



# NAB PRESENTATION TO THE DOC FOLLOW-UP WORKSHOP ON RADIO FREQUENCY SPECTRUM POLICY

Presented By:

Karen Willenberg, NAB Chairperson

David Mathe, Deputy Chairperson of NAB Technical Committee

Date: 15 October 2013

# Who is the NAB

Industry Association, established in 1994

Current NAB Members:

- The three television services and the 18 radio services of the SABC
- All licensed commercial radio broadcasters (includes: Primedia , Kagiso Media , Tsiya Group, AME, Classic FM, YFM, Capricorn FM)
- All licensed commercial television broadcasters ( e.tv, Multichoice, M-Net, Top TV)
- 35 community radio broadcasters and one community television broadcaster
- Both the licensed broadcast signal distributor and the selective and preferential broadcast signal distributor (Sentech and Orbicom)

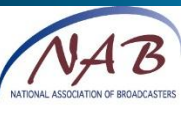
# NAB Mandate

The organisation is a voluntary, non profit entity , funded solely by subscriptions of its members, established to:

- Ensure a broadcasting system that provides choice and diversity for audiences
- Create a favourable climate for broadcasters to operate within
- Ensure a broadcasting industry grounded in the principles of democracy, diversity and freedom of expression



# Policy Considerations



# Background and context

- ▶ On 18 September 2009 the DOC published a draft Spectrum Policy for public comment
- ▶ The NAB participated in this public consultative process, which led to the department publishing a final Spectrum Policy on 16 April 2010
- ▶ The NAB notes that the DOC has called this workshop to consider a review of the 2010 Spectrum Policy. It is apparent that the DoC has been engaging with a range of stakeholders, however the NAB has not had the opportunity to meet the DOC on the proposed Spectrum Policy review process until today
- ▶ The NAB therefore appreciates this workshop, and would require additional time to consult its membership on key matters that affect broadcasters

# Importance of Television

There are fundamental principles the NAB would like to bring to the attention of the DoC in relation to broadcasting:

- ▶ Analogue Terrestrial Television currently provides Television services to over 41 million South Africans
- ▶ Terrestrial Television is a mass medium which educates, informs and entertains and provides a range of public interest services - most of which are delivered free-to-air (FTA)
- ▶ Approach to spectrum allocation as a result of digital migration and the digital dividend must take into account the importance of Terrestrial Television in SA
- ▶ Spectrum is directly linked to the future viability of Terrestrial Television and serving the needs of citizens

# Approach to Digital Dividend

- ▶ The NAB acknowledges that Mobile Telecommunication operators have a direct interest in gaining access to the digital dividend 1 and that there may be significant socio-economic benefits in facilitating such access
- ▶ The NAB has no in-principle objection to this, provided that:
  - This happens within the context of national policy
  - The DOC has considerations for the digital to digital migration –
    - On a policy/ national position level
    - Considering costs and timelines
  - The spectrum needs and future viability of Terrestrial TV are taken into account
  - Migration programmes, including digital to digital migration, and re-stacking plans, are managed in such a way that there are sufficient financial incentives to terrestrial TV broadcasters and no disruption to terrestrial TV viewers

# Timing and Funding

- ▶ Releasing the digital dividend means that approximately three quarters of South Africans will need access to a DTT STB before analogue transmissions can be switched off, while the other quarter will need a DTH STB
- ▶ The NAB believes the approach to the digital dividend 1 must take into account the need for government to facilitate and fund an efficient migration process
- ▶ For digital dividend 2, spectrum efficiency must be carefully considered

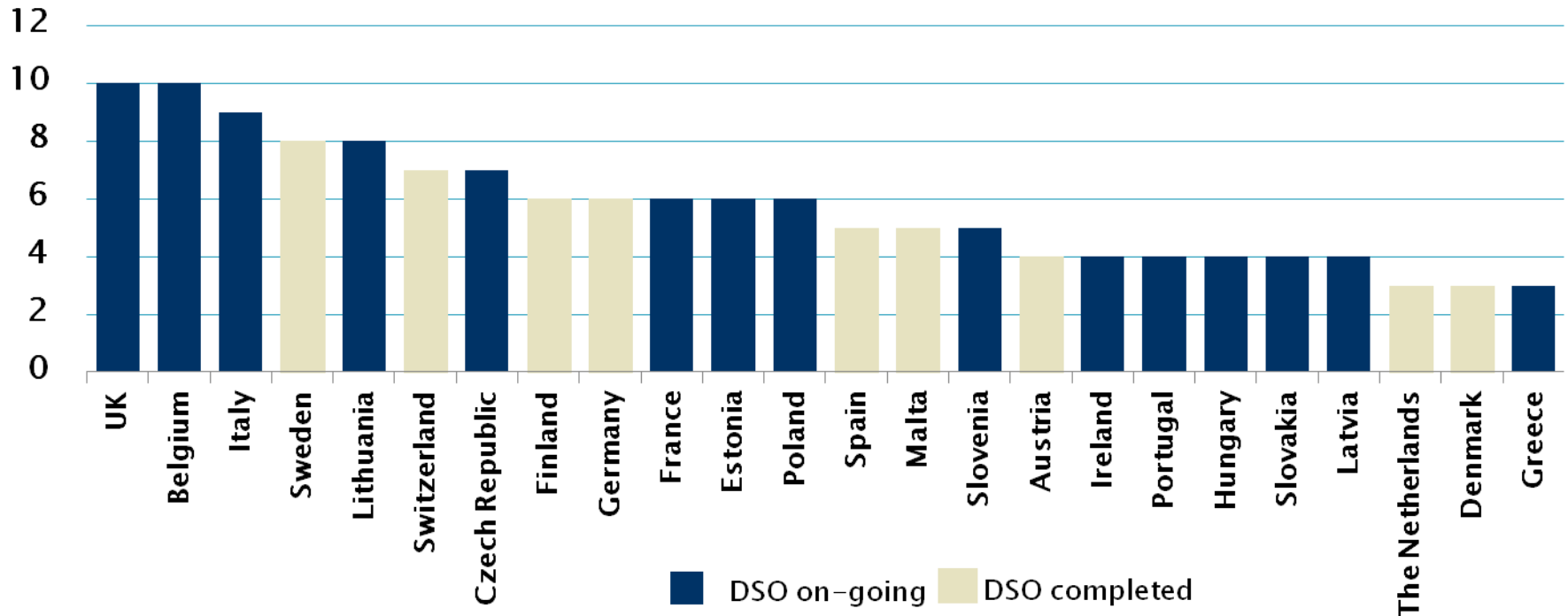


# Timing and Funding...cont

- ▶ The removal of broadcasters from the band 694-790 on a national level will not equate to spectrum efficiency
- ▶ **Co-existence as a principle means that both Mobile IMT and Broadcasting must enjoy mutual benefit**
- ▶ Without an efficient and well-funded process there will be no dividend in the foreseeable future
- ▶ The considerable costs as a result of re-stacking need to be taken into account

# Timelines for the migration

Source: Farncombe



Digital migration processes take on average 6 years to complete but many of those countries already completed had low FTA terrestrial share – unlike South Africa with a relatively high rate of reliance on terrestrial television

# Timelines for the Migration in SA

- ▶ SA has already experienced multiple delays:
  - 2 years to finalise regulations and frequency plan
  - 18 months to finalise STB specification
  - Debate on standards caused a delay of more than a year
  - Delay in the publishing of the performance period (still not concluded)
  
- ▶ Impact of delays...
  - Project lost momentum
  - DTT platform credibility was damaged, and
  - Some investment wasted

# Funding the Migration

How other governments have funded their migration process



- Funding from spectrum auctions
- Direct subsidies to households, No “eligibility” criteria, user Coupons could cover up to 90% of the STB price, but consumers had to pay state and local sales tax on the coupon amount, which in effect reduced its value by US\$3.



- Subsidies for digital decoders & antennas targeting border areas where simulcast was impossible. Households already digital excluded, all types of decoders eligible
- Subsidies for digital decoders and antennas targeting the whole country. Only households with limited income eligible. All types of decoders eligible

Also government / public funding in UK, Italy, Germany, Austria

# Funding the Migration

## United Kingdom

### Funding

- 1.26 We will put funding in place to ensure that existing authorised and planned DTT users of channels 61 and 62 and PMSE users of channel 69 do not bear the extra costs that must reasonably be incurred to clear the spectrum. The Government indicated in the Digital Britain Final Report, published on 16 June 2009, that it will meet these costs.<sup>3</sup> We are currently in discussion with HM Treasury on the most appropriate disbursement mechanisms for the funds, which we believe are essential to such a major programme of work. We believe the direct cost of clearing the 800 MHz band in the UK, although modest in comparison to the benefits, will amount to about £115-250m (NPV).

Source: *Digital dividend: Clearing the 800 MHz band*, OFCOM, 30 June 2009, available on-line on 26 June 2013 at

<http://stakeholders.ofcom.org.uk/binaries/consultations/800mhz/statement/clearing.pdf>

•PMSE – Programme Making and Special Events

# Funding the Migration SA Context

- ▶ Currently SA government funding is narrowly targeted and drawn solely from the National Fiscus
- ▶ Based on international best practice, the NAB believes broader funding is required which should be drawn from digital dividend proceeds
- ▶ The NAB proposes that government funds the migration from the proceeds of spectrum
- ▶ The costs attributed to digital to digital migration and re-stacking to also be funded by government

# Terrestrial TV spectrum needs

- ▶ Worldwide trends show that more spectrum for broadcasting services are envisaged, eg for HD, 3D TV, Ultra HD
- ▶ The DOC is aware of the need to cater for future spectrum requirements of broadcasters and to this end:
  - The DoC published a policy direction to ICASA (GG 34848) directing ICASA to amongst others:
    - undertake an inquiry into the rational and efficient exploitation of the remaining VHF and UHF spectrum for future digital dividends, and report to the Minister on the following issues:
    - Future spectrum requirements for all 3 spheres of digital terrestrial television broadcasting (public, community, commercial) in the next 10 years
  - The DOC commissioned a study by ZComs/Deloittes to evaluate future broadcasting spectrum needs. This study should be published as a matter of urgency as it will guide the industry on future spectrum requirements and efficient spectrum allocation
- ▶ ITU Working party 6A conducted a study for the JTG 4-5-6-7, detailing additional spectrum requirements for broadcasters



# Technical Considerations





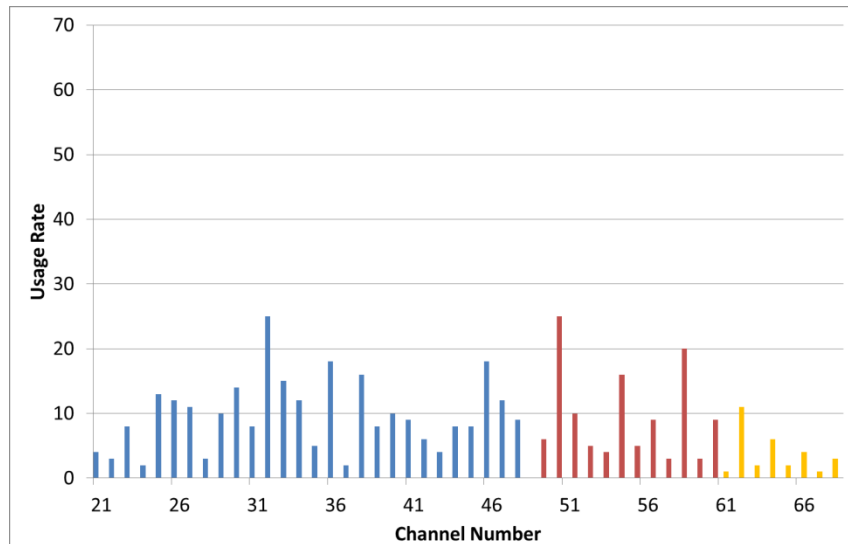
# WRC-12 Resolution

- ▶ During the WRC 12, Resolution 232 of the WRC-12 was reached. The Resolution stated among others:
  - To allocate the frequency band 694-790 MHz in region 1 to mobile IMT services on a **Co-Primary basis with other services to which this band is allocated on a Primary basis**
  - That the allocation will be effective after WRC-15
  - That WRC-15 will specify the technical and regulatory conditions applicable to the mobile service allocation, taking into account the ITU-R

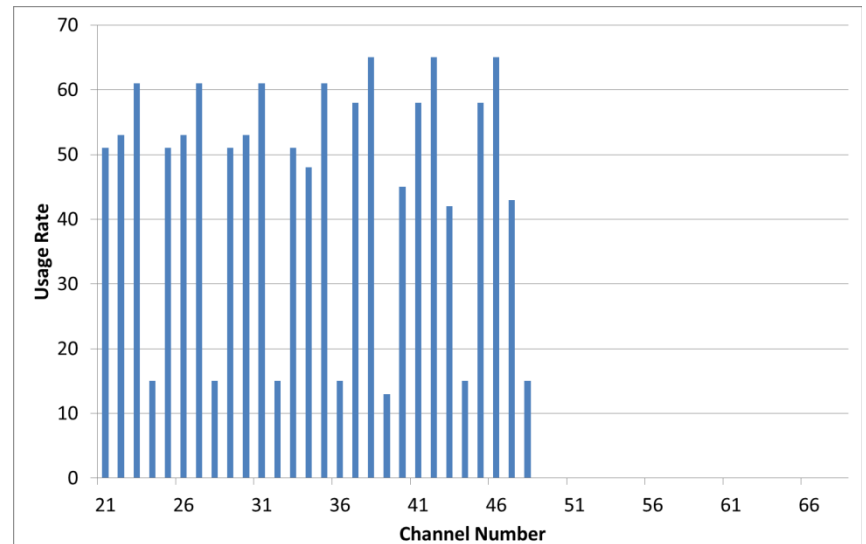
# WRC-12 Resolution...cont

- ▶ The resolution states that the allocation will take place after WRC-15
- ▶ ITU-R is mandated to conduct a study on the spectrum needs for both broadcasting and mobile services
- ▶ The resolution does not advocate for a wholesale migration of broadcasting services out of band 694 -790 MHz
- ▶ **In line with the ECNS licensees' view, the NAB is in agreement that allocation is still subject to the conclusion of the WRC15 on technical requirements**
- ▶ The findings of the ZComs/Deloitte study will assist this process in determining the spectrum needs for the Terrestrial Television broadcasters in the future

# ICASA published plan



ICASA TBFP 2013 (Annexure G)  
(2x National DTT + 1 Metro DTT)



ICASA TBFP 2013 (Annexure J) 7 Mux plan  
(7x National DTT mux – below 694 MHz)

# What is restacking?

- ▶ Reorganising Television Broadcasting spectrum to release dividend spectrum
  - Repacking Television services within the remaining broadcast spectrum
  - Possible post ATV switch-off (mostly)

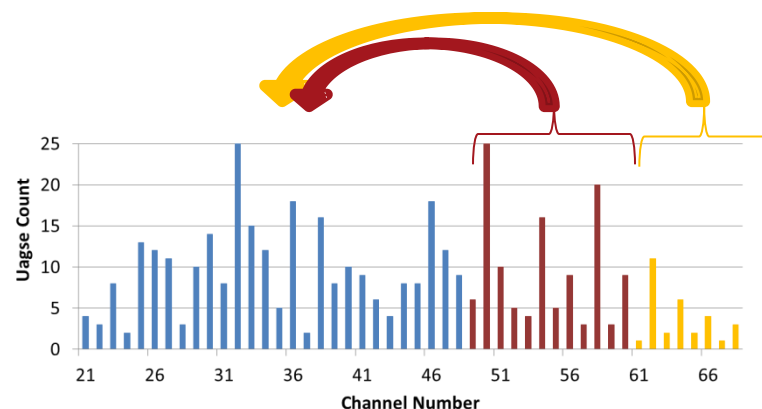
- ▶ Requires

- Clear policy directive
  - DD1 (790 –854 MHz)?
  - DD2 (694 - 790 MHz) ?
  - Both? By when? and HOW?
- Careful re-planning
- International coordination
- Major funding
- Competent and proficient signal distributor
- Detailed implementation plan

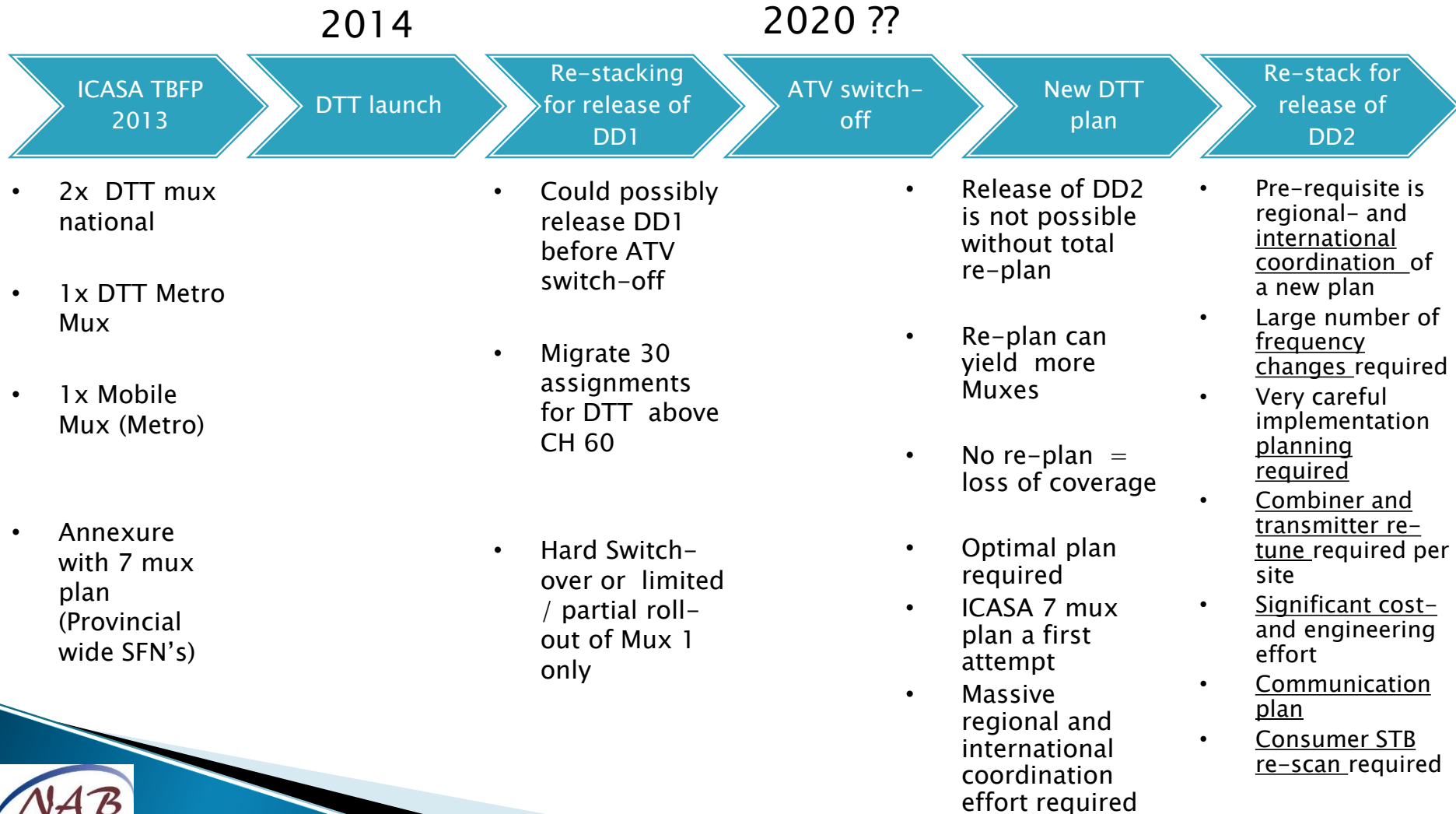
Communication with consumers

- ▶ International examples

- UK – OFCOM (DD1)
- Australia - ACMA (Both DD1 and DD2)



# Process

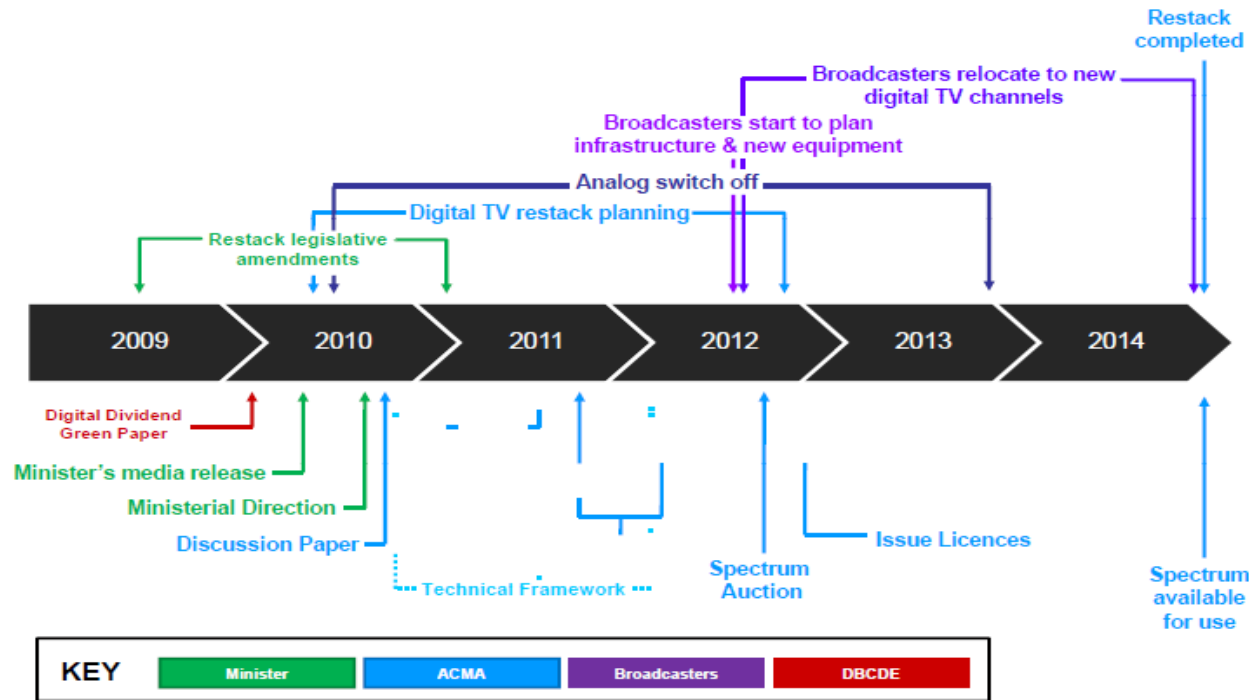


# ICASA re-stacking discussions

- ▶ ICASA published 2013 terrestrial broadcasting frequency plan (March 2013)
- ▶ Broadcasters tabled concerns of the complexity and cost of re-stacking with JSAG (Joint Spectrum Advisory Group)
- ▶ Includes a Annexure of a 7 Mux plan
  - Objected to by all broadcasters
  - Not optimal - not local community broadcasting
  - Requires significant international coordination
  - Engineering research required
  - Very large area SFNs and the unknown impact of tropospheric interference due to ducting on long term stable operation
  - ICASA is in the process of debating this plan within SADC

# Australian Communication and Media Authority (ACMA) Overview

## Yielding the Digital Dividend: *The Restack and Reallocation Processes*



Source: *Clearing the Spectrum*, ACMA, 2010, available on-line on 26 June 2013 at [http://www.acma.gov.au/webwr/\\_assets/main/lib311953/c\\_hose-acma\\_clearing\\_the\\_spectrum\\_restack.pdf](http://www.acma.gov.au/webwr/_assets/main/lib311953/c_hose-acma_clearing_the_spectrum_restack.pdf)

DBCDE – Department of Broadband Communications and Digital Economy

# Implementation Challenges (Band re-plan to 7 Mux plan)

- ▶ Successful international coordination is a prerequisite for implementation
  - Significant progress with 7 Mux plan
  - Transition process undefined and unclear
- ▶ In addition, Regional co-ordination on implementation plans (timing) is essential
- ▶ Large number of frequency changes
  - **376** frequency changes required for DTT
  - All Mobile mux frequencies must also change
  - **Only 9 Frequencies in current plan don't change**



# Implementation Challenges (Band re-plan to 7 Mux plan)...cont

- ▶ Implementation is theoretically possible
  - The “how” is hugely complex
  - Needs a competent re-tuning team travelling to every site in South Africa
    - Re-tuning transmitters
    - Re-tuning combiners
  - Significant combiner and resource costs
  - Clear viewer / subscriber communication strategy
  - Significant time required
    - Optimistically - 2-3 years

# Conclusion

- ▶ The criteria to achieve analogue switch off must be determined
- ▶ Re-plan of broadcasting spectrum use post Analogue Switch Off is inevitable
  - To yield the Digital Dividend(s)
  - To use the available broadcasting spectrum more efficiently
  - Either re-plan or lose coverage
- ▶ It will take a significant effort to arrive at a frequency plan that allows for re-stacking
  - Deriving an “optimal” plan
    - Community and local broadcasting
  - Engineering studies
    - Long-term implementation and interference studies
    - Configuration change and reduction in data rate
  - International coordination
  - Addressing the cost and compensation matters- who pays?

# Conclusion....cont

- ▶ The needs of all players in the ICT sector must be balanced
- ▶ FTA Broadcasters cannot recoup costs directly from audiences/consumers
- ▶ Broadcasting provides core education, information and entertainment services to citizens across the country
- ▶ The timeline for the migration should be realistic as it is not entirely dependent on broadcasters or signal distributors but also depends on effective take-up by the general public/consumers
- ▶ Migrating broadcasters must be given additional incentives for the migration to speed up the process

The NAB welcomes the DoC's Spectrum Policy Review initiative and we look forward to robust engagement on key issues affecting the broadcasting industry

**Thank You**