NAME: **Sergey Dashyan**

LTE/UMTS/GSM Radio Network Planner and Optimizer

Date of Birth: Dec.1976
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Summary

- Key Skills: LTE/UMTS/GSM RF Network Planning and Optimization
- Innovative and highly driven, offering 20 years of continuous professional Telecom experience.
- Known for strong motivational skills that consistently produce positive change.
- Articulate refined communicator, both oral and written.
- Skilled at completing projects within tight timelines.
- Take pride in ability to motivate, energize and lead to successful outcomes and committed to organizational success.

Professional Experience

NSN (Nokia Solutions and Networks (NSN), formerly Nokia Siemens Networks) (www.nsn.com)
Dec. 2009 – Dec. 2013
Position: Radio Network Planning and Optimization Engineer/Consultant on Contract in Moscow

Jan. 2013 – Dec. 2013; Nokia Solutions and Networks (NSN); Moscow;
Project: MTS MRM (Macro Region Moscow) LTE PLO - LTE Network Optimization (project of PLO – LTE Prelaunch Optimization) as Engineer/Consultant

- Participation in LTE network target KPI definition and agreement with customer;
- Network parameter changing implementation by Network by NetAct CM Manager, NetAct Operational Manager, BTS Site Manager;
- Interfered Area investigation; PCI plan, eNodeB Configuration checking; Statistics Export from NetAct Report and processing; Reports generation
- PL Optimization Report Template Creation;
- SubCo PLOptimization Report checking, remarks to SubCo;
- DL logs processing/analysing;
- PLOptimization Report Creation; KPI Calculation; Drop Analyses (NemoAnalyze; TEMS Discovery); Cross Feeders and Cross MIMO Detection;
- Cells with Low Throughput Investigations and Analyses (Dependence/Behaviour of MCS/SNR/ Throughput/Throughput per PRB);
- Participation in "Throughput per PRB" Equation Definition and participation in creation of methodology of Report with low speed cells preparation;
- Throughput per PRB Calculation for Low Throughput Cells;
- LTE-FDD Radio Planning on MTS-MRC LTE-FDD Project;
- Network Dump Taking and Converting to MDB by PlanEditor; Roots drawing for Drive Tests;
- Preparing LTE PLO knowledge sharing materials for colleagues

Dec. 2011 - Jan. 2013; Nokia Solutions and Networks (NSN); Moscow;
Project: MTS MRM (Macro Region Moscow) LTE RP - LTE Radio Network Planning as Engineer/Consultant

- 3D Digital Maps checking, remarks, corrections request;
- Multi-RAT Network Planning Project creation, Initial Setup of Planning tool (Atoll) also on Oracle DataBase;
- Standard Propagation Model Calibration in Atoll by CW Measurements; Different propagation models comparison on 3d and 2d Maps;
- Antenna choose for project; AFP (antenna-feeder path) Solutions/Scenarios preparation for different type and length feeders;
- Nominal Planning of LTE Network (output: configuration file) using Existing Survey Data and Reports, Maps, Planning tool Atoll with preparing related predictions;
- Detailed Network Planning, Site Survey report (SARF) Review, Detailed Site Planning (decision for Physical Configuration and Antenna configuration (freestanding or shared with other technologies) and location – on output physical Configuration File (ИД) with sketch of Planned Antenna Location);

Collaborating with Refarming (2G) and 3g planning teams to making general Physical Configuration File and Antenna Location Sketch including all Technologies on Site.
- Propagation Predictions and Simulations in Planning Tool (Atoll 3.1);
- Compared predictions, simulations, recommendations for different candidates and configuration preparing to make agreement with customer;
- Network Dump Taking and Converting to MDB by PlanEditor;
- Guidance and knowledge sharing with colleagues;

July 2011 – Dec. 2011; Nokia Siemens Networks (NSN); Moscow;
Project: MTS MRM (Macro Region Moscow); Moscow 3G/UMTS Network Planning as Engineer/Consultant

- 3G Network Planning, SARF Review, Site Planning (decision for Physical Configuration; on output: Physic. Config File);
- PSC planning; ADJS (3g-3g), ADJW (3g-2g) neighbors planning;
- Integration data preparing and checking;
- Parameter value change Implementation on Network by NetAct CM Manager, NetAct Operations Manager (xml creation in PlanEditor or CM Manager and provisioning in NetAct Operations Manager);

March 2010 – July 2011; Nokia Siemens Networks (NSN); Moscow;
Project: MTS MRC (Macro Region Center) 3G/UMTS Radio Network Planning (Rollout Phases 01-06) as Engineer/Consultant

- Project Creation in Planning Tool (NetAct Planner) and Periodical Update of BS Physical and Logical Configurations;
- Nominal Planning of 3g Network (output: configuration file) using Existing Survey Data and Reports, Maps (google earth), Planning tool NetAct Planner (ASSET 3G) with preparing related predictions;
- Detailed Network Planning, Site Survey report (SARF) Review, Additional Data request from SubCo if necessary, Detailed Site Planning (decision for Physical Configuration and Antenna Configuration (freestanding or shared with other technologies) and Location – on output Physical Configuration File (ИД) with Sketch of Planned Antenna Location);
- PSC planning; ADJS (3g-3g), ADJW (3g-2g) neighbors planning;
- Search area preparation, new Site candidates recommendations to customer for FTK (full turnkey) with compared predictions and simulations for different Candidates and Configurations to get Approval for right recommended candidate; Radio Planning part of TSSR checking (Responsible for Tambov, Smolensk, Voronezh, Kostroma Regions);
- Radio Network Planning Report Preparation (Predictions and Simulations in Planning Tool);
- XML Creation and Provisioning for NodeB Integration on RNC, Adjacency creation and Parameters Implementations using PlanEditor, NetAct CM Manager, NetAct Operational Manager (Integration of NodeB for all regions);
- NodeB Rehosting (XML creation for NodeB creation on new RNC, Neighbor relations Modifications, and NodeB Remove from previous RNC).
- Network Dump Taking and Converting to MDB by PlanEditor;
- Multi-RAT Network Planning Project creation, Initial Setup of Planning tool (NetAct Planner), Data Periodical Updates;
- NetAct Planner (ASSET Aircom) Oracle DB Admistration
- Preparing 3G/2G RF planning and Integration guidelines and knowledge sharing materials for colleagues

Dec. 2009 – Feb.2010; Nokia Siemens Networks (NSN); Moscow;
Project: MTS MRM PLO (Moscow 3G Network Prelaunch Optimization) as Engineer/Consultant

- 3G Network Planning, SARF Review, Site Planning (decision for Physical Configuration, agreement with customer; on output Config. File (ИД);
- PSC planning; ADJS (3g-3g), ADJW (3g-2g) Neighbors planning;
- 3G PLOptimization Report Checking;
- 3G Radio Network Planning Report Preparing;
- Network Statistics Report Preparing in NetAct Report Builder; Network Statistics Report Export by Report Suite;
- Parameter Implementation on Network using PlanEditor (for XML preparing), NetAct CM Manager, NetAct Operational Manager.
- Network Dump Taking and Converting to MDB by PlanEditor; Roots drawing for Drive Tests;

Tools Used: **Atoll (3.1); NetAct Planner (same as AirCom ASSET 3G Enterprise), MapInfo; Nemo Analyze; TEMS Discovery; Google Earth; SASPlanet; Global Mapper; BTS Manager;**
NetAct: Plan Editor, CM Editor, CM Operations Manager, Optimizer, Application Manager, Report Suite, Report Builder, Alarm Monitor, Alarm History;

K-Telecom (VivaCell-MTS) (www.mts.am)
March 2008 - Dec. 2009, Armenia, Yerevan
Radio Network Planning Engineer

- Main Tasks is GSM (900/1800) and UMTS Network Planning.
- This includes preliminary planning Using Drive tests results and customer complaints investigation.
- Evaluating of existing GSM (900/1800) sites on suitability for UMTS network.
- Technical Site Survey, Coverage Prediction. Antenna height, Azimuth, tilts definition/calculation for chose candidate. Technical Review, Engineering Drawings Review and approval, Final Design verification.
- Frequency Planning Checking, CO channel and Adj Channel Interference Identification. Drive test Analyse.
- Network Analyses and Antenna Type, Down Tilt, Azimuth modifications etc.
- Unrecognized RF interference source found.
- Indoor Repeaters planning, Site Survey, power budget and antenna diversity calculation.

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Tools Used: **Atoll; A9155 v. 6.6, U-Net v.2.2, MapInfo, Vertical Mapper, PIANO, ASSET 3G, Anritsu MT8212B Cell Master**
Vendors: **Alcatel and Huawei**

Armenia Telephone Company "ArmenTel" (branch of OTE (Greece) then VimpelCom, BeeLine)
May 2004 – March 2008 (www.beeline.am), Armenia, Yerevan
GSM/UMTS Radio Network Planning and Optimization Engineer

- Responsible for the Radio Design and Optimisation of 2G (GSM 900/1800) and 3G (UMTS) Networks in Central Region (Capital of Armenia Yerevan and neighbour to Capital 4 big Regions).
- Detailed Cell Planning: Preliminary planning Using Drive Results. Candidates search, Technical Site Survey, Coverage Predictions for each candidate (2g and 3G). Choose best one candidate. Antenna height, Azimuth, tilts definition/calculation. Planning network coverage lease with site acquisition agents and civil engineers to enable the development of effective site solution. Technical Review, Engineering Drawings Review and approval, Final Design verification. Identify and evaluate GSM and Node B site locations.
- Preparing Integration Data (2G) for Candidate, Frequency plan (BCCH, TCH), Neighbors plan, other all important radio parameters (NCC/BCC, BSC, Power Reduction, HSN, LAC …)
- Evaluating of existing GSM (900/1800) sites on suitability for UMTS network.
- Best Server (CPICH) analyses, Ec/Io analyses, SC planning, Neighbour list Planning, 3G parameter setting ect...
- Radio Network performance monitoring and optimisation for approximately 250 sites (2G and 3G)
- KPI (Key Performance Indicators) statistics. Daily KPI review of all important parameters such as Call establishment SR, Call SR, CDR, SDCCH Success and Drop Rates, TCH Success and Failure Raites, , TCH DR, RxQ, Handover Failure ... . If some problems dedicates, preparing Change Requests for changing necessary parameter(s).
- GSM frequency planning and spectrum usage optimisation Based on KPI and Drive Test Analyses.
- Post Site / Node B activation Drive test and analyses.

Toll Used: **ASSET3G (Aircom International), ILSA,Neptune, Nemo outdoor, Nemo Analyse, TEMS Pocket, MapInfo, Vertical Mapper, PIANO, Business Object.**

Database: **ASSET3G Administration, Oracle Data base Administration**
Vendors: **Siemens, Ericsson**

"ARAY" CJSC
Oct. 2003 – May 2004, Armenia, Yerevan
Engineer

- Responsibility: diagnostics and programming of EEPROM, troubleshooting of audio and RF equipments.

State Engineering University of Armenia
Aug. 2002 - Aug 2005
Lecturer

- Lecturer of GSM, Communication Systems, Fiber Optics Communication Components and Systems. Supervisor of Master Thesis

EpygiLabs AM LLC (Branch of Egypi Technology, Inc., Texas, USA)
March 2002 -Aug 2002, Armenia, Yerevan
Engineer

- Responsibility: Computer modelling (C++, MathCad, MatLab) and research of Fiber Optics (FO) components and communication systems
- *Topics:* Computer Modelling of Semiconductor laser, Semiconductor optical amplifier, EDFA, Raman Amplifier, Thin film filters, Receiver, 10 Gigabit Ethernet System, CWDM System, LADAR System, SCM System, MUX/DMUX for CWDM systems, dual-arm Mach-Zehnder amplitude modulator, optical fiber.

National Technical University of Athens (Greece)
Oct. 2001 – March 2002, on Contract. Greece, Athens
Engineer/Researcher in Electrical & Computer Engineering Dep.

- *Responsibility: Computer Modelling of Stimulated Raman Scattering in WDM System with Dispersion Compensated Links. Project Requested by* ***Nortel Network Company***

EpygiLabs AM LLC (Branch of Egypi Technology, Inc., Texas, USA)
Sept. 1999 – Oct. 2001, Armenia, Yerevan
Engineer

- Responsibility: Computer modelling (C++, MathCad, MatLab) and research of Fiber Optics (FO) components and communication systems
- *Topics:* Computer Modelling of Semiconductor laser, Semiconductor optical amplifier, EDFA, Raman Amplifier, Thin film filters, Receiver, 10 Gigabit Ethernet System, CWDM System, LADAR System, SCM System, MUX/DMUX for CWDM systems, dual-arm Mach-Zehnder amplitude modulator, optical fiber.

Education

1999 – 2002: Postgraduate of Radio engineering & Communication System Department, State Engineering University of Armenia.
Ph.D. Degree (Candidate of Technical Science) Since 2002;
Research Engineer's Degree in the "Communication Means" (2001)

1997 – 1999: Master of Engineering in "Communication Means and Telecommunications" (1999) from State Engineering University of Armenia.
Award for the best Ms. Degree thesis, sponsored by the Armenian Professional Society of America (1999)

1993 – 1997: Bachelor of Engineering in "Radio technique and Communication" (1997). Department of Radiotechnique and Communication Systems, State Engineering University of Armenia

Skilled with tools:

RF Planning and Optimisation Tool Experience (summary): Atoll, A9155 v.6.6; U-Net 2.2; ASSET3G, ILSA, Neptune, Nemo Outdoor, Nemo Analyse, TEMS Discovery, TEMS Pocket, MapInfo, VerticalMapper, PIANO, Business Object; Google Earth; SASPlanet; Global Mapper; NetAct Plan Editor; NetAct CM Editor; NetAct CM Operations Manager; NetAct Optimizer; NetAct Application Manager; BTS Manager; Alarm Monitor; Alarm History; NetAct Report Suite; NetAct Report Builder;

Trainings Undergone

Period: before 2010

- Ultima Mentor for UMTS Network Optimization,
- Ultima OptiPlanner for UMTS Network Optimization
- Ultima Forte for GSM Network Optimization
- UMTS Network, MTS Corporate Training
- "BSS Radio Network Planning and Optimization", course number MN1790; Siemens Training centre in Moscow
- APIS Technical Training AB: GSM Cell Planning; GSM System Overview, Signalling;
- AIRCOM International: ENTERPRISE Administration, ASSSET 3G for GSM/GPRS Tool User, CONNECT Tool User, ILSA Tool User, NEPTUNE Logging & Analysis Tool User
- Network Administration Training Course, ALCATEL UNIVERSITY
- Digital signals; Digital transmissions; FDM; TDM; TDMA; WDM; OSI Reference Model; TCP/IP; IP Network; Ethernet LANs; PDH; SDH; ATM; ATM/IP; Network Planning concepts and methods; Bridge, Router, Hub, Switch, Gateway; PPP, LCP, NCP; Proxy; Practical Exercises: Alcatel 1640FOX.
- The NKT Summer School in Advanced Photonics, Copenhagen, The Royal Academy of Science and Letters
  Photonic Band Gap Devices, Solitons for Optical Communication, Photonic Band Structures and Quantum Information, Nonlinear Photonic Devices, Quantum Communication and Computing, Ultrafast Photonics, High Speed Semiconductor Lasers for Telecom., Semiconductor Quantum Dots, Ultra High Data Rate Optical Communication.

Trainings and workshops in NSN (Russia, Moscow) period: Dec. 2009 - Dec. 2013

- NetAct Optimizer Workshop, 1 week duration, January 2013;
- LTE radio optimization; ANR LTE 492 RL(20), LTE 782 (RL30) (Automated Neighbor Relation), X2 link Management LTE1327 RL50 FSMr3 Capacity and Dimensioning; - LTE1346 RL50 Capacity and Dimensioning FSMr2; - LTE1039 RL35TD FSM3 Performance and Capacity; - LTE972 Flexi Baseband Module FBBA; - LTE1247 Multiradio System Module extended LTE configurations
- RL50/RL35/RL50FZ - LTE487 Idle Mode Mobility Load Balancing
- RL50/RL35/RL50FZ - LTE907 TTI Bundling
- RL50/RL35/RL50FZ - LTE511 Intra Cell HO
- LTE961 Cell configuration in RL35TD with OD FSMr3 - MIMO (basic)
  LTE1392 Extended TD-LTE Site configuration for RL35TD
  LTE1163 TD-LTE dual carrier operation within one RRH/RF module
- RL50/RL35 - LTE568 DL Adaptive Closed Loop MIMO (4x2)
- RL35 - LTE993 Cell Combination (Super Cell)
- Small Cell topology based access dimensioning tool
- RL50/RL50FZ/RL35 - Synchronization Features, LTE80 GPS Synchronization, LTE713 Synchronous Ethernet
  LTE80/LTE1629, LTE134, LTE612, LTE710, LTE711, LTE713
- LTE134 Timing over Packet ; LTE612 Synchronization Hub

Languages:

- Armenian – Native
- Russian - Fluent
- English – Advanced
- German - 7 years at school, and 3 years at University but no practice