DIGITAL TERRESTRIAL TELEVISION (DTT) BROADCASTING POLICY

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ABBREVIATIONS

ASO	Analogue Switch Off
BBC	British Broadcasting Corporation
CAS	Conditional Access System
CEO	Chief Executive Officer
COM	Committee
DAF	Digital Access Fee
DBMC	Digital Broadcasting Migration Committee
DTT	Digital Terrestrial Television
DVB	Digital Video Broadcasting
DVB-T	Digital Video Broadcasting Terrestrial
DVB-T2	Second Generation Digital Terrestrial Television Broadcasting System
DR	Disaster Recovery
DSO	Digital Switch-On
EPG	Electronic Programme Guide
FTA	Free to Air
FTV	Free to View
CDTCL	Central Digital Transmission Company Limited
GBC	Ghana Broadcasting Corporation
GE	Geneva
GIBA	Ghana Independent Broadcasters Association
GLSS 6	Ghana Living Standards Survey Round 6
GSA	Ghana Standards Authority
GSS	Ghana Statistical Service
GTV	Ghana Television
HD	High Definition
IDTV	Integrated Digital Television
ITU	International Telecommunication Union
LCN	Logical Channel Numbering
LEAP	Livelihood Empowerment Against Poverty
MOC	Ministry of Communications
MPEG-4	Motion Picture Experts Group technology 4

NCA	National Communications Authority
NMC	National Media Commission
NTP	National Telecom Policy
SD	Standard Definition
STB	Set Top Box (Unit that converts digital signals for analogue TV sets to receive)
TV	Television
WRC	World Radiocommunications Conference

1.0 BACKGROUND

1.1 HISTORY OF TELEVISION IN GHANA

1.1.1 Broadcasting in Ghana started in 1935 when the British colonial rulers introduced a BBC relay station in Accra code named radio ZOY.

1.1.2 Broadcasting in Ghana was mainly radio until 1965 when Black and white television service was introduced.

1.1.3 Broadcasting in Ghana has conventionally been transmitted and received in analogue format and for a long period of time was the monopoly of the Ghana Broadcasting Corporation until 1994 when the first private radio station was authorised. In 1995, the first private television network, Crystal Radiovision Network Limited was authorised and commenced operations.

1.1.4 Since the liberalisation of broadcasting in Ghana in the mid nineteen nineties, radio and television broadcasting has grown significantly from a monopoly owned and controlled by the state into a highly competitive market which includes private players.

1.1.5 Terrestrial Television broadcasting has been in analogue since the launch of TV services in 1965 until 2008 when a pilot terrestrial digital video broadcasting system (DVB-T) was installed by GBC in Accra. In 2009, commercial terrestrial digital video broadcast was authorised and launched by Skyy Digital (now First Digital) in Accra and Takoradi.

1.1.6 In 2010 GBC launched a DVB-T transmission network in Accra and Kumasi. Ghana began the process of migrating from analogue broadcasting to Digital Terrestrial Television (DTT) with the inauguration of the Digital Broadcasting Migration Committee (DBMC). GOtv commenced DVB-T2 transmissions in 2013.

1.1.7 Television broadcasting may be delivered over cable (wired connection), over satellite (i.e. through space) or over terrestrial wireless (wireless over land and received via a common aerial). In Ghana, TV over cable is almost non-existent whereas satellite television has been growing in recent times as it covers the entire country at low cost. The most pervasive means of television reception is the terrestrial platform.

1.1.8 The terrestrial platform however remains the only platform that continues to use analogue technology for its transmission even though digital techniques in broadcasting have been in existence for over a decade.

1.1.9 Digital equipment and platforms perform better and offer better economic value than analogue. Maintaining networks in analogue for broadcasting cannot be economically justified. Analogue equipment and networks are close to end of life and with manufacturers no longer manufacturing analogue equipment, remaining in the analogue space is no longer an option for governments, broadcasters and viewers.

1.1.10 The application of digital techniques to television broadcasting results in several advantages over analogue including the following:

a. A higher number of television programme channels and choice for the viewer
b. Better picture quality, clearer sound, introduction of new services and more

interactivity and data services including electronic programme guide (EPG) for television viewers

c. Reduced operational cost for broadcasters
d. Better efficient use of spectrum as digital broadcasting technology enables transmission of up to twenty (20) standard definition channels and data services including an EPG on one frequency that in analogue format currently carries only one TV station. The radio frequency (RF) spectrum used for terrestrial television is considered a scarce and finite natural resource that has to be managed efficiently and effectively both technically and economically in the national interest and digital television offers these technical and economic benefits. Economic value from the spectrum efficiency gain to be realised due to the switch over from analogue to digital terrestrial television services is known as the digital dividends.

1.1.11 The benefits in 1.1.10 offer a strong reason for the prioritization of Ghana's DTT migration. The DTT migration will have social and economic benefits including the creation of jobs.

1.1.12 Ghana signed the Geneva 2006 (GE06) Agreement establishing the digital terrestrial broadcasting plan in the bands 174 – 230 MHz and 470 – 862 MHz at the Regional Radiocommunications Conference (RRC-06). The agreement requires signatory countries including Ghana to migrate from analogue television broadcasting to a digital TV platform by 17 June 2015.

1.1.13 To comply with the tenets of the GE-06 Agreement, the Ministry of Communications in January 2010 inaugurated a National Digital Broadcasting Migration Committee and developed a road map for Ghana's migration from analogue to digital broadcasting by December 2013.

1.1.14 As a result of implementation challenges, the road map was revised. The supply and installation of the DTT platform was completed by fourth quarter 2018.

1.1.15 Digital broadcasting is the application of digital techniques and encoding of audio and video signals to transmit digital data rather than analogue waveforms on networks to consumers.

1.1.16 Digital Broadcasting migration refers to the process of moving all terrestrial television broadcasters operating on analogue transmission systems to digital broadcasting transmission platform.

1.1.17 The migration of analogue terrestrial broadcasters onto the digital broadcasting platform will result in the freeing up of frequencies granted to existing analogue broadcasters. These freed-up frequencies are referred to as the digital dividend and potentially offer opportunities for new and enhanced services within the broadcasting and telecommunication space.

1.1.18 A single national FTA digital platform comprised of two multiplexes will be created for the use of FTA licensed broadcasters utilising same frequencies for transmitting digital TV signals to homes across the country. Current frequency allocation to a single broadcaster should be capable of delivering signals for a minimum of twenty (20) standard definition (SD) programme channels and data services including an EPG to be created per multiplex and in accordance with the national transmission and compression standard (DVB-T2/MPEG-4).

1.1.19 The National Communications Authority (NCA), as specified by law, shall issue frequencies to Central Digital Transmission Company Limited (CDTCL) for the operation of the national digital signal multiplex platform.

1.1.20 The migration from analogue to digital broadcasting shall be carried out in phases. The DTT network infrastructure will be completed in the first quarter of 2019 and the "switch off" of analogue transmission shall be done in phases by the end of 2020 to allow dual illumination or simulcasting of broadcasting signals in both analogue and digital for the period.

1.1.21 Digital broadcasting signals may be received through existing analogue TV sets and Integrated Digital TV (IDTV) sets which are connected to a Set Top Box (STB). The Ghana Standard Authority (GSA) with the support of DBMC together with the NCA have developed minimum specifications and standards for digital receivers. All DTT receivers shall comply with a revision of the Ghana Standard (GS1099) which will include but not be limited to additional features such as increased memory, conditional access support, middleware, DRM support, Dolby sound, etc. and any subsequent revisions. In accordance with 11.2, Government will establish a well-coordinated plan to replace legacy STBs with new enhanced STBs.

1.1.22 A successful migration and transition from analogue broadcasting to digital terrestrial television broadcasting requires government policy to guide the migration process and to set the framework for a progressive DTT environment. This policy document has the input of all stakeholders including the National Communications Authority (NCA), the Parliamentary Select Committee on Communications, Ministry of Information, the National Media Commission (NMC), Ministry of Tourism, Culture and Creative Arts, Ministry of Finance, Ghana Broadcasting Corporation (GBC), Ghana Independent Broadcasters Association (GIBA), Ghana News Agency (GNA), Ghana Institution of Engineering (GhIE), National Film and Television Institute (NAFTI), Film Producers Association of Ghana (FIPAG), Actors Guild, Ghana Academy of Film and Television Arts (GAFTA), Musicians Union of Ghana (MUSIGA), Ghana Independent Content Producers Association (GICPA) and the general public.

1.2 DTT MIGRATION ROAD MAP

1.2.1 The transition from analogue to digital broadcasting involves:

a. The development of digital receiver standards and specifications
b. The deployment of DTT network platform and digital switch on
c. A simultaneous transmission of TV services in both analogue and digital (simulcast) for a period not exceeding twelve (12) months from the date of Digital Switch-On nationwide; and
d. The switch-off of the analogue television service (ASO)

1.2.2 To facilitate the digital switch-over, Government has opted for a single national platform provider (signal distributor) for FTA and other value-added services. At a cost to the applicant, and if capacity is available, the platform may also co-locate pay TV operations, for

the transmission of pay TV services, subject to authorisation of the pay TV service provider by the NCA.

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1.2.3 To further facilitate the roll out of the national DTT network solution, the following aspects, required for a digital broadcasting environment have been put in place:

a. **The establishment of technical standards** – The National Communications Authority (NCA) working with the Digital Broadcasting Migration Committee (DBMC) and the Ghana Standards Authority has published transmission standards and minimum specifications for Free-to-Air (FTA) DTT receivers; gazetted as GS1099. All DTT receivers shall comply with a revision of the Ghana Standard (GS1099) which will include but not be limited to additional features such as increased memory, conditional access support, middleware, DRM support, Dolby sound, etc. and any subsequent revisions.
b. **Conformance Regime for DTT Receivers** – The NCA has published the conformance regime for DTT receivers, which will be revised to reflect the revision to Ghana standard GS1009 as indicated in clause 5.5**.**
c. **Authorisation of Digital Terrestrial Pay TV** to 6 operators (i.e. GoTV, Crystal Radio Vision Network Ltd, First Digital, Cable Gold, NGB and Nour Vision Limited) since 2013.
d. **Logical Channel Numbers (LCNs)** have been developed for FTA stations. This will ensure that FTA stations when migrated to the DTT platform would be arranged according to the LCN on the GS1099 compliant receivers and in accordance with the Rules for the Assignment of Logical Channel Numbers (LCNs).

1.3 LEGAL AND REGULATORY FRAMEWORK

1.3.1 The broadcasting sector is governed by policies, regulations and laws that will continue to guide the sector.

1.3.2 To have a successful migration from analogue to digital broadcasting, appropriate legal backing for the migration process must be in place. The broadcasting bill currently under deliberations and review is providing an opportunity for the inclusion of relevant clauses on digital broadcasting.

1.3.3 Existing laws, policies and regulations that will continue to guide the sector and may require some amendments to accommodate a digital terrestrial television environment includes:

a. Ghana Broadcasting Corporation Decree, 1968, (NLCD 226)
b. National Media Commission Act, 1993 (Act 449)
c. NMC National Media Policy, 2000
d. NMC Broadcasting Standards, 2000
e. NMC Guidelines for local language broadcasting, 2009
f. National Communications Authority Act, 2008 (Act769)
g. Electronic Communications Act, 2008 (Act 775)
h. Electronic Transactions Act, 2008 (Act 772)
i. Electronic Communications Regulations, 2011 (LI1991)
j. National Telecommunications Policy, 2005
k. TV License Law (Amended), 2016

1.3.4 An amendment of the Electronic Communications Act, 2008 – Act 775 is necessary to provide for the following:

1.3.4.1 Impose "shall carry" obligations on private DTT pay operators for one channel of the national broadcaster;

1.3.4.2 Replacement of authorisations/licenses of analogue broadcasters and freeing of frequencies in the 694 – 862MHz for International Mobile Telecommunications (IMT) services;

1.3.4.3 Mandate the Minister for Communications to announce:

a. The analogue switch off date in the second quarter of 2020; the date for decommissioning of analogue transmitters/ networks.
b. Steps to protect the nation from dumping of Analogue Television Sets and to facilitate the recycling of legacy STB that are not compliant with Ghana's DTT receiver specifications and any subsequent revisions, in order to prevent environmental hazards to the citizenry.

2.0 POLICY OBJECTIVES

2.1 The objectives of the Policy on the Transition from analogue to digital terrestrial television in Ghana include the following:

a. To create the policy environment for the smooth migration of analogue broadcasting to digital terrestrial television (DTT) broadcasting.
b. To guarantee the availability of all existing terrestrial analogue television stations in digital formats in at least their current existing coverage areas.
c. To make available to all existing television households access to digital television services and ensure universal access to free-to-air television services.
d. To allow a dual illumination period not exceeding the second quarter of 2020.
e. To ensure the availability of digital STB that conform to Ghana DTT receiver specification and its subsequent reviews, in the market.
f. To as much as possible adopt and implement a framework to provide STBs (fully or partially subsidised) to the citizenry with emphasis on the aged, persons with disability etc. based on the Livelihood Empowerment Against Poverty (LEAP) system.
g. To free up relevant spectrum of economic value from the broadcasting service for telecommunication and any other services of value to the state.
h. To promote environmental sanity through co-location of broadcast transmission infrastructure.
i. To encourage the promotion of local content towards growth and job creation in the sector.
j. To set up a commercially oriented corporate body, Central Digital Transmission Company Limited (CDTCL), to run the platform for long term viability and growth of same.

3.0 DTT NETWORK OPERATIONAL STRUCTURE

3.1 There shall be one National DTT platform operator initially owned by Government of Ghana and solely established to provide exclusive signal and transmission carrier services for authorised Free-to-Air (FTA) broadcasters.

3.2 The DTT platform shall be built to include capabilities for the provision of HD, Pay TV, Free-to-View (FTV) and any other value-added services.

3.3 The DTT infrastructure platform shall be managed as a commercial entity incorporated as the Central Digital Transmission Company Limited (CDTCL). The CDTCL shall be authorised and allocated frequencies by the NCA.

3.4 A seven-member governing board shall be appointed by the President to oversee the affairs of the CDTCL. Membership of the board shall comprise:

i. The Chairperson
ii. 1 representative of the Ministry of Communications
iii. 1 representative of the Ministry of Finance
iv. 1 representative of GBC
v. 1 representative of GIBA
vi. 1 representative of the public with infrastructure management experience.
vii. The Chief Executive Officer of the CDTCL

3.5 The CDTCL shall have a Chief Executive Officer (CEO) appointed by the President in accordance with laws governing the appointment of CEO's of a state institution.

3.6 Only authorised broadcasters by the NCA will be allowed on the DTT platform.

3.7 The NCA shall assign broadcasters LCN's according to the date of their authorisation. The CDTCL will work closely with the NCA and NMC to ensure that all channels on the platform are in good standing.

3.8 The CDTCL shall develop a tariff model per channel payable by broadcasters on the DTT platform structured on a regional and national basis.

3.9 CDTCL will charge premium fees for slots allocated to international broadcast media when the capacity of the network is expanded.

3.10 Government must provide CDTCL with working capital for the first three years to enable the company support the Digital Switch Over (DSO) process.

3.11 The CDTCL will be expected to be self-sustaining in the medium to long term by securing revenue from broadcasters for transmission, distribution and related services and through the monetization of value added services on the platform.

4.0 MIGRATION AND NETWORK CAPACITY EXPANSION PLAN

4.1 MIGRATION OF EXISTING ANALOGUE FTA BROADCASTERS

4.1.1 All existing authorised analogue terrestrial TV stations shall be offered capacity on the DTT platform on completion of the project.

4.1.2 All licensed FTA Broadcasters shall be assigned LCN according to their date of authorisation.

4.1.3 All authorised analogue TV Broadcasters by the NCA, shall bear the cost of sending their channel(s) or signal(s) to the central headend of the network provider in Accra.

4.1.4 It shall be mandatory for all analogue TV transmitters to be switched off in the second quarter of 2020.

4.1.5 All licensed FTA broadcasters on the national DTT platform must allocate sixty percent (60%) of their prime-time programme content to local productions and programmes. The percentage allocation for local content will be reviewed within a period of every three (3) years to reach 70%.

4.1.6 During the period of the dual illumination, existing broadcasters shall pay 75% of the standard tariff on the DTT platform. In the second year and beyond, existing broadcasters shall pay the full tariff. New entrants (including those authorised but yet to commence service at the time of nationwide Digital Switch- On shall be charged full tariff from date of activation.

4.2 DTT CAPACITY EXPANSION TO SUPPORT MORE TELEVISION SERVICES

4.2.1 The DTT platform with two multiplexes with the capacity to accommodate forty (40) Standard Definition (SD) channels and data services including EPG will migrate all existing analogue FTA broadcasters.

4.2.2 Any future DTT expansion would introduce additional multiplexes with capacity for additional channels with a mix of High Definition (HD) and Standard Definition content, the construction of a Headend redundancy and other potential enhancements.

4.2.3 The expansion will assist the CDTCL to deliver attractive, low cost multi-channel services to a wide audience as part of a multi-platform digital broadcasting strategy.

4.2.4 The additional capacity from the DTT expansion will create an opportunity to attract international broadcast media to localize on the platform. In anticipation of this, the CDTCL shall allocate a number of slots at a premium determined price, subject to the approval of the Minister for Communications.

4.2.5 It will ensure use of interactive standards, which will enhance broadcast functionality and enable interactive features for viewers (i.e. access to data and other services) that utilize the digital transmission capability of the DTT multiplex for a variety of data distribution

services. Where a return path is available via a fixed or mobile broadband connection, a richer set of interactive services can potentially be provided.

4.2.5 It will reduce the barriers to entry for regional broadcasters who would not have to pay to transport their content to the National Headend

4.2.6 Taking into account trends in television broadcasting especially in digital transmission, Government intends to expand and optimize the capacity of the broadcasting infrastructure to guarantee incumbent broadcasters sufficient transmission capacity for digital migration and new services and leaving an opening for new market entrants to enable more competition in the broadcasting industry.

4.2.7 Government will ensure the construction of a Disaster Recovery (DR) infrastructure to provide replication of vital systems such as playout equipment, content storage and TV transmission, managed broadcast solutions, etc across the network.

4.2.8 The CDTCL will ensure that there are integrated programme exercises between technology and business line areas to include high availability operations, operational recovery and business line testing.

5.0 UNIVERSAL ACCESS

5.1 It is the policy of the Government of Ghana to achieve universal access to digital television services for all citizens of Ghana. Successful migration from analogue to DTT means achievement of universal access objective of providing broadcasting services (90% terrestrial and 10% satellite) to all Ghanaians irrespective of location.

5.2 Ghana Broadcasting Corporation (GBC) is the state broadcaster and operating the TV station with the widest coverage in the country. But even GBC does not cover the entire population with thousands of households missing out on TV service. Analogue terrestrial television presently covers 59.39% of the land mass of Ghana and 79.50% of the population. To achieve universal access for digital broadcasting, a combination of satellite and terrestrial transmission systems would be implemented to ensure a 100% FTA television coverage in Ghana.

5.3 Private television stations with terrestrial TV authorisations will broadcast only on terrestrial and shall be encrypted on satellite unless requested in writing to have its distribution on satellite in the clear for purposes of being viewed in homes. There will be no additional cost for allowing signals in the clear on satellite.

5.4 For households to receive digital signals, a Set-Top-Box (STB) is required. A STB connected to an analogue TV converts digital signals into a format for analogue TV sets to receive. A STB is also required for IDTV to receive signals on the DTT platform.

5.5 The network provider shall implement a Conditional Access (CA) system to facilitate the collection of the Digital Access Fee (DAF), which will be introduced to replace the existing TV licence, and will be used as indicated in clauses 11.1.4 and 11.1.5. The CA in addition will support the provision of enhanced broadcast services to citizens. The existing STBs without

CA will be replaced through a voucher system by the network provider to enable continuous viewership of digital television.

5.6 Ghana has an estimated 5.8 Million households out of which 4.6Million are TV households. 99% of TV households rely exclusively on FTA broadcasting with a little below 1% subscribing to pay TV. Of the estimated 4.6 Million TV households, 1.1M are poor and vulnerable households who are not in a position to afford an IDTV or STB [Source: GSS; GLSS 6, 2014].

5.7 In line with the policy objectives, Government has decided as part of its universal access obligation for broadcasting services to as much as possible implement a framework to provide STBs (fully or partially subsidised) to the citizenry with emphasis on the aged and persons with disability, etc utilizing the LEAP System.

5.8 The DTT platform will designate a channel in the clear, to be used by state sponsored channel, to be received through the CA digital receivers.

6.0 ACCESS TO DTT PLATFORM

6.1 All broadcasters on the DTT platform shall bear the cost of sending their approved channel(s) or signal(s) to the central headend in Accra per the agreed guidelines issued by the network provider.

6.2 All broadcasters on the DTT platform shall be levied a monthly fee by the network provider. The fee structure will be based on the classification of the channel (i.e. regional or national).

6.3 The DTT platform fees shall be payable at the beginning of each month to the network provider. A broadcaster shall be given the option to pay the fees for a 12 month period in advance.

6.4 CDTCL shall charge premium for slots allocated on the platform for international broadcast media. This will be done in a transparent and fair manner.

7.0 MANDATORY OBLIGATIONS FOR TV NETWORK OPERATORS

7.1 All licensed TV network operators shall carry one (1) channel of the State which will be decided upon by the responsible Ministry in collaboration with GBC at no cost.

7.2 The channel of the State which must be carried by all licensed TV network operators will have no adverts and will be sponsored by the Government of Ghana.

7.3 All licensed Pay TV network operators will charge the approved Digital Access Fee as part of their subscription fee. This fee shall be lodged into the account of the DAF custodian as prescribed by law.

7.4 All licenced FTA broadcasters (i.e. satellite, terrestrial and any other type of licensed FTA broadcaster) will be required to encrypt their signals to support the collection of the Digital Access Fee.

8.0 DTT RECEIVER CONFORMANCE REGIME

8.1 All DTT receivers shall comply with Ghana Standard GS1099 (as approved by the Ghana Standards Authority) and any subsequent revisions which will include but not limited to additional features such as increased memory, conditional access support, middleware, DRM support, Dolby sound, etc, and obtain conformance certification from the NCA before being marketed in Ghana.

8.2 "DTT receiver" refers to STB and any other device such as an IDTV, USB dongles, computers, mobile phones which the consumer purchases in order to access DTT services in Ghana.

9.0 PUBLICITY

9.1 The Ministry of Communications in conjunction with the Ministry of Information shall ensure that the citizenry is well informed about the transition from analogue to digital terrestrial television.

9.2 Publicity shall be on Television on all FTA terrestrial networks, on radio, on social media, in print, on billboards and any other publicity form as approved by the Ministry of Communications and Ministry of Information.

9.3 All FTA terrestrial TV networks shall carry the adverts on their TV stations in line with the schedule as agreed with the Ministry of Communications and Ministry of Information.

9.4 ALL FTA terrestrial TV networks will provide airtime at no cost for the public campaign and awareness creation for the benefit of the broadcasters and the viewing public.

10.0 PHASED ANALOGUE SWITCH-OFF PLAN

10.1 To ensure the viability of analogue switch-off (ASO), 90% of the population will be covered with digital transmission (i.e. digital transmission signals from 42 sites) nationwide.

10.2 The phased analogue switch-off will be carried out on a regional basis. The rationale is to ensure that lessons from one region can be applied to another, perfecting the ASO processes. Also it will ensure that low risks areas can be prioritised before rolling out to more populated areas. The risk of service disruption will be limited to a single region and further ease the monitoring and interference resolving process

10.3 The phased analogue "switch-off" will be completed in the second quarter of 2020.

10.4 This switch-off date is informed by the effective public awareness campaign which will educate the public on the ASO date, digital receiver availability and consumer support assurance.

10.5 On the ASO date, all analogue transmitters in the country shall be switched off or decommissioned and frequencies used on the transmitters shall revert to the National

Communications Authority.

11.0 IMPLEMENTATION ARRANGEMENTS

11.1 PROVISION OF GOVERNMENT SUBSIDIZED STBS

11.1.1 Government will ensure the provision of subsidized STBs with additional features such as increased memory, conditional access support, middleware, DRM support, Dolby sound, etc will be made available to the vulnerable in society to enable viewing of TV in the digital era.

11.1.2 To support digitization agenda of the country, Government will utilize the availability of the additional features in 11.1.1 on both the platform and STBs through the revision of the Ghana receiver standards to provide the opportunity for the CDTCL to offer value-added services and to facilitate the collection of Digital Access Fee (DAF).

11.1.3 The DAF shall target all owners of devices identified under the current TV License law and other devices with the capability to receiving digital television signals due to technological advancement.

11.1.4 The MoC will facilitate the establishment of a Digital Access Fund to support Local Content Development and promotion.

11.1.5 The Digital Access Fee (DAF) is geared toward the sustenance of the DTT platform infrastructure, support to content providers on the platform and the growth of the creative industry in the promotion of Ghanaian cultural values through television.

11.1.6 Up to twenty percent (20%) of DAF lodged into a digital access fund will support local content development and promotion among the youth to create employment.

11.1.7 Fully subsidized STBs made available to persons under the LEAP System will be exempted from the payment of DAF. However, if any of the owners of the fully subsidized STBs falls above the poverty line, DAF payment will be activated by CDTCL in collaboration with the Ministry responsible for the LEAP system.

11.1.8 The most cost-effective solution is to be deployed that involves satellite serving as both transmission feed to the various transmitters through an encrypted satellite routing network as well as distribution feed for the national broadcaster in reaching areas and households not likely to be covered through the terrestrial platform. The use of satellite as gap fillers is to enable the national broadcaster achieve the universal access policy of broadcasting services.

11.2 LEGACY STBS REPLACEMENT PLAN

11.2.1 Taking into consideration the legacy STBs already in the market based on the minimum specifications for digital receivers, and to attain the objectives for the Digital Switch-Over programme, Government will establish a well-coordinated replacement plan for legacy STBs for an enhanced STB with the approved additional features.

11.2.2 The new minimum specifications for the STBs including the additional features will be published and implemented after consultation with stakeholders.

11.2.3 The CDTCL will be mandated to implement the replacement plan for Government through rebate voucher system. The general public and all stakeholders will be well informed through a vigorous public education campaign.

12.0 DIGITAL DIVIDEND

12.1 The Government shall implement Resolution 749 (REV. WRC-15) regarding the use of the band 790-862 MHz for mobile applications and other services. This band is referred to as the **'first digital dividend'** from the DTT transition. Article 5.316B of the Radio Regulations set 17th June 2015 as the effective date for the primary allocation to the mobile service in the frequency band 790-862 MHz.

12.2 The Government of Ghana shall also implement Resolution 232 (WRC-12) of the ITU World Radiocommunications Conference of 2012 (WRC-12) and Resolution COM4/4 (WRC-15) regarding the use of the frequency band 694-790 MHz by mobile, except aeronautical mobile service. The band 694-790MHz is thus referred to as the **'second digital dividend'** from the DTT transition.

12.3 The National Communications Authority shall adopt the most appropriate internationally harmonised frequency arrangement and channelling plan for the digital dividend band.

13.0 LICENSING OF NEW BROADCASTERS

13.1 The DTT platform will initially have two multiplexes. Each multiplex currently has a capacity of about 20 SD programme Channels and data services including EPG. The DTT platform will be launched with capacity of about 40 SD programme channels. Future expansion of the DTT platform will increase the capacity for additional programme channels and data services.

13.2 All existing analogue FTA Channels will be migrated with an LCN assigned according to date of first authorisation.

13.3 The NCA will develop guidelines for the issuance of new authorisations and proceed to issue new licenses for terrestrial FTA broadcasting services.