLM	59N1754	018E1035	51.8	336	H	D: 10°-200°/5 dB
32	Södertälje	STOCKHOLM	59N1326	017E3726	36.0	174	H	D
43	Bergshamra/Vaxtuna	STOCKHOLM	59N3629	018E3623	33.0	117	H	D
39	Mölnbo/Tallstugan	STOCKHOLM	59N0100	017E2436	33.0	156	H	ND
39	Södertälje	STOCKHOLM	59N1326	017E3726	36.0	174	H	D
42	Mölnbo/Tallstugan	STOCKHOLM	59N0100	017E2436	33.0	156	H	ND
42	Södertälje	STOCKHOLM	59N1326	017E3726	36.0	174	H	D
43	Norrtälje	STOCKHOLM	59N4522	018E4217	30.0	73	H	D
43	Stockholm/DN	STOCKHOLM	59N1936	018E0124	27.0	115	H	ND
43	Stockholm/Nacka	STOCKHOLM	59N1754	018E1035	51.8	336	H	D: 10°-200°/5 dB
45	Bergshamra/Vaxtuna	STOCKHOLM	59N3629	018E3623	33.0	117	H	D
45	Norrtälje	STOCKHOLM	59N4522	018E4217	30.0	73	H	D
45	Stockholm/DN	STOCKHOLM	59N1936	018E0124	27.0	115	H	ND
45	Stockholm/Nacka	STOCKHOLM	59N1754	018E1035	51.8	336	H	D: 10°-200°/5 dB
21	Härnösand	SUNDSVALL	62N3636	017E5754	31.8	258	H	D
21	Sundsvall	SUNDSVALL	62N2208	017E1913	47.0	446	H	ND
24	Härnösand	SUNDSVALL	62N3636	017E5754	31.8	258	H	D
24	Sundsvall	SUNDSVALL	62N2208	017E1913	47.0	446	H	ND
26	Härnösand	SUNDSVALL	62N3636	017E5754	31.8	258	H	D
26	Sundsvall	SUNDSVALL	62N2208	017E1913	47.0	446	H	ND
24	Uppsala/Vedyxa	UPPSALA	59N5125	017E4648	40.0	245	H	ND
26	Uppsala/Vedyxa	UPPSALA	59N5125	017E4648	40.0	245	H	ND
29	Uppsala/Vedyxa	UPPSALA	59N5125	017E4648	40.0	245	H	ND
30	Uppsala/Vedyxa	UPPSALA	59N5125	017E4648	40.0	245	H	ND
22	Gotland/Bunge	VISBY	57N5157	019E0022	27.0	132	H	D
22	Gotland/Havdhem	VISBY	57N0947	018E2046	27.0	87	H	D
22	Visby/Follingbo	VISBY	57N3535	018E2236	47.0	308	H	ND
24	Gotland/Bunge	VISBY	57N5157	019E0022	27.0	132	H	D

¹ The 7 dB restriction can be reduced to 5 dB provided e.r.p. for assignment EMMABODA ch. 47 (BRid - 106547074) in the GE06 Plan is reduced by 6 dB in sector 70°-90°.

Ch	Assignment	Allotment	Lat	Long	e.r.p. (dBW)	h _{effmax} (m)	Pol	Ant (D/ND)
24	Gotland/Havdhem	VISBY	57N0947	018E2046	27.0	87	H	D
24	Visby/Follingbo	VISBY	57N3535	018E2236	47.0	308	H	ND
31	Gotland/Bunge	VISBY	57N5157	019E0022	27.0	132	H	D
31	Gotland/Havdhem	VISBY	57N0947	018E2046	27.0	87	H	D
31	Visby/Follingbo	VISBY	57N3535	018E2236	47.0	308	H	ND
24	Virserum	VAESTERVIK	57N1934	015E3812	29.0	181	H	ND
27	Borgholm/Böda	VAESTERVIK	57N1548	017E0020	27.0	114	H	D
27	Virserum	VAESTERVIK	57N1934	015E3812	29.0	181	H	ND
27	Västervik	VAESTERVIK	57N4317	016E2545	47.0	385	H	ND
30	Virserum	VAESTERVIK	57N1934	015E3812	29.0	181	H	ND
34	Virserum	VAESTERVIK	57N1934	015E3812	29.0	181	H	ND
38	Borgholm/Böda	VAESTERVIK	57N1548	017E0020	27.0	114	H	D
38	Virserum	VAESTERVIK	57N1934	015E3812	29.0	181	H	ND
38	Västervik	VAESTERVIK	57N4317	016E2545	47.0	385	H	ND
40	Virserum	VAESTERVIK	57N1934	015E3812	29.0	181	H	ND
43	Virserum	VAESTERVIK	57N1934	015E3812	29.0	181	H	ND
35	Västerås	VAESTERAAS	59N3838	016E2412	47.0	344	H	ND
36	Västerås	VAESTERAAS	59N3838	016E2412	47.0	344	H	ND
24	Väddö/Elmsta	OESTHAMMAR	59N5807	018E5038	34.0	182	H	D
24	Östhammar	OESTHAMMAR	60N1550	018E0433	47.0	358	H	ND
30	Väddö/Elmsta	OESTHAMMAR	59N5807	018E5038	34.0	182	H	D
30	Östhammar	OESTHAMMAR	60N1550	018E0433	47.0	358	H	ND
24	Mölnbo/Tallstugan	-	59N0100	017E2436	33.0	156	H	ND
24	Södertälje	-	59N1326	017E3726	36.0	174	H	D

Suppressions

The following Allotments or assignments are to be considered and treated as deleted when starting the corresponding new implementation (which are also included in the previous chapter). That means they have no implementation rights and no protection rights. Nevertheless the entry may be kept in the GE06 Plan, but will have to be modified to carry a remark using the t_remarks field saying "LVA-S 01-12-2016", as a reference to this agreement.

Latvia

Table 7

Deleted assignment	New assignment
PRIEKULE Ch.39	PRIEKULE Ch.47
BROCENI Ch.39	BROCENI Ch.47
-	AUCE Ch.47

JH
F. Remus

Sweden

Table 8a

Ch	Deleted Allotment	New Allotment/s
26	KARLSHAMN-KARLSKRONA	EMMABODA
26	VAESTERVIK	EMMABODA
31	EMMABODA	KARLSHAMN-KARLSKRONA, VISBY
43	UPPSALA-OESTHAMMAR	GAEVLE

Table 8b

Ch	Deleted assignment	New Allotment/s
26	KARLSHAMN KARLSKRONA RONNEBY KALLINGE	EMMABODA
26	VAESTERVIK BORGHOLM/BOEDA LOENNEBERGA JAEMJOE	EMMABODA
31	EMMABODA BROEMSEBRO BORGHOLM RAMSAETTRA	KARLSHAMN-KARLSKRONA VISBY
43	UPPSALA UPPSALA RICKOMBERGA OESTHAMMAR	GAEVLE STOCKHOLM NORRKOEPING MOTALA KARLSHAMN-KARLSKRONA

Table 8c

Deleted assignment	New assignment
Ösmo/Björsta ch. 21	-
Mölnbo/Tallstugan ch. 29	Mölnbo/Tallstugan ch. 21
Södertälje ch. 29	Södertälje ch. 21
Mölnbo/Tallstugan ch. 30	Mölnbo/Tallstugan ch. 32
Södertälje ch. 30	Södertälje ch. 32
Mölnbo/Tallstugan ch. 35	Mölnbo/Tallstugan ch. 39
Södertälje ch. 35	Södertälje ch. 39
Mölnbo/Tallstugan ch. 47	Mölnbo/Tallstugan ch. 42
Södertälje ch. 47	Södertälje ch. 42
Mölnbo/Tallstugan ch. 53	Mölnbo/Tallstugan ch. 24
Södertälje ch. 53	Södertälje ch. 24

JH
T. Rasmus

Entry into force

This agreement will enter into force upon the signature of both parties.

Place Rīga, Latvia
Date 23.12.2016

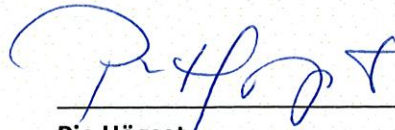
For the Electronic Communications Office
of Latvia



Māris Aleksandrovs
Director of Technical Department,
Electronic Communications Office

Place Stockholm
Date 09.01.17

For the Swedish Post and
Telecom Authority



Pia Högset
Head of Section for Spectrum Development
Spectrum Department, PTS



Kopā caurakļotas un numurētas **Lietvede**
5 (**preču**) lapas **Elizabete Freimanāle**
Rīgā, **23.12.2016.**

