ITU and NCA

Online Training Course delivered by NCA, Ghana on

Conformance and Interoperability (C&I) Virtual Training for Africa Group 2021: Policy, Legal & Regulatory framework.

15th – 19th November 2021, 09:00-15:00hrs GMT, 11:00-17:00hrs GMT + 2

TRAINING COURSE OUTLINE (ONLINE)

COURSE DESCRIPTION

Title	**Conformance and Interoperability (C&I) Virtual training for Africa Group 2021: Policy, Legal and Regulatory framework.**
Objectives	[Briefly state main objective of the training course] i) The main objective of the workshop is to enhance capacity of Member States in Africa to establish Conformance and Interoperability Policy and Regulatory Frameworks; to equip participants on knowledge on building and using labs, to effectively make use of tested telecommunication equipment for conformance and interoperability and to contribute to achievements of sustainable developments Goals. ii) To contribute to international community's effort to achieving the Sustainable Development Goals (SDG), especially those targets on Infrastructure (namely 9.1, 9.a, 9.b, and 9.c) in adopting eco-friendly set of harmonized standards, since the countries can, through conformance and interoperability (C&I) regime instruments, better control and authenticate products. iii) To increase the probability of interoperability, i.e. equipment built by different manufacturers being capable of communicating successfully.
Dates	15th – 19th November 2021 (9:00 – 15:00hrs, GMT, 11:00-17:00, GMT + 2)

Duration	1 week and maximum of 6 hours per day with breaks
Registration deadline	10th November 2021
Training fees	free
Course code	21OI27730AFR-E

DESCRIPTION OF THE TRAINING COURSE

The Conformance and Interoperability workshops has proven to enhance capacity of participants from Member States in Africa to effectively test conformance and interoperability of equipment used in networks and digital infrastructure and to establish labs for testing including establishing policy and regulatory frameworks.

Capacity acquired through this training will enable facilitation of safe usage of ICT products and services anywhere in the region, regardless of who is the manufacturer or service provider, it is therefore crucial that products and services be developed in accordance with relevant international standards, regulations and other specifications, and that their compliance be tested

As widespread Conformity and interoperability of telecommunication/ICT equipment and systems allow increased market opportunities as well as the reliability and integration of world trade which can be achieved through Programs, polices and decisions.

This course will cover introduction to Conformance, type approval and Interoperability (C&I) Regime and will concentrate on the legal, policy, regulatory and administrative aspects of C&I. The course will not cover technical specifications of building C&I laboratories and practical measurements of C&I.

LEARNING OUTCOMES

Upon completion of this course, participants will be able to:

a) ensure that products and services are delivered according to expectations. Conformity assessment builds consumer trust and confidence in tested products and consequently strengthens the business environment and, thanks to interoperability, the economy benefits from business stability, scalability and cost reduction of systems, equipment and tariffs.
b) Understand the benefits of C&I which will increase as many countries will have adopted harmonized C&I regimes at both national and bi-/multilateral level.
c) Understand challenges due to inappropriate/inadequate infrastructure and technology development to be in a position to test or to recognize tested ICT equipment (e,g accredited laboratories) will be minimized and countries will be in position to adopt harmonized C&I regimes at both national and vi/multilateral levels.
d) Acquire knowledge and understand that availability of high-quality, high-performing products will accelerate widespread deployment of the infrastructure, technologies, and associated services, allowing people to access the information society regardless of their location or chosen device, and contributing to implementing the SDGs.
e) Enhance knowledge and understand that simplifying the conformity assessment process will facilitate the homologation of products destined for telecommunications/ICTs, will give legal certainty to users on compliance in the products they acquire; and will promote the adoption of the best technological standards and measures to protect intellectual property.

f) In addition, this will contribute to raise the quality standards of the services to make them more efficient for the benefit of the population.

g) Acquire knowledge, understanding and competencies in the administrative, regulatory and technical requirements needed for equipment authorization (type approval) to be in line with national, regional and international standards.

h) Know the ITU updated activities on C&I with specific emphasis on Pillars 3 & 4 of the C&I program in the context of workstreams of Thematic Priority.

i) The training aims at ensuring knowledge understanding and compétence in MRA (Mutual Recognition Arrangements/ Agreements) aspects of the administrative, regulatory, and technical requirements for equipment authorisation in line national, regional and international standards.

j) Competently take the final examination at the end of the training.

TARGET POPULATION

The Training course is open to experts conducting activities on conformity and Interoperability from Ministries in charge of ICTs and the Regulatory Bodies.

Target audience for this course are the Ministry and Regulators staff in the ICTs Industry working with ICTs standards including approving and authorizing ICTs equipment and devices in Sub-Sahara Africa. These are technical staff from entities like;

- Ministry of ICTs
- Regulatory Authority
- Operators
- Service Providers
- Manufacturers
- Vendors
- ICT equipment Dealers, etc

ENTRY REQUIREMENTS

Candidates will be selected based on their duties and background knowledge of Conformance and Interoperability issues. Confirmation of admittance to the training course will be sent directly to the selected candidates. Candidates will be expected to give a brief of C&I status in their countries and also to participate in group projects and presentation of C&I related issues.

TUTORS/INSTRUCTORS

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TRAINING COURSE CONTENTS

The topics covered in this module are:

1. The ITU activities on C&I with focus on Pillars 3 & 4 of the C&I Programme and CITP updates
2. Legal aspect of Conformity and Interoperability (ITU, GHAN, FCC & EU perspective)
3. Country experience
4. Guidelines of C&I Regimes (Conformity and Interoperability frameworks)
5. Guidelines of Type Approval Regulation
6. Policy and regulation of Conformity and Interoperability establishment/development
7. Conformity and Interoperability of Internet of Things in the 4th Industrial Revolution
8. Mutual Recognition Agreement/Arrangement (MRA)
9. Written test
10. Brainstorming, Q&A and Evaluation and closure

TRAINING COURSE SCHEDULE

15th November, 2021 GMT	
09:00 – 10:15hrs	***Welcoming remarks*** ***Welcoming speech ITU*** ***Welcoming speech NCA*** - Director General - ITU Representative Session 1 **ITU Updates** Objective: To promote updates on Conformity and interoperability Thematic Priority and Theory of Change. The ITU activities on C&I with focus on Pillars 3 & 4 of the C&I programme and CITP updates - Mr. Keith Mainwarring
10:15 - 10:25hrs	*Break*
10:25 – 11:40hrs	Session 1 cont'd **ITU Updates** Objective: To promote updates on Conformity and interoperability Thematic Priority and Theory of Change. The ITU activities on C&I with focus on Pillars 3 & 4 of the C&I programme and CITP updates - Mr. Keith Mainwarrig - ITU
11:40 – 12:20hrs	*Lunch*
12:20 – 13:35hrs	Session 2: Legal aspect of Conformity and Interoperability Objective: Law enforcement and surveillance, safeguard, post-market surveillance - Telecommunication/ICTs Act provisions: placing products in the market; institutions rights and responsibilities - Legislation to promote orderly equipment marketplace surveillance - Coordination across Regulatory Agencies - Relevant international standards **NCA**

	Break
13:45 – 15:00hrs	Session 2: cont'd **Legal aspect of Conformity and Interoperability** Objective: Law enforcement and surveillance, safeguard, post-market surveillance - Telecommunication/ICTs Act provisions: placing products in the market; institutions rights and responsibilities - Legislation to promote orderly equipment marketplace surveillance - Coordination across Regulatory Agencies - Relevant international standards **NCA**
16th November 2021	
9: 00 - 10:15hrs	Session 3: Country experience Objective: to share experiences, opportunities and challenges - Country A - Country B - Country C - Country D - Country E - Country F - Country G, etc
10: 15 - 10:25hrs	*Break*
10:25 - 11:40hrs	Session 3: Contry Experience Cont'd Objective: to share experiences, opportunities and challenges - Country A - Country B - Country C - Country D - Country E - Country F - Country G, etc
11:40 – 12:20hrs	*Lunch*
12:20 – 13:35hrs	Session 4: **Guidelines of C&I Regimes (Conformity and Interoperability frameworks)**

	Objective: enhance capacity focusing on international issues related to the C&I Regimes. • Regulatory Framework • ICT standards and test suites • Type Approval, Certification and self – declaration process • Regulatory Authority • Accreditation Bodies, Certification Bodies and laboratory • Mutual Recognition Agreement/Arrangement (MRAs) • Institutions • Roadmap **NCA**
13:35 – 13:45hrs	*Break*
13:45 – 15:00hrs	Session 4: **Guidelines of C&I Regimes (Conformity and Interoperability frameworks)** Objective: enhance capacity focusing on international issues related to the C&I Regimes. • Regulatory Framework • ICT standards and test suites • Type Approval, Certification and self – declaration process • Regulatory Authority • Accreditation Bodies, Certification Bodies and laboratory • Mutual Recognition Agreement/Arrangement (MRAs) • Institutions • Roadmap **NCA**
	17th November 2021
09:00 - 10:15hrs	Session 5: **Guidelines of Type Approval Regulation** Objective: Framework and initial implementation roadmap for settling type approval system including certification and services • Introduction to type Approval and requirements • Legal framework • C&I Infrastructure • Initial implementation roadmap • Type Approval and homologation process • Import procedures for testing proposals • Equipment type Approval • Type Approval and conformity of production • Administrative Procedures of type approval • Certification and Self-declaration processes • Roadmap to establish a procedure for type approval testing • Approach for conformity and Interoperability testing • Market Surveillance and Enforcement • Consultation process and procedure

	• Fees and payment **NCA**
10: 15 - 10:25hrs	*Break*
10:25 - 11:40hrs	Session 5: **Guidelines of Type Approval Regulation** Objective: Framework and initial implementation roadmap for settling type approval system including certification and services • Introduction to type Approval and requirements • Legal framework • C&I Infrastructure • Initial implementation roadmap • Type Approval and homologation process • Import procedures for testing proposals • Equipment type Approval • Type Approval and conformity of production • Administrative Procedures of type approval • Certification and Self-declaration processes • Roadmap to establish a procedure for type approval testing • Approach for conformity and Interoperability testing • Market Surveillance and Enforcement • Consultation process and procedure • Fees and payment **NCA**
11:40 – 12:20hrs	*Lunch*
12:20 – 13:35hrs	Session 6: **Policy and regulation of Conformity and Interoperability establishment/development** Objective: Development and review of Regulatory Framework and Roadmap for establishment of C&I regimes • Telecommunication Act provisions • Methodology to calculate fees for Type Approval process including issue and/or renewal of Certification • Law enforcement and surveillance, safeguards, post-market surveillance, sanctioning and other legal provisions and procedure • Coordination and harmonization of C&I regime with other national Regulatory agencies **NCA**
13:35 – 13:45hrs	*Break*

13:45 – 15:00hrs	Session 6: **Policy and regulation of Conformity and Interoperability establishment/development** Objective: Development and review of Regulatory Framework and Roadmap for establishment of C&I regimes • Telecommunication Act provisions • Methodology to calculate fees for Type Approval process including issue and/or renewal of Certification • Law enforcement and surveillance, safeguards, post-market surveillance, sanctioning and other legal provisions and procedure • Coordination and harmonization of C&I regime with other national Regulatory agencies **NCA**
	18th November 2021
09:00 - 10:15hrs	Session 7: **Conformity and Interoperability of Internet of Things in the 4th Industrial Revolution** Objective: To enhance utilization of internet as a tool to help achieve results and not a threat. • Introduction to IoT • Difference between M2M and IoT • Legal framework • Infrastructure • Initial implementation roadmap • Conformity and interoperability of Internet of Things • Characteristics, Applications and challenges of Internet of Things • Benefits of conformity and interoperability of IoT • IoT interoperability testing • Conformity and Interoperability of Internet of Things process • Networking technologies and protocols • Standardization of Internet of Things • IoT Business Model • IoT Architecture **AFRINIC**
10: 15 - 10:25hrs	*Break*
10: 25 - 11:40hrs	Session 7: **Conformity and Interoperability of Internet of Things in the 4th Industrial Revolution** Objective: To enhance utilization of internet as a tool to help achieve results and not a threat. • Introduction to IoT • Difference between M2M and IoT • Legal framework

	• Infrastructure • Initial implementation roadmap • Conformity and interoperability of Internet of Things • Characteristics, Applications and challenges of Internet of Things • Benefits of conformity and interoperability of IoT • IoT interoperability testing • Conformity and Interoperability of Internet of Things process • Networking technologies and protocols • Standardization of Internet of Things • IoT Business Model • IoT Architecture **AFRINIC**
11:40 – 12:20hrs	*Lunch*
12: 20 - 13:35hrs	Session 8: **Mutual Recognition Agreement/Arrangement (MRA)** Objective: To develop a global network of Conformity assessment bodies key to international trade to promote cross boarder stakeholder confidence and acceptance of accredited conformity assessment bodies. • General Introduction • Principles • Efficiency and Effectiveness • Partnership and collaboration • Frameworks and Mutual Benefits • Regional Developments Guidance on • Development • Implementation • Management **NCA**
13: 35 - 13:45hrs	*Break*
13: 45 - 15:00hrs	Session 8: **Mutual Recognition Agreement/Arrangement (MRA)** Objective: To develop a global network of Conformity assessment bodies key to international trade to promote cross boarder stakeholder confidence and acceptance of accredited conformity assessment bodies. • General Introduction • Principles • Efficiency and Effectiveness • Partnership and collaboration • Frameworks and Mutual Benefits • Regional Developments Guidance on • Development • Implementation • Management

	NCA
19th November 2021	
9: 00 - 10:15hrs	Session 9:Written test Objective: evaluate understanding and knowledge transfer **ITU/NCA**
10: 15 - 10:25hrs	*Break*
10: 25 - 11:40hrs	Session 9: Written test Objective: evaluate understanding and knowledge transfer **ITU/NCA**
11:40 – 12:20hrs	*Lunch*
12: 20 - 13:35hrs	Session 10: Brainstorming, Q&A and Evaluation and closure Objective: evaluation of the course from participants including discussion focusing on pressing issues and topics for the next training ITU/NCA
13: 35 - 13:45hrs	*Break*
13: 45 - 15:00hrs	Session 10: Brainstorming, Q&A and Evaluation and closure Objective: evaluation of the course from participants including discussion focusing on pressing issues and topics for the next training ITU/NCA

METHODOLOGY (Didactic approach)

This course will be delivered using instructor-led online learning. The course is delivered using power-point slides posted on the course page and selected reference materials that the participants have to study each day, participate in scheduled activities and undertake self-assessments. Students will reinforce their understanding of the topics studied by drawing on their specific environments and are encouraged to consult with experienced colleagues who are working on a relevant topic. The following methods will be used for this course

- Self-study of PPTs and reference materials
- Instructor led presentations made through Zoom

- Interactive chat sessions and forum discussions

EVALUATION AND GRADING

Students' performance in this course will be determined using a combination of grades for the forum, participation in chats/zoom sessions, self-assessment quizzes and the final exam. Where:
- Forum posts for 30 hours will be awarded 10 points in total
- Assignments 15 points in total, 1 Assignment per day worth 1.5 points
- Participation in the Chat or Zoom sessions will be awarded 10 points in total
- Self- Assessments quizzes will have 10 questions worth 1 point per question (1 question per day)
- Attendance will be awarded 5 points in total, 0.5 points for per 3 hours per day
- Final Exam will be assessed by % of correct answers from a set of 25 multiple choice questions worth 2 points per question, out of a total of 50 points

The forum will account for 10% of the total score, assignments 15% of total score the chats/zoom sessions 10% of the total score, attendance 5% of total score, Quizzes 10% and the final exam 50%.

Total score higher than 70% is required to obtain the ITU certificate

TRAINING COURSE COORDINATION

Course coordinator:	ITU coordinator:
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TOPICAL AREAS UNDER CONSIDERATION FOR THE C&I TRAINING FOR THE AFRICAN REGION 2021

- The ITU activities on C&I with focus on Pillars 3 & 4 of the C&I Programme and CITP updates
- Legal aspect of Conformity and Interoperability (ITU, GHAN, FCC & EU perspective)
- Country experience
- Guidelines of C&I Regimes (Conformity and Interoperability frameworks)
- Guidelines of Type Approval Regulation
- Policy and regulation of Conformity and Interoperability establishment/development
- Conformity and Interoperability of Internet of Things in the 4th Industrial Revolution
- Mutual Recognition Agreement/Arrangement (MRA)
- Written test
- Brainstorming, Q&A and Evaluation and closure