

QUESTION 8/1

Examination of strategies and methods of migration from analogue to digital terrestrial broadcasting and implementation of new services

1 Statement of the situation or problem

1.1 Evidence suggests that the migration from analogue to digital sound and television broadcasting technologies will be universal and unstoppable over time in countries or regions at varying pace. While digital satellite sound and television broadcasting services have been introduced worldwide, digital terrestrial television and sound broadcasting are becoming a priority for every country of ITU regions.

1.2 ITU-D can continue playing a role in helping Member States evaluate the technical and economic issues involved in migrating from terrestrial analogue to digital sound and television broadcasting. ITU-D has been collaborating closely with both ITU-R and ITU-T on broadcasting matters, including through discussions being held in ITU-R Joint Task Group 4-5-6-7, thus avoiding duplication.

1.3 The use of the "digital dividend" is an important issue, and continues to be widely debated by broadcasters and operators of telecommunication and other services operating in the same frequency bands. The role of the regulatory authorities in this regard is crucial to balancing the interests of users with the demands of growth in all branches of the industry.

1.4 Following the preparation by the three ITU Sectors of numerous studies on implementing digital television broadcasting systems, and pursuant to the resolutions of the World Radiocommunication Conference (Geneva, 2012) (WRC-12) on exploiting the digital dividend in the future, there is a need to study the impact of the digital dividend on all parties and to review best practice in this regard, as these are essential steps for reaping maximum benefit from the frequencies concerned. The digital dividend spectrum can be used for new, innovative services, from interactive television to mobile communications and wireless broadband Internet services.

2 Question or issue for study

Studies under the Question will focus on the following issues:

2.1 Impact on developing countries of the coexistence of terrestrial television broadcasting with other terrestrial telecommunication services, taking into consideration relevant activities carried out in the other two ITU Sectors, including new uses for the digital dividend.

2.2 Analysis of gradual transition to digital terrestrial television broadcasting, focusing mainly on the activities necessary for the analogue switch-off, including:

- a) analysis of ongoing progress in the quantity/availability of receiving terminals for reception by users of both sound and TV digital terrestrial broadcasts;
- b) analysis of various analogue switch-off strategies, including economic/financial benefits granted to lower-income people for the acquisition of the necessary means for terrestrial reception of digital broadcasting signals;
- c) analysis of spectrum re-planning strategies, such as the reallocation of existing broadcasting channels, to allow the coexistence of broadcasting and other services, considering new uses for the digital dividend; and
- d) analysis of effective marketing strategies to accelerate the process of public awareness about digital broadcasting.

2.3 Spectrum planning for bands allocated to broadcasting services in preparation for the analogue switch-off, the digital dividend, and possible band plans, the planning of different services including allotment plans, and specific bands to be allocated to broadcasters after the analogue switch-off, within the purview of ITU-R.

2.4 The use of the digital dividend frequency bands resulting from the transition to terrestrial digital broadcasting, including technical, regulatory and economic aspects, such as:

- a) status of the use of the digital dividend frequency bands;
- b) standards/recommendations adopted or currently being studied by the other two ITU Sectors related to the topic;
- c) sharing of the digital dividend frequency band;
- d) harmonization and cooperation at regional level;
- e) the role of the digital dividend in saving financing, cost savings on the transition to digital, and best experience and practice in this regard.

3 Expected output

- a) A report reflecting studies outlined in §§ 2.1, 2.2, 2.3 and 2.4 above.
- b) Collection and periodic dissemination of relevant data emanating from the organizations and groups listed in § 8 below. Periodic updates on studies taking place in the other ITU Sectors.
- c) Comprehensive guidelines on transition from analogue to digital broadcasting, focusing especially on strategies to speed up the migration and analogue switch-off.
- d) Best practices report on fostering public awareness regarding the transition from analogue to digital broadcasting.
- e) Compendium of public policies on the digital terrestrial television transition, bringing together the regulatory experiences of countries concerning strategies for spectrum re-planning and planning and executing the analogue switch-off.

4 Timing

A yearly progress report is expected at each study group meeting.

5 Proposers/sponsors

Brazil; Arab States.

6 Sources of input

- 1) Collection of related contributions and data from Member States and ITU-D Sector Members, and those organizations and groups listed in § 9 below.
- 2) Updates and outputs of ITU-R and ITU-T study groups; relevant recommendations and reports related to digital terrestrial sound and television broadcasting below 1 GHz.
- 3) Examination of the impact on developing countries of transition to digital sound and television broadcasting, re-planning, convergence and interactivity.
- 4) Outputs of WTDC Resolution 9 (Rev. Dubai, 2014), including relevant recommendations, guidelines and reports.

7 Target audience

Target audience	Developed countries	Developing countries ¹
Telecom policy-makers	Yes	Yes
Telecom regulators	Yes	Yes
Service providers/operators	Yes	Yes
Broadcasting operators	Yes	Yes
ITU-D programme	Yes	Yes

a) Target audience – Who specifically will use the output

Beneficiaries of the output are expected to be middle and higher-level managers in broadcasters, telecommunication/ICT operators and regulators worldwide.

b) Proposed methods for implementation of the results

Activities include conducting technical studies, observing best practices, and developing comprehensive reports serving the target audience's interests.

8 Proposed methods of handling the Question or issue

a) How?

- 1) Within a study group:
 - Question (over a multi-year study period)
- 2) Within regular BDT activity (indicate which programmes, activities, projects, etc., will be involved in the work of the study Question):
 - Programmes
 - Projects
 - Expert consultants
 - Regional offices
- 3) In other ways – describe (e.g. regional, within other organizations with expertise, jointly with other organizations, etc.)

b) Why?

To be defined in the workplan.

9 Coordination and collaboration

The ITU-D study group dealing with this Question should coordinate closely with:

- Other ITU-R and ITU-T study groups dealing with similar issues, and in particular other relevant ITU-D groups, for example the ITU-D Working Group on Gender Issues
- ITU-R Joint Task Group 4-5-6-7 and Study Group 1 Working Party 1B
- The Technical Committee of the Inter-Regional Broadcasting Union
- UNESCO and relevant international and regional broadcasting organizations, as appropriate

¹ These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

- The Director of the Telecommunication Development Bureau (BDT) shall, through the appropriate BDT staff (e.g. regional directors, focal points) provide information to rapporteurs on all relevant ITU projects in different regions. This information should be provided to the meetings of the rapporteurs when the work of the programmes and regional offices is in the planning stages and when it is completed.

10 BDT programme link

Outputs 1.2, 2.2 and 4.1

WTDC Resolutions 10 (Rev. Hyderabad, 2010) and 9, 17 and 33 (Rev. Dubai, 2014)

Links to BDT programmes aimed at fostering the development of telecommunication/ICT networks as well as relevant applications and services, including bridging the standardization gap.

11 Other relevant information

As may become apparent within the life of the Question.