

ITU ACTIVITIES IN DIGITAL BROADCASTING TRANSITION

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ITU-ABU REGIONAL WORKSHOP
Needs of Developing Broadcasters for
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Content

- Mega trend and digital broadcasting
- ITU outputs for digital broadcasting
- ITU cooperation with broadcasting organizations
- Digital Broadcasting roadmap project
- What to consider in making digital broadcasting transition roadmap ?

Mega Trend & Digital Broadcasting/1

- Convergence/Multimedia/Ubiquitous ?
 - Any terminal, any infra/media, any contents
 - What is the impact ?
 - : Provide users with higher accessibility to infra/media and contents
 - : Economy of scope
 - : Promote competition and cooperation between broadcasting & telecommunication companies

Chance to jump to new infra and service through new MEDIA POLICY

Mega Trend & Digital Broadcasting/2

- Globalization from the aspects of education and culture
 - Education is essential factor for strengthening national competitiveness (required to establish more effective way to deliver info. & knowledge)
 - Increasing importance of preserving and developing own culture and understanding other cultures

These have been important roles of broadcasting and more active leadership is required for new era

Mega Trend & Digital Broadcasting/3

- The policy for digital broadcasting and new media is
 - not only technical issues
 - but also political, economy and industry issues
- Its policy making requires
 - not partial
 - but comprehensive approach

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ITU outputs for digital broadcasting transition

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ITU outputs/1

Global and regional spectrum allocation

- WRC / RRC-06

Spectrum Management Guideline (SG1)

- Handbook and Recommendation SM 1047-1 "National Spectrum management"
- Recommendation SM 2012-1 "Economic Aspect of Spectrum Management"
- Handbook on Computer Aided Techniques for Spectrum Management
- Handbook on Spectrum Monitoring
- SMS4DC (Spectrum Management System for Developing Countries)

SMS4DC/Introduction

- **SMS4DC purpose:** a software tool to assist developing countries in efficiently and effectively managing their national use of the radio spectrum.
- **SMS4DC development:** a joint project between the ITU Development and Radiocommunication Sectors. Outline concept endorsed by WTDC 2002 and design specification in accordance with ITU-R Recommendations.
- **SMS4DC maintenance:** annual licence fee provides ongoing technical support and free upgrades;

SMS4DC/Future development

- Google Earth linkage
 - Calculation results, borders, contours in KML format which is readable by Google Earth
- Monitoring
 - Respond to queries from monitoring system through XML files
 - Send orders to monitoring system and import of the requested information to the SMS4DC through XML files
 - Display monitoring data (e.g. measurements)
- Addition of new services (e.g. radionavigation, maritime mobile)

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ITU outputs/2

Wave Propagation recommendation (SG3)

- Recommendation ITU-R P.1546 "Method for point to area prediction for terrestrial services in 30MHz-3000MHz"

Report of the Rapporteur on transition (SG6/WP6A)

- Document 6/110 (28 October 2008)
"Report on transition from analogue to digital terrestrial broadcasting", approved at the SG6 meeting on 3-4 November 2008 (under editorial finalization)

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ITU outputs/3

Digital broadcasting transition

- ITU-D Question 11-2/2 "Examination of terrestrial digital broadcasting technologies, and systems, including cost/benefit analysis, interoperability of digital terrestrial system with existing analogue networks, and methods of migration from analogue terrestrial techniques to digital techniques"

SG activities for developing countries

- ITU-D Study Group 2's Report on question 9-2/2 "Identification of study topics in the ITU-T and ITU-D study groups which are of particular interest to developing countries"

ITU cooperation with Broadcasting Organizations

- WBU : Cooperation agreement under preparation
- ASBU : ITU/ASBU Seminars on digital broadcasting
- ABU : Close cooperation in transition from analogue to digital
- AIBD : ITU/AIBD workshops on digital technologies
- EBU : Signed cooperation agreement

Digital Broadcasting Roadmap Project

- 1st phase of the project : Feasibility Study on Digital Broadcasting roadmap in Africa
- 2nd phase of the project : Roadmap for Transition to Digital Broadcasting in Africa

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Why started from Africa ?

- RRC-06
 - Agreement for digital broadcasting services in the frequency band 174-230/470-862MHz
 - Transition period from 17 June 2006 to 17 June 2015, allowing some countries an additional five-year extension for the VHF
- World Telecommunication Development Conference 2006(WTDC-06)
 - African region decided introduction of new digital broadcasting technologies as one of the important regional initiatives
 - Ask ITU to implement at national, regional, interregional and global level, making utmost use of its resources

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Feasibility Study on Digital Broadcasting roadmap in Africa

- Brief Introduction
 - Period : January – July 2008
 - Contribution : Korea
 - Implementing Agency : ITU
- Outputs of the study
 - Analysis of current broadcasting situation and plan for digital broadcasting transition
 - Identification of pilot countries for roadmap project
 - Developing of project document for making roadmap

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Summary of survey's result/1

<Replied by 22 African countries among 53>

- Plans to introduce digital terrestrial broadcasting services:
 - No plans at this moment: 7 countries;
 - Currently developing a plan: 7 countries;
 - Finalizing a plan : 5 countries;
 - Trial: 1 country.
- Introduction of digital terrestrial/mobile TV:
 - until 2010 : 9/6 countries;
 - until 2015 : 1/0 country;
 - until 2020 : 1/1 country.

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Summary of survey's result/2

- The end of transition period:
 - until 2010 : 1 country;
 - until 2015 : 8 countries;
 - until 2020 : 9 countries.
- Assistancess expected from ITU:
 - Technical or regulatory expertise: 20 countries
 - Adapting roadmap to the country: 19 countries
 - Providing technical information: 18 countries
 - national legislation : 18 countries;
 - financing and budget: 15 countries;
 - customer awareness: 14 countries;

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Roadmap for Transition to Digital Broadcasting in Africa

- Brief introduction
 - Period : November 2008 – August 2009
 - Contribution : ITU and Korea
 - Implementation agency : ITU
- Expected outputs of the project
 - Developing Guidelines for making digital broadcasting transition roadmap and action plan
 - Customization of some pilot countries' roadmap
 - Deployment of pilot systems

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What will be included in the Guidelines for digital broadcasting transition roadmap and action plan ?

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Roadmap and action plan

- Digital broadcasting transition is a long and complex one
- A smooth transition requires co-ordination between many actors and interests
- Roadmap could provide certainty on market , create common knowledge and expectations
- This would then facilitate players' decision and investment, encourage co-ordination

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General scheme of approach

Structural market failure
General interest objectives related to switchover



Cost and benefit analysis
Government policy (intervention)



Switchover roadmap/Action plan/Information
Fiscal incentive/Switchover fund
Regulation on technical standard
Deregulation of broadcasting policies

Structural Market failure

- Chicken-and-egg situation
- Situation rents of incumbents
- Free-rider syndrome
- External benefits
- Threshold effects

Who will lead the migration ?

- To give a key role to market
 - Minimize government's burden on budgets and give broadcasters maximum flexibility
 - No link with national objectives to advance digital infrastructure construction
 - Deepen digital divide between the rich/the poor
- Managed market take up strategy
 - In case if there is no clear market demand
 - Impose a moratorium on analog roll out and announce cut off date for analogue
 - Subsidy to the consumers in buying set-top
 - Fast way providing universal service

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Cost and Benefit Analysis (CBA)

- CBA translates the positive/negative impacts of envisaged decision into monetary terms

COSTS and RISKS

- digitization of reception/receivers
- digitization of broadcasting infrastructure
- risks of competition distortion
- risks of moral hazard

BENEFITS

- positive impact on markets, info. society & economy
- reduction of transmission cost
- Increase of competition
- Spectrum gains
- Prevention of digital divide
- promotion of universal digital access

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What to do at each Phase of migration/Phase 1

- Starting introduction of digital television transmission
 - No further analogue license issued for terrestrial broadcasting
 - Regulation should be reviewed to reflect the implication of digital transmission
 - Special frequency channels will be allocated to the current broadcasters to provide simulcasting in digital format
 - The possibilities relative to infrastructure-sharing arrangements involving a number or all operators will be explored

What to do at each phase of migration/Phase 2

- The simulcast period
 - Broadcaster will be encouraged to establish a migration plan
 - National broadcasts will be transmitted as must carry, free-to-view, on any digital terrestrial platform that may be available

What to do at each Phase of migration/Phase 3

- Analogue Cut-off
 - Before analogue cut off, All current broadcasters will need to be migrated to a digital platform
 - Households will need to have upgrade TV sets to digital or buy set top boxes
 - The time required will be depending on the migration option selected by the broadcasters/regulators and the market reaction to the introduction of DTTV

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Main Policies and Consideration/ Regulatory and Legislative matters

- Setting up a new media policy
 - Introduction of new digital broadcasting media like digital terrestrial broadcasting, mobile broadcasting, IPTV...
 - Liberalization? privatization? competition?
- Strategies and process of transition
- Ownership of multiplex
- Licensing of broadcasters, network operators and multiplex operators
- Frequency related issues
- Financial measures in support of transition
- Digital tuner mandatory

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Main Policies and Consideration/ Technology

- Study and choose on the available standards
- Identify the costs associated with development of the required broadcast facilities :network infra, compression options, transmission standards, upgrading studio facilities
- Cost calculations on network infrastructure is linked to coverage predictions regarding options on network type (SFN or MFN), the modulation scheme and data rates

Main Policies and Consideration/ Customer awareness

- Study consumers' behaviour and expectation toward digital broadcasting transition
- Improve consumer information about digital TV : Ensure the public are prepared for the introduction of digital services. Public should know what needs to be done to receive digital broadcasting services
- Encourage consumer switchover by reduction switchover cost : discount license fee or VAT
- Subsidise the purchase of set-top boxes for analogue broadcasting switch off

Committed to connecting the World



Thank you for your attention !

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