Beyond Digital Switchover: The Future of Broadcasting and Spectrum Implications

Commonwealth Spectrum Management Forum
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Background

South Africa and a majority of other African administrations are still in the process of digital switchover or digital migration.

Most of the countries have missed the ITU mandated digital transition date of 17 June 2015; however good progress has been made in advancing the switchover process.
South Africa – Status Quo

➢ Digital transmission network rolled out successfully, covering 88% of the population via the digital terrestrial television (DTT) network.

➢ Complementary satellite gap-filler network is in place to cover remaining 12% of population not accessible via DTT.
  ❖ This direct-to-home (DTH) satellite coverage has full national footprint.
  ❖ All infrastructure upgrade work was done with local expertise, from planning to implementation.
Digital-enabled Television

- In process of addressing final leg of migration - viewer migration by means of Set Top Box (STB) decoders.
- Digital-enabled television sets with an integrated digital tuner (also known as integrated digital television, IDTV) are also available in the market.
- South Africa has local capacity to produce STBs and IDTVs.
The Digital Dividend

- The completion of digital switchover will result in release of high demand dividend spectrum in 700MHz and 800MHz Ultra High Frequency (UHF) bands.

- Spectrum is highly sought after due to great propagation characteristics of the frequencies in these bands.

- These frequencies offer
  - Better ability in penetrating through walls and travelling longer distances than currently available mobile telephony frequencies.
  - The possibility for operators to deploy fewer base stations for a larger coverage, thus reducing investment costs.

- The dividend spectrum will help to accelerate the rollout of high speed broadband services and extend access to internet connectivity for all.
Threat to Linear Broadcasting

- Proliferation of high speed data services is expected to have a negative effect on the future of linear broadcasting.

- Viewer trends are shifting to online environments as a result of availability of high capacity, high speed internet connectivity and over-the-top (OTT) applications that are taking advantage of these platforms.

- The digital dividend spectrum will enable transmission and delivery of high value content onto mobile and internet connected devices.

- Internationally, viewer behaviour and patterns are changing to a demand-driven content consumption approach.
  - Advertising revenues follow the eyeballs and therefore are also shifting towards online platforms.
  - This is a direct threat to the sustainability of traditional linear broadcasting, which relies heavily on advertising revenues.
Impact of 5G Technologies

- TV market disruption: By improving download speeds and streaming for consumers, the potential for 5G to provide a catalyst for TV market disruption is strong, according to experts at the recent International Broadcasting Conference (IBC) held in Amsterdam, Netherlands in September 2017.

- The ubiquitous existence of fibre technology is already causing disruption to traditional broadcasting but is limited by the “last mile delivery” to the home, which has been an issue in the past.

- The high capacity and high speed capabilities brought about by 5G will solve the delivery piece, i.e. the last mile.
  - 5G closes the gap because technologies that operate in the 5G space are wireless and can be easily distributed.
  - Economies of scale and worldwide adoption will expedite the availability of devices to the global market.
The 4th Industrial Revolution is Real

- Tests and prototypes for 5G based devices are already in place in the international space.
  - Major chip manufacturers like Intel already experimenting with prototype modems for 5G.
  - Technology allows for downloads speeds in excess of 10Gbps, which is equivalent to simultaneously downloading 10 full High Definition (HD) movies in one second.

- For example
  - During FIFA World Cup hosted by South Africa in 2010, all matches were distributed from venues to broadcast rights holders across the world in an uncompressed full HD format via fibre, transmitting at speeds of 10Gbps (i.e. 10 billion bits per second). Games were in turn broadcast to viewers via various formats but at much reduced or compressed HD data rates of 10Mbps (10 million bits per second) and less.
  - 5G promises to give the 10Gbps download speeds directly to the viewer, a data transmission rate currently reserved for high end operators.
The South African Newsroom

Despite the many woes besetting the traditional media environment, South Africa has a growing and diverse media environment.

This has little to do with the mainstream media and is rather due to:

➢ A developing community media sector with a relatively strong community radio industry and a struggling, but still important community print sector.
➢ Increasing internet access. For example, Facebook is now used by a quarter of all South Africans (some 13-million people), with 7-million accessing the site using smartphones (2016 South African Social Media Landscape survey).
➢ Many are now likely to follow an unfolding story from Twitter or Facebook before traditional news outlets can cover the story.

The public’s news now comes from multiple alternative news sources: friends, acquaintances, online news sites, and even the neighbourhood WhatsApp group.
Is Social Media today’s Newsroom

- Changes in the South African Newsroom brought about by the onset of digital news and social media are demonstrated by the #FeesMustFall student protests on campuses around South Africa.

- Coverage of these protests challenged traditional media coverage with increased significance in social media in media coverage.

- Social media was responsible for almost 60% of media coverage (ROI Africa October 2015), with 3-million posts on #FeesMustFall made on social media, 99.3% of these on Twitter (NovusOnline).

- The #FeesMustFall coverage highlighted the advantages of social media to
  - Balance the bias of conventional media by allowing many points of view and many places for people to express opinions.
  - Balance the bias of mainstream media stereotypes of protestors as violent and disruptive.
  - Mobilise, inform, correct traditional media.
  - Provide alternative sources of information for journalists.

Social media or the “alternative media” gave students a voice they had not had in the past.
Is the Alternative Newsroom the solution?

- As the power of the ‘alternative’ news sources in shaping public opinion grows so does the urgent need for newsrooms to find ways to remain relevant and generate increasingly relevant content.

- The increasing trend is for stories to be first told on social media before migrating to legacy platforms such as print, radio and television.

- Independent media websites are now talking about in-depth issues that are not and will not be covered by the mainstream media – often due to capacity and cost restrictions.

- But online media is not the all-encompassing panacea for exclusion from information.
  - South Africa still has an urban-rural divide on media consumption, particularly as many people remain offline due to high data costs.
  - Media and related organisations still rely heavily on output from formal media institutions.
The Media Development & Diversity Agency (MDDA) is a public-private partnership set up by an Act of Parliament in 2002 with the mandate to encourage ownership of, and access to, media by historically disadvantaged and historically diminished indigenous language and cultural groups.

Providing both financial and non-financial support for community broadcast and print projects, the MDDA aims to facilitate

- **Voice for the voiceless:** Community media gives those communities historically sidelined by the traditional media the opportunity to add their views and aspirations to the public discourse in the country.

- **Active Citizenship:** Community Media empowers grassroots communities by establishing a platform for social dialogue, formation of political opinion and civic education.

- **Social Cohesion:** Community media plays a predominant role in strengthening and building communities.
Impacts of the Digital Dividend on Community Media Sector

- A key challenge for the MDDA’s broadcasting stakeholders is digital migration where digital terrestrial television (DTT) requires members to have equipment and capacity to compete in a digital environment.
  - Migration will not be without cost for the MDDA’s stakeholders, with increased costs for transmitters already being identified by community television stations.
  - The costs include ensuring a good balance of local content, as well as available cheaper content that services a public mandate. The MDDA must ensure that the new technology’s benefits are not outweighed by its costs.

- Breaking news is now digital. This means that the
  - Community print media needs more support in an ever-changing print landscape that competes with online media, including social media.
  - Community media - like their mainstream colleagues - need business models to sustain these new forms of storytelling.

The MDDA’s role is vital before, during, and after migration to ensure that community media’s interests are identified, fought for, and maintained.
Thank You