

**REGULATION N° 005/R/MR-MCA/RURA/2019 of 27th/06/2019  
GOVERNING DIGITAL TERRESTRIAL TELEVISION  
SERVICES IN RWANDA**

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**PREAMBLE**

**The Regulatory Board of Rwanda Utilities Regulatory Authority;**

Pursuant to Law n° 09/2013 of 01/03/2013 establishing Rwanda Utilities Regulatory Authority (RURA) and determining its mission, powers, organization and functioning, especially in Articles 2, 4, 8, 20, 21, 37, 47 and 49;

Pursuant to law n° 24/2016 of 18/06/2016 governing Information and Communication Technologies, especially in Articles 92, 93, 292, 293, 294, 295, 296, 297, 298 and 299

Considering the inputs submitted during the online consultation with stakeholders;

Having reviewed the regulations n° 004 / RURA / 2011 governing licensing for digital terrestrial television;

After consideration and approval in its meeting of 27<sup>th</sup>/06/2019;

Hereby issues the following Regulation governing Digital Terrestrial Television services in Rwanda.

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**CHAPTER ONE:    GENERAL PROVISIONS**

## **Article One: Purpose of this Regulation**

The purpose of this Regulation is to provide a licensing and regulatory framework for Digital Terrestrial Television services in Rwanda.

## **Article 2: Definitions of Terms**

In this Regulation, the following terms are defined as follows:

1. **Broadcasting:** the emission or transmission of sound or images for direct reception by the general public by means of receivers adapted for that purpose, whether the delivery is effected by means of or uses of the radio frequency spectrum, cable, optical fiber, satellite or any combination of these;
2. **Community Distribution License:** a licensed operator providing terrestrial broadcasting network and multiplexing services covering a small or a bit larger region of the country but not covering the whole territory of the country. It might be either state owned or private one;
3. **DTT:** an acronym that stands for Digital Terrestrial Television;
4. **Head-end:** equipment where the various program feeds are collected from television studios or from satellite feeds, assembled, encoded and multiplexed onto one or more transport streams;
5. **License:** the official document issued by the Regulatory Authority granting rights and obligations of operating a signal distribution services;
6. **Multiplexer:** the equipment that simultaneously transmits two (2) or more messages on a single transmission path;
7. **Multiplex Services:** making available network facilities, and includes the operation of content multiplexing, bundling and distribution in combination;
8. **National Signal Distribution License:** a licensed operator providing terrestrial broadcasting network and multiplexing services covering the whole country and it is either state owned or private;
9. **Regulatory Authority:** Rwanda Utilities Regulatory Authority as established by the Law N°09/2013 of 01/03/2013;
10. **Service:** provision of content from the Digital Video Broadcasting (DVB), head-end (studio) to the end users, television receiving equipment using Terrestrial Digital Broadcasting network;

11. **Service Provider:** Any person chosen and contracted by the Signal Distributor to sell to customers some products like decoders, subscription or any other service specified in the contract;
12. **Signal Distributor:** a licensed operator providing terrestrial broadcasting network and multiplexing services;
13. **Signal Distribution Service:** making available network facilities, and includes the operation of content distribution to the customer premise;
14. **Transmitters:** where the multiplexed are fed to the antennas for the broadcasting of the Digital television signal;
15. **Value Added Services (VAS):** extra electronic services provided by the licensee other than basic signal distribution services;

### **Article 3: Scope of application**

This regulation applies to any person carrying out or intending to carry out the activity relating to the:

- a) installation,
- b) maintenance,
- c) operation of digital terrestrial television multiplex and
- d) provision of signal distribution services as a common carrier of licensed content service providers.

## **CHAPTER 2: PRINCIPLES GOVERNING PROVISION OF SIGNAL DISTRIBUTION**

### **Article 4: Operating a Signal Distribution Network**

A Signal Distribution Licensee shall carry out and or build the Terrestrial Digital Broadcasting Platform and the multiplexing networks for the distribution of Broadcasting Services and other VAS including but not limited to:

- a) sending the short messages to the subscribers;
- b) streaming services;
- c) launching video on demand.

The provision of VAS is subject to the approval of the Regulatory Authority.

**Article 5: Technical standards of signal distribution network**

The licensee of the signal distribution services must comply with the DTT transmission standards and Technical specifications for Set Top Box (STB) and as prescribed in annex of this Regulation. The transmission standards and technical specifications may be updated from time to time by the Regulatory Authority.

**Article 6: Number of Signal Distributor**

The number of National Signal Distributors are two (2) operators. However, the Regulatory Authority reserves the right to revisit the number of signal distributors as deemed appropriate to respond to the needs of the market.

**Article 7: Responsibilities of the Signal Distributor**

Under this Regulation, the Signal Distributor has the following responsibilities:

- a) Establish, operate and maintain a Digital Terrestrial Television broadcasting infrastructure;
- b) Provide and manage delivery of multimedia service to the consumer's conditions of which service delivery shall be determined by a Service Level Agreement Comply with adopted Quality of Services standards;
- c) Make an agreement with Must Carry channels as prescribed by regulations governing Must Carry channel(s);
- d) Comply with any other regulatory requirements.

**Article 8: Spectrum usage rights and restrictions**

Any Signal Distributor Operator must combine the function of multiplex operator service provider and service distributor. The Signal Distributor holds the spectrum usage rights but is not allowed to outsource those rights.

However, some of the services including but not limited to the management of network, maintenance of the network and customer service delivery may be outsourced subject to the

approval of the Regulatory Authority. Such outsourcing does not waive the licensee from the duty to comply with license obligations.

**Article 9: Non-Disclosure Obligation**

Any licensed Signal Distributor is not allowed to disclose any contractual information related to Content Service Providers or any other Broadcasting service provider which has applied for connectivity to the multiplexers, unless such information is required:

- a) for the purpose of debt collection by Signal distributor;
- b) by the licensee’s attorney in connection with any potential threat or actual litigation between the licensee and the customer concerned;
- d) by the Regulatory Authority for the purpose of performing its functions;
- e) for conducting statistical or research work to develop the sector subject to the Regulatory Authority’s written approval;
- f) by an order of the Court or any national Institution purposely in performing its mandate.

**CHAPTER 3: LICENSING REGIME FOR SIGNAL DISTRIBUTION**

**Article 10: License Categories**

There are two (2) license categories for Signal Distribution Broadcasting Services:

- a) National Signal Distribution License;
- b) Community Distribution License.

**Article 11: Application for a Signal Distributor License**

Any person intending to conduct the business of building and running a Signal Distribution Network shall submit a license application to the Regulatory Authority.

**Article 12: Administrative Requirements**



An applicant for Signal Distributor license shall submit to the Regulatory Authority his/her written application accompanied with the following documents:

- i. the name and business registration particulars of the applicant;
- ii. the names, addresses and contact numbers of the legal Representative of the applicant;
- iii. a clearance from the Rwanda Revenue Authority;
- iv. Registration certificate issued by Rwanda Development Board;
- v. information on the shareholding status of the applicant;
- vi. article of association/ MoU of the Company if any;
- vii. Description of the network and services with five (5) years roll out targets;
- viii. the geographical area of activity;
- ix. Description or plan concerning the communications network;
- xi. a five (5) years business plan including human resource development;
- xii. Payment of a non-refundable application fee equivalent to USD 1, 000, payable in local currency considering the BNR exchange rate of the day of application.
- xiii. network standards and technology to be used;
- ix. Technical specifications of the equipment to be used within the network; The Regulatory Authority may request for any additional information to the applicant for the purposes of the license application. If the applicant fulfilling all the requirements, as set out in this regulation, the Regulatory Authority must grant a license in a period not exceeding thirty (30) calendar days from the date of receipt of such application.

### **Article 13: Technical and operational requirements**

A Signal Distributor licensee shall, among other things, comply with the following:

- i. To provide signal distribution services as a common carrier of licensed Content Service Providers;
- ii. To ensure that any broadcasting signal or content carried through the network of the Signal Distributor is sourced from a licensed Content Provider;

- iii. To ensure that Broadcasting signal or content carried through the network of a Signal Distributor shall be of the specified and required quality and standard as may be prescribed by the Regulatory Authority;
- iv. To provide Signal Distribution Services in an equitable, reasonable and non-discriminatory manner,
- v. To consider that twenty per cent (20%) of the transmitted channels are allocated to Free to air channels;
- vi. To ensure that all Free to Air Channels are accessible without constraints to its specific Set-Top-Box (STB) and Integrated Digital Television (iDTV), the STBs should reflect the technical specifications published by the Regulatory Authority;
- vii. To ensure that all conditional access television channels shall be accessible through a single Set-Top-Box and integrated digital television using mechanisms such as, smart cards, passwords or keys or any other mechanisms compatible with the single receiver system;
- viii. To provide enough and accurate information to customers with regard to the types of STB's to be bought by the customer;
- ix. To provide capability to interface with any Content Service Provider to make available, provisioning of content aggregation and Program bouquet handling system that shall support data paths embedded in the DVB stream based on open source (nonproprietary) multimedia system to support Electronic Program Guide (EPG);
- x. To submit to the Regulatory Authority updated coverage and roll-out plans on the provision of its services and that, such updated roll-out shall be subject to inspection and approval by the Regulatory Authority;
- xi. To seek an approval of the Regulatory Authority prior any disconnection of the content TV provider;
- xii. The Signal Distributor should not broadcast/scroll any advertising message on any carried content without an official authorization from the Content Service Provider;
- xiii. To provide network security to prevent stolen decoders from being used outside Rwanda;

xiv. To comply with any other conditions as may be prescribed by the Regulatory Authority.

**Article 14: Availability of set top boxes on market**

The terrestrial pay television services providers and signal distributors are allowed to import and sell the STBs taking into consideration the STB' technical specifications prescribed by the Regulatory Authority. When is necessary the Regulatory Authority may allow other investors to import and sell the STBs.

**Article 15: License Validity and fee**

The validity of a Signal Distribution license is fifteen (15) years renewable. Before collecting a Signal Distribution license, the license must first pay the license fees equivalent to USD 104,000 but payable in local currency considering the National Bank exchange rate of the day of such payment.

**Article 16: Renewal of License**

The signal distributor license holders may apply to the Regulatory Authority for renewal of a license not later than twelve (12) months before the expiry of the existing license.

Procedure for the renewal of license is the same as that procedure applicable to the granting of the original license unless otherwise required by laws and Regulations into force. Any Signal Distribution licensee who does not want to continue the business shall also notify the Regulatory Authority twelve (12) months before the expiration of the existing license. If the licensee doesn't renew the license or notify about the closure of the business, signal distribution services should be ceased at the expiration date of the license.

**Article 17: Grounds for Refusing to Grant License**

An applicant may be refused a license by the Regulatory Authority on the following grounds:

in order to protect the national integrity and/or national security;

ii) for reasons of limitations on the frequency spectrum resources;

iii) if the Regulatory Authority reasonably believes that competition in the signal distribution sector can be adversely affected;

iv) if the applicant has failed in meeting the information requirement and related obligations.

### **Article 18: License Modification**

The Regulatory Authority has the power to make modifications to Signal Distribution Licenses when it determines that a modification is needed in order to respond to:

- i) Significant changes in new laws or regulations, or significant court decisions that directly affect the license provisions;
- ii) The requirement of any regulatory changes that are intended to ensure equal opportunities and effective competition in Digital Terrestrial Television markets in both rural and urban areas;
- iii) Adjusting to the changes necessitated by an existing market conditions.
- iv) The requirements of any technological developments or changes;

The Licensee may apply to the Regulatory Authority for modification of any term of its license and the Regulatory Authority has the right to effect such modification if it considers it appropriate to do so, having due regard to the provisions of the laws and regulations in force.

### **Article 19: License Cancellation**

The Regulatory Authority may cancel the license of a signal distributor if:

- i. the licensee is guilty of fraud or intentional misrepresentation when applying for the license;
- ii. after notification of license issuance, the licensee fails to withdraw its license within a period of three months;
- iii. the original purpose for which the operator's license was issued no longer exists.

### **Article 20: License Transfer**

The licensee shall not transfer the license to any person without prior written consent of the Regulatory Authority. Such approval shall be granted after consideration of the matter and if the proposed transferee meets all the conditions for granting the relevant license.

### **Article 21: Procedure for license transfer**

A license transfer proceeding is initiated by an application from the licensee stating the reasons for such transfer and shall be accompanied by the evidence of payment of all fees and levies required by law by the transferor as well as the shareholding structure of the transferee if any.

Until the Regulatory Authority has issued an approval of the transfer, no licensee may attempt to transfer its license to another person. The duration of the license and the license terms and conditions shall remain the same.

### **Article 22: Suspension of license**

The Regulatory Authority may suspend a signal distributor license when it determines that suspension is needed in order to respond to:

- a. Failure to comply with license terms and conditions;
- b. Failure of the licensee to provide to the Regulatory Authority the data required or failure to cooperate with the Regulatory Authority inspection and audits;
- c. Failure to pay regulatory fees.

### **Article 23: Revocation of the License**

The Regulatory Authority may revoke a signal distributor license where after the grant of the license it is found that the licensee:

- i. has repeatedly and seriously violated the provisions of this regulation, license terms or any other law on broadcasting referred to in this regulation or in orders made under it; or
- ii. is engaged in or is supporting activities amounting to a treasonable offence under the Penal Code of Rwanda.
- iii. has no longer sufficient financial resources to meet its obligations in view of the nature and extent of the operation.

#### **Article 24: Procedures for license revocation**

A license revocation proceeding will be conducted in the following manner:

- a. The Regulatory Authority shall commence a license revocation proceeding by sending written notice to the licensee advising the licensee of the commencement of a revocation proceeding, and requiring licensee to file a response.
- b. If the licensee contests the revocation or fails to respond to the Regulatory Authority notice, the Regulatory Authority will hold a hearing on the license revocation.
- c. The Regulatory Authority may revoke or not the license based on the outcome of the hearing session on license revocation.

#### **Article 25: Return of the suspended or revoked license**

If the signal distributor license has been suspended or revoked, it shall have immediate effect from the date of suspension or revocation and the operator shall within five (5) days from the date of suspension or revocation return the license to the Regulatory Authority. During that period, the licensee shall not operate or provide any service he was licensed for.

#### **Article 26: Frequency Assignment**

The Regulatory Authority assigns the spectrum to the Signal Distributor according to the requirement and availability of the frequency.

#### **Article 27: Validity of the radio frequency license**

The validity of the radio frequency license is subject to validity of the parent license granted to the signal distributor operator. However, the signal distribution licensee shall pay initial and annual fee for radio frequency as determined by applicable laws and regulations.

## **CHAPTER IV: MONITORING AND ENFORCEMENT**

### **Article 28: Safety Measures**

The licensee shall in respect of services operated, maintained or offered under its License take proper and adequate safety measures to safeguard life or property, including exposure to any electrical emissions or radiations emanating from equipment or installation from such operations.

### **Article 29: Performance Monitoring**

The Regulatory Authority shall monitor the performance of each license holder for full compliance with all terms and conditions of the license;

The licensee is required to report on safety, human resource development, financial, technical, organization and other data needed to allow the Regulatory Authority to effectively monitor the compliance of the license holder.

### **Article 30: Noncompliance with the provisions of these regulations**

Any person who contravenes to the provisions of this regulation shall be liable to administrative fines related to broadcasting services as provided by the law N°24/2016 of 18/06/2016 governing Information and Communication Technologies

## **CHAPTER V: FINAL PROVISIONS**

### **Article 31: Repealing provision**

All prior provisions contrary to this regulation are hereby repealed.

### **Article 32: Commencement**

This regulation shall take effect on the date of its signature by the Chairperson of the Regulatory Board.

**Kigali, on 27<sup>th</sup>/06/2019**

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**Dr Ignace GATARE**  
**Chairperson of the Regulatory Board**

**Annex: DTT Transmission standards and Technical specifications for Set Top Boxes**

**1. DTT Transmission Standards**

Transmission system	DVB – T2
Video Compression Standard	MPEG-4
DVB-T2 Network Topology	SFN, MFN, or Hybrid
Fast Fourier Transform (FFT) length, which specifies the number of carriers	1k, 2k, 4k, 8k, 16k and 32k
Carrier modulation	QPSK; 16-QAM; 64-QAM, 256 QAM
Code rate of inner error protection	1/2, 2/3, 3/4, 5/6, 7/8
Data rate	1k, 2k, 4k, 8k, 16k and 32k
Channel bandwidth	8MHz and 7MHz
Signal Transmission techniques	OFDM and COFDM

**2. Technical Specifications for Set-Top-Boxes**

<b>Basic features</b>	- Full function standard IR remote control, using AAA size battery	
	- Favorite channel list editing	
	Maximum channels receivable and storable	(up to) 800
	Warranty	1 year: Epidemic failure and repair facility has to be considered
	User Manual	Use friendly documentation which should be in English. French



<b>System Resources</b>	Flash Memory	>64MB
	SD RAM	256MB
<b>RF tuner &amp; DVB-T2 Channel</b>	Frequency	VHF (174-230 MHz) optional, UHF (490 – 694 MHz)
	Input signal level	36~85dB $\mu$ V
	FEC coding	LDPC Code + BCH Code, Code rates: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6
	FFT Size	1K, 2K, 4K, 8K, 16K, 32K.
	C/N range (Rice channel)	3dB (QPSK 1/2) to 24dB (256QAM 5/6)
	Pilot Pattern	PP1, PP2, PP3,PP4,PP5,PP6, PP7 and PP8
	Guard intervals	1/128,1/32,1/16,19/256, 1/8, 19/128, 1/4.
	Channel raster	7 MHz (VHF), 8 MHz (UHF), 1.7 MHz (VHF)-optional
	Signal Bandwidth	7.61 MHz (Normal mode), 6.80, 7.77 MHz (Extended mode)1.54 (optional) 6.66,1.57(optional),
	Service specific robustness	Physical Layer Pipes (PLP)
	Interleaving	Bit + Cell +Time + Frequency As per ETSI EN 302 755
	Diversity	SISI, MISO, (SIMO, MIMI if diversity receiver)
	Rotated constellations	Significant robustness gain in channels with severe degradations (multipath, SFN operation, narrow band interference...)
	Mode of Extensions	Future Extension Frame (FEF)
	Max Bit Rates (8MHz)	50.3 Mbit/s, (32Ke, 256QAM, CR=5/6, GI=1/28, PP7)
Used Bit Rates (8MHz)	Portable SFN: 25.0 Mbit/s, Fixed SFN: 37.0 Mbit/s, Fixed MFN: 40.2 Mbit/s	
	C/(N+I) Performance in SFNs	ETSI EN 302 755 compliant
	GE06 compatible	Signal is under the mask of DVB-T2 (power level measured in a 4 KHz bandwidth)
<b>Bypass Support</b>	The RF bypass gain shall be in the range -1db to +3db over the frequency range 174 to 694 MHz	

<b>Maximum Frequency Offset</b>	The STB shall be able to receive signals with an offset of up to 125 kHz from the nominal center frequency	
<b>Return Loss</b>	>13 dB	
<b>Response to changes in Modulation</b>	The STB shall recover automatically from changes in modulation parameters, continuing to output an error-free transport stream after recovery. Recovery shall take no more than one second for any one change.	
<b>MPEG Transmission stream and video and Audio Decoding</b>	Transmission stream	MPEG-2 ISO/IEC 13818
	Video decoding	MPEG -4 AVC (H.264), 1920X1080 (High definition-optional) (ISO/IEC 14496-10)
	Aspect Ratio (image rate)	4:3, 16:9
	Frame frequency	25Hz (PAL)
	Video Resolution	720X576 (PAL)-standard definition, HD 1080,1080i (optional)
	Audio decoding	MPEG/MusiCam Layer I & II / HE AAC
	Audio mode	Single track/dual track/stereo
	Audio sampling rate	32KHz, 44.1KHz 48KHz. , 96 KHz (optional)
	Quality reception thresholds	All STBs should have an on-screen visual signal level indicator which would aid in directing the antenna and troubleshooting reception problems.
<b>Software</b>	<ul style="list-style-type: none"> <li>- EPG: current and next program information. 24x7 days schedule.</li> <li>- Capable of the Identity control, watch rating and parental lock</li> <li>- Auto/manual tuning</li> <li>- 24-hour clock</li> <li>- OTA: STB software's, EPG, CA features must be upgradable over the air (USB Upgrade-optional)</li> <li>- Support Receive mail</li> <li>- Provides the instant and personalized message prompt</li> <li>- Display and withdrawal of subtitles</li> <li>- Support multi-language info</li> </ul>	

<b>software for interpretation and handling of the active service information</b>	PSI/SI(program Specific Information/Service Information)	NIT, CAT, PAT, PMT, SDT, EIT, TDT, TOT EN 300 468 [10] and ETSI TR 101 211 [11] compliant
<b>Additional Hardware</b>	PVR (optional)	
<b>Teletext &amp; Teletext subtitle</b>	<ul style="list-style-type: none"> <li>- It should be able to display Teletext using the OSD (On Screen Display) and/or by the insertion of the Teletext data in the VBI of the analogue CVBS video output.</li> <li>- It should be able to display Teletext subtitling, meeting the requirements for level 1.5 in ref. [ETS 300 706, “Enhanced Teletext Specification”]</li> </ul>	
<b>Interfaces</b>	<ul style="list-style-type: none"> <li>- RF input connector: IEC 169-2 female, input impedance 75 ohms</li> <li>- One RCA (CINCH) female connector for video output and Two RCA (CINCH) female connectors for stereo sound output</li> <li>- RF by pass (loop) IEC 169-2 male</li> <li>- RF input via a PAL-B/G modulator</li> <li>- SCART interface (optional)</li> <li>- HDMI interface</li> <li>- USB Port (optional)</li> <li>- Data port1 (RS232, 9 pin D -Sub type(optional)</li> <li>- Should include at least one RF cable to connect the unit with its associated analogue television receiver</li> </ul>	
<b>Interfaces for Conditional Access</b>	<ul style="list-style-type: none"> <li>- For pay TV, STB must include at least one embedded smart card reader or a DVB-CI (Common Interface) slot to allow any type of conditional access module to be plugged into the set top box. (EN 50221-1997 V1.2/97)</li> </ul>	
<b>Mechanical interfaces(LED Indicators)</b>	green	normal operation
	flashing green	system boot in progress
	flashing red	software download in progress
	Controls to be provided on the front panel	Menu, P+, P-, V+, V-
<b>Physical attributes</b>	Power supply	AC 240±10%, 50 ±1Hz 12V DC input (Option)

<b>Environmental attributes</b>	Power consumption	Max 15W
	Operating Temperature	0~45°C
	Operating humidity	Up to 90%
	Over and under voltage protection	
	Overheating protection	
<b>Reliability</b>	MTBF (Mean time between failures)	80,000Hrs
	Standby functionality (sleep mode)	

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**Dr. Ignace GATARE**

**Chairperson of the Regulatory Board**