

# PROFILE

**[TTC MOBILE]**

*TELECOM....Training, Outsourcing, Implementation.*

TTC commenced operation in 2003 as TTC organization, and was later in 2007, registered with the Corporate Affairs Commission as **TTC Mobile Limited**. We are in the business of manpower development for the telecom and ICT-related industry in general, via delivery of quality training covering IT, telecom. We have a total of 35 years cumulative experience in training delivery.

Aside our regular corporate training for institutions, and retail training for fresh graduates at our various training centers across the country, TTC Mobile has successfully deployed various grass-root-oriented trainings programs like **FREE IT Training (2003)**, **National Youth Development Program (2005)**, **National ICT Summit (2007)**, **National Telecom Scholarship (annually, from 2008)**. In 2010, we were selected as training partner to the federal government's Presidential Amnesty Program, which implementation commenced in November 2010; we are currently training delegates on this program, a continual basis.

Since 2003, thousands of Nigeria Youths have accessed quality ICT training via these programs, and many of them are now gainfully employed in various sectors of the economy, contributing their quotas to national developments in line with our mission statement, to effectively empower individuals, support institutions and corporate organizations in modern technologies, in order to help reposition them for local and global opportunities.



As we work towards being a leading light in the provisioning of professional technical training and support services, in IT and Telecommunications, we appreciate collaboration in order to tap into the rich experience of advanced ICT human resource, for the benefits therefrom. Consequently, we have enjoyed the support of Technical Partners in the United

Kingdom and in the United States, which have adequately complemented our initiatives. Our Partners, Lever Technologies Group Plc., Leeds, in the United Kingdom and CSE Systems USA, equally appreciate our drive, which is core ingredient to engender globalization in Nigeria.

Our corporate clientele include ***Dangote Sugar, Apapa; Dangote Projects, Ikeja; Silverbird Communications; Nigerian Army (Bonny Camp), and Nigeria School of Aviation, Zaria.***

## ENDORSEMENT

Three National Regulatory Authorities:

1. ***Association of Telecommunications Companies of Nigeria, (ATCON)***
2. ***Information Technology Association of Nigeria, ITAN***
3. ***Nigeria Internet Group, N.I.G.***

have separately, officially endorsed TTC'S customized Training Curriculum, as having content, which will boost local manpower development in our young graduates, add value to their curriculum and increase employability to foreclose unemployment

On the international scene, The Chairman, Board of Directors of the United States Telecommunications Training Institute, ***USTTI, Ambassador Michael Gardner,*** at their head office in Washington DC, USA, has commended TTC Mobile, on its efforts in bringing quality telecom training to the Nigerian youths.



**TTC Mobile** has 5 training centers in Lagos and Port Harcourt, with Head office at 130A, Oba Ladejobi Street, Ikeja GRA, Lagos.

Some courses offered at TTC Mobile.

### **Maintaining a BlackBerry® Enterprise Server in a Microsoft Exchange Environment**

With more than 28 million BlackBerry® smartphone customers and BlackBerry® Enterprise Server software deployed in over 175,000 organizations worldwide, the demand for skilled BlackBerry professionals is greater than ever.

As a BlackBerry Professional, you will be responsible for helping GSM operators interface their equipment with BlackBerry® smartphones; helping organizations setup and manage BlackBerry Enterprise Servers; resolving Internet /Intranet configuration issues, etc.

Topics covered in this training include:

- Hardware & Software Preparations for Installations
- Installation of Microsoft Exchange Server
- Configuration of Microsoft Exchange Server for BES
- BlackBerry Enterprise Server installation and upgrade
- BlackBerry Enterprise Server and BlackBerry smartphone user configuration
- BlackBerry Enterprise Server administration
- Securing the BlackBerry Enterprise Server environment
- Maintaining the BlackBerry solution
- Troubleshooting issues with the BlackBerry solution

### **INTERNETWORKING & CCNA (4 WEEKS)**

This **one month** training will take you through the theory and practical of building Wired Local Area Networks (WLAN) from scratch. You will learn to terminate UTP cables, create Straight-Through, Crossover and Rollover cables, connect terminated cables to Switch and Face Plate, etc.

Beyond the hardware, this course will also teach you to configure Server Operating Systems with ADS, DNS and DHCP. You will learn to create Domains/Workgroup and to join computers to Domain/Workgroup. The Basics of Network Administration is also covered in this training. You will learn to create User Accounts for intended users of a corporate LAN, manage them, recover passwords for them, share and access resources on a Local Area Network., and do lots more.

The CCNA part of this training will give you detailed overview of the roll Cisco routers play in connecting several LANs together to form an **internetwork**. The various commands you must enter in the Cisco Router to make this possible will not only be discussed, you will also have the rare privilege of configuring and seeing them work, by yourself, in our Cisco lab of several Routers and Switches.

Because this training is very comprehensive and practical, it guarantees that you will pass the CCNA certification Exam, hereafter.

#### **Course Content**

LAN Setup & Configuration leading to N+, Server+, MCP

- *Structured Cabling, Setting up a LAN, TCP/IP Configuration, Domain & Workgroup Configuration, Creating & Managing User Accounts, Sharing Internet and other Resources.*

Internetworking & Router Configuration leading to CCNA

- Full Cisco Academy curriculum & Router Configuration



### **GSM ENGINEERING (4 WEEKS)**

GSM as a technology is expanding very fast, particularly in Nigeria. Now, 2.5G, 3G and 4G technologies are building on the fundamental 2G GSM networks to provide higher quality voice, data and video streaming. Therefore, to remain relevant in this industry as Engineer or Contractor, it is important to understand the fundamentals of these technologies, from the practical perspective. This one month training will take you through the processes that take place on the operator's network, from the minute a phone is switched on by the *caller*, to the time the *called* answers a call, with particular attention to how equipments are installed or configured to achieve desired objectives. This course does not stop at looking into equipment in details; it also considers important issues such as GSM *frequencies, transmission power, LOS, capacity, coverage*, etc.

Transmission, in the form of Plesiochronous Digital Hierarchy (PDH) and Synchronous Digital Hierarchy (SDH) are also dealt with in details. The Antenna types, and coverage areas for each of them is fully discussed. This course is a must for fresh graduates seeking employment as **BTS Engineers, Field Support Engineers, RF Engineers**, etc. However, in order to maximize the benefits of this training, it is highly recommended that participants in this training first go through our LAN & CCNA training. Hundreds of young people are now employed not just in the telecom and IT industries, but also in the banking, Oil and Gas, Manufacturing sectors, courtesy of their understanding of this course, which of course was build on a very good understanding of the pre-requisite courses.

#### ***Covered in this 4 weeks training is***

*BTS: Software Commissioning & Operation*

*PDH: Installation Commissioning & Operation*

*SDH: Installation Commissioning & Operation*

*BTS/PDH/SDH Network Integration*



### **NETWORK MANAGEMENT (2 MONTHS)**

This is a 2 months training that takes you beyond just the basics of Local Area Networks and Internetworks. At the level of big networks and internetworks, it is no longer reliable to work with small Operating Systems like we did with LANs. For reliability and security purposes among many other reasons, big networks often use big operating systems like UNIX (GSM 'servers', called MSCs, use UNIX).

In this course, we shall use Linux Operating System to give you a detailed insight into how Servers are configured and how they work. This course will particularly be interesting for persons who would like to work as **Switch Engineer** for GSM/CDMA operators/vendors. Another big issue with big networks is SECURITY. Deliberate measures must be taken, either within the operating system or via the introduction of a 3rd party software or hardware (called Firewalls) to make sure that only authorized persons have a pre-assigned level of access, to network resources. This way, MTN's owner, for example, can go to bed knowing that no user can break into their network to make free calls. As simple as this may sound, it is a very complex issue and therefore is given a special place in our Network Management 2 months training.

#### ***The course content covers***

LAN Setup & Configuration leading to N+, Server+, MCP

- *Structured Cabling, Setting up a LAN, TCP/IP Configuration, Domain & Workgroup Configuration, Creating & Managing User Accounts, Sharing Internet and other Resources.*

Internetworking & Router Configuration leading to CCNA

- Full Cisco Academy curriculum & Router Configuration

Security Solutions & Application leading to Security+

- *Security Policies. Account Policies. Auditing. Firewalls Implementation..*

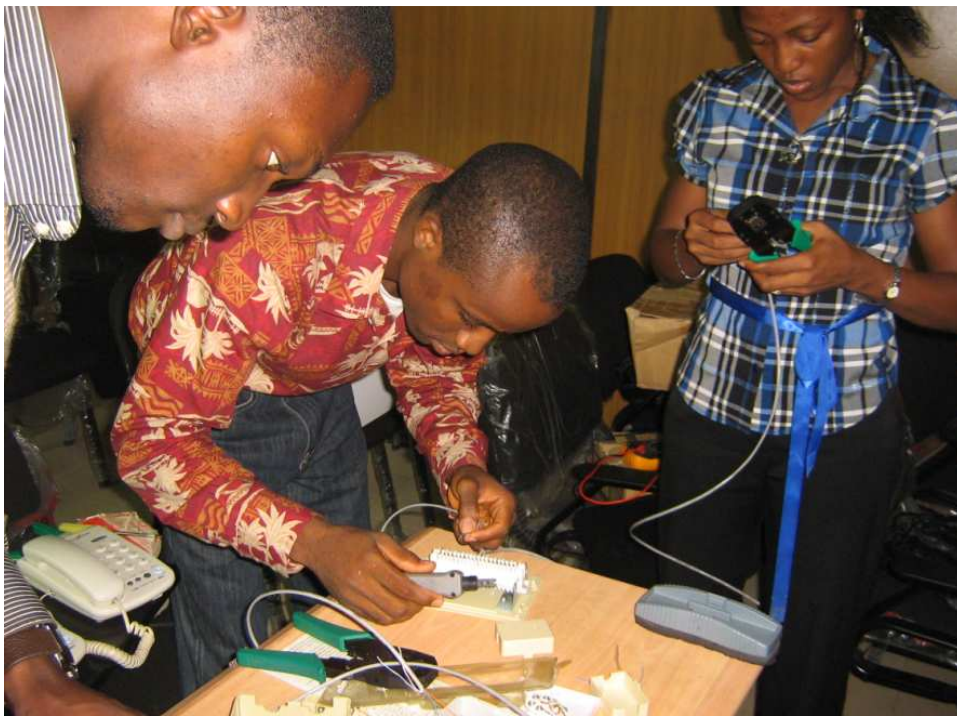
Linux: Installation & Administration leading to Linux+

## TRANSMISSION (2 MONTHS)

Just as in electricity and water generation/distribution, in Telecommunication, the bandwidth that you use as an individual (baseband) is only finite part of the entire bandwidth available on the operator's network (broadband). It follows therefore that the same medium used to get voice or data to a single user may not suffice to send same signal from, say 1000 users in Lagos to another set of 1000 different users in Abuja. You will require media that support, at least in theory, 1000 times the bandwidth requirement of 1 user. This kind of 'big bandwidth' connection, whether wired or wireless, is called **Transmission** link.

Several media can be deployed for transmission. Most recent and globally accepted of these media is Fibre Optics, which is fast replacing VSAT/Satellite technologies. Others are Copper, Coaxial cable, and Microwave. The best choice-medium for your purpose would be determined by several factors like

- Cost
- Bandwidth requirement
- Frequency supported
- Distance
- etc.



At this 2 months training, you will learn the different transmission technologies in details, as well as where their implementation is most suited.

In the **VoIP** (Voice over Internet Protocol) class, you will learn to make telephone calls on your data network. Once you have a good LAN in place, you will not need a separate telephone network to do voice. This can translate into great saving for you or your organization.

**VPN** will show you how you can use the internet (public network) to connect your branch office together to form a private network. On this private network, now called the **Virtual Private Network**, VPN, your data is NOT visible to other people on the Internet. Your

packets are simply encapsulated in some tunneling protocols before sending; and only the intended recipient can decode and retrieve the message.

Your skills in transmission, VoIP and VPN will stand you out as an asset to corporate organizations, whether as a self-employed or as a paid employee.



### **Course outline for Transmission Engineering**

#### **VSAT: Installation & Configuration leading to CSI**

- Theory of Satellite Communication, Assembling of VSAT Hardware from LNA, Feedhorn, BUC, etc. Installing VSAT: Setting Azimuth, Elevation Using Compass & Inclinator. Terminating & Connecting the Feeder Cables. Entering & Configuring the Modem, Tracking the Satellite. Commissioning the VSAT.

#### **Introduction for Optical Fibre**

- Couplers, Connectors. Multi-mode single-mode, Pigtails, Patch Cords, etc. Demonstration of Use of Fibre Toolkit, Media Converter, etc. Implementation of Fibre Optics for LANs.

#### **VoIP & VPN Design and Configuration**

- Installation & Configuration of VoIP, Gateways. Assigning Telephone Nos to Phones. Demonstration of Calls on Wired Network. Concepts, Protocols & Implementation of VPNs.

### **RF Engineering (2 MONTHS)**

More and more people want to remain mobile and still have access to network resources. A typical example here is the wireless connection between our mobile phones and operators' Base Stations. This concept of wireless (RF) is very wide and is covered under our training RF Engineering. RF means Radio Frequency. From scenarios as simple as connecting LANs in two offices together using radios and antennas in a LOS, Point to Point architecture; to complex scenarios of connecting thousands of handsets to a Base Station without cables (NLOS, PmPt), RF principles are basically the same and are covered under this course. These

same principles can be applied in various formats, at different frequencies or manipulated to give birth to new standards.

You will learn to configure Base Stations for Non Line of Site (NLOS) operations with Customer Premise Equipment (CPEs); you will learn to configure Radios for Point to Point communication, say between a branch office and its head office; you will learn to Design such RF networks, before implementation.

At the end of the training, you would have covered the curriculum for the Certified Wireless Network Administrator, CWNA, and be qualified to write the certification exam.



***This 2 months training will cover***

Introduction to GSM Engineering

- *GSM Radio & Switches. GSM*

*Fundamentals. Introduction to GPRS, UMTS, etc. Upgrade of 2G to 2.5G to 3G Networks.*

RF Planning & Implementation leading to CWNA

- *RF Planning using EDX Software, RF Site Survey. Installing & Connecting Antennas for 2.4GHz RF. Entering & Navigating Radios. Basic Radio Configuration. ISP Base Station Configuration*

- *Base Station Hardware Installation. Installing Network Software. Configuring IP Settings.*

- *Configuring VLANs. Configuring Base Station as Access Point, Wireless Bridge, Repeater, WDS. Configuring Security. Configuring Firewall & NAT. Configuring WAN Parameters.*

BTS Installation, RF Verification and RBS Integration

Acceptance Testing of 2G and 3G Network Entities

### **CERTIFICATE IN TELECOM**

Next to our 6 months training which leads to Diploma in telecom, is our 3-month training. This training fully equips individuals to pursue their dreams and aspirations to develop a career in telecom. It is a combination of our one month and two months programs.

At the end of this practical session, you would be able to setup small networks using UTP cables, you would be able to setup internetworks using Cisco Routers and Switches, you would be able to setup Wide Area Networks using VSAT, you would be able to deploy VPN and VoIP on LANs, Internetworks and WANs that you create, you would be able to setup Wireless Networks, Install RF Antennas for 2.4GHz and configure Radios to carry voice and data.

The basics of Fibre Optics and GSM Technologies are also covered. We cannot imagine therefore that after gaining all of these skills, you would remain unemployed for long!



#### ***Certificate in telecom course outline:***

*LAN Setup & Configuration leading to N+, Server+, MCP*

- *Structured Cabling, Setting up a LAN, TCP/IP Configuration, Domain & Workgroup Configuration, Creating & Managing User Accounts, Sharing Internet and other Resources.*
- *Internetworking & Router Configuration leading to CCNA • Full Cisco Academy curriculum*

*VSAT: Installation & Configuration leading to CSI*

- *Theory of Satellite Communication, Assembling of VSAT Hardware from LNA, Feedhorn, BUC, etc. Installing. VSAT: Setting Azimuth, Elevation Using Compass & Inclinator. Terminating & Connecting the Feeder Cables. Entering & Configuring the Modem, Tracking the Satellite. Commissioning the VSAT.*

*Introduction for Optical Fibre*

- *Couplers, Connectors. Multi-mode, singlemode, Pigtails, Patch Cords, etc. Demonstration of Use of Fibre Toolkit, Media Converter, etc. Implementation of Fibre Optics for LANs.*

*VoIP & VPN Design and Configuration*

- *Installation & Configuration of VoIP Gateways. Assigning Telephone Nos to Phones. Demonstration of Calls on Wired Network. Concepts, Protocols & Implementation of VPNs.*

*Introduction to GSM Engineering*

- *GSM Radio & Switches. GSM Fundamentals. Introduction to GPRS, UMTS, etc. Upgrade of 2G to 2.5G to 3G Networks.*

*RF Planning & Implementation leading to CWNA*

- *RF Planning using EDX Software, RF Site Survery. Installing & Connecting Antennas for 2.4GHz RF. Entering & Navigating Radios. Basic Radio Configuration.*

**DIPLOMA IN TELECOM TRAINING**

This is the most comprehensive of all our training programs. It is loaded and specially packaged, with inputs from key players in the telecom industry as well as prospective employers of skilled labor, for persons who genuinely desire to be the best in the field of telecom engineering. This training is highly recommended for students and graduates of Electrical Engineering, Computer Science, Physics Electronics, and science and engineering courses in general. Other professionals who intend to use the knowledge gained and skills acquired in the areas of marketing, Human Resource Development, etc for the telecom industry are also welcome to register for this training.

Our six months Diploma in telecom and your degree certificate is a killer combination that turns the table around in your favor at job interviews. So dear to our heart is this training that, as much as possible, we do not let graduands of this 6-month training go home empty handed. We attempt to seek **internship** for them with telecom companies. Sometimes, we even succeed in getting jobs for them outrightly. However, we must reiterate that the emphasis here is not on stipends paid during the internship. Rather, the emphasis is on the opportunity to practice what trainees have learnt and build their experiences in the process. We believe that, with time, these experiences will ultimately converge into good remuneration for the trainee.

***Our 6-months training cover all the courses listed below:***

**Network Management*****Network Management leading to N+, Server+, MCP***

- *Structured Cabling, Setting up a LAN, TCP/IP Configuration, Domain & Workgroup Configuration, Creating & Managing User Accounts, Sharing Internet and other Resources.*

***Security Solutions & Application leading to Security+***

- *Security Policies. Account Policies. Auditing. Firewalls Implementation..*

***Internetworking & Router Configuration leading to CCNA***

- *Full Cisco Academy curriculum & Router Configuration*

***Linux: Installation & Administration leading to Linux+***



### **Transmission Engineering**

VSAT: Installation & Configuration leading to CSI

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VoIP & VPN Design and Configuration

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Introduction to GSM Engineering

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RF Planning & Implementation leading to CWNA

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ISP Base Station Configuration

- *Base Station Hardware Installation. Installing Network Software. Configuring IP Settings.*

- *Configuring VLANs. Configuring Base Station as Access Point, Wireless Bridge, Repeater, WDS. Configuring Security. Configuring Firewall & NAT. Configuring WAN Parameters.*

BTS Installation, RF Verification and RBS Integration  
Acceptance Testing of 2G and 3G Network Entities



### GSM Engineering

BTS: Software Commissioning & Operation  
PDH: Installation Commissioning & Operation  
SDH: Installation Commissioning & Operation  
BTS/PDH/SDH Network Integration

#### HEAD OFFICE

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0805 088 1404

#### LEKKI

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Lagos.  
Tel: +234 0709 820 3195

#### PORT-HARCOURT

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(Igboekwu) Street,  
D-line, Port Harcourt.  
Tel: +234 813 279 0600



**TTC** Mobile

member of



Association of Telecom  
Companies of Nigeria

**Please note that our training schedule, content, duration, fee, etc. can be customized to meet your peculiar requirement. Just ask!**

## **TESTIMONIES**

### **SOME TESTIMONIES OF SOME PAST TRAINEES**

I recommend TTC (particularly the 3-month training) to prospective applicants who seek to occupy technical positions in telecom companies. Aside helping you pass interviews, you will also find the acquired skills handy in the execution of your duties when employed.

***Aldo, Glomobile***

Quality of training at TTC is very good. Trainers are experienced and make training interesting. I recommend TTC to anyone who genuinely desire to learn or develop a career in ICT.

***Obinna, Silverbird Communication***

As part of my training with TTC, I was deployed for 6-month Industrial Attachment. I was retained and now fully employed by the telecom company.

***Omo, Imperial Telecom***

My training with TTC has made such a difference. I have climbed my career ladder confidently and steadily thereafter.

***Chidubem, Zain***

Akin Aregbesola (md/ceo, TTC) is a man of great vision and strong passion for IT/Telecom. His interest in bridging the digital divide stands the company out. He is also an outstanding trainer and mentor. I am not surprised the company is growing from strength to strength every year.

***Dipo, former VoIP Analyst, Globacom***

Standard and quality of training in TTC is superb. As far as telecom skills acquisition is concerned, TTC is the place to be.

***John, Starcomms***