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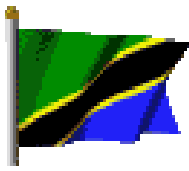


TANZANIA COMMUNICATIONS REGULATORY AUTHORITY

DIGITAL MIGRATION-LESSONS FROM TANZANIA

**A Presentation to ITU SYMPOSIUM,
17th June, 2015 GENEVA SWITZERLAND**

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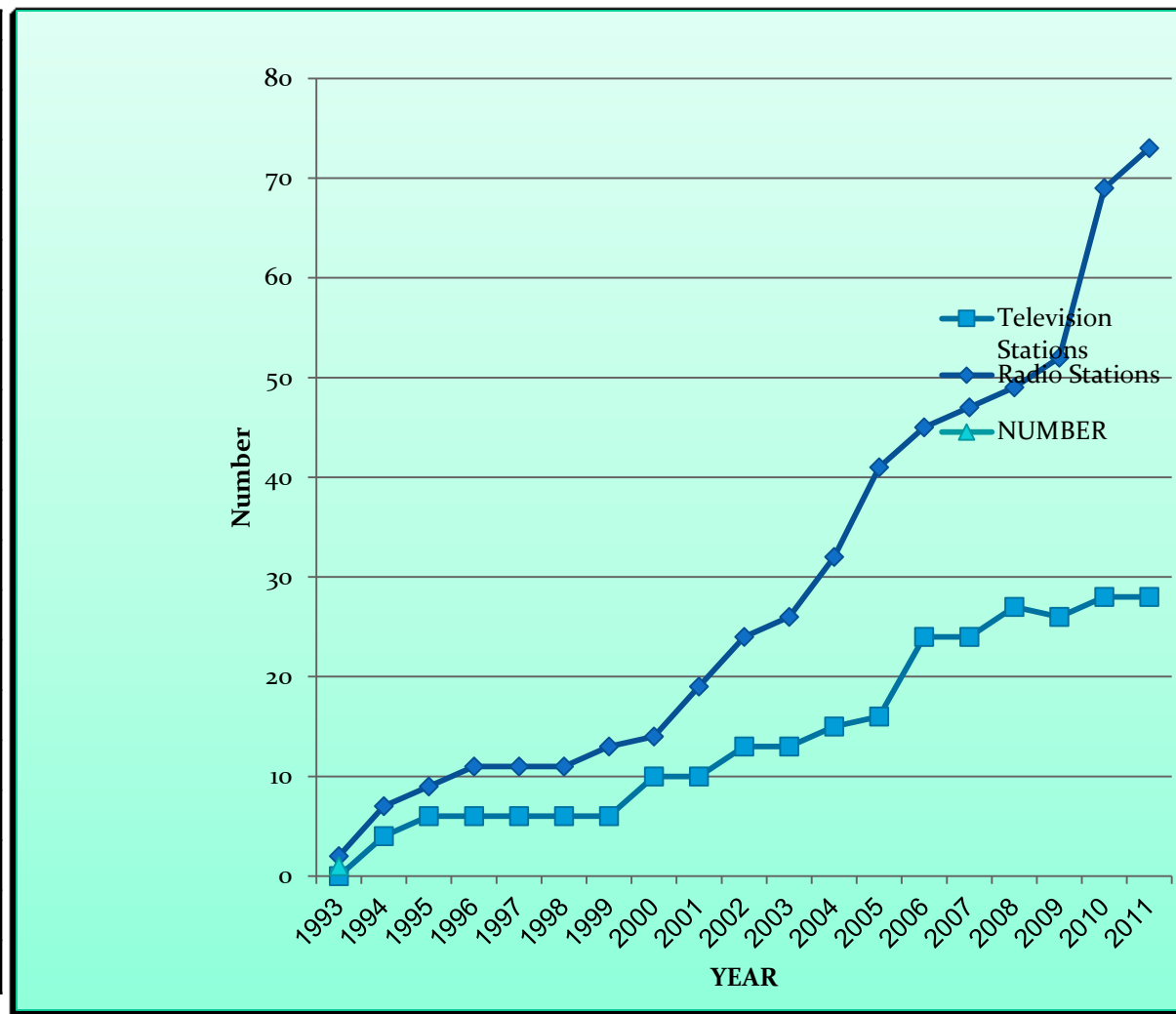
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Tanzania started to switch off analogue transmission from **31st December, 2012** on a phased approach.

The Broadcasting Landscape

Year	Radio Stations	TV Stations
1993	2	0
1994	7	4
1995	9	6
1996	11	6
1997	11	6
1998	11	6
1999	13	6
2000	14	10
2001	19	10
2002	24	13
2003	26	13
2004	32	15
2005	41	16
2006	45	24
2007	47	24
2008	49	27
2009	52	26
2010	69	28
2011	83	28





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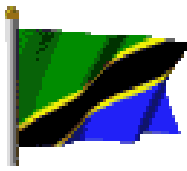


Behind the success story

Factors for success

- Roadmap
- Strong Leadership
- Consultation
- Communication strategy
- Cost
- Consumers
- Well planned ASO



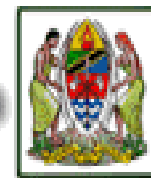


1. Road Map

- The Digital Migration is a Policy driven rather than market driven;
- The Tanzania Communications Regulatory Authority (TCRA) drew a migration Roadmap consisting of activities, events and timelines; (Figure 1 below)



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Road Map..Co'td

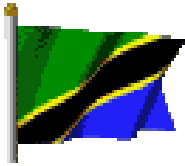
S/NO	ACTIVITY	RESPONSIBLE	DATE
1.	Consultation with Stakeholders	TCRA, MOCT CHIEF MINISTER'S OFFICE, PMO, ZBC, FINANCE, Operators	09.08.2005 - 30.11.2005
2.	Adoption of Policy on Digital Broadcasting	MOCT and PMO	16.01.2006
3.	Amendment of Legislation	MOCT, PMO, Attorney General Chambers	18.04.2006
4.	Modification of Converged Licensing Framework	TCRA	24.04.2006
5.	Switchover to Digital Broadcasting	TCRA/ZBC Operators	15.6.2006
6.	Simulcast Period	TCRA/ZBC Operators	15.6.2006-14.6.2012
7.	Switch off date of Analogue Broadcasting	TCRA/ZBC Operators	31.12. 2012
8.	Digital Broadcasting Only	TCRA/ZBC Operators	10.01.2013

Fig. 1 DTT Road Map Source: 1st PCD-2005, TCRA

2. Strong Leadership

- ◆ The Government;
 - The President;
 - The Minister;

- ◆ The Regulator
 - Bold and firm;
 - Consultation;
 - Coordination



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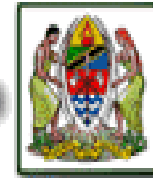
3. Consultation with stakeholders

(a) 2004/6 Participated in the GE04 & GE06 processes;

(b) 2005/2006; Issued two Public Consultation Documents. (PCDs):-



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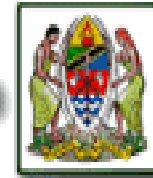


Consultation. Co'td

- (i) 2005: First PCD highlighted DTT and its benefits;
- (ii) 2006 Second PCD: Established licensing framework for DTT;-Separation of Content and transmission; Case for establishment of Multiplex Operators (MUX) as signal distributors;
- (c) 2007: Formation of the National Technical Committee on DTT Broadcasting (NTC-DB);



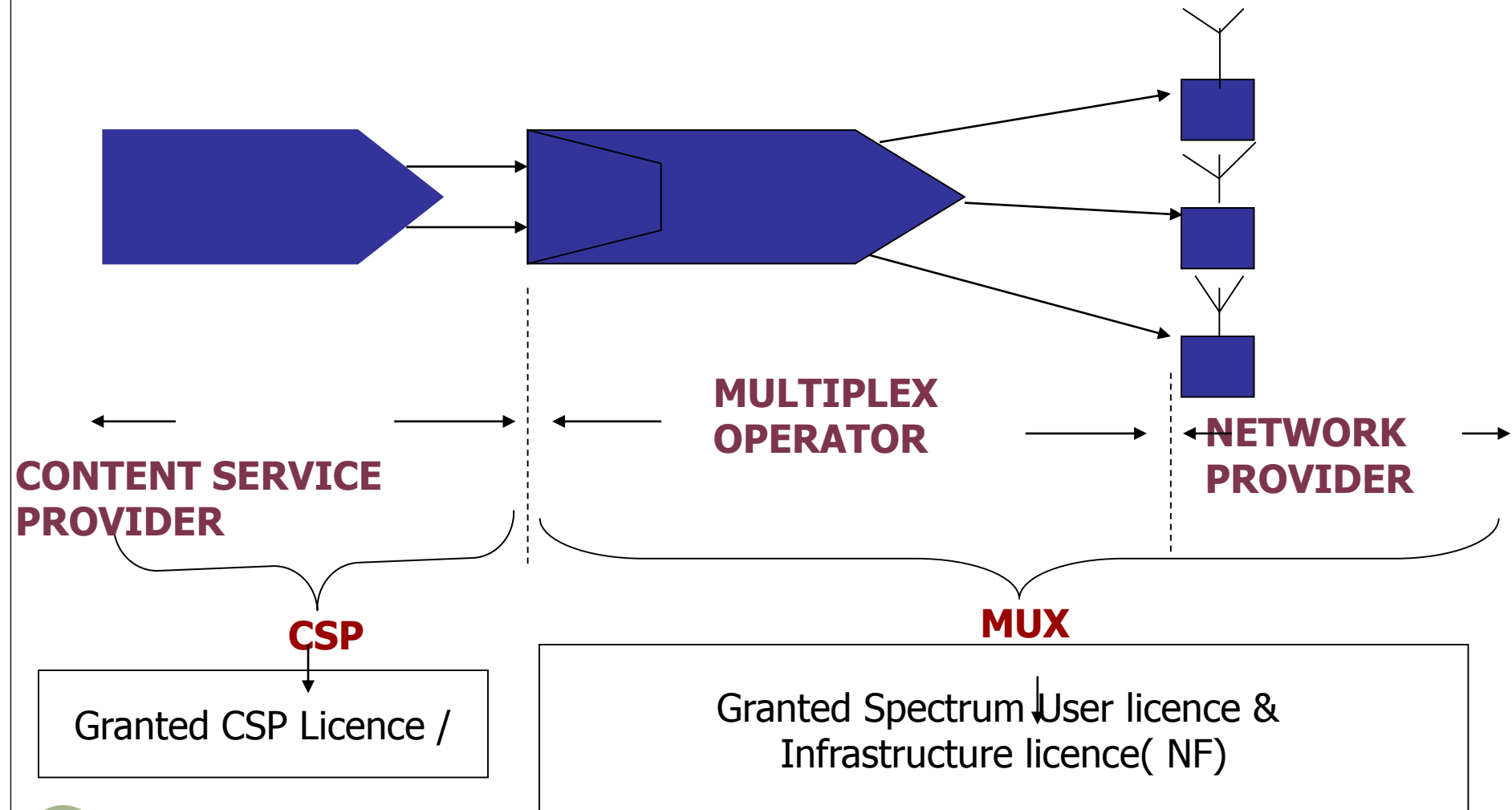
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Consultation. Co'td

(c) 2008: Inter-Ministerial National Steering Committee (NSC) as a Government Organ to oversee migration. NTC-DB provides technical advise to NSC.

(d) 2007: Consultation on Regulatory Framework (Separation of Transmission/Content- **Figure 2.** below)



Consultation. Co'td

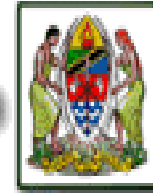
(e) 2010/11: Legal Framework was put in place:-

- (i) Enacting of the Electronic & Postal Communications Act, 2010 (EPOCA) by the Parliament of Tanzania and its ascension by the President. EPOCA provides for DTT migration;
- (ii) 2011 : EPOCA(Digital and other Broadcasting Networks) Regulations, 2011 which provide for Analogue Switch Off (ASO) on 31st December, 2012,
- (iii) 2011: The Government through the NSC approved a phased ASO in all simulcast service areas beginning with Dar Es Salaam(31/12/2012), Dodoma/Tanga (31/1/2013), Mwanza (28/2/2013), Arusha/Moshi (31/3/2013) and Mbeya (30/4/2013).

(f) 2010: Licensing of MUX through an open tender. Three Multiplex Operators were licensed to provide digital signal distribution



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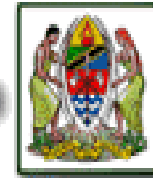
4. Communication Strategy

Communication is power. One of the key success factors was to identify and categorize the audience profile for effective outreach:-

- 2010 TCRA formulated a Communications Strategy (CS) and approved by the Government.
- The CS provided for all communications outlets including print and electronic media (newspapers, TV/Radio) roadshow, talkshows, meetings/seminars and outdoor advertising.



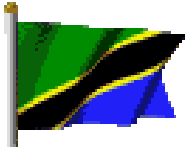
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Communication Strategy. Co'td

jingles and songs(audio and visual) from villages to national level, tailor made for various age groups, various social spheres, government to private sector;

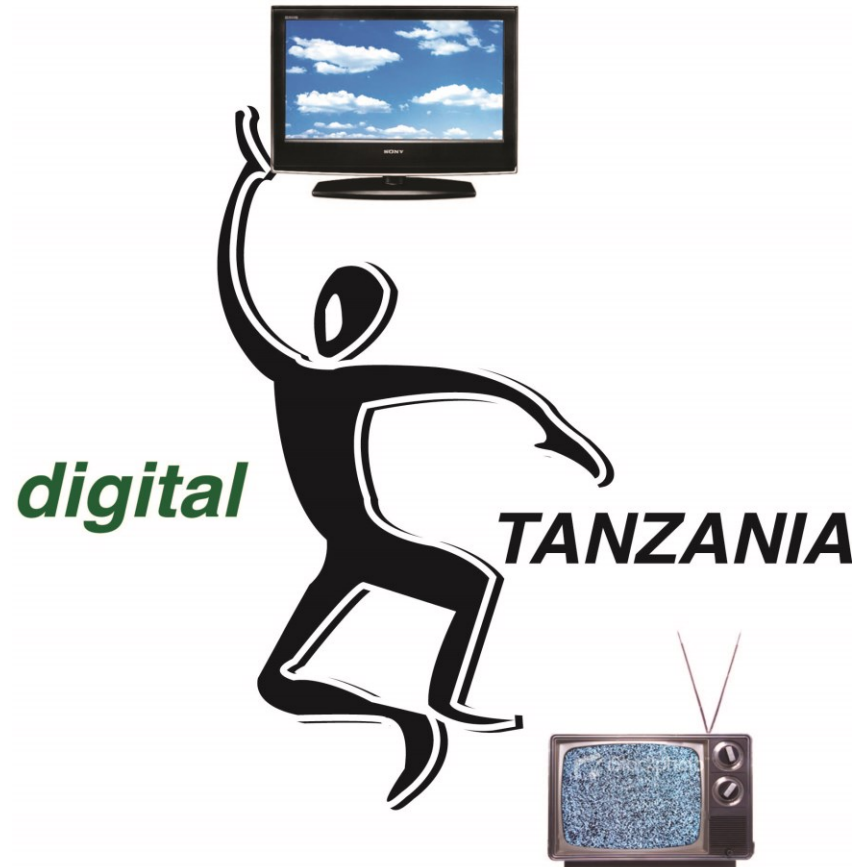
- 2011: The President of the United Republic of Tanzania launched the Public Awareness Campaign and the digital logo on 24th August, 2011 (Fig.3);



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DIGITAL LOGO





Launching the Public Awareness



**The President of Tanzania
launching the Public Awareness
Campaign and unveiling the
Digital Logo on 24th August,
2011**

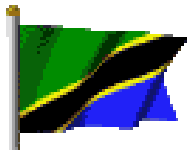
5. Cost

- NSC considered recommendations from the NTC-DB on how to finance DTT networks:-
 - (a) **Public Private Partnership (PPP)** for the public signal distributor (public broadcaster entered into a joint venture with a foreign company to build DTT infrastructure;
 - (b) **Private Investments** for two additional signal distributors with local and foreign shareholders ;
 - (C) **Government exempted import duty** on STBs to make them affordable to consumers.

6. Consumers

Key factors addressed:-

- Consumers' willingness to voluntary digital uptake;
- Availability of STBs. There are over 1000 distribution centres for STBs;
- STBs Affordability by import duty exemption;



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Consumers..Co'td

- Provision for customer care including toll free telephone lines by service providers for customer technical support;
- Active consumer feedback mobilisation by the Consumer Consultative Council;
- Quality of Service (QoS) and Quality of Experience (QoE) assurance by the Regulator;



7 Well Planned ASO



The NTC-DB Set Criteria for Analogue switch off

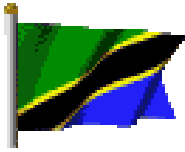
- The Analogue TV service area should be well covered with digital TV signal;
- Sufficient public awareness campaign on digital migration in a specific area;
- Availability of the Set Top Boxes;
- Tax exemption of the STBs to ensure affordability.



Challenges

● **Issues Related to Network Rollout**

- High costs of Simulcast Period: parallel running of DTT and analogue networks ; satellite capacity cost, utilities and human resource;
- Coordination with neighbours not yet switched-on;
- Inability by MUX to roll out countrywide (achieved 22% DTT population penetration vs 24% Analogue coverage);
- DTT black spots due to un-even terrain/erected towers;
- Regional and rural insertion to MUX's network.

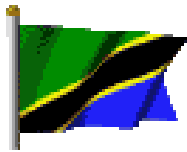


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Challenges..Co'td

- **Issues Related to Network Rollout ..Co' td**
 - Over compression by MUX compromising QoS and QoE;
 - Deployment of DVB-T and DVB-T2 network paradox (transition within transition).



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Challenges..Co'td

● **Issues related CSP /MUX Relationships**

- MUX complications on Service Level Agreement (SLA) with Content Service Providers (CSPs);
- High transmission fees imposed by MUX to CSPs prior to ASO. TCRA intervened and established Cost Based Fee (CBF) charged my MUX to CSPs based on satellite (http://www.tcra.go.tz/consultative_docs/pcd_mux_cbf_2012.pdf) with a ceiling of US\$ 3800 per channel per transmission site. Further study ongoing to establish a model for the use of fibre optic National ICT backbone and retail last-mile connectivity;
- Few CSPs caught by surprise on ASO day ;

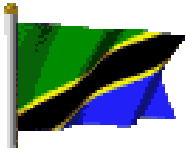


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Challenges..Co lu

- **Issues related to Content**
- Lack of content to fill out increased capacity;
- Lack of compelling local content;
- Escalating piracy and copyright issues due to increased capacity and innovation within the DTT making it easy to copy, edit and manipulate works of others;
- Lack of harmonised regulatory framework to share content.
- Lack of regulatory frameworks for content across platforms



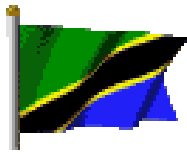
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Challenges..Co lu

● Issues related to Consumer s

- Lack of consumer awareness on digital migration;
- Lack of consumer understanding of STB/antenna **installation** and **use of remote control** functionalities;
- Distribution of STBs was not steady in the beginning;
- STBs inter-operability;
- STBs backward compatibility, presence of DVB-T and DVB-T2 in Tanzania;
- Liberalisation of STB importation? Quality control?
- Image pixilation on screens(weather/aircraft);

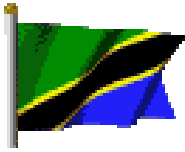


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Lessons

- Success of digital migration based on practical experience in Tanzania depends on the following key factors;
 - (a) Political will;
 - (b) Roadmap (SMART-Specific, Manageable, Attainable, Realistic and Time-bound);
 - (c) Legal and Regulatory instruments;
 - (d) Concerted Public Awareness Campaigns;
 - (e) Regular consultations with stakeholders;
 - (f) Resources;



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Lessons ..Co'td

- (f) DSO team (skills);
- (g) Champions (Head of State, Minister, Artists);
- (h) Operators goodwill;
- (i) Consumer willingness;



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Conclusion

The Tanzania success story was realized by the following:-

1. Personal involvement of the President of the United Republic of Tanzania, H.E Jakaya Mrisho Kikwete;
2. Aggressive Public Awareness Campaign
3. Appropriate Legal/Regulatory Framework;
4. Stakeholders participation from planning to implementation;



Thank You

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