## Engr. Maor, Moses Sedoo (MNSE, COREN) No 49, Akinwunmi Street, off Hughes Avenue, Yaba, Lagos, Nigeria.

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**Profile:** More than 10 years' multi-vendor (Huawei, ZTE, Ericsson and Nokia) experience in LTE/WCDMA/GSM Radio Network Planning, Optimisation, Dimensioning and Performance Engineering in Both Vendor and Operator roles. I am also experienced in Pre-Sales Planning, Project Management, and Managed Services Operations.

## **RELEVANT PROFESIONAL EXPERIENCE:**

Manager: RAN Capacity Analysis & Optimization (January, 2018 – Date) Airtel NIGERIA.

## 1. Technology - GUL

Strategy definition and initial parameter tuning for L1800 re-farm Ensure balancing of traffic between different technologies, GUL Ensure the selected UTRAN & eUTRAN solutions are capacity future prove Minimize the HR utilization

## 2. Design & Monitor UTRAN and eUTRAN Interfaces -

Design the UTRAN and eUTRAN interfaces based on traffic forecast Monitor the traffic gross and ensure to keep system in good utilization Recommend cost effective solutions

### 3. Capacity Planning -

Follow up with core network and transport Engineering to ensure end to end capacity planning

Ensure the utilization of LTE and 3G layer in efficient way

Understanding the HW and SW capabilities of the telecom equipment(Multi-Vendor requirements)

Capacity plan for special events and sudden traffic increase

## PRINCIPAL ENGINEER (Technical Manager): ETRAN/UTRAN & GERAN Planning & Opt (August, 2016 – January, 2018) 9mobile (ETISALAT) NIGERIA.

- Develop framework and conduct PoCs for new technologies such as MOCN, NMR, LTE etc
- Lead special projects e.g. technical trials/feature testing
- Mapping of RAN Parameters between Huawei RAN15, Alcatel and NSN RU40.
- Knowledge shearing on 4G/3G Huawei, Alcatel and NSN Optimization strategy for competence transfer and Team building
- Monitor Radio planning and optimization of assigned BSC areas in accordance with Etisalat guidelines

- Ensure quality of network and coordinate with all stakeholders from Implementation and O and M to achieve same.
- Participate in radio capacity planning and resource management
- Ensure agreed cell level, BSC/RNC level, and Network level KPIs (2G, 3G, and LTE) are not lower than defined thresholds
- Ensure accuracy in reporting and presentation of all technical plans
- Assist with the deployment of leading edge technology and solutions as defined and approved by EMTS
- Work with RF Planning team to understand the RF design, cluster definition, customer expectation, and network configuration.
- Study RF design coverage maps and identify problem areas in terms of coverage, interference, or pilot pollution.
- Perform sanity check on antenna configuration.
- Ensure the Methods and Procedures handbook on optimization is followed correctly and optimization procedures implemented are consistent with Etisalat guidelines.
- Maintain up-to-date documentation of optimization-related actions; also maintain archives of all collected data.
- Request drive tests, analyze data, and recommend network changes as applicable
- Perform any other duties as assigned by the Senior Manager, RF Planning and Optimization

## **3G Optimization experience:**

- Deep Knowledge of HSxPA, Parameter Planning and Tuning
- interRAT KPI and HHO Strategy adaptation and optimization
- ping pong reselection between 2G and 3G
- Pilot pollution and coverage hole Optimization.
- Knowledge of active set size
- Soft HO versus Hard Handover analysis and Optimization.
- Ensuring 3G KPI's meet Target threshold. (CSSR, CDR, RRC, Rab.....)
- Swap project experience (Ericsson to Huawei)

## 4G Optimization experience:

- Multi-Vendor 4G (LTE FDD) RAN Optimization & planning experience
- 1800 Freq re-farm and Strategy design for Single RAN(GSM+LTE) Deployment
- CSFB, SRVCC, RRC Redirection & PS Handover implementation & testing.
- Planning of LTE FDD L1800 sites (PCI, Neighbors, X2) using Unet /Atoll.
- TA dimensioning by calculating MME paging capacity, eNodeB paging capacity. TAC planning, LAC-TAC mapping with WCDMA sites for optimized CSFB Strategy.
- Reviewing and designing LTE Radio Network Parameters for Network Strategy implementation and Performing site configuration checks, Power settings, Antenna configurations, implemented PCIs, PCI clashes, azimuth, Hand over parameters prior to Cluster DT.

## SENIOR ENGINEER: ETRAN/UTRAN & RAN Planning & Optimization (Feb, 2013 – July, 2016) (EMTS) ETISALAT NIGERIA.

- Huawei, Alcatel and NSN 2G/3G/4G optimization for accessibility, capacity, retainability and Hand-Over (Intra-Frequency, Inter-Frequency, Inter-RAT) based on Network adopted Strategy using M2000, NetAct for operators.
- Mapping of RAN Parameters between Huawei RAN15, Alcatel and NSN RU40.
- Knowledge shearing on 4G/3G Huawei, Alcatel and NSN Optimization strategy for competence transfer and Team building
- Monitor Radio planning and optimization of assigned BSC areas in accordance with Etisalat guidelines
- Ensure quality of network in assigned area and coordinates with all stakeholders from Implementation and O and M to achieve same.
- Participate in radio capacity planning and resource management
- Ensure agreed cell level, BSC/RNC level, and Network level KPIs (2G and 3G) are not lower than defined thresholds
- Lead special projects e.g. technical trials/feature testing
- Ensure accuracy in reporting and presentation of all technical plans
- Assist with the deployment of leading edge technology and solutions as defined and approved by EMTS
- Work with RF Planning Manager to understand the RF design, cluster definition, customer expectation, and network configuration.
- Study RF design coverage maps and identify problem areas in terms of coverage, interference, or pilot pollution.
- Perform sanity check on antenna configuration.
- Ensure the Methods and Procedures handbook on optimization is followed correctly and optimization procedures implemented are consistent with Etisalat guidelines.
- Request drive tests, analyze data, and recommend network changes as applicable
- Perform any other duties as assigned by Manager, RF Planning and Optimization

# LM Ericsson. (August, 2008 – Feb, 2013) RF Planning and Optimization (Airtel Project): (August, 2008 – Feb, 2013)

- RF Planning: Capacity and coverage planning/Prediction, interference analysis.
- Radio site planning and optimization of assigned BSC areas in accordance with operator's guidelines
- Ownership of network quality, co-ordinates with all stakeholders from Implementation and O&M to achieve same.
- Analyze performance reports on daily basis and identify the cells where Key Performance Indicators (KPIs) such as call drop rate, handover failure rate, SDCCH & TCH congestion, SDCCH drop etc. fall beyond specified limit for arresting problems at the earliest
- Deployment of leading edge technology & solutions; New Features trials, Solutions and Service planning
- Conducting on the job hands on training for Support Engineers and ASP's at all levels.

- Network wide frequency (BCCH, BSIC, HSN, MAIO) Auditing, planning/replanning
- Traffic study, planning and projection to ensure that the traffic channel of a cell is not over congested or under utilized
- Drive tests with TEMS Investigator for identifying Coverage holes, capacity requirements and new coverage requirements. Analysis of drive test data to evaluate network performance track out the TCH blockage & other call related problems.
- Optimizing the Macro Cell by allocating proper Neighbors, Handover criteria, Cell Select/ Reselect Offset Criterion, etc.
- Handling of C/I and C/A issues by change of frequency, BTS Power, antenna configuration, parameters of site and neighboring sites, parameter adjustments.
- Optimizing the network by making required changes like change in orientation of antennas, change of tilts, neighbor list upgrade and modification in power of the BTS etc.
- Traffic management through change in channel combination, hardware addition/deletion, BTS swapping, etc.
- Collection of the Alarm data of OMC.

## Senior GSM BSS Support Engineer Huawei Technologies Co. Nigeria Limited, Abuja. (Feb.2004 – August, 2008)

- Huawei BSC32, BSC 6000, BTS312, 3012AE, BTS 3006c and PCU System Planning, Implementation and Optimization.
- BSC, BTS and PCU Problem Analysis and Fault Recovery.
- Site integration, software loading and activation
- Re-parenting/cutover of sites.
- A-ter/A-Interface expansion.
- Software upgrade / Hardware Upgrade and Downgrades
- RF Cable sweeping using Site Master
- External Alarms configuration and Troubleshooting
- BTS Final Site Acceptance Tests (FAT).
- Technical Support and Training.

## TRAINING PROGRAMS ATTENDED

Subject

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LTE Design, Dimensioning & Algorithms	Huawei University, Hangzhou, China, 2016
WCDMA Radio Network Solution & Optimization	Huawei Training Centre, Abuja Nigeria, 2016
TDD / FDD LTE RAN Planning Specialist	Nokia Academy, Espoo 02610, Helsinki Finland,2015
FDD LTE RAN Parameters	Nokia Academy, Espoo 02610, Helsinki Finland,2015
RAN Parameters II (HSDPA) [RU 40]	Nokia Academy, Warsaw Poland,2015
3G Radio Planning Essentials [RU40]	Nokia Academy, Warsaw Poland,2015
3G/2G Planning and Optimization Specialist	Alcatel Lucent University, Shanghai China,2015
3G Radio Planning Specialist [RU30]	Nokia Academy, Espoo 02610, Helsinki Finland,2014
RAN Key Performance Indicators [RU30]	Nokia Academy, Espoo 02610, Helsinki Finland, 2014
WCDMA RAN13-RAN14-RAN15 Delta Features	Huawei Training Centre, Abuja Nigeria, 2015

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WCDMA RAN15 Radio Network Features and Algorithms	Huawei Training Centre, Abuja Nigeria,2015
WCDMA RAN15 Advanced Radio Network Optimization	Huawei Training Centre, Abuja Nigeria,2015
WCDMA RAN15 Radio Network Performance Mgmt	Huawei Training Centre, Abuja Nigeria,2015
LTE System Overview	Huawei Training Centre, Abuja Nigeria,2015
LTE Air Interface	Huawei Training Centre, Abuja Nigeria,2015
Using Mentum Planet for W-CDMA/HSPA Planning	Mentum S.A
GSM Radio Network Planning & Optimization	Huawei Training Centre, Abuja Nigeria
GSM Base Station Subsystem	Huawei Training Centre, Abuja Nigeria
GPRS EDGE Radio Network Planning & Optimisation	Huawei Training Centre, Abuja Nigeria
GSM G10 Radio Network Features	Ericsson Academy, Lagos Nigeria
GSM G10 Radio Network Tuning	Ericsson Academy, Lagos Nigeria

## **Platforms**

TEMS 8.0.4 Data Collection, TEMS Route Analysis,

MapInfo 15.0, Google Earth, Atoll, U-Net

Aircom ACTIX, Aircom RANOPT, Aircom ASSET

Spectrum Analyzer (Tektronix Y400)

Toad (Airtel tool for stats extraction and trends)

Huawei GENEX (Assistant 2.3 and 3.3, Naster 2.4 and UNET)

Huawei IMANAGER M2000, CME, LMT, Web LMT

Huawei BSC32, BSC6000, BSC6810, BSC6900 UMTS, RNC, PCU M900/1800, Citrix

Huawei BTS 3012, 3012 AE, 3006C, 3812, 3900A, DBS 3800, 3900 WCDMA, Single RAN V7.0

Huawei products and versions RAN 10, RAN 11, RAN 12, RAN 13, RAN 14, RAN 15 Technologies

MS Project, MS Excel, MS PowerPoint

Ericsson Business Object (BO)

Nokia NetAct

### **EDUCATIONAL HISTORY**

1. University of Agriculture, Makurdi., Benue-state
Bachelor of Engineering (Electrical Electronics Engineering)
Second Class Honor, Upper Division. (1997-2002)

2. Mt St Micheals Secondary School, Aliade Senior School Certificate Examination (1988-1993)

#### Awards

- **Gandy Engineering Ltd.**-Prize for the best graduating Student in Electrical Electronics Engineering, 2002.
- Paterson Zochonis Industries PLC- Prize for the Best Graduating Student in Electrical Electronics Engineering, 2002.
- **9mobile Nigeria (Etisalat)** Prize for the Most Innovative Engineer-2013

## SPECIAL ATTRIBUTES /SKILLS

- Strong Innovative, Analytical and Organizational skills.
- An eye for details and a strong sense of aesthetics.
- Good Oral and Written Communication skills.
- Result oriented, team playing, role owning and leadership capable

### PROFESSIONAL AFFILIATION

- Corporate Member, Nigeria Society of Engineers. (19084)
- **COREN** Certified. (R15837)

### **PUBLICATIONS**

- 1. Mollification of WCDMA Interference on Uplink Channels in Cellular Network Using the Power Control Approach (2017): *British Journal of Applied Science & Technology 20(4): Page 1-11; Article no.BJAST.33048 ISSN: 2231-0843, NLM ID: 101664541*
- 2. Interference Cancellation by Regenerated Signals in Cellular Network Systems (2019): Journal of Scientific Research and Reports, Vol. 22(1), pp 1-9.
- 3. Evaluation of Electromagnetic Fields from Power Lines in Irrua, Edo State, Nigeria (2019): Journal of Scientific Research and Reports, Vol. 22(1), pp 1-7.
- 4. Optimized Outer Loop Power Control Technique on Circuit Switched Service in Wideband Code Division Networks. *Multidisciplinary Journal of Islamic University in Uganda.* (*Under Review*)
- 5. Performance Analysis of Decoding-based Successive Interference Cancellation Technique in Cellular Network: *Journal of Electronics and Communication Engineering Research*. (*Under Review*)
- 6. Data Throughput Assessment of 4T4R MIMO Technique on LTE Wireless Cellular Networks (*Under Review*)
- 7. Coverage Assessment of WCDMA and LTE Technology at 5MHz Bandwidth in a Co-Sited Wireless Network (*Under Review*)
- Comparative User Experience Assessment between WCDMA and LTE Technology at 5MHz Bandwidth in a Heterogeneous Cellular Network (*Under Review*)
- 9. Circuit Switched Quality Enhancement using Optimized Inner Loop Power Control Approach (*Under Review*)
- 10. DL Data Throughput Enhancement Techniques using 256 QAM Modulation (*Under Review*)
- 11. Assessment of 64 QAM modulation Technique on UL data transfer in LTE (*Under Review*)

#### HOBBIES.

• Reading, Writing & Tourism.

## REFERENCES.

To be supplied on Request.