



ITU Centres of Excellence Network for Africa
African Advanced Level Telecommunications Institute (AFRALTI)
Online Training Course on
Broadcast Spectrum Management
5 – 30 October 2020

COURSE OUTLINE

COURSE DESCRIPTION

Title	Broadcast Spectrum Management
Objectives	<p>This course “Broadcast Spectrum Management” presents mainly Radio Frequencies (RF) used for broadcasting services as per ITU Radio Regulations and change of use of the radio frequencies from analog to digital terrestrial television broadcasting in the Very High Frequency (VHF) band III (174-230MHz and Ultra High Frequency (UHF) bands IV&V (470-862MHz) that was done by the Regional Radiocommunications Conference (RRC) for Broadcasting Areas in Region 1 held in Geneva in 2006.</p> <p>The objectives of the training course are to:</p> <ul style="list-style-type: none">• Understand of the management of the RF spectrum used for broadcasting services as per ITU Radio Regulations and Radio Frequency Allocation tables;• Understand of the allocation of the RF spectrum for the Digital Terrestrial Television broadcasting as per Geneva 2006 Agreement and its uptake to the UK, Kenya and Tanzania as the case studies;• Understand of the valuation methodologies of the Digital Dividend RF spectrum; and• Understand of the background of the TV and Radio Broadcasting.
Dates	5 - 30 October 2020
Duration	20 Days
Registration deadline	2 October 2020
Training fees	USD960
Course code	20OI26042AFR-E

LEARNING OUTCOMES

After completing this course, the participant will be able to:

- Allocate and assign the RF spectrum used for different Broadcasting services as per ITU Radio Regulations;
- Allocate and assign the RF spectrum for the Digital Terrestrial Television Broadcasting services as per Geneva 2006 Agreement;
- Carry out valuation of the Digital Dividend RF spectrum and license it at market value; and
- Learn lessons of experience on Digital Broadcasting Migration from the U.K, Kenya and Tanzania as the three Country Case Studies.

TARGET POPULATION

This training is targeted at personnel from regulators, broadcasters, digital signal distributors, policy makers in the government and academia who are interested in understanding well the Broadcast Spectrum Management.

TUTOR/INSTRUCTOR

NAME OF TUTOR(S)/INSTRUCTOR(S)	CONTACT DETAILS
Dr John Mpapalika	Email: mpapalikaj2016@gmail.com Tel: +255 762 545 228
Jonathan Mwakijele	Email: Jmwakijele@afraiti.org Tel: +254 718 860 897

EVALUATION

Centres of Excellence shall grant certificates of achievement based on assessment tests undertaken during, and at the end of, each training. In this regard, Centres of Excellence shall develop assessment tools for this training. The tools should include the following:

- Regular assessments quizzes

Only candidates who have successfully completed all the assessments quizzes shall be awarded the ITU certificate.

TRAINING SCHEDULE AND CONTENTS / AGENDA

Training schedule and content (online training)

DAY	MODULE TITLE	TOPICS
1	Introduction to Broadcasting and Radio Frequency Spectrum	<ul style="list-style-type: none"> • Definition of terms • Light Spectrum • Electromagnetic spectrum
2		<ul style="list-style-type: none"> • Radio waves • Propagation of Radio waves
3		<ul style="list-style-type: none"> • Sweet Spot Combination of Propagation of Radio Waves • The Sweet Spot RF Spectrum • Allocation of the Pot of Gold RF spectrum
4	Applicable ITU Radio Regulations for Broadcasting Services	<ul style="list-style-type: none"> • Applicable ITU RF Spectrum Allocations for Broadcasting Services as per STK 61 and GE 89 Agreements
5		<ul style="list-style-type: none"> • Applicable ITU RF Spectrum Allocations for Broadcasting Services as per STK 61 and GE 89 Agreements (Cont.)
6	Radio Frequency Bands Used for Broadcasting Services	<ul style="list-style-type: none"> • Addressable Radio Frequency Spectrum • TV and Radio Frequency Bands
7		<ul style="list-style-type: none"> • TV services in the VHF and UHF Bands
8		<ul style="list-style-type: none"> • RF Spectrum Used for Broadcasting Satellite Services
9		<ul style="list-style-type: none"> • The Fixed Satellite Service Frequency Bands
10		<ul style="list-style-type: none"> • Traditional satellite systems
11	The Transition of Terrestrial Television Broadcasting from analog to Digital as per Geneva 2006 agreement	<ul style="list-style-type: none"> • Definition • Broadcasting area in Region 1 • Map of the ITU Regions for Allocations of the Radio Frequencies
12		<ul style="list-style-type: none"> • Analogy Terrestrial Television Broadcasting Frequency Plan for Broadcasting Area in Region 1
13		<ul style="list-style-type: none"> • Channel spacing • Channel numbering
14		<ul style="list-style-type: none"> • Channel referencing
15		<ul style="list-style-type: none"> • Cutoff date for transition • Extension of the cutoff date for the transition • Grant of extension of the cutoff date for transition

16	Application of the Digital Dividend RF Spectrum and its Channelisation Plan	<ul style="list-style-type: none"> • Channelisation plan for Digital Dividend I • Channelisation plan for Digital Dividend II
17	The Uptake of the Digital Terrestrial Television Broadcasting	<ul style="list-style-type: none"> • The case of UK
18		<ul style="list-style-type: none"> • The case of Kenya
19		<ul style="list-style-type: none"> • The case of Tanzania
20	Summary and Conclusions	<ul style="list-style-type: none"> • Summary of discussed topics and feedback from participants

METHODOLOGY

This course shall be conducted fully online. There will be Instructor led training, lectures, case studies and quizzes. All participants must do all the quizzes and pass in order to get a certificate from ITU. The tutor will deliver live lectures through ZOOM on every Thursday and Friday from 10:00 HRS to 12:00 HRS Geneva, Switzerland Time. This will be opportunity for participants to interact directly with the tutor and ask questions and discuss different topics covered online in that week.

TRAINING SCHEDULES AND CONTENT AGENDA

WEEK	ACTIVITIES	EXERCISES AND QUIZ
WEEK 1	Read week 1 topics: <ul style="list-style-type: none"> • Introduction to Broadcasting and Radio Frequency Spectrum • Applicable ITU Radio Regulations for Broadcasting Services Participate in live discussions on Thursday and Friday	Do all quizzes in week 1
WEEK 2	Read week 2 topics: <ul style="list-style-type: none"> • Radio Frequency Bands Used for Broadcasting Services Participate in live discussions on Thursday and Friday	Do all quizzes in week 2
WEEK 3	Read week 3 topics: <ul style="list-style-type: none"> • The Transition of Terrestrial Television Broadcasting from analog to Digital in the Very High Frequency (VHF) band III (174 -230 MHz) and Ultra High Frequency (UHF) bands IV &V (470 -862 MHz) as Per Geneva 2006 Agreement Participate in live discussions on Thursday and Friday	Do all quizzes in week 3
WEEK 4	Read week 4 topics: <ul style="list-style-type: none"> • Applications of the Digital Dividend RF spectrum and its Channelisation Plan • The Uptake of the Digital Terrestrial Television Broadcasting: the case of the U.K, Kenya and Tanzania. Participate in live discussions on Thursday and Friday	Do all quizzes in week 4

TRAINING COORDINATION

Training Coordinator: Mr. Jonathan P. Mwakijele Head of Management, Policy and Regulatory Unit AFRALTI Tel : +254 718 860 897 Email: Jmwakijele@afralti.org	ITU coordinator: Mr. Emmanuel Niyikora Programme Officer ITU Area Office for West Africa, Dakar Tel : +250 788312939 Email: emmanuel.niyikora@itu.int
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REGISTRATION AND PAYMENT

ITU Academy portal account

Registration and payment should be made online at the ITU Academy portal.

To be able to register for the course you **MUST** first create an account in the ITU Academy portal at the following address:

<https://academy.itu.int/index.php/user/register>

Course registration

When you have an existing account or created a new account, you can register for the course online at the following link: <https://academy.itu.int/training-courses/full-catalogue/broadcast-spectrum-management>

You can also register by finding your desired course in our training catalogue <https://academy.itu.int/index.php/training-courses/full-catalogue>

Payment

1. On-line payment

A training fee of USD 960 per participant is applied for this training. Payment should be made via the online system using the link mentioned above for training registration at <https://academy.itu.int/training-courses/full-catalogue/broadcast-spectrum-management>

2. Payment by bank transfer

Where it is not possible to make payment via the online system, select the option for offline payment to generate an invoice using the same link as above. Download the invoice to make a bank transfer to the ITU bank account shown below. Then send the proof of payment/copy of bank transfer slip and the invoice copy to Hcbmail@itu.int and copy the course coordinator. **All bank transaction fees must be borne by the payer.**

Failure to submit the above documents may result in the applicant not being registered for the training.

3. Group payment

Should you wish to pay for more than one participant using bank transfer and need one invoice for all of them, create an account as **Institutional Contact**. **Institutional Contacts** are users that represent an organization. Any student can request to be an institutional contact or to belong to any existing organization.

To do this, head to your profile page by clicking on the **“My account”** button in the user menu. At the bottom of this page you should see two buttons:

- a. If you want to **become an institutional contact**, click on the **“Apply to be an Institutional Contact”** button. This will redirect you to a small form that will ask for the organization name. After you fill the name of the organization you want to represent, click on **“continue”** and a request will be created. An ITU Academy manager will manually review this request and accept or deny it accordingly.
- b. If you want to **belong to an existing organization**, click on the **“Request to belong to an Institutional Contact”** button. This will redirect you to a small form that will ask you to select the organization you want to join from an organization list. After you select the correct organization, click on **“continue”**, a request will then be created. The Institutional Contact that represents that organization will manually accept or deny your request to join the organization.

ITU BANK ACCOUNT DETAILS:

Name and Address of Bank:	UBS Switzerland AG Case postale 2600 CH 1211 Geneva 2 Switzerland
Beneficiary:	Union Internationale des Télécommunications
Account number:	240-C8108252.2 (USD)
Swift:	UBSWCHZH80A
IBAN	CH54 0024 0240 C810 8252 2
Amount:	USD 960
Payment Reference:	CoE-AFR 26042 – P.40590.1.07

4. **Other method of payment**

If due to national regulations, there are restrictions that do not allow for payment to be made using options 1 & 2 above, please contact the ITU coordinator for further assistance.