

QUESTIONNAIRE ON SPECTRUM REQUIREMENTS FOR TERRESTRIAL TELEVISION BROADCASTING IN CONNECTION WITH WRC-15 AGENDA ITEM 1.2

This questionnaire can be completed online at the following web page:

<https://extranet.itu.int/rsg-meetings/sg6/wp6a/Lists/DTTB%20Questionnaire/overview.aspx>

Login as: **Username:** (your TIES username)@ties.itu.int
 Password: (your TIES password)

NOTE - Electronic versions of Annexes 1, 2 & 2 can be found under QUESTIONNAIRE in the WP 6A Share Folder on the WP 6A Sharepoint site.

Name of the Administration/Sector Member:

For sector members please indicate the geographical area over which you operate:

Contact person:

E-mail address:

Telephone number:

- 1 a) What standards have you adopted for digital terrestrial television broadcasting?
- b) Have you started introduction of digital terrestrial television services?
- c) If yes, please provide further detail on the number of multiplexes in use, their technical specifications, the percentage of geographic area or population they are intended to cover and the total spectrum use to inform WP 6A.

Reply:

- a) DVB-T, DVB-T2
- b) All TV-services have been digital since 2007

Place des Nations
CH-1211 Geneva 20
Switzerland

Telephone +41 22 730 51 11
Telefax Gr3: +41 22 733 72 56
 Gr4: +41 22 730 65 00

Telex 421 000 uit ch
Telegram ITU GENEVE

E-mail: itumail@itu.int
http://www.itu.int/

Country	No of multi-plexes	System & modulation	FEC	GI	Reception mode ¹	Capacity per multiplex (Mb/s)	Current percentage population coverage	Intended percentage population coverage	Content per multiplex	Total capacity (Mb/s)	Total spectrum bandwidth used or intended for implementation (MHz) ²	Any additional comments (e.g. duration of licences)
FIN	1	DVB-T 64QAM 2/3			fixed		99,9%		6 SD MPEG2		320	Public Service, licensed until 31.12.2016
	1	DVB-T 64QAM 2/3			fixed		99,9%		8 SD MPEG2		320	Licensed until 31.12.2016
	1	DVB-T 64QAM 2/3			fixed		90,4%		8 SD MPEG2		320	Licensed until 31.12.2016
	1	DVB-T2 64QAM			outdoor/mobile		40%		1 HD MPEG4		320	Licensed until 31.12.2016
	1	Now DVB-T 64QAM 2/3, from 1.1.2013 also DVB-T2 allowed			fixed		95%		9 SD MPEG2		320	Licensed until 13.6.2026
	1	DVB-T2 256QAM			fixed				HD MPEG4, Currently no content on air		320	Licensed until 31.12.2016
	1	DVB-T2 256QAM			fixed				HD MPEG4, Currently no content on air		8	Local MUX (capital area), licensed until 31.12.2016

¹ E.g. fixed, portable outdoor/mobile, portable indoor.

² Refer Sections 2 and 3 on page 1 of this circular.

Place des Nations
CH-1211 Geneva 20
Switzerland

Telephone +41 22 730 51 11
Telefax Gr3: +41 22 733 72 56
Gr4: +41 22 730 65 00

Telex 421 000 uit ch
Telegram ITU GENEVE

E-mail: itumail@itu.int
<http://www.itu.int/>

FIN (cont.)	1	DVB-T2 256QAM			fixed		75%		3 HD MPEG4 & 4 SD MPEG4		56	VHF band, Licensed until 31.12.2016
	1	DVB-T2 256QAM			fixed		75%		4 HD MPEG4		56	VHF band, Licensed until 31.12.2016
	1	DVB-T2 256QAM			fixed		75%		2 HD MPEG4 & 8 SD MPEG4		56	VHF band, licensed until 31.12.2016
	1	DVB-T			fixed		<1%				8	Local MUX (Seinäjoki) Licensed until 31.12.2016
	1	DVB-T			fixed		<1%				8	Local MUX (Kristiinankaupunki) licensed until 31.12.2016
	1	DVB-T			fixed		<1%				8	Local MUX (Pietarsaari) licensed until 31.12.2016
	1	DVB-T			fixed		<1%				8	Local MUX (Vaasa) licensed until 31.12.2016
	2	DVB-T			fixed		<1%				16	Local MUX (Åland) licensed until 23.2.2026

- 2 a) Have you commenced analogue television switch-off?
b) If you have any such plans, when do you expect to have completed the analogue switch-off process?

Reply:

a & b) The analogue switch-off process has been completed on the 1st of September, 2007.

- 3 a) What is the percentage of viewer uptake of terrestrial television in your country, including those whose service provider uses terrestrial broadcast re-transmission (e.g. in cable networks)?
b) If possible, please also provide details of the number or proportion of users who receive television primarily by terrestrial means.

Reply:

- a) 90 % of households
b) 50 %

- 4 a) Indicate how many analogue television transmitters use channels in the frequency sub-band 694-790 MHz (as indicated in Resolution **232 (WRC-12)**).
b) How many are in the remaining part of the UHF band.

Reply:

- a) & b): no analogue TV transmitters are in use

- 5 a) What frequencies/channels are currently used or intended to be used by digital terrestrial television broadcasting in your country? Please distinguish between those in use and those intended to be used.
b) If allotments/SFNs are in use, a sketch map of frequency allocations could be included, with an accompanying table of allocations, as shown in Annex 2. Otherwise, it might be possible to show main transmitters and channels, grouped in layers, in a table.
c) Please indicate how many digital television assignments/allotments use channels in the frequency sub-band 694-790 MHz (as indicated in Resolution **232 (WRC-12)**), and
d) How many are in the remaining part of the UHF band.

Reply:

- a) 174-230 MHz, 470-790 MHz
b) See Annex
c) 74 allotments in band 694-790 MHz
d) 173 allotments in band 470-694 MHz, 28 allotments in band 790-862 MHz (band 790-862 MHz not used any more for television in Finland)

- 6 a) Are those frequency bands also shared with other primary services?
b) If yes, please give details of those systems and their spectrum use.

Reply:

- a) No.

- 7 a) Are those frequency bands also shared with secondary services such as PMSE (Programme Making and Special Events), radio astronomy or wind-profile radar?
b) If yes, please give details of those systems and their spectrum use.

Reply:

- a) Yes.
b) 174-230 MHz: Radio Microphones
470-789 MHz: Radio Microphones
TVc 21 & 23: SAB,

- 8 a) Do you foresee the adoption or expansion of television services broadcast using second-generation systems such as DVB-T2?
b) If yes, please give indicative details of the planned transition, including any simulcast period.

Reply:

- a) Some DVB-T2 transmissions are already on air. They will replace current DVB-T transmissions partly at the beginning of the next license period (2017) and totally after a relatively long transition period.
b) Details under discussion.

- 9 a) Do you foresee a requirement for new and enhanced services, including HD and 3D television, on the terrestrial television platform?
b) If yes, please give indicative details of the number and nature of services planned, and if known, the expected timeframe for their introduction.

Reply:

- a) Yes.
b) Number of HD services are already on the air, more HD services are expected to be broadcasted after the beginning of the new license period (2017). 3D services are not under discussion at the moment.

- 10 a) Are there plans in your country to launch more multiplexes in the future?
b) If yes, how many more and when? Please also indicate the expected timeframe for their introduction.

Reply:

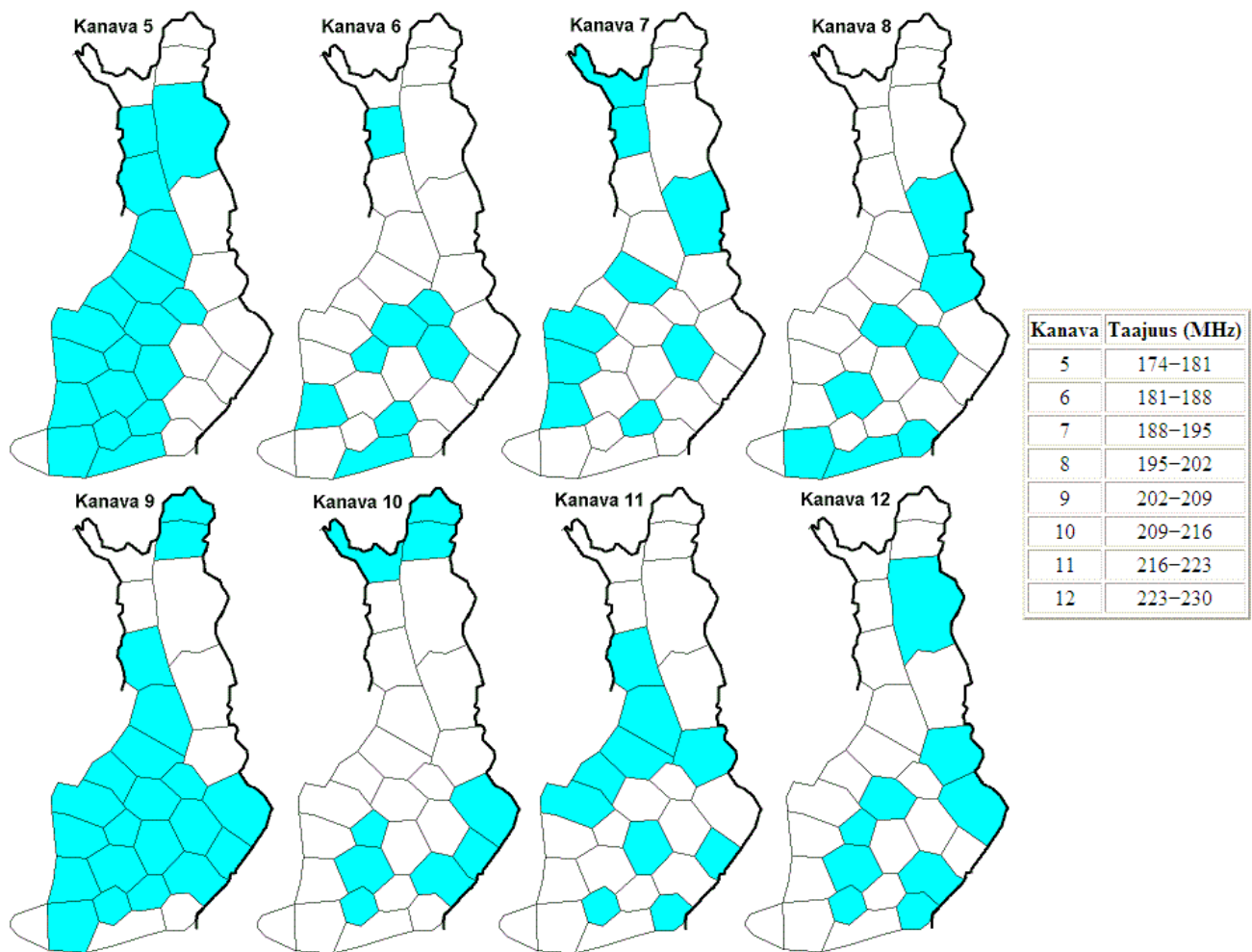
- a) It is expected that the number of multiplexes will be decreased because of re-allocation of frequencies.

- 11** a) What is the amount of spectrum you foresee that will be required for terrestrial television broadcasting, if plans in Questions 8, 9 and 10 are to be supported, and services identified in Questions 6 and 7 are to be taken into account? Please indicate the modes of transmission that will be used, and timeframes.
If appropriate, a suggested form to express these requirements is shown in Annex 3.

Reply:

- a) Under discussion.

ANNEX: Frequency allotments / VHF



ANNEX: Frequency allotments / UHF

