Digital Broadcasting Switchover – The Global Perspective

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“Death of TV”
Something fundamental is happening in the TV ecosystem!
DIGITISATION

- Exponentially increases the capacity of broadcast platform
- Reduces the costs of both production and distribution of content
- Increases the range of format, portable, mobile to 3D
Once-in-a-life opportunity

- Launch new multimedia services
- Close the digital divides
- Use “golden” spectrum effectively and efficiently
DTT has been launched on all continents!
Each country at its own pace!
Sometimes, it’s beneficial to be late comers!

- Avoid mistakes by learning from others experience
- Technology leapfrog
Europe 2011

Countries with ASO completed

Countries with ASO process underway

Countries with some DTT services launched

Countries with DTT services Not yet formally launched

Target ASO 2012
Europe

- European Commission recommended DSO to be completed by **1 January 2012**
  - EU REC 2009/848/EC Oct 2009
Completed - Europe

- Netherlands – 11 Dec 2006
  - 90% cable subscribers

- 2007
  - Finland – Many viewers refused to pay TV licence fee due to high price of DTV.
  - Sweden
  - Switzerland
Completed (2) - Europe

- 2008
  - Germany - Cable and satellite available

- 2009
  - Denmark, Norway

- 2010
  - Belgium, Spain, Latvia, Estonia, Croatia, Slovenia, Luxembourg
Completed (3) - Europe

- 2011
  - Israel, Wales, Monaco, Austria, Scotland, Cyprus, Malta
  - France including overseas departments and territories.
In progress – Europe

- **2012 ASO**
  - Azerbaijan, Bulgaria, Czech Republic, Ireland, Lithuania, Portugal, Slovakia, UK

- **2013**
  - Greece ($), Hungary, Iceland, Italy (2006!), Poland, Serbia

- **2014 - Turkey**

- **2015 – Russia (30% popl)**, Macedonia, Romania
Not Yet Started- Europe

- Albania – 2015
  - unlicensed DTT for many years
- Ukraine – 2015
- Other former Soviet Union countries
Africa

- DVB-T deployed:
  - 2005 – Namibia
  - 2009 – Algeria, Gabon, Kenya
  - 2010 – Ghana, Nigeria, Uganda

- Majority adopted/planned DVB-T/T2

- ASO announced date
  - 2012 – Kenya, Nigeria, Uganda
  - 2013 – Tanzania, Zimbabwe
Africa – Recent Activities

- The East African Community (EAC) at the end of 2011
  - adopted DVB-T2/MPEG-4
  - developing minimum standards for STB
  - adopted Unified Licensing Framework: signal distributors and content providers
Africa – Recent Activities

- SADC adopted DVB-T2 / MPEG4
- Countries members had started with DVB-T, can continue with its implementation and migrate to DVB-T2 at later date.
WRC-12 Decisions

- Adopted 700MHz band in Region 1 to be shared between broadcasting and mobile on primary basis
- Sub-Saharan African countries are planning
  - 4 layers DTV below channel 49
  - 700MHz for IMT wireless broadband
- Ministerial summit in Accra, Ghana in Sep 2012 to decide.
Africa - Private Initiatives

- Multichoice Africa rolling out DVB-T2 networks (50 programs) over 15 countries
- Gotv Africa DVB-T2 Pay TV services on air in Zambia, Kenya and Nigeria
- TNT Africa DVB-T pay-TV in Gabon (300 000 households) with plans in other West and Central Africa
GE06 Transition Period
Middle East

- DVB-T deployed
  - 2008 Saudi Arabia
  - 2009: Iran, Israel
- Adopted DVB-T
- ASO target 2015
Asia-Pacific DTT Deployed

- 2001 Australia
- 2002 India, Singapore
- 2003 Japan (ISDB-T)
- 2005 South Korea (ATSC), Vietnam
- 2007 New Zealand, Hong Kong (DTMB)
- 2008 China (DTMB)
DTT Adopted

- Philippines ISDB-T
- Pakistan undecided
- 9th Conference of ASEAN Ministers (Indonesia, 2007) endorsed DVB-T as standards for member nations (Brunei, Cambodia, Indonesia, Laos, Malaysia, Singapore, Thailand and Viet Nam)
ASO Dates

- Japan completed 2011
- 2012: South Korea, Hong Kong
- 2013: Australia, New Zealand
- 2014: Mongolia, Taiwan
- 2015/20: Malaysia, Thailand, Viet Nam
Latin America – DTT Deployed

- Argentina, Brazil – ISDB-Tb
- Colombia DVB-T 2008
- Mexico ATSC
Latin America – DTT Adopted

- Chile, Ecuador, Paraguay, Peru, Uruguay and Venezuela adopted ISDB-Tb
- Colombia DVB-T/T2
Latin America – ASO target

- 2014: Peru
- 2015: Uruguay
- 2016: Brazil. Mexico
- 2018: Chile, Venezuela
- 2020: Colombia
- 2023: paraguay
North America

- **United States**
  - High power – Jun 2009
  - TV 52-69 – Dec 2011
  - Low power – Sep 2015

- **Canada**
  - Mandatory markets – Aug 2011, some CBC delayed to Aug 2012
  - Low power outside MM continue analogue operations
Not yet Started – Central America

- Cuba – 2014
- Costa Rica – 2018
- El Salvador – 2019
- Caribbean countries
Caribbean

- **Terrestrial TV situation**: Only 5 administrations in the Caribbean have 50% or higher percentage of analogue terrestrial TV penetration

- **Standards**: 3 administrations have adopted a standard (1 for DVB-T and 2 for ATSC). Most administrations have not decided or are in testing phase.
Caribbean (2)

- **Plans to migrate:** 4 administrations have no plans to migrate due to high penetration of cable TV. One administration (French Caribbean Islands and French Guyana) has already completed transition to digital and analogue switch-off.

- **Analogue TV use:** VHF and UHF used by a significant number of administrations. The switch over phase will require compatibility measures for smooth transition until ASO is completed.
**Caribbean (3)**

- **ASO dates:** only one administration has identified a target date for ASO. There is a need to coordinate ASO dates to avoid interference constraints during interim periods.

- **Digital dividend:** almost all administrations are considering the possibility of using the 700 MHz band (698-806 MHz) and/or 800 MHz band (790-862 MHz), pursuant to the WRC-07 and WRC-12 decisions to allocate these bands worldwide and identify them for international mobile telecommunications (IMT).
KEY LESSONS LEARNED
Importance of Regional Harmonisation

- ITU RRC 2006
- SADC 2011
- USA, Mexico and Canada adopted ATSC
- Latin America (except Colombia) adopted ISDB-Tb
- ASEAN Conference of Ministers endorsed DVB-T
Benefits

- Spectrum efficient and minimise interference
- Reduced cost of receivers and STB due to economies of scales
- Facilitate ASO and DSO with neighbouring countries.
Consumers are key

- Available and affordable DTT receivers/STBs
- Marketing and communication
- Compelling content
- Consumer change NOT technology project
Involve all stakeholders

- Regulators
- National public and commercial broadcasters
- Telecommunications operators
- Manufacturers
- Installers
- ...
Secure funding is necessary

- Help scheme
- Marking and communication costs
DO IT
DO IT NOW
DO IT TOGETHER
Thank you for your attention!