



Digital dividend or digital disaster: lessons from South Africa

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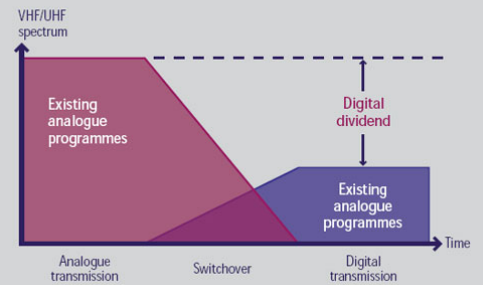
Expert Forum, Colombo, October, 2012.

Outline - SADC & SA case

- Digital dividend - need for convergence and public interest perspective.
- Access to information/freedom of expression
- Open access and infrastructure sharing
- Business development for current players/new entrants
- Spectrum Allocation/assignment - efficiency/public interest/redress/
- Dual illumination/legacy issues
- Multiplex allocation: HDTV and channel availability
- Standards/set top boxes/ condition access/ECG
- industrial policy vs. consumer welfare/competition regulation
- Subsidies
- Regulatory forbearance/ limitations on competition
- Co-ordination

Digital Dividend

Figure 1 — Digital dividend spectrum



Dividend between
800MHz and 1GH
Dividend 1 (790MHz)
Dividend 2 (Below
790MHz)

Source: ITU News available at <http://www.itu.int/net/itunews/issues/2010/01/27.aspx>



Digital Dividend

- Prime spectrum around the 700MHz and 800MHz bands -particularly suitable for the deployment of high-speed wireless broadband services using technologies such as LTE and 4G
- Spur new competition in the broadband market, drive down prices and improve market penetration
- Legacy issues of broadcasting services - TV and radio remain primary mode of information and education - public vs. state broadcasting
- Co-ordinated and integrated approach required.



Changing world of communications (for some)

- Informa Telecoms estimates that by 2015, 20% of Internet traffic on the African will be carried by cellular networks, compared to the global average of 3%
- Demand for additional spectrum in sub-Saharan Africa is likely to be even greater than in high-income countries owing to the phenomenal mobile growth in Africa as wireless and mobile broadband only supplements wireline broadband in the first world (it is not their primary means of access to the Internet)
- Public policy issue of continued spaces for intermediated information, cultural exchange and education



Policy challenges

- Public interest and efficiency debate
- Market efficiency - affordable access
- Treasury pressures - artificial scarcity – barrier to entry
- Spectrum usage fee regime - getting the value right
- Efficiency in allocation (use it or lose it)
- SA redress challenges – premium on price of BEE capital Universal service objectives to be met
- Technology/service neutral licensing

Integrated approach required

- Enabling regulatory environment
- Infrastructure based competition (self-provide)
- Service based competition
- Physical infrastructure sharing – Cost reduction
- Environmental impact
- Alignment of policy objectives across national, local govt, SOE's, & private sector
- Open access and non-discriminatory regime

SADC Roadmap

SADC switchover 2013, ITU deadline 2015

- **Policymakers** responsible for policies that would allow for **accelerated migration** to digital broadcasting;
- the ICT **regulators** should be committed to setting regulatory frameworks conducive for digital broadcasting service provision cross border issues that will allow for **interoperability**;
- ICT **broadcasters and operators** are critical to the accelerated roll out of digital broadcasting networks and diffusion of the digital broadcasting service;
- **equipment manufacturers and vendors** have a key role to ensure adherence to the required and approved standards of equipment and hindrance to
- **dumping of e-waste** of analogue broadcasting equipments into the region;
- the **consumer rights groups** commitment and involvement is critical to the provision of **universally accessible digital broadcasting** services and assurance of the inclusion of people with disabilities and special needs in the accessing the new broadcasting services; and
- **harmonious** policy and regulatory approach that the region SADC should pursue to allow for **economies of scale** and **human capacity development** through shared knowledge and skills

SADC implementation

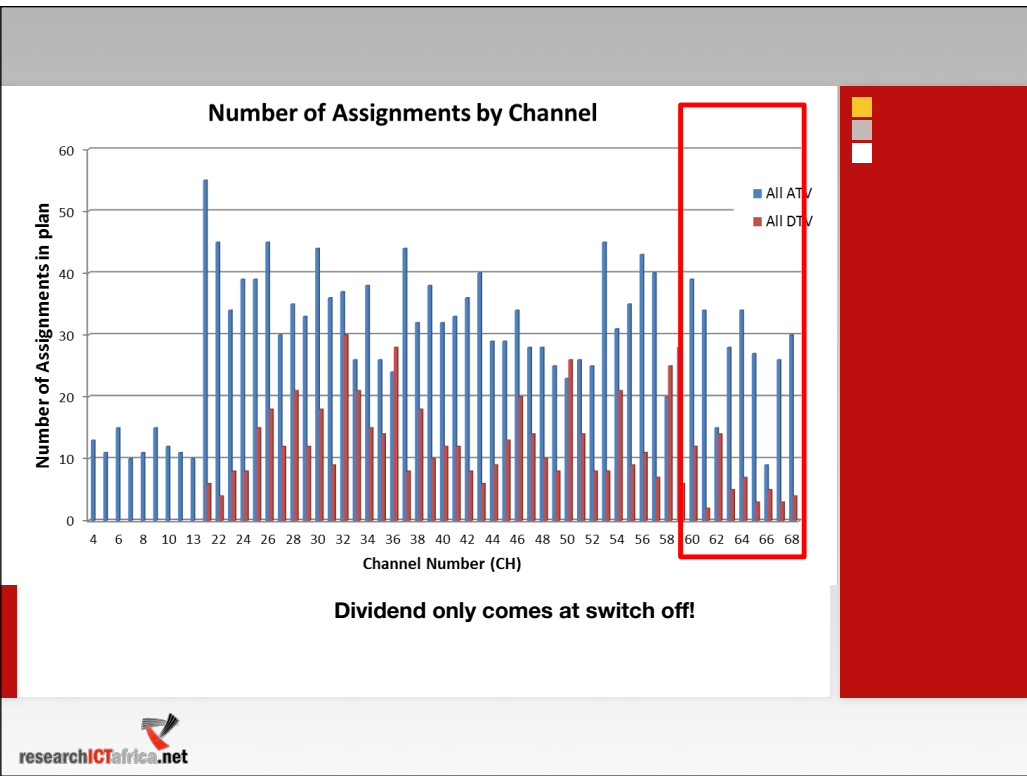
- establishment of the national targets, considering the different national situations to:
 - develop **harmonized technical standards** for digital broadcasting equipment and set top boxes (STB);
 - develop **harmonized frequency band plans** for the provision of the digital broadcasting services;
 - develop a **harmonized process for awarding the digital dividend**;
 - develop a harmonized **licensing** frameworks;
- develop harmonized **switch off date**;
- ensure equal **participation** of all **stakeholders** and include consumer participation to the migration process;
- ensure effective and adequate **human capacity development** in digital broadcasting; and
- to ensure that all the existing SADC **citizens having access** to analogue broadcasting services should have access to digital broadcasting.

Standards

- the basis of the standard should be based on the **GE-06 Plan**;
- **DVB-T** should be adopted as the standard, with the provision for countries to upgrade to **DVB-T2** should they elect to do so;
- long battle between the European DVB-T and Japanese ISDB-T digital broadcasting standards in South Africa delayed implementation by two years.
- Pilots in DVB-T already conducted when Minister committed to Brazilian adapted Japanese standard
- **MPEG 4** is recommended for adoption by SADC, however countries can elect to use MPEG 2 based on their country needs;
- MPEG 4 could be used for (Standard Digital Television) SDTV or (High Digital Television- HDTV, for both audio and video for the set top box shall be:
 - i. 170 – 230 MHz (VHF-H/ Band III);
 - ii. 230-238 MHz (VHF-H/Band III);
 - iii. 246 – 254 MHz (VHF-H/Band III) SA only
 - iv. 470 – 862 MHz (UHF/ Band IV/V);

Spectrum Allocation

- Band 790-862 MHz is allocated for mobile services including International Mobile Telecommunications (IMT) and should be used when available;
- recommended SADC to harmonize band plan for the **790 – 862 MHz and create a unified 800MHz band for electronic communications services;**
- initial emphasis to be placed on **migrating the bands 214 – 230MHz and 790-862 MHz;**
- where possible member countries should avoid making any new TV broadcast assignments in the band 790 – 862 MHz unless it is for the purposes of facilitating smooth migration process;
- consistent with the GE-06, member countries should facilitate the **sharing of the band 174 – 230 MHz for Digital Terrestrial Television (DTT) and T-DAB;**
- **DTT should be assigned to band (174 – 214) while T-DAB should utilize band (214-230MHz);** and additional band 230 – 238 / 246 – 254 MHz can be used for DTT services as per GE-06 plan (table A3.1 – 11); and
- In Mauritius the band (174 – 230) is shared between DTT & T-DAB.





Reconciling legacy issues & new opportunities

- Opportunity to bring new commercial & community broadcasters into historically limited environment
- Audience fragmentation - advertising revenues/subscription broadcasters
- Challenges to public broadcasting
- Who pays for dual illumination - existing broadcasters ? New entrants? Dividend beneficiaries? Universal service funds?
- Who pay for local content development?
- Who pays for set top boxes?
- Who pays for installation, antennae adjustment, rebranding?

Set top boxes & subsidies

- Cost of set top box determined by policy imperatives and industrial policy rather than industry.
- R300 million (2011 - 2013) allocated to USASA to subsidise about 850 000 set op boxes (6% of households).
- BUT NOT IMPLEMENTED
- Grants/allocation
- freerider vs. high social grant distribution cost.
- “the base of devices with middleware and return paths to receive advanced interactive services is fragmented and may not provide the minimum addressable market for broadcasters to offer new services economically.” NAB Report, Farncombe Technology




Implementation planning



*Guidelines for the transition from analogue to digital broadcasting, ITU, 2010

Interdependencies in Digital Migration, SADIBA



SA - the case of the hare and the tortoise

- Ahead of the curve - 2000 established Ministerial Digital Broadcasting Task Team, findings proposed to Cabinet in 2002. Benefit of first failed round of DTT in UK & Spain. Region 1 standards DBV-T/MPEG
- New stakeholder body Digital Dzonga 2006 abandoned in 2010.
- Minister announces new standard Brazilian adapted Japanese standard
- Spectrum invitation to apply (ITA) for the 2.6 and 3.5GHz spectrum process for the licensing framework and regulations for spectrum on demand started in Nov 2006.
- ICASA issued a position paper and draft regulations in July 2009 hearings took place in October 2009 and in May 2010 ICASA published the regulations and issued a call for applications. Deadline for applicants was 30 July 2010.
- Granting methodology to follow an Auction approach but timelines and details of the process were excluded from the ITA stood.
- 30% BEE/HDI shareholder requirement.
- ICASA criticised and DoC lobbied—subsequently the entire auction process was withdrawn...still no movement in 2012 (6 years later)

■ **Electronic Communications Act, 2005 Digital Terrestrial Television Regulations - Multiplex Allocation**

■ MULTIPLEX 1 (PUBLIC AND COMMUNITY TELEVISION SERVICES)

- SABC is allocated 100% capacity in multiplex 1 and must maintain a ratio of three public channels to one commercial channel to ensure that a large portion of its allocated capacity is dedicated towards the provision of public broadcasting services;
- Other community television services licensed on trial basis for a period not exceeding one year will continue to broadcast on analogue frequencies.

■ MULTIPLEX 2 (COMMERCIAL FREE-TO-AIR TELEVISION SERVICES)

- Commercial free to air broadcaster, e-TV, allocated sixty percent (60%) capacity of the multiplex; and can only apply for additional channel authorisation, in addition to the digital incentive channels in Multiplex 2 at the end of the dual illumination period.
- Any other interested licensee or person can apply for available capacity in multiplex 2 to conduct test services.

■ MULTIPLEX 3 (SUBSCRIPTION BROADCASTING SERVICES)

- Subscription broadcaster, M-Net, fifty percent (50%) capacity of the multiplex; subject to conducting a hard switch-over following which M-Net can only apply for additional channel authorisation, in addition to the digital incentive channels in Multiplex 3, at the end of hard switch-over.
- Any other interested licensee or person can apply for available capacity in multiplex 3 to conduct test services.

SA Digital Migration Delays

- The tender for government-subsidised STBs, which closed on 14 September 2012, needs to be evaluated and awarded;
- Contracts with successful companies must be negotiated;
- Commencement of manufacturing for 5 million government-subsidised STBs, including creation of the necessary technology and infrastructure, and the training of staff. This alone will take 6–9 months;
- Distribution of government-subsidised STBs to the South African Post Office, from where they can be bought;
- Design and implementation of means-based subsidy programme to determine which people receive subsidised STBs;
- Distribution and installation of STBs in people's homes;
- Media campaigns necessary to educate the public about all of the
- E-TV interdict against Minister challenging her determination that state signal distributor, Sentech, is responsible for conditional access system

Conclusions

■ Co-ordination

- Need to view migration from convergence perspective.
- Case by case - consider legacy issues
- Efficiency of spectrum as basis for allocation vs.
- Public interest/access to information/ education currently radio & TV.
- Enabling environment for broadcasters to drive take up of services
- Support re-farming/ reallocation with installation/rebrand costs
- Commit resources to necessary institutions/ensure capacity to manage commercial process
- Opportunity for making more efficient use of spectrum, meeting changing communication needs of the public
- try to limit unintended consequences by creating enabling, flexible rather than controlling environment.

References

- Draft Plan of Action for Digital Broadcasting Migration in SADC available at http://www.nbc.na/co_aboutus.php?id=36&title=Digital%20Migration
- Digital Migration Plan available at <http://www.info.gov.za/view/DownloadFileAction?id=88342>
- Berger, G (2010) Digital Broadcasting Migration: a primer available at <http://guyberger.ru.ac.za/fulltext/Digitalmigration.pdf>
- ICASA Digital Migration regulations available at <https://www.icasa.org.za/LegislationandRegulations/RegulationsUnderWayProjects/WorkingdocumentsPendingProcesses/DigitalTerrestrialTelevision/Draft/tabid/568/ctl/ItemDetails/mid/2174/ItemID/1318/Default.aspx>

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