

WORKING PARTY 6A QUESTIONNAIRE ON SPECTRUM REQUIREMENTS FOR TERRESTRIAL TELEVISION BROADCASTING IN CONNECTION WITH WRC-15 AGENDA ITEM 1.2

- 1 a) What standards have you adopted for digital terrestrial television broadcasting?
- EN 302 755 called DVB-T2 and ITU-T H.264 (ISO/IEC 14496-10) called MPEG4-AVC.*
- b) Have you started introduction of digital terrestrial television services?
- We have a private company named TELESTAR using EN 300 744 (DVB-T) and ISO/IEC 13818 (MPEG-2) to distribute services received from Canal Satellite Horizons.*
- 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.
- Eight (8) multiplexes are used (being use) to offer services in the main city (1.5 million inhabitants)*
- 2 a) Have you commenced analogue television switch-off?
- Not yet*
- b) If you have any such plans, when do you expect to have completed the analogue switch-off process?
- The national strategy for A-D transition plans the ASO in Mid 2015.*
- 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)?
- Typically 85%.*
- b) If possible, please also provide details of the number or proportion of users who receive television primarily by terrestrial means.
- The totality of this percentage received television primarily by terrestrial means.*
- 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)**).
- Six (6) analogue television transmitters are used in the sub-band 694 – 790 MHz.*
- b) How many are in the remaining part of the UHF band.

Twelve (12) analogue television transmitters are used in the remaining part of the UHF band [470 – 694 MHz].¹

- 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.

Frequencies or channels to be used by DTT are currently be defined during GE06 planning. The principle is a minimum of 4 multiplexers / site

- 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.

None

- 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

None

- d) How many are in the remaining part of the UHF band.

A minimum of 4 assignments by site

- 6 a) Are those frequency bands also shared with other primary services?

According to our NFAT², the sub-band [470 – 790 MHz] is exclusively designed for television broadcasting and associated auxiliary services.

The sub-band [790 – 862 MHz] is exclusively designed for IMT.

- b) If yes, please give details of those systems and their spectrum use.

- 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?

None

- b) If yes, please give details of those systems and their spectrum use.

- 8 a) Do you foresee the adoption or expansion of television services broadcast using second-generation systems such as DVB-T2?

Yes.

¹ *In addition, we have additional eight (8) frequencies used by the private distributor company announced in the response 1-c) above.*

² National Frequency Allocation Table

- b) If yes, please give indicative details of the planned transition, including any simulcast period.

National strategy for A-D transition is being adopted by the Government. In essence, this strategy provides the initial deployment for Q2, 2014 and the ASO for Q2, 2015. These dates are indicative and are subject to change based on the reality of deployment.

- 9** a) Do you foresee a requirement for new and enhanced services, including HD and 3D television, on the terrestrial television platform?

Yes, in the strategy mentioned previously, HD services are planned. Depending on the demand, 3D services could be offered.

- b) If yes, please give indicative details of the number and nature of services planned, and if known, the expected timeframe for their introduction.

These details can be provided later at the time of network deployment

- 10** a) Are there plans in your country to launch more multiplexes in the future?

Yes

- b) If yes, how many more and when? Please also indicate the expected timeframe for their introduction.

These details can be provided later at the time of network deployment

- 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.

Answer: Kindly see annex 3

ANNEX 1

Presentation of reply to Question 1: *What standards have you adopted for digital terrestrial television broadcasting? Have you started introduction of digital terrestrial television services? If yes, 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.*

Country	No of multiplexes	System & modulation	FEC	GI	Reception mode ³	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) ⁴	Any additional comments (e.g. duration of licences)
NIGER	4 / site	DVB-T2	To be determined during deployment	To be determined during deployment	Fixed (mainly)	To be determined during deployment	85%	100% of the current percentage	SD & HD	To be determined during deployment	Gross total of 280MHz (224MHz UHF with additional 56MHz in the VHF)	

³ E.g. fixed, portable outdoor/mobile, portable indoor.

⁴ Refer Sections 2 and 3 on page 1 of this circular.

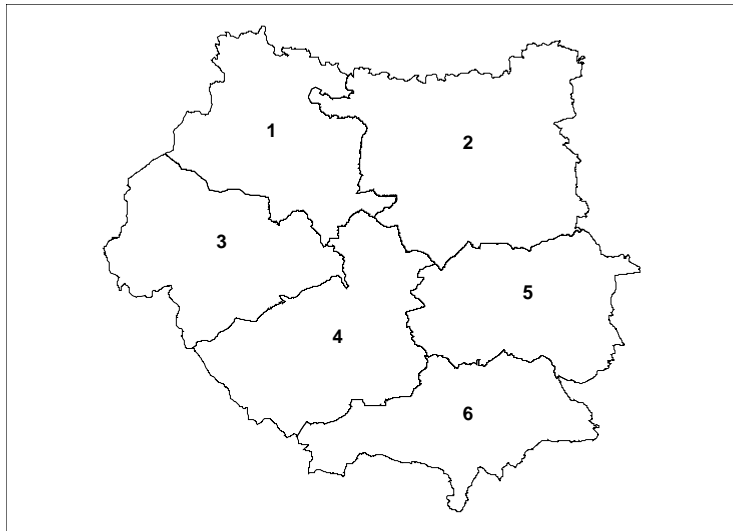
ANNEX 2

Suggested presentation of reply to Question 5: *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.*

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.

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 how many are in the remaining part of the UHF band.



Area	Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Layer 6	Layer 7
1	27	37	39	44	54	56	66
2	23	69	38	-	57	56	-
3	23	69	43	-	57	52	-
4	30	32	39	61	35	52	68
5	21	28	31	45	48	50	-
6	60	-	33	32	49	67	65

ANNEX 3

Presentation of reply to Question 11: *What is the minimum amount of spectrum you foresee that will be required for digital terrestrial television broadcasting in Bands IV & V, 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.*

Country	No of multiplexes	System & modulation	FEC	GI	Reception mode ⁵	Capacity per multiplex (Mb/s)	Intended percentage population coverage	Content per multiplex	Total capacity (Mb/s)	Total spectrum bandwidth needed (MHz) ⁶	Any additional comments including time frames
NIGER	1 (VHF)	DVB-T2,	To be determined during deployment	To be determined during deployment	Fixed (mainly)	To be determined during deployment	100%	SD (mainly)	To be determined during deployment	Gross total of 280MHz (224MHz UHF with additional 56MHz in the VHF)	1 or more from 2015
	4 / Site (UHF)	DVB-T2	To be determined during deployment	To be determined during deployment	Portable outdoor/mobile (in city core areas)	To be determined during deployment	90%	SD/HD			2 as soon as possible, 2 or more from 2015

⁵ E.g. fixed, portable outdoor/mobile, portable indoor.

⁶ Refer Sections 2 and 3 on page 1 of this circular.