

**Inaugural Digital Broadcasting Switchover Caribbean
13-15 August 2012
St John's, Antigua & Barbuda**

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!

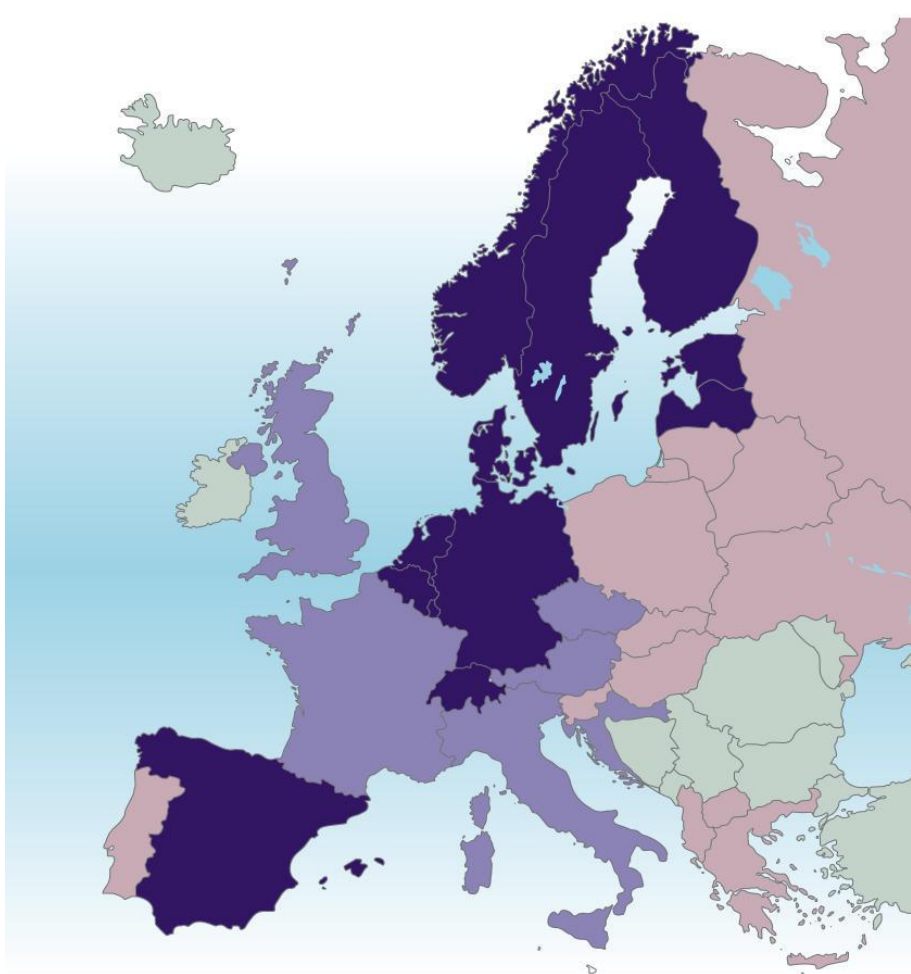


Sometimes, it's beneficial to be late comers!

- 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.

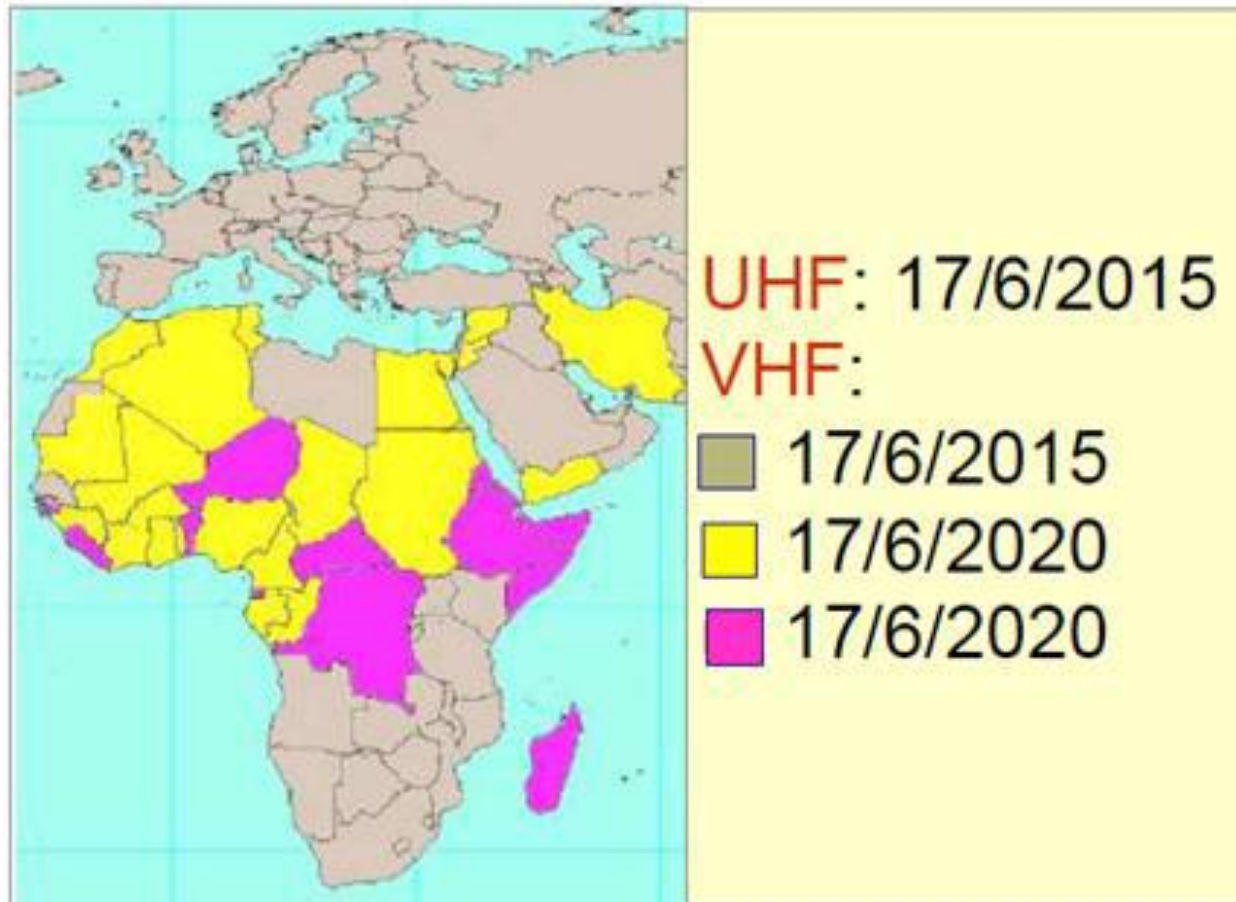


Africa - Private Initiatives

- 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 AFR



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**), Viet Nam
- 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!

