

ITU activities and publications on transition

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Introduction

A roadmap is a management forecasting tool

- Directed to the implementation of strategy and related to project planning
- Matching short-term and long-term goals
- Indicating the main activities needed to meet these goals

Roadmap development has three major uses

- Helping to reach consensus about requirements and solutions
- Providing a mechanism to help forecast the key milestones
- Providing a framework to help plan and coordinate the steps needed

Approach and Working Methods

NRT	<ul style="list-style-type: none">• NRT works as advisor bringing wider stakeholder focus• Assists develop the roadmap and prepares agreed parts.• Established by Minister/decreed/law ..
Government Agencies	<ul style="list-style-type: none">• Responsible for establishing policy and Government endorsement, legislation, and budgets for Government funded activity• Preparing Regulations, Licence models, Service/Spectrum planning, standards etc• Legal aspects of Licence allocation process/licence issue and oversight.
Broadcasters Transmission Providers	<ul style="list-style-type: none">• Transmission Network Construction/Operation• Recovery of Analogue equipment post switch off• Working with all of the above on Analogue Switch Off Processes• Providing programming for the digital network
ITU Expert	<ul style="list-style-type: none">• Introduce the ITU developed Guidelines for Migration as a resource• Facilitate NRT in development of Roadmap/ TRANSFER KNOWLEDGE• SHARE experience of other countries as relevant to the discussion• Consults with NRT, and other stakeholders to clarify needs of the country• Assist with framework and content of roadmap document

Guideline: Situation and challenge

Situation

- ITU/BDT activity on the implementation of regional initiatives projects approved by WTDC-06
- Supported by ITU and Korea Communications Commission (KCC), Republic of Korea

Challenge

- DTTB and MTV is being implemented in all Regions
- Analogue switch-off has been completed in a number of European countries and in the USA
- According to the GE06 Agreement, analogue TV will no longer be protected after 17 June 2015
 - In a number countries, including 31 African countries, not after 17 June 2020 in Band III
- Digital TV has proven its success
 - Countries not preparing for DTTB and MTV introduction should start rather sooner than later

Guideline: Scope and objective

Scope

- Guidelines on
 - Transition from analogue TV to Digital Terrestrial Television Broadcasting (DTTB)
 - Introduction of Mobile Television Broadcasting (MTV)
- Identification of
 - The policy, economic and technology choices
 - Their potential impact DTTB and MTV introduction
- Providing many practical examples and references to documents for additional or more detailed information

Objective

- To assist the African countries in making their own roadmap
 - To shift smoothly from analogue to DTTB and MTV
- To provide information regarding the cost benefit analysis of policy decisions and best practices

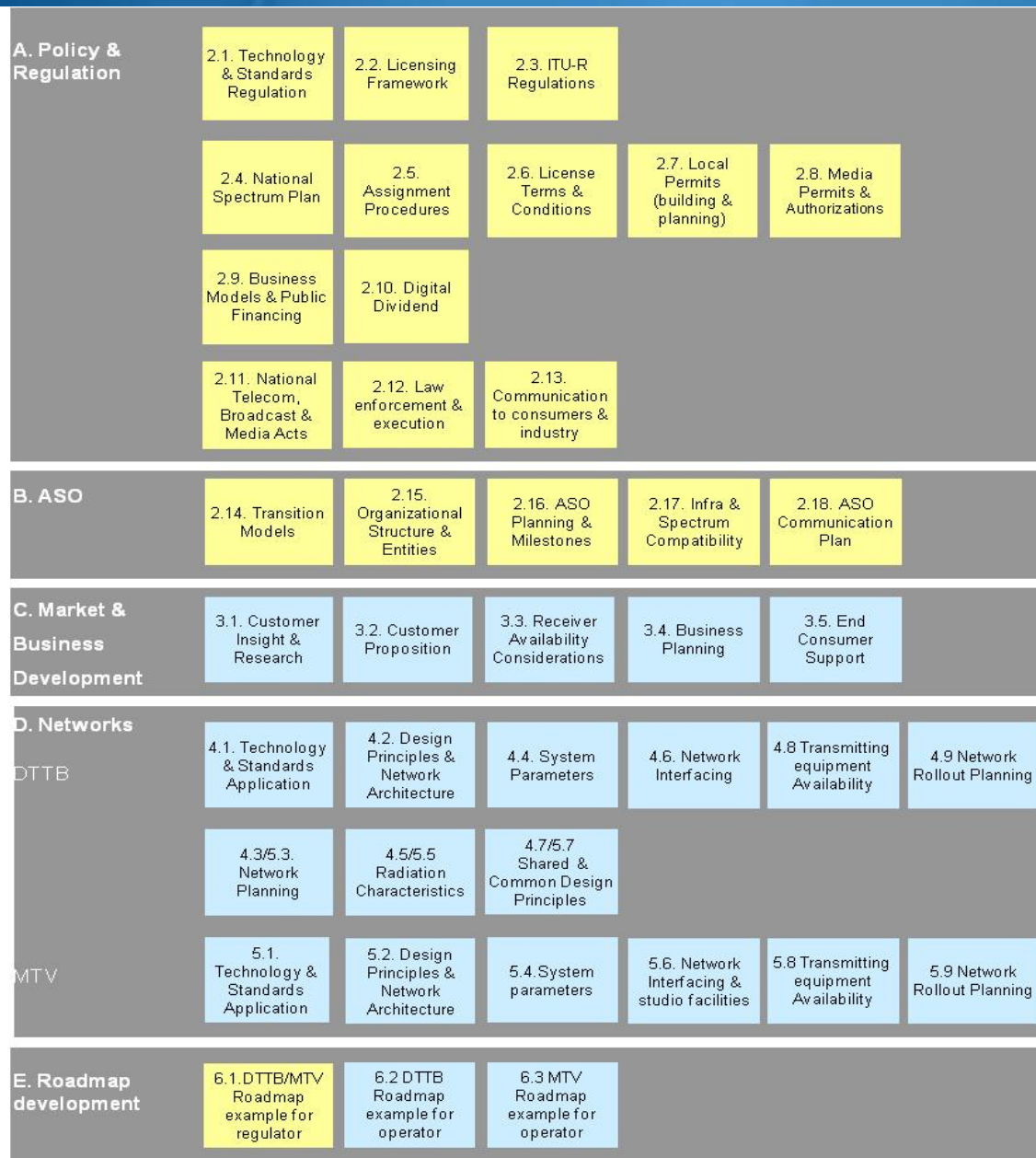
Guideline Revisions

ASIA PACIFIC UPDATE

- WTDC 10 assigned priority to assisting developing countries in Asia Pacific on digital migration including archives
- Guidelines Updated to reflect the different ITU rules and requirements in Region III (Asia Pacific) (KCC fund)
- Addition of New Chapter on Archives Migration
- Survey conducted to identify needs (used also for selection countries to develop roadmaps)

Complete revision

- MIC Japan fund
- Revision of the Guidelines
- Meeting in Tokyo, April 2013 (group of experts)
- Adding IPTV, satellite TV, cable TV



= Government led
 = Market led

Content of the Roadmap Report

Main Chapters

1. Introduction
2. Current TV market and DSO objectives
 - Market players
 - Regulatory framework
 - DSO objectives
3. National roadmap
 - Description of the DSO process per Phase
4. Consideration of top-10 most critical key topics and choices
5. Recommendations

Annexes

- Decisions, main activities, advice on key DSO topics for each of the Phases of the Roadmap
- Additional information
- Glossary of abbreviations

Challenges

Greatest challenge

- To meet the DSO objectives, including Analogue Switch-Off date in June 2015
- To avoid service interruption, or even service termination

Conditions to be fulfilled for a successful transition

- Strong leadership from government
- Firm decision that sets the Analogue TV Switch-Off date
- Close cooperation between Regulator and market parties
- Clear and timely regulatory framework (including decisions on the “Digital Dividend”)
- Adequate information and assistance to viewers

Conclusions

- Transition to DTTB and the introduction of MTV services is a complex process
 - Involving decisions on key topics and choices of 41 functional building blocks
- A successful transition to DTTB and the introduction of MTV services requires:
 - Strong leadership of government
 - Firm decision of analogue TV switch-off date
 - Close cooperation of Regulator and market parties
 - Clear and timely regulatory framework (including decisions on the “Digital Dividend”)
 - Adequate information and assistance to viewers

Regional initiatives

- In all the regions Digital broadcasting and transition
 - Africa
 - Asia Pacific
 - Arab
 - Americas
 - Europe (Central and Eastern Europe)
 - CIS

Major events

- **ITU Telecom 2011, Geneva**
 - Ministerial Roundtable, 26 October : The Transition to Digital Television and the Digital Dividend
<http://world2011.itu.int/digital-television>
- **The Fifth World Electronic Media Forum**
 - Accra, Ghana, 16-18 November 2011
<http://www.aub-uar.org/wemf/>
 - Session 1, Migration to Digital Radio and Television
 - Accra Declaration:
http://www.ebu.ch/CMSimages/en/DW_%20THE%20ACCRA%20DECLARATION%20final%20_2_tcm6-73225.pdf
- **Digital Migration and Spectrum Policy Summit (ITU-ATU)**
 - Nairobi, Kenya, 29 November – 1 December 2011
<http://atu-uat.org/index.php/en/reports/digital-migration-reports>
 - Recommendations
http://atu-uat.org/images/eventlist/events/files/reportsfolder/Digital%20Migration%20&%20Spectrum%20Policy%20Summit_Recommendations.pdf?r=0.9003948695026338

- **WRC-12**

- 23 January – 17 February 2012, Geneva

- <http://www.itu.int/ITU-R/index.asp?category=conferences&mlink=wrc-12&lang=en>

- Agenda item 1.17

consider results of sharing studies between the mobile service and other services in the band 790-862 MHz in Regions 1 and 3, in accordance with Resolution **749 (WRC-07)**, to ensure the adequate protection of services to which this frequency band is allocated, and take appropriate action

- **Workshop on Transition to Digital Terrestrial Television Broadcasting**

- 27 February – 2 March 2012, Bangkok, Thailand

- <http://academy.itu.int/moodle/course/view.php?id=353>

- **Connect Arab Summit**

- 5 – 7 March 2012, Doha Qatar

- <http://www.itu.int/ITU-D/connect/arabstates/>

Frequency coordination meeting (ITU-ATU)

- followed the ATU Digital Migration and Spectrum Policy Summit (Nairobi, Kenya, 29 November to 1 December 2011)
- promote the cooperation and exchange of experience within the Western and Central African countries on spectrum issues relating to the transition to digital terrestrial television and the digital dividend.
- coordinate sub regional Roadmaps and initiate frequency coordination, with a view to facilitating harmonization and use of the digital dividend spectrum
- re-evaluating the frequency plan adopted by the ITU Regional Radiocommunication Conference in 2006 (GE06 Plan) for terrestrial television broadcasting in the 174-230 MHz and 470-862 MHz bands
- necessary consequential actions, while taking into account:
 - Short and medium term spectrum needs of broadcasting and mobile industries and ensure equitable and efficient access to the spectrum
 - Establishment of proper timelines and activities for the review and modification of GE06 Plan using the procedure of the GE06 Agreement.

<http://www.itu.int/ITU-D/tech/events/index.html>

First phase: Bamako, Mali, 13-15 March 2012

- 140 delegates from 22 countries
- In order to ensure equitable and efficient access to the spectrum, the frequency coordination meeting focused on the feasibility of **establishing a minimum number of four multiplexes with national nationwide coverage for each country** in the region in the band 470-694 MHz (UHF channels 21 to 48).
- With fixed rooftop reception, this would enable, using currently available equipment, the provision (in the case of DVB-T2 and MPEG-4) of up to **80 nationwide standard definition television programs or up to 20 nationwide high definition television programs, which is likely to satisfy most requirements of countries in the region.**
- In a second step, additional requirements may be considered and could be satisfied through further technical discussions



Second phase: Kampala, Uganda, 16-20 April 2012

- 130 delegates from 31 countries
- Ten countries having already participated in the Bamako event in March 2012 were also present, which facilitated convergence towards a solution at regional level.
- Five iterations conducted between 10 March and 20 April 2012,

Main additional conclusions and recommendations:

- The next ATU Summit is invited to consider the adoption of the **MPEG4 and DVB-T2** standards at regional African level.
- It is also recommended that the ATU summit consider the adoption of the dual **HDTV/SD** format at African regional level for the set-top boxes
- it is recommended that those administrations currently having more than the minimum resource be encouraged to make the utmost effort to release part of it to enable neighbouring countries to reach up to that level of resource. This is important to ensure that every country is able to successfully transition to digital television, hence release the digital dividend for its neighbours.

ITU Regional Development Forum (RDF) for Europe and Seminar for Europe and CIS on Transition to Digital Broadcasting, Borderline Frequency Coordination and Digital Dividend, 7-9 May 2012, Warsaw, Poland

- RDF provided an opportunity for high level dialogue between BDT and decision-makers of ITU Member States as well as Sector Members on key challenges and actions related to the spectrum management and digital dividend, to better assess strategic orientations that may have an impact on BDTs regional work-plan in between World Telecommunication Development Conferences.
- The Seminar was an integral part of the European Regional Initiative on Digital Broadcasting for Europe that searches to provide a basis for the exchange of best practices encountered on the path of digital transition, and the ways to maximize the economic and social benefits of the digital dividend. It also considered how to further develop a unified approach in order to enhance the advantages that it would bring to the region of Central-Eastern Europe.

The Workshop discussed, in particular:

- Digital terrestrial television transition;
- Legislative issues;
- Maximizing the value and benefits of the digital dividend;
- Harmonization of digital dividend spectrum;
- Costs of transition;
- Borderline frequency migration

More details, including outcomes:

<http://www.itu.int/ITU-D/eur/rdf/index.html>

Regional Workshop and Frequency Coordination Meeting on the Transition to Digital Terrestrial Television and the Digital Dividend, Bridgetown (Barbados), 21-25 May 2012

- Organized by the Caribbean Telecommunications Union (CTU), the Caribbean Broadcasting Union (CBU) and the International Telecommunications Union (ITU)
- Aimed to promote the cooperation and exchange of experience within Caribbean countries on spectrum issues relating to the transition to digital terrestrial television and the digital dividend.
- To coordinate the use of the UHF spectrum in order to maximize the benefits of the transition to digital TV broadcasting and the digital dividend and minimize interference.

- Broadcasting service: to identify compatible frequency assignments that may be used by each country for digital television without harmful interference and a procedure through which these assignments may be brought in service.
- Mobile service: to assess possible arrangements by which the higher part of the UHF band (i.e. above 698 MHz) may be used without harmful interference.
- The results obtained may be used as a basis for formal agreements between the concerned countries.
- Conclusions and recommendations of the workshop and frequency coordination meeting in respect of the:
 - broadcasting service in the UHF band
 - mobile service in the UHF band

<http://www.itu.int/ITU-D/tech/events/index.html>

Other workshops, meetings

- **Connect Americas Summit**, 17-19 July 2012, Panama City (Panama)
<http://www.itu.int/ITU-D/connect/americas/>
- **13th Forum on Telecommunication/ICT Regulation and Partnership in Africa (FTRA-2012)** , 18 to 20 June 2012, Libreville (Gabon)
<http://www.itu.int/ITU-D/afr/events/FTRA/2012/index.html>
- **Interregional ITU Forum on Topical Matters of Telecommunication Regulation and Radio Frequency Spectrum Use for CIS and Europe**,
 - 11-13 September 2012, Kiev (Ukraine),
- **ITU Workshop for the CIS Countries "Trend in the Development of Radiocommunication as a Result of WRC-12. Technical and Regulatory Aspects"**,
 - 5-8 June 2012, St. Petersburg (Russian Federation)
- **Sub-Regional Workshop on Digital Television Migration and Digital Dividend**, 30 May-1 June 2012, Montevideo (Uruguay),
<http://www.itu.int/ITU-D/tech/events/index.html>
- **ITU-AIBD-ABU Regional Workshop on "Digital Broadcasting: Opportunities, Business and Challenges"**
 - 26-28 May 2012, Bangkok (Thailand)<http://www.itu.int/ITU-D/tech/events/index.html>

Workshops, seminars

- **2nd ATU/ITU Digital Migration and Spectrum Policy Summit**
 - 27-28 September 2012, Accra (Ghana)
 - <http://atu-uat.org/index.php/en/reports/digital-migration-reports>
- **Global ICT Forum on Human Capacity Development**
 - Cape Town (South-Africa), 2-25 October 2012
 - <http://academy.itu.int/moodle/course/view.php?id=551>
- **ITU Regional Seminar for Europe on Transition to Digital Broadcasting and Digital Dividend,**
 - Budapest (Hungary), 5-7 November 2012
 - <http://www.itu.int/ITU-D/eur/ri/broadcasting/seminar/index.html>

Cape Town, October 2012

- The objective of the Forum was to discuss the capacity building challenges of the transition to digital broadcasting and address how these challenges can be met.
- The Forum was an opportunity for countries and organisations to showcase initiatives undertaken in this regard, such as the e-Skills initiative in South Africa, and the m-Powering Initiative being launched by the Director of the BDT within ITU.

KEY TOPICS

- Broadcasting trends and the necessity of transitioning to digital broadcasting.
- Policy, regulatory and technical challenges of the transition to digital broadcasting.
- Human Capital development in an m-environment: multi-sector perspectives.
- Leveraging Learning and development through mobile based devices.
- Social development and building ICT literacy.
- Country case studies on the transition roadmap.
- Country policies and experiences with e-skills initiatives.
- Developing leadership for knowledge based economy.
- Readiness of higher learning institutions for a digital society.

- In collaboration with the National Media and Infocommunications Authority of Hungary
- Regulatory Seminar for Europe on “Transition to Digital Terrestrial Television Broadcasting and Digital Dividend”
- Integral part of the European Regional Initiative on Digital Broadcasting for Europe that searches to provide a basis for the exchange of best practices encountered on the path of digital migration, and the ways to maximize the economic and social benefits of the digital dividend.
- How to develop further a unified approach in order to enhance the advantages that it will bring to the region of Central-Eastern Europe.
- The meeting was targeted at the staff of the Ministries and Regulatory Authorities, in particular those who required very good understanding of the ITU role and functions in the telecommunication/ICT sector for accomplishing their tasks.

- The Seminar discussed, in particular:
 - Towards Successful Transition to the Digital Terrestrial Television Broadcasting: Country and Regional Challenges on Licensing policies and criteria, decisions and experiences (regulatory round-table)
 - Choice between DVBT and DVBT-2;
 - Utilization of the Digital dividend – decisions and experiences
 - Decision about introduction of the HDTV
 - DVBT or DVBT-2
 - Analogue Switch-Off strategies and experiences
 - Roundtable on way forwards

Project, direct assistance

- **ITU - KCC, Korea**
 - Second phase of the project for the roadmap development
 - Asia-Pacific: 6+1 more countries to assist: Indonesia, Myanmar, Philippines, Papua New Guinea, Fiji, Thailand +1: Lao PDR
 - ABU-AIBD-ITU workshop, Kuala Lumpur
 - Africa: 1 more country to assist: Gabon, 2nd ATU-ITU Summit
 - Third phase
 - Asia-Pacific: 3 more countries to assist
 - workshop
 - Caribbean: 1 country to assist
- **ITU – MIC, Japan**
 - New project
 - Update of Guidelines on Digital Broadcasting taking into account new developments in the area of DTTB and MTV implementation, convergence,
 - Asia-Pacific: 2 countries to assist (Bangladesh, Micronesia) and workshop
 - Africa: 2 countries to assist (Mozambique, Democratic Republic of Congo) and workshop
- **Possible cooperation (under discussion):**
 - African Development Bank
 - Latin American Development Bank
 - TDF

Documents, reports

- **Guideline for the Transitions**
 - Update with Asia-Pacific information, including archives (also in French):
 - http://www.itu.int/ITU-D/tech/digital_broadcasting/project-dbasiapacific/Digital-Migration-Guidelines_EV7.pdf
- **Q11-3/2 Report**
- **Roadmaps for ASP and AFR**
 - http://www.itu.int/ITU-D/tech/digital_broadcasting/project-dbafrica/db_afr_roadmaps.html
 - http://www.itu.int/ITU-D/tech/digital_broadcasting/project-dbasiapacific/db_asp_roadmaps.html
- **Digital Dividend: Insights for spectrum decisions**
 - http://www.itu.int/ITU-D/tech/digital_broadcasting/Reports/DigitalDividend.pdf
- **Digital broadcasting trends**
 - http://web.itu.int/dms_priv/itu-d/oth/01/2A/D012A0000353301PDFE.pdf
- **Spectrum Management Training Program (SMTP)**
 - Under ITU Academy, see a separate presentation

Thank you!

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