

Keynote address: Where is the world with the digital switchover?

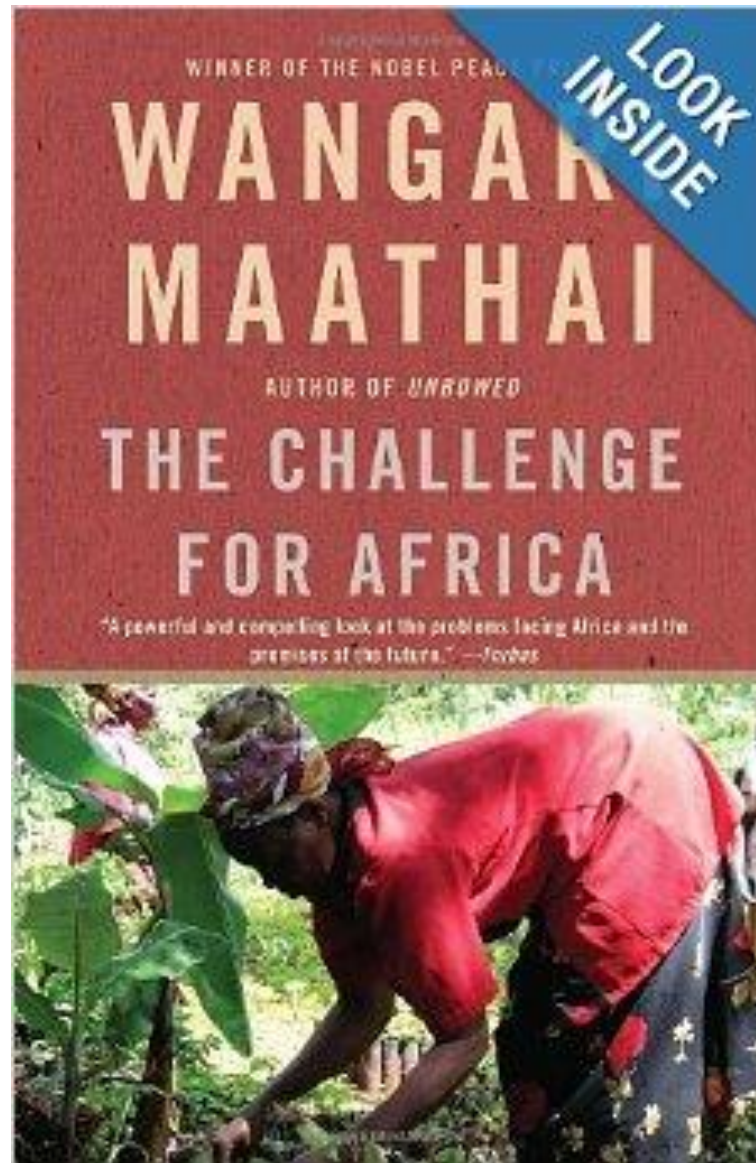
Pham Nhu Hai, Head of Broadcasting Services Division, Radiocommunication Bureau, International Telecommunication Union

**DIGITAL BROADCASTING SWITCHOVER FORUM
AFRICA 2014
11-14 February 2014
Arusha, Tanzania**

**Where is the World with
Digital Switchover?**

Pham Nhu Hai
Head, Broadcasting Services Division
ITU Radiocommunication Bureau





Agenda

- DSO challenges
- Worldwide status
 - How DSO managed?
 - Will they meet the target?
- Africa stock take
 - Where are we?
 - What to be done?
- Conclusions



No easy process!

- Revising existing policies and regulations and Taking key policy and regulatory decisions
- Allocating required budget
- Rolling out the network
- Producing content
- Educating the public.

Viewers

More programs

Interactive



Better quality

Anywhere



Remember the Music Industry?



Key moment for Diverse and Local Contents

New players

Better access



Small players

Competition

Diverse program



Spectrum Efficiency



International
Telecommunication
Union

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Digital Dividend

- The digital dividend is the amount of spectrum made available by the transition of analogue television to digital.
- The digital dividend represents very significant amounts of spectrum.

Broadband Benefits to Emerging Markets

(Source: McKinsey&Company)

- At today's western Europe penetration level
 - GDP: 300-400B, 10-14M jobs
 - Africa: 40-90B, 1.3-3.1M jobs
- Overall social welfare
 - Human capital
 - Improve healthcare
 - New income opportunities



10% increase in broadband's household penetration

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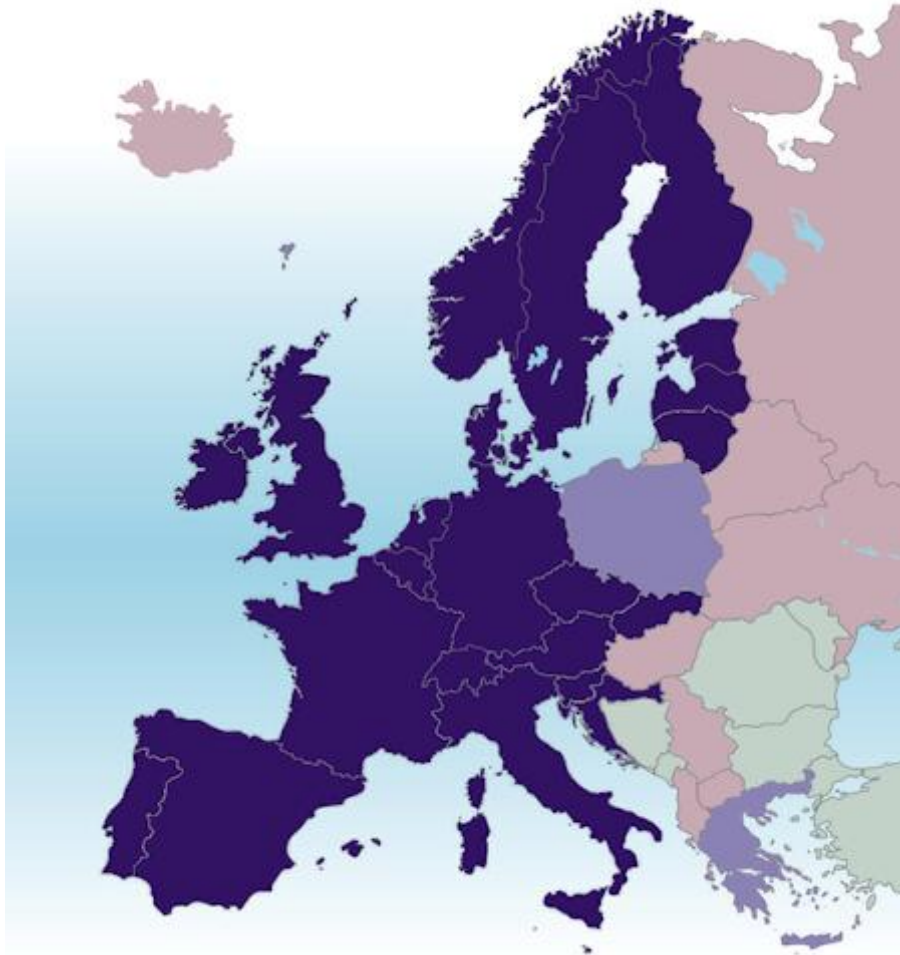
0.1-1.4% boost to the country's GDP






WORLDWIDE STATUS



Europe 2013



-  Countries which have not yet formally launched
-  Countries with some DTT services launched
-  Countries with analogue switch off (ASO) process underway
-  Countries which have completed ASO

DigiTAG



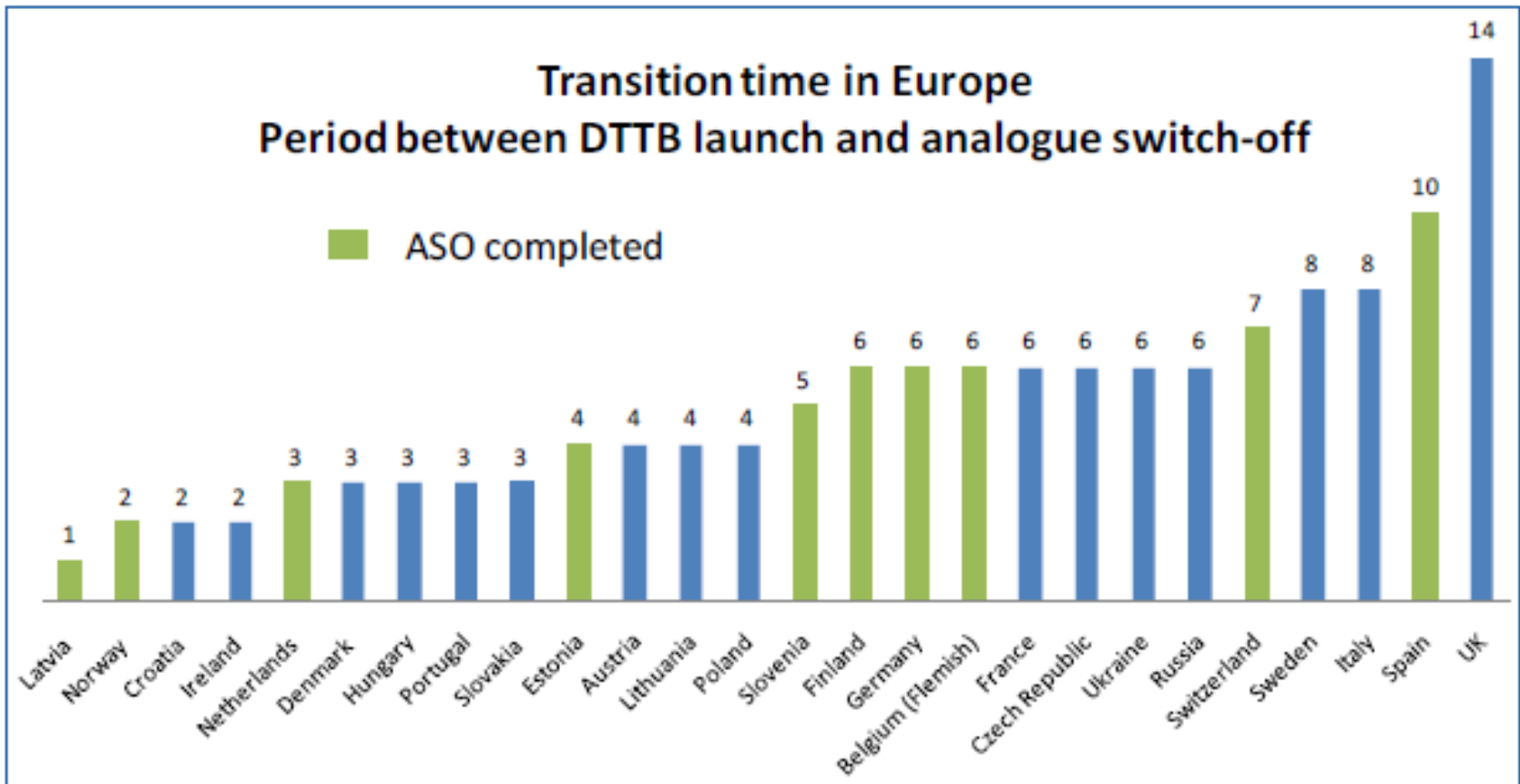
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ASO - EUROPE

Country	Launch date	Compression format	Completion of ASO
UK	1998	MPEG-2	Completed
Sweden	1999	MPEG-2	
Spain	2000/ 2005	MPEG-2	Completed
Finland	2001	MPEG-2	Completed
Switzerland	2001	MPEG-2	Completed
Germany	2002	MPEG-2	Completed
Belgium (Flemish)	2002	MPEG-2	Completed
NL	2003	MPEG-2	Completed
Italy	2004	MPEG-2	Completed
France	2005	MPEG-2/MPEG-4 AVC	Completed
Czech Republic	2005	MPEG-2	Completed
Denmark	2006	MPEG-2/MPEG-4 AVC	Completed
Estonia	2006	MPEG-4 AVC	Completed
Austria	2006	MPEG-2	Completed
Slovenia	2006	MPEG-4 AVC	Completed
Norway	2007	MPEG-4 AVC	Completed
Lithuania	2008	MPEG-4 AVC	Completed
Hungary	2008	MPEG-4 AVC	2014
Ukraine	2008	MPEG-4 AVC	2014
Latvia	2009	MPEG-4 AVC	Completed
Portugal	2009	MPEG-4 AVC	Completed
Croatia	2009	MPEG-2	Completed
Poland	2009	MPEG-4 AVC	2013
Slovakia	2009	MPEG-2	Completed
Ireland	2011	MPEG-4 AVC	Completed
Russia	2012	MPEG-4 AVC	2015



Transition Periods



- Preparation and planning time: 2 to 8 years
- Implementation and ASO time: 1 to 14 years
- Countries starting later need in general less time

Asia-Pacific

Country	Analog TV switchover	Committed to implement APT700	Assigned / Licensed AP700
Japan	2011	Yes	2x30 MHz
Korea (Rep.)	2012	Yes	2x20 MHz
Australia	2013	Yes	Full APT700
New Zealand	"	Yes	Full APT700
Tonga	2014	Yes	2X15 MHz
India	2015	Yes	Not yet
Singapore	"	Yes	Not yet
Malaysia	"	Yes	Not yet
Brunei	"	Yes	Not yet
China	2018	Yes (TDD)	Not yet
Indonesia	"	Yes	Not yet
Thailand	2015	No	No
Philippines	2018	No	No
Others	Not decided	No	No

Asia Pacific ASO Timetable

ECONOMIES	Year	System	Mobile
AFGHANISTAN	ND		
AUSTRALIA	2013	DVB-T	
BANGLADESH	2015	DVB-T	
BHUTAN	2020	DVB-T/T2	
BRUNEI DARUSSALAM	2015	DVB-T	
CAMBODIA	2015	DVB, DTMB	T-DMB
CHINA, PEOPLE'S REPUBLIC OF	2018	DTMB	CMMB
COOK ISLANDS	2020		
DPRK	ND		
FIJI	2014		

Asia Pacific ASO Timetable..

HONG KONG (CHINA)	2015	DTMB	
INDIA	2015	DVB-T/T2	
INDONESIA	2018	DVB-T	
IRAN, ISLAMIC REPUBLIC OF	2020		
JAPAN	2012	ISDB	ISDB
KIRIBATI	ND		
KOREA, REPUBLIC OF	2012	ATSC	T-DMB
LAOS	ND		
MALAYSIA	2015	DVB-T	
MALDIVES	ND	DVB-T, ISDB-T	

Asia Pacific ASO Timetable...

ECONOMIES	Year	System	Mobile
MARSHALL ISLANDS	ND		
MICRONESIA	ND		
MONGOLIA	2014	DVB-T2 (-T)	CMMB/DMB-T (DVB-H)
MYANMAR	2020	DVB-T2	
NAURU	ND		
NEPAL	2017	DVB-T2	
NEW ZEALAND	2013	DVB-T	
PAKISTAN	ND		
PAPUA NEW GUINEA	ND		

Asia Pacific ASO Timetable

PHILIPPINES	2018		
SAMOA	ND		
SINGAPORE, REPUBLIC OF	2015	DVB-T/T2	
SOLOMON ISLANDS	ND		
SRI LANKA	2017	DVB-T2	
THAILAND	2015		
TIMOR LESTE	ND		
TONGA	2014	DVB-T2	
TUVALU	ND		
VANUATU	ND		
VIETNAM, SOCIALIST REPUBLIC OF	2020	DVB-T	



Roadmaps - Asia Pacific

- Bangladesh
- Bhutan
- Fiji
- Indonesia
- Lao PDR
- Maldives
- Micronesia
- Myanmar
- Papua New Guinea
- Philippines
- Thailand
- Timor-Leste
- Vietnam and
- Vanuatu



Latin America

Country	Standards	DTT Launch	ASO complete
Brazil	ISDB-T	2002	2016
Colombia	DVB-T	2010	2019
Chile	ISDB-T	2010	2019
Argentina	ISDB-T	2010	2019
Mexico	ATSC	2004	2022



AFRICA STOCKTAKE



ASO - Africa

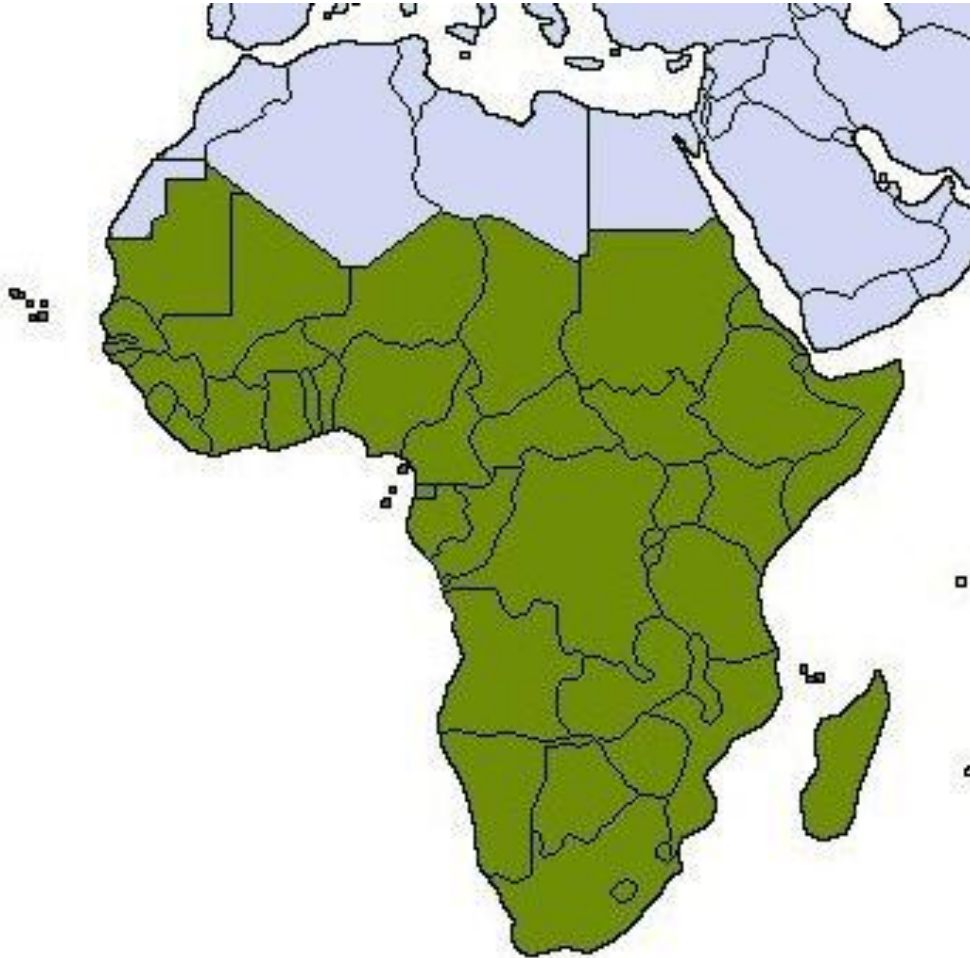
Country	Standards	DTT Launch	ASO
Mauritius	DVB-T	2005	31 Dec 2013
Tanzania	DVB-T2		31 Dec 2013
Seychelles	DVB-T2		2013
South Africa	DVB-T2		31 Dec 2013
Ghana	DVB-T2		31 Dec 2014
Egypt	DVB-T2	2010	Jun 2015
Benin	DVB-T2/MPEG4		Jun, 2015 : UHF Jun, 2020: VHF
Algeria	DVB-T/MPEG2	2010	2015
Nigeria	DVB-T2		Jun 2015
Senegal	DVB-T2	2014	Jun 2015
Cameroon	DVB-T2/MPEG4	2013	2015

ASO – Africa ...

Country	Standards	DTT Launch	ASO
Burundi	DVBT2/ MPEG4		Not decided
Chad	DVB-T2 but not officially decided		Not decided
Côte d'Ivoire	DVB-T2		Not decided
Democratic Republic of the Congo	Not Yet Decided		Not decided
Ethiopia	DVB-T2	Jan 2013	Not decided
Gabon	Not decided		Not decided
Gambia	DVB-T2	2015	Not decided
Guinea-Bissau	Not yet decided		Not decided
Mali	DVB-T2		Not decided
Sudan	DVB-T but not officially decided		Not decided
Togo	DVB-T2		Not decided



Sub-Saharan Countries



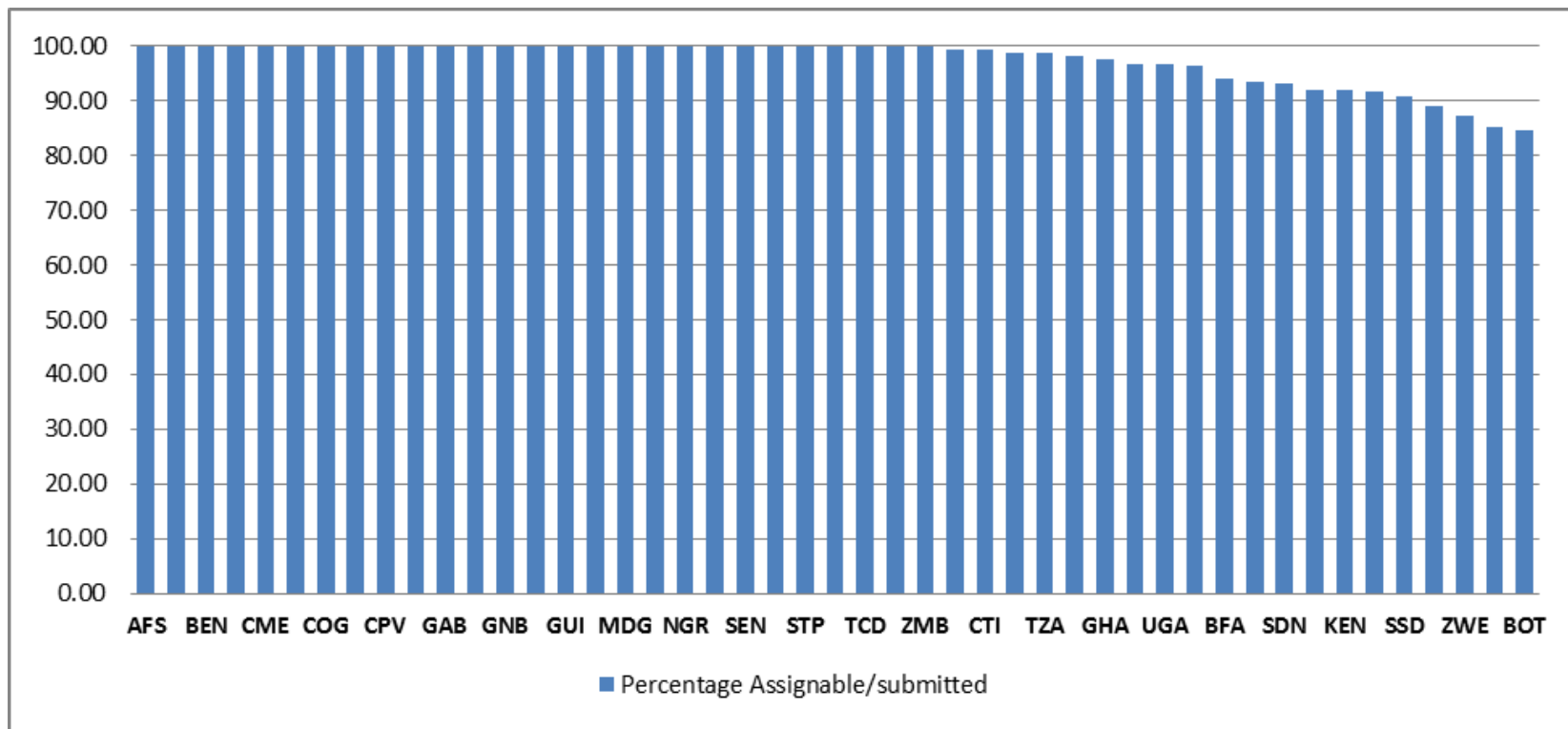
Planning Objective

- To identify a minimum of 4 coverage layers (multiplexes) for the territories of all sub-Saharan African countries
- Above 694 MHz for Mobile service (Digital Broadband)



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Iteration 33



<http://www.itu.int/ITU-R/terrestrial/broadcast/ATU/index.html>



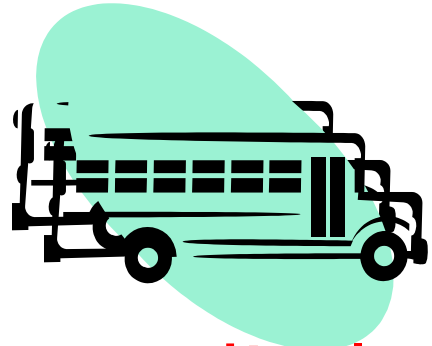
Roadmaps - Africa

- Burundi
- Chad
- Democratic Republic of Congo and
- Equatorial Guinea
- Gabon

CONCLUSIONS



We are on the RIGHT BUS!



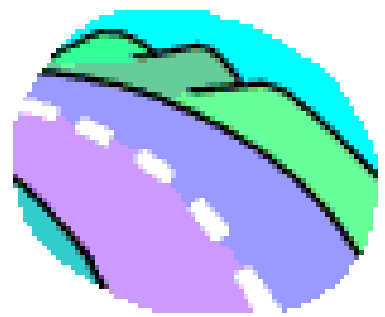
Diverse media landscape

eGovernment

eHealth

eEducation

eCommerce



We cannot tire and give up. We own
it the present and future generations
of all species to rise up and walk.

Wangari Maathai





Work together!



Get on the BUS!



Thank you for your attention!



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