

Framework on the application and usage of DVB Identifiers in Digital Terrestrial Television (DTT) Networks in Kenya

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1. BACKGROUND

The Authority in line with its 5th Strategic Plan 2023-2027 undertook an exercise to harmonize the identification of channels in Digital Terrestrial Television (DTT) Networks through the adoption and implementation of Digital Video Broadcasting identifiers (that is, Original Network Identifier (ONID), Network ID range (a total of 256), and Logical Channel Numbers (LCN)), within the strategic objective to increase DTT population coverage and usage.

The harmonization of the identification of channels in DTT Networks will be achieved through the implementation of the following DVB identifiers that have been assigned for use by Kenya.

DTT Kenya Original Network ID	0x2194 (8596)
Network Name	DTT BSD'S name Kenya (e.g. DTT SIGNET Kenya)
Network ID Block	0x3201 - 0x3300
Private Data Specifier	0x00002194

The DVB Identifiers will be allocated to Broadcast Signal Distributor (BSD) and Broadcasters by the Authority as stipulated in the Framework.

2. OBJECTIVE

This Framework defines the allocation and usage of DVB Identifiers in Digital Terrestrial Television (DTT) Networks in Kenya. The aim of the present document is to provide assistance to allocation and usage of identifiers.

The objective of these Framework is to ensure a standardized and user-friendly system for identifying and organizing television channels in digital broadcasting.

This aims to enhance the viewer experience by making it easier for audiences to navigate channels, find content quickly, and understand the channel lineup.

The Framework also seek to promote consistency across different broadcasting platforms, ensure compliance with regulatory requirements set by the Authority of Kenya, and facilitate effective communication of any changes in channel assignments. Ultimately, the goal is to improve the overall quality and accessibility of television broadcasting in the country.

3. AMENDMENTS

This framework shall be amended periodically to ensure continued relevance with developments in the industry and emerging best practices.

4. INTERPRETATIONS

In this document, unless the context otherwise requires

- a) "Original_Network_ID" means a unique identifier of a broadcast platform operator
- b) "*Logical Channel Numbers (LCNs)*" means three-digit channel numbers in the range 001-999 that are assigned to each broadcasting service and added to the digital signal for ordering services so that the viewer can uniquely identify the broadcast (television/radio) service they wish to watch/listen to on the digital broadcasting platform.
- c) *"Electronic Programme Guide (EPG)"* means a programme schedule broadcast alongside the digital television or radio signals and provides a means by which users navigate around the supplied services.
- d) *"Broadcast License"* means a license issued by the Authority to provide broadcasting services.
- e) "*Broadcast Signal Distributor (BSD*)" means an entity licensed by the Authority to construct systems, distribute and transmit on behalf of licensed broadcast digital television/radio signals for reception by end-users.

5. APPLICABLE LEGAL FRAMEWORK

The legal and regulatory provisions that shall be considered in the implementation of this framework will be the Kenya Information and Communications Act, 1998

6. ORIGINAL NETWORK IDENTITY

The licensed broadcast signal distributors shall be required to adopt Kenya's assigned Original Network IDs, 0x2194 (8596) in their networks.

7. NETWORK IDENTITY

Kenya has been assigned 256 Network IDs 12801 - 13056 (0x3201 - 0x3300). Every regional SFN Network (multiple transmitters on the same frequency in the same area) and every transmitter in MFN should be assigned a unique Network ID.

Noting that some BSDs have not built their networks in SFN but in MFN, this requires that all their transmitters need their own Network ID.

The 256 Network IDs will be distributed, in the order in which they were licensed, with each DTT operator being allocated 60 Network IDs per MUX as below;

Network ID	Broadcast Signal Distributor
Network ID Range: 12801 - 12860	1
Network ID Range: 12861 - 12920	2
Network ID Range: 12921 - 12980	3
Network ID Range: 12981 - 13040	4
Network ID Range: 13040 – 13056	Other

8. LCN IMPLEMENTATION

Logical Channel Numbers (LCNs) are crucial in the broadcasting industry for efficient organization and navigation of channels for viewers. They serve as a standardized way to assign numerical identifiers to channels, making it easier for audiences to find and access their desired content.

Criteria for making classifications based on LCNs:

- Required Attributes:
 - The numerical identifier assigned to each channel
 - Standardized format for consistency
 - Unique identification for each channel
- Variable Attributes:
 - o Channel type (e.g., entertainment, thematic, religious, radio)
 - Channel language (e.g. English / Swahili & Vernacular)
 - Channel resolution (e.g., HD, SD)
 - Channel location (local, national)

By utilizing LCNs, broadcasters can ensure a seamless viewing experience for audiences, enabling quick channel selection and reducing viewer confusion. Additionally, LCNs facilitate channel surfing features, enhancing user convenience and satisfaction.

In summary, LCNs play a critical role in simplifying channel navigation, improving user experience, and enhancing the overall efficiency of the broadcasting industry.

8.1.LCN assignment methodology

The assignment methodology shall be on a first-come, first-served basis for free-to-air channels. This means that the LCN numbers shall be reserved in the order of receiving the licence applications and processing them to completion.

In the case of already operational FTA broadcasters, the LCN number shall be assigned by the Authority with priority given to compliance with licence conditions.

8.2. License types and Channel types

Tables 2.1 and 2.2 below provide the License types and Channel types. Any amendments to these descriptions shall be made known to all relevant stakeholders.

Table 2.1 License types

Public FTA TV Broadcast License			
Commercial FTA TV Broadcast License			
Community FTA TV Broadcast License			
Radio FTA Broadcast License (Public, Commercial & Community)			
Subscription Broadcasting service			
Temporary Broadcast License			

Table 2.2 Channel Types

1. Public Channels				
2. General Entertainment Channels National Languages				
3. General Entertainment Channels Vernacular Languages				
Thematic Channel:				
4. Children's Channels				
5. News and Information Channels				
6. Music Channels				
7. Lifestyle and Culture Channels				
8. Documentary Channels				
9. Movie Channels				
10. Sports Channels				
11. University and Educational Channels				
12. Parliamentary Channels				
13. Religious Channels				
14. Community TV				

For a more detailed definition of these Channel Types, please refer to Annex 1.

8.3. Allocations of LCNs to Free-to-Air broadcaster

In line with the first come, first served approach, the Authority shall allocate the lowest available LCN within the relevant Channel Type range to each broadcaster. The assigned LCN will be specified in the broadcast license and will remain valid for the entire license period—currently 10 years—provided the broadcaster does not change its Channel Type category.

For existing FTA broadcast license holders, the Authority allocate LCNs to operational broadcasters based on channel type, compliance status and the order in which they were licensed. Once this process is complete, non-operational broadcasters with a valid license will be assigned the lowest available LCN within their Channel Type range, in the order in which they were licensed. The assigned LCN will be included as an addendum to the broadcaster's FTA license. The Authority may designate additional, remove any or merge Channel type as and when deemed necessary.

Table 3. Logical Channel Numbering Plan

Below is an overarching Logical Channel Numbering (LCN) Plan.

LCN range			Channel Type	Language	Geo
1 -9	1	Dublic	Public Channel(KBC channel 1)	• English / Swahili	National
	2 - 9	Public	Public Entertainment & Parliamentary Channels		
	11-70	General Entertainment	General Entertainment	English / Swahili	National/Local
	71-75		News	English / Swahili	National/Local
6	76-80	-	University and Educational	English / Swahili	National/Local
- 14	81-85		Children	English / Swahili	National/Local
10	86-90	Thematic Channel	Lifestyle and Culture	English / Swahili	National/Local
	91-95	1	Documentary	English / Swahili	National/Local
	96-100	1	Movie	English / Swahili	National/Local
	101-105		Sport	English / Swahili	National/Local
10 -	106 – 190	General Entertainment	General Entertainment	Vernacular	National/Local
171 - 349	191-349	Religious	Religious - Christian		National/Local
	350-379		Religious - Islamic		National/Local
	380-400	Community Tv	General Entertainment/ Religious		Local
400 - 499			Reserved		
500 - 699	500 - 599	Terrestrial Subscription			National
	600 - 699	Terrestrial Subscription			National
66,	700 - 739		Reserved		
700 - 7	740 - 749		ce		
	750 - 799	Radio	Radio Service		National/Local

8.4. Allocation of Replacement LCNs

- The Broadcaster shall give written notice to the Authority of any intended changes to the characteristics of the Channel type as set out in the Broadcast Licence not less than six (6) weeks before the intended implementation of any such changes.
- 2. This will allow the Authority to determine whether the changes require a replacement Channel LCN to be allocated and allow time for the necessary application process should a replacement Channel LCN be so required

- 3. In the event a replacement Channel LCN (whether in the same or a different genre) is required to be allocated, the Authority will notify the licensee within **fifteen (15) days** of receipt of the licensee's notice.
- 4. The Broadcaster shall submit further information requested by the Authority in relation to changes to the Channel, which may include the completion of an application where a replacement Channel LCN is required.
- 5. In the event that the Authority considers that the Channel has evolved into a new channel, it shall notify you in writing and advise on the replacement LCN process.

8.5. Allocations of LCNs to Subscription Service

- 1. Each subscription broadcast service operator shall be assigned by the Authority a range of LCNs for broadcast services within 500 699.
- 2. Each service of the subscription broadcast service operator shall be allocated an LCN tag using the logical channel descriptor.
- 3. If a channel is available on both SD (Standard-definition) and HD (High Definition) television, the subscription broadcast service operator may use the same LCN provided all content is similar. There may however be differences in promotions, adverts and on-screen graphics.
- 4. Channel type should be the basis for the grouping of Channels on the DTT platform to assist viewer navigation of content.
- 5. The subscription broadcast service operator's own receiver shall correlate the channel number label for service in the service list menu and service selection on the remote control with the corresponding service LCN.
- 6. The subscription broadcast service operator's own receiver shall sort the service list displayed in EPG menu according to the LCNs in ascending order.

8.6.LCN Vacation

In the event that:

- a) The Broadcast Licence is withdrawn or expires and is not renewed.
- b) The Carriage Agreement expires or terminates and does not coincide with the commencement of a replacement Agreement, and you have not notified the Authority that the Channel is to be suspended,
- c) The Broadcaster is in material breach of the licence terms and fails to remedy such breach within receipt of written notice of such breach; or

The Authority may vacate the Channel LCN immediately and shall notify the Broadcaster as soon as reasonably practicable of the reason for such vacation.

Annex 1 | Overview of Channel Type Categories

Category 1: Public Channel

Stations funded by government resources that offer a wide range of content, including news, entertainment, drama, and community-oriented programs in the official languages, English and Swahili and broadcasts Free-to-Air nationally.

Category 2: General Entertainment Channel (National and Vernacular Languages)

Privately owned, advertisement-funded channels that provide a wide variety of content, including news, entertainment, and drama, in English, Swahili, ethnic dialects and broadcasts Free-to-Air nationally/regionally.

Category 3: Children Channels

A children's TV channel broadcasts content aimed at children, focusing on entertainment, learning, and development. The programming includes cartoons, animations, and educational content that engages children's creativity and develops skills such as colors, numbers, letters, and social skills. Children's TV channels ensure that the content is age-appropriate and creates a positive and safe environment for children to explore.

Category 4: News and Information Channels

Stations that focus on delivering national and international news and informational programming.

Category 6: Music Channels

TV stations dedicated to music-related content, including music videos, concerts, and documentaries about the music industry.

Category 7: Lifestyle and Culture Channels

TV stations that offer lifestyle-related content, focusing on fashion, travel, cooking, music, and pop culture, as well as programs targeting youth and modern culture.

Category 8: Documentary TV Channels

Stations specializing in documentary content covering real-life events, nature, society, crime, history, and culture. These channels engage viewers with informative and educational programming.

Category 9: Movie Channels

Stations specializing in films, including both local and international productions. They offer a wide selection of movies, from classics to recent releases.

Category 10: Sports Channels

Channels dedicated to sports coverage and related events. These are typically Pay TV channels offering extensive sports programming.

Category 11. University and Educational Channel

Stations that offer academic and education-related content, including university programs, distance learning, and professional courses.

Category 12. Parliamentary Channel

Public TV stations focusing on coverage of legislative assemblies and political processes, such as parliamentary meetings, debates, and decision-making.

Category 13. Religious Channel

Stations that broadcast religious content, such as sermons, Bible studies, or Islamic programs.

Category 14. Community TV

Community TV stations are non-profit and focus on promoting community interests and social issues within a local area.

Radio Service

A radio service is a broadcasting platform that delivers audio content such as news, music, entertainment, and information to listeners. On DTT, it often provides enhanced sound quality along with supplementary visual elements like the station's logo and program guide.