



**WRITTEN COMMENTS ON THE PROPOSED DRAFT IMT ROADMAP FOR
CONSULTATION**

07 October 2014

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1. EXECUTIVE SUMMARY

- 1.1 SENTECH thanks ICASA for the opportunity to make written comments on the proposed draft IMT Roadmap for Consultation as published on 02 September 2013.
- 1.2 SENTECH acknowledges and appreciates the importance of universal access and affordability of broadband services to the citizenry of the Republic in as far as education, access to information, communications, public safety and economic development.
- 1.3 SENTECH's submission will be highlighting the importance of considering the following matters, when the Authority deliberate on the submissions;
 - 1.3.1 Network convergence considerations;
 - 1.3.2 Digital dividend;
 - 1.3.3 Analogue Switch-Off (ASO);
 - 1.3.4 DTT – to – DTT frequency Migration, and
 - 1.3.5 Studio – to - Transmitter Links (STLs);
- 1.4 SENTECH believes that the motivation for converged networks is driven by the increasing demand from consumers to have greater variety of communications and media services on modernistic platforms and on various wireless portable devices. This demand is powered by the fact that consumers have now become content producers and are constantly seeking cost efficient and reliable ways of sharing/distributing content.
- 1.5 Therefore moving forward, the broadcasting and telecommunications industry should not be reviewed without taking into consideration the requirement of network convergence and the required change to the current legislative framework of ECNS, ECS and BS licensing categories.
- 1.6 It is important for the Authority and the mobile industry to take note that ASO will not yield any digital dividend as Digital Dividend I (790 – 862 MHz) and II (694 – 790 MHz) will both only be available concurrently post DTT-to-DTT migration.
- 1.7 As part of the discussions, ICASA should also consider the requirements for STLs as they are impacted by the co-primary allocation of mobile except aeronautical mobile services in the band 790 – 862 MHz.
- 1.8 SENTECH is concerned at the proposed dates for public hearings.
- 1.9 Not enough time is provided for the consideration of other entities' submission.
- 1.10 The proposed date by the Authority is too burdensome.

2. NETWORK CONVERGENCE

- 2.1 SENTECH considers the digitisation of the broadcasting signal distribution network to IP data transmission network and the continued evolution of the mobile technology as forces that are constantly transforming the regulatory environment and are impacting on the conditions of competition in both the telecommunications and broadcasting industry.
- 2.2 Technological evolution has enabled the possibility of triple play products including telecommunications, TV and the Internet.
- 2.3 As technological evolution has changed how the market can be contested, there are reasonable expectations that the regulatory environment is therefore required to make convergence a mutual beneficial environment as contemplated in section 2 of the EC Act namely, s2(a),..., (g).
- 2.4 The motivation for converged networks is driven by the increasing demand from consumers to have greater variety of communications and media services on modernistic platforms and on various wireless portable devices.
- 2.5 It is clear that this demand is powered by the fact that consumers have now become content producers and are constantly seeking cost efficient and reliable ways of sharing/distributing content.
- 2.6 It is on this basis that SENTECH presupposes that moving forward, the broadcasting and telecommunications industry should not be reviewed without taking into consideration the requirement of network convergence and the required change to the current legislative framework of ECNS, ECS and BS licensing categories.
- 2.7 Network Convergence is also an important consideration in as far as the requirements for profit maximization through a unified network approach.
 - 2.7.1 The creation of a higher spatial reuse factor of frequencies;
 - 2.7.2 Encouraging lower infrastructure costs in sparsely populated areas;
 - 2.7.3 Improvement of user experience and enhanced service efficiency through the creation of a ubiquitous media delivery platform; and
 - 2.7.4 Subsequently encouraging an improved and affordable access to capacity for the delivery of videos services: anywhere, anytime and on any platform;
- 2.8 From a single Content Playout ingest source as a result of convergence, Television and Radio content can be distributed across different multi-screens (devices) – fulfilling viewers demands for ‘content everywhere, anytime and on any device’ – and enabling broadcasters to monetise these ‘eyeballs’ 24/7/365.

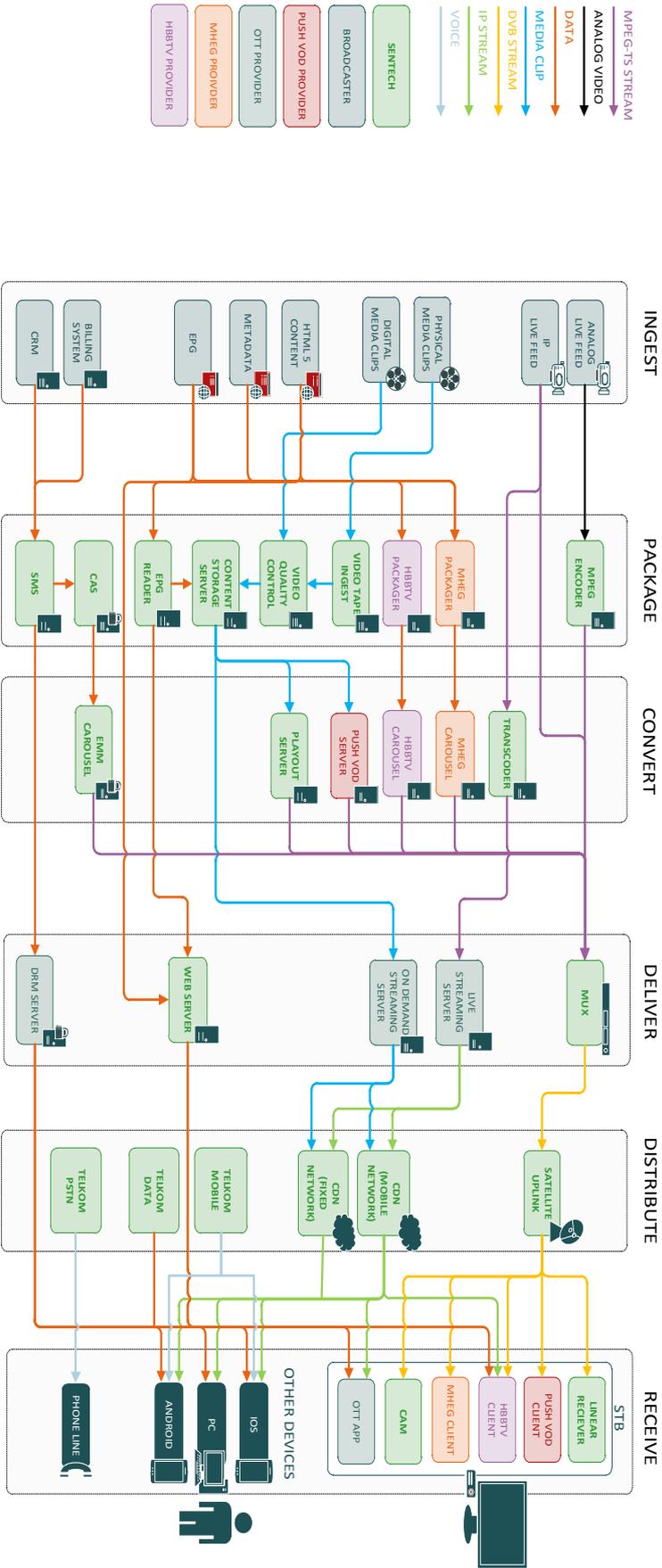


Figure 2: Evolution of Content Distribution Value Chain

3. DIGITAL DIVIDEND

- 3.1 Under section 2.4 (Digital Dividend) of the Terrestrial Broadcasting Frequency Plan 2013, Government Gazette No. 36321 Notice 298 of 2 April 2013, the Authority stated that “Broadcasters and other interested stakeholders will be engaged further in a separate process still to be defined to ensure the fair distribution of spectrum” that will be released as a result of the DTT migration.
- 3.2 SENTECH would like to know when the Authority intends on initiating that process.
- 3.3 SENTECH is also concerned that the Authority has decided to release the Draft IMT Road Map for Consultation prior to initiating the process as undertaken in the Terrestrial Broadcasting Frequency Plan 2013 Regulations.
- 3.4 It is also important to note that the Authority has acknowledged that the band 694 – 790 MHz “between UHF Broadcasting and the mobile services as allocated on a co-primary basis”.
- 3.5 The Authority has also stated its awareness regarding “studies into broadcast spectrum requirements within the ITU and nationally”.
- 3.6 The Authority went further by stating that ICASA “will consider the outcome of the studies and adapt” accordingly and appropriately.
- 3.7 SENTECH has reasonable expectation that the Authority should demonstrate how the above matters have been taken into consideration during the deliberations.

4. DTT AND ASO

- 4.1 As previously stated in SENTECH’s submissions on Frequency Migration Regulation and Radio Frequency Migration Plan, ASO will not yield any digital dividend.
- 4.2 Annex G DTT of the Terrestrial Broadcasting Frequency Plan 2013 Regulations has a number of assignments above 790 MHz.
- 4.3 The Digital Dividend I (790 – 862 MHz) and II (694 – 790 MHz) will both be available concurrently only post DTT-to-DTT migration.
- 4.4 It is important to note that the migration is not solely about creating digital dividend but also about securing the future of the terrestrial broadcasting platform by ensuring a smooth transition for terrestrial broadcasting services.
- 4.5 The country is currently in the process of striving to complete the transition to digital television with the termination of analogue television services as a consequence.
- 4.6 The next step will be the restacking process, which is the clearing of digital television services from the band 694 to 862 MHz post ASO.

- 4.7 It is also important to note that the DTT-to-DTT migration broadcasting terrestrial frequency plan will require that 93% of the existing DTT network (current DTT assignments) be reconfigured during DTT-to-DTT migration process, which will be both a time and resource consuming process.
- 4.8 It is therefore important that the restacking detailed planning principles are discussed and agreed upon prior to the DTT-to-DTT migration process.
- 4.9 Should the restacking process not be done properly, broadcasting services will be mostly affected with little impact on the digital dividend, 694 – 862 MHz.
- 4.10 Challenges likely to be experienced during the restacking process;
 - 4.10.1 Interference between pre-ASO and Post-ASO frequency plan (revised Annex G and Annexure J) and cross border interference (DTT and IMT services of neighbouring countries);
 - 4.10.2 Disruption of terrestrial television services;
 - 4.10.3 Retuning and installation of combiners;
 - 4.10.4 Recalibration and re-commissioning of transmitters;
 - 4.10.5 Possible broadcast antenna replacements (subject to radiation pattern verification for operation below 694 MHz)
 - 4.10.6 Changing antenna patterns in line with the updates, Annexure G and J, of the Terrestrial Broadcasting Frequency 2013 as per Government Gazette No. 38005 Notice 801 of 16 September 2014.
 - 4.10.7 Review of the frequency multiplex re-allocation.

5. Studio – to - Transmitter Links (STLs)

- 5.1 STLs are point-to-point low bandwidth one-way transmission links used mainly to relay radio programme material from the studio to the radio broadcast transmitter site.
- 5.2 STLs are overwhelmingly used for Community and Commercial Radio Broadcasting Services.
- 5.3 STLs historically have been “grandfathered” and exposed to a soft-touch regulatory framework by the Regulator. Consequently STLs were previously not subjected to regulatory frequency assignment processes and spectrum fees regulations.
- 5.4 Only the equipment specifications were regulated through the ICASA type approval processes.
- 5.5 STLs are currently mainly operated in the upper UHF band and sharing spectrum with terrestrial broadcasting services on a non-interference basis.

- 5.6 Historically STLs and terrestrial broadcasting services have co-primary allocation in the National Radio Frequency Band Plan.
- 5.7 STLs are operated on a first-come-first-serve-no-interference basis. That is, new STLs are not permitted to interfere with existing STLs and/or existing terrestrial broadcasting services.
- 5.8 SENTECH currently operates 168 STLs for Commercial and Community Radio Broadcasting services.
- 5.9 SENTECH continues to roll-out STLs as ICASA continue to issue more terrestrial broadcasters services.
- 5.10 Sentech operates three (3) types of STL, namely;
 - 5.10.1 Analogue STL, primarily used for audio broadcasts for distance less than 25 km;
 - 5.10.2 Digital Uncompressed STL, primarily used for audio services of distances more than 25 km; and
 - 5.10.3 Digital High Capacity(Multiple_E1)-STL, primarily used for multiple audio and video contribution requirements;
- 5.11 It is important to note that SENTECH does not necessarily operate majority of the STLs that exists in the broadcasting industry.
- 5.12 The cost for the migration of STLs will be affected by the following, *inter alia*;
 - 5.12.1 Proposed new frequency band;
 - 5.12.2 Installation requirements;
 - 5.12.3 Decommissioning of current STLs;
 - 5.12.4 Network planning for new STLs;
- 5.13 SENTECH requests the Authority to ensure that STLs are not subjected to sharing frequency bands with high capacity microwave bi-directional links due to the high cost of deploying such systems.
- 5.14 The Authority should also take into consideration that a lot of the STLs are deployed on mobile tower infrastructure and therefore subjected to additional specifications from mobile operators.
- 5.15 It is therefore imperative when consideration is made for the re-allocation of STLs parameters such as wind-loading, propagation characteristics, antenna sizes, transmitter powers, etc. are taken into consideration.
- 5.16 It is on this basis that SENTECH proposes STLs be permitted to operate in the bands;
 - 5.16.1 821 – 832 MHz;
 - 5.16.2 864.1 – 868.1 MHz; and
 - 5.16.3 1452 – 1492 MHz;

- 5.17 STLs can operate in the bands 821 – 832 MHz and 864.1 – 868.1 MHz on the basis of a secondary allocation. This should provide protection to new services to which the primary allocation has been made.
- 5.18 STLs should also be provided as primary allocation status in the band 1452 - 1492 MHz

6. CONCLUSION

- 6.1 ICASA should consider that the success of Community Broadcasters is not measured by listenership figures but rather by the relevance of the content to the community it is serving.
- 6.2 The Authority should further consider that listenership figures are generally limited by the simple fact that community stations have limited reach due to licensed transmitter power output, frequency availability, and availability of transmitter infrastructure.
- 6.3 It is on this basis that SENTECH believes that requiring STLs to be subjected to spectrum fees will not yield any positive outcome, especially since the DTSP, MDDA and SENTECH have been cooperating in insuring the survival of community broadcasters by seeking ways of reducing their financial burden.
- 6.4 The frequency bands proposed will provide financial relief, to an extent, with regards to the migration of STLs.
- 6.5 SENTECH requests the Authority to initiate the process regarding ASO and restacking matters as soon as possible, to ensure a smooth and expedient process that will yield dividend I and II.
- 6.6 It is important to note that the ASO final date is currently dependent on the following, *inter alia*;
- 6.6.1 The gazetting of the start of dual illumination to initiate the requirements as stated in the Digital Migration Regulations of 2012; and
- 6.6.2 The finalisation of all set-to-box (STB) related matters;.
- 6.7 SENTECH further requests ICASA to include discussions of network convergence as part of the discussion of ensuring universal access and affordability of broadband services.
- 6.8 Technological evolution has enabled the possibility of triple play products including telecommunications, TV and the Internet. As technological evolution has changed how the market can be contested, the regulatory environment is therefore required ensuring that convergence becomes a mutual beneficial environment.