

Digital Switchover Strategies Challenge and Lessons learned

ITU BDT Seminar
**Transition from Analogue to Digital Broadcasting: correlation
between technical, economic and social costs and
advantages»**
16 - 18 June 2009, Saransk, Russian Federation

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Why?

- Better picture and sound
- More programs
- TV anywhere
- **Competitive markets**
- **Budget revenue**
- **Efficient use of spectrum**
- No other choice...



It's a digital world!

- May he live in interesting times!



How? What strategies?

- Market structure
 - Competition or complimentary
- Services
 - SDTV, HDTV, Mobile, etc..
 - Pay or free-to-air
- Legal (licensing) framework
 - Delivery vs. content
 - Existing licences
 - Service access

Implementation

- “big bang” or stage approach
- Spectrum planning
- Management
- Funding
- Time schedule
- Milestones

Big or small bang!

- “Overnight” analogue switch off
 - Nation-wide or region by region
 - High risk, good planning required
 - Andorra, Finland, Luxembourg, The Netherlands, USA
- Phase approach
 - Austria, Czech Republic, France, Germany, Italy, Sweden, Switzerland, United Kingdom

Viewers are Kings/Queens!

- Coverage of digital services
- “Killer” programs
- Availability of digital receivers or set-top boxes
- Publicity campaigns
- Assistance services

Spectrum planning

- General frequency framework
GE06 Plan
- Interim frequency assignments
during transition period
- International coordination

Some examples – Europe

(Source: EBU Technical)

UK	<ul style="list-style-type: none"> • Launch in 1998 of ITV pay-TV services • Re-launch in 2002 of Free-view free-to-air services • 2004: creation of SwitchCo (now Digital UK) to lead switchover process • 2008: 6 muxes: - 30 to 40 free-to-air DTT services - one pay DTT bouquet (on-demand TV) 	Free-to-air offer with appealing content	Strategy
Sweden	<ul style="list-style-type: none"> • Early launch in 1999, 3 DVB-T Muxes 50% coverage – slow start • 2004: Government puts in place legislative framework • 2008: - 5 muxes, one in MPEG4 AVC format (may be HDTV in 2009) - 10 free-to-air and 27 pay DTT services 	Successful Pay-TV offer	
Germany	<ul style="list-style-type: none"> • Launch in 2002 in Berlin region only; • Very short simulcast period (between 9 to 3 months) • 2008: 6 muxes, ~ 24 free-to-air DTT services 	Launch region-by-region	
France	<ul style="list-style-type: none"> • Launch in 2005 with 35% coverage increased progressively; 5 Muxes + 1 mux HDTV • France Télé numérique created to guide switchover • 2008: Government decision for 11 DTT muxes 95% coverage + 2 DVB-H after ASO 	MPEG4 for pay DTT services	

South Africa – current situation

- Analogue and digital television mainly through terrestrial networks and satellites. limited cable or fiber penetration.
- 91% of the population is covered by the existing analogue terrestrial network.
 - Government objective that every citizen who currently receives analogue television service will have to have access to DTT service in at least one SD format, offering not less than what is currently available with the option of adding channels for and during the 2010 Soccer World Cup.
- 9% of the population (about 3.6 m) is not covered by existing terrestrial analogue network.
 - low power **analogue** transmitters taking input signal from satellites to provide television coverage to these remote and rural areas.

SA – DSO Approach

- Aug 2005 - Minister establishes the Digital Migration Working Group (DMWG) mandated to develop recommendations towards the framework of the national strategy for migration
- Apr 2006 - Establishment of the *Electronic Communications Act* which provides a regulatory framework for the convergence of broadcasting, broadcasting signal distribution and the telecommunications sectors.
- Nov 2006 - DMWG handed completed report of the proposed switchover from analogue to digital broadcasting in South Africa to the Minister;
- Feb 2007 - Cabinet approves the digital switch-on starting 1 November 2008 and the analogue switch-off on 1 November 2011. Programs are to be simulcast (dual illumination) in both analogue and digital during the period.
- Mar 2007 - Government published a draft digital strategic plan for public comment
- May 2007 - Government established the Digital Migration Office (DMO)

SA – DSO Implementation

- Digital migration in phase approach, starting in 2006.
 - first two years includes the replace and upgrade of the infrastructure.
 - following three years establishes digital transmission facilities at all existing current transmitter sites (184)
 - the final third phase sees the introduction of new services
 - 31 main sites covering 56% of the population by 2009
 - 68 sites covering 78% of the population by 2010
 - 85 sites covering 92% of the population by 2011.

SA - Costs

- The cost of the rollout is estimated to be around 1 billion SA Rand (800 million Euros).
- The operation cost of dual illumination (simulcast) of analogue and digital services is estimated to be around 750 million Euro for the three years.

SA - Assistance

- The cost of subsidy for set-top boxes (STB) is estimated to be between 2.5 to 3.5 billion Euros depending on the funding models decided by the Government.
- The cost of development, distribution and installation of STB is expected to be substantial.
- It is Government's intention that STB should be manufactured locally
 - to service the internal market that will be created in South Africa for set top boxes,
 - to become the lead supplier across the continent for this consumer driven technology.

ASO – some examples

(Source : EBU Technical)

Country	DTT Launch	ASO Date
Netherlands	2003	Completed
Finland	2001	Completed
Sweden	1999	Completed
Switzerland	2001	Completed
Germany	2002	Completed
Belgium, Flemish	2002	Completed
Denmark	2006	2009
Norway	2007	2009
Austria	2006	2010
Spain	2000/2005	2010
France	2005	2011
Czech Republic	2005	2011
UK	1998	2012
Italy	2003	2012

Lessons learned

- Clear and timely legislative framework
- Well planned Analogue Switch-off
- Views communication and support
- Attractive digital offer
- **Cooperation**

Legislative framework

- Clear and predictable
- ASO time table
- Digital service requirements
- Licensing
- Access to spectrum
- Access to network (MUX)
- Create ONE entity to manage the process

Well planned ASO

- Clear strategies
- Clear timetable – Avoid confusion
- Good timing - avoid
 - Summer holidays period
 - Winter (difficult access to sites)
 - Weekends or major events
- Field measurements to ensure adequate digital coverage

Communication is the key!

(Source: OFCOM, UK)

Consumer awareness plan in UK						
	3-Years	2-Years	1-Year	<12 months	1 month	Switchover
National Launch of <i>SwitchCo</i>	"Get ready!"	"How to get ready!"	"Are you ready?"	Countdown: 'Switchover is happening!'	Countdown: 'Switchover is here!'	Switchover to 100% digital

Support is vital!

- Education
- Technical
- Financial
- Policy/legal

Cooperation is a must!

- Get everyone involved in ALL process
 - Governments and regulators
 - Public Service Broadcasters
 - Private and commercial broadcasters
 - Cable and satellite platforms
 - Manufacturers of professional and consumer equipment
 - Retailers and antenna installers

ITU's roles

- Disseminate information
- Conduct technical studies – sharing between mobile and other services
- Ensure effective application of GE06 Agreement
- Provide assistance to administrations

Report ITU-R BT.2140

- **WP6E**
- Report on **Transition from analogue to digital terrestrial broadcasting**
 - **Overview of technologies**
 - **Available options**
 - **Route to follow**

Handbook on digital television implementation

- TOC approved at April 09 meeting
 - Digital TV principles
 - Digital TV broadcasting
 - Digital multimedia broadcasting
 - Interactive TV
 - Digital content protection and management
 - Quality in digital TV
 - Networks aspects
 - DTV Receivers

Joint Task Group 5-6

- The task
 - Conduct sharing studies
 - 790-862 MHz
 - Mobile and other services
- Two meetings so far
- Next meeting Nov 2009

Provide assistance

- Training Seminars
- Make available frequency plans and coordination information on the web
- Develop and make available softwares
 - Planning software
 - Coordination software
 - Conformity software

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for a brighter digital
future!**



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**Thank you for your
attention!**



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