

CURRICULUM VITAE

CLIVE WILTON

Nationality: British & French (dual)
Current Address: 4 rue des Chipeaux, 85320 Corpe, France.
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Email: clive@clivewilton.com
Languages: Native English, fluent French, good German
Interests: Microlight pilot & instructor, triathlon competitor, health & nutrition

EDUCATION

1970 - 1977 *Dulwich College London SE 21, UK.*

O-level Maths, English, Chemistry, Physics, Biology, French, German.

1977 - 1979 *Merton Technical College, Surrey, UK - Ordinary National Diploma in Technology*

EXPERIENCE & SKILLS

Supervisory Able to comfortably communicate with all levels of management. Group level experience within Motorola Central Services, supporting and mentoring multi-cultural teams worldwide. Project manager for EDGE upgrade project for Mobistar Belgium with team of 15 engineers and technicians. Lead RF Engineer for Ericsson USA managing 10 RF engineers and 10 drive test teams. Various other positions with responsibility for small engineering teams. Project management. Equipment specification/evaluation. Design and preparation of procedures and training documents. Specification of frequency and parameter planning procedures. Specification and selection of measurement equipment. Training of junior engineers. Advanced level user of Microsoft applications for reporting and tracking project progress, including programming of visual basic macros for Excel.

RF Planning & Optimisation RF prime for Hungarian GSM-R project, designing and optimising 900km of rail track to EIRENE standards using Comtest Netprobe equipment on test trains.

Radio design of GSM-R, GSM900, 1800, 850, 1900 & WiMAX 2.5GHz networks, including coverage planning, network dimensioning, site selection, frequency and parameter planning for multi-layer, multi-technology networks, using ATOLL, PLANET, ODYSSEY, TEMS CELL PLANNER / NETACT (ASSET) and PARCELL planning tools. Experienced in Capacity planning and management in multi-layer networks. Completed LTE introduction training course.

Optimisation of GSM-R, GSM, UMTS & WiMAX networks (Ericsson, Nokia, Huawei, Nortel & Motorola) including direct use of OMC and OSS tools. Collection and analysis of performance statistics from PM tools such as NIMS PrOptima, METRICA/NPR, FACTS, ENIQ. Congestion relief and capacity planning. Global BSS parameter testing and analysis. Planning and execution of optimisation tasks, including control of drive test teams. Hands-on experience of NETPROBE; TEMS; TEMS LIGHT; and ROHDE & SCHWARZ TS5x-K1 measurement tools, NETANALYZER, ACTIX and OPAS post processing tools. Analyses of drive tests using MapInfo & MapBasic.

Indoor & Micro Design, planning and optimisation of indoor projects in GSM900 & 1800 networks, including airports, underground-railways, shopping centres, conference centres, football stadia, railway stations, bridges, and special in-building solutions as well as micro-cell city centre solutions for traffic management.

Computer Systems Advanced level of computer literacy. Fluent in HTML, XML, Perl, C, Visual Basic for Excel and MapBasic programming languages.

EMPLOYMENT

Summary, since 1995

| Date | Company | Position | Vendor | Tools |
|---------------------------|---|---|--|---|
| July 2012- Present | Kapsch CarrierCom, Paris, France | GSM-R Planning & Optimisation expert | Kapsch / Nortel | Atoll, MapInfo, Nortel OMC-R, Netprobe, NetAnalyzer |
| Sep 2011- Apr 2012 | Ericsson France, Nouméa, New Calédonia | RF Optimisation expert | Ericsson | Ericsson OSS, ENIQ, MapInfo, TEMS, TEMS Cell Planner |
| Jan 2011 – July 2011 | DMN Global Inc. Plano, TX. USA | Pre-Sales lead engineer. Optimisation technical lead. | Ericsson ALU Motorola | Actix Analyser. MapInfo |
| Aug 2010 – Dec 2010 | Motorola Australia Pty. Tahiti, French Polynesia. | RF Planning & Implementation Manager WiMAX | Motorola WiMAX | ATOLL, MapInfo, Motorola EMS |
| Dec 2006 – July 2010 | Motorola Ltd, Swindon, U.K. Motorola GmbH, Vienna, Austria | Multi-Vendor Intelligent Optimisation Service, Subject Matter Expert. | Ericsson, Huawei, Nokia, Siemens, Alcatel, Motorola | Motorola IOS & MVIOS. MapInfo, MapBasic, CellOpt, FACTS, Metrica |
| Dec. 2005 – Oct. 2006 | Incode Telecom, Paris France | Project manager GSM/GPRS/EDGE | Alcatel, Nokia, Siemens | Metrica, NetAct, RNO, MapInfo, TEMS, PrOptima |
| Nov. 2005 – Dec. 2005 | Ericsson UK, Hayes, UK. (Vodafone UK) | 3G Optimisation engineer | Ericsson | TEMS, MapInfo, Ericsson OSS. |
| Feb. 2005 – Oct. 2005 | Incode Telecom, Brussels Belgium (Mobistar) | Project manager, lead analyst GSM/GPRS | Nortel | PrOptima, MapInfo, Metrica, TEMS, VBA |
| Nov. 2004 – Dec. 2004 | O2 Germany, Cologne | Network Performance analyst GPRS | Nokia | Metrica, PrOptima, MapInfo, Odyssey. |
| Oct. 2003- Sept 2004 | O2 UK, London | RF Planning and Optimisation team lead. | Nokia | NMS2000. ODYSSEY. TEMS. Metrica. MapInfo. |
| April 2002 – Sept 2003 | Ericsson Inc. Dallas USA. (AWS) | Lead RF Design & Optimisation engineer | Ericsson | TEMS. TCP. Ericsson OSS (CNA, RNO, FOX) |
| Feb 2002 – March 2002 | MTN Nigeria, for O2 wireless consultancy | Optimisation consultant GSM | Ericsson | ASSET, CNA, OPTIMA, MapInfo. |
| Nov 2000 – Dec 2001 | ONE (Connect Austria), Vienna, Austria | Optimisation Co-ordinator GSM | Nokia | NOKIA NMS/2000, PLANET, Metrica, MapInfo, TEMS |
| May 2000 - Nov 2000 | OPTIMUS, Lisbon, Portugal | Radio engineer Special-Projects GSM | Ericsson | PARCELL, Metrica, MapInfo, TEMS |
| Nov 1999 - May 2000 | TELE.RING GmbH, Vienna, Austria | Radio planning Special-Projects GSM | Alcatel | CHIR-PLUS, ARCVIEW, TEMS |
| Sept 1999 - Nov 1999 | TMN, Lisbon, Portugal (via Lucent) | Customer Support Engineer GSM | Lucent | NPSX, TEMS |
| Nov 1997 – Sept 1999 | VIAG INTERKOM, Frankfurt, Germany | Senior Optimisation Engineer GSM | Nokia | ODYSSEY, MapInfo, Metrica, R&S TS5X-K1, OPAS |
| May 1997 - Nov 1997 | MOBILIX A/S, Copenhagen, Denmark | Network Optimisation Supervisor GSM | Nokia | PARCELL, Metrica, MapInfo, TEMS |
| Jan 1997 - May 1997 | HIGH-TECH GmbH (MOTOROLA), Vienna, Austria | Optimisation Engineer GSM | Motorola | PLANET, NETPLAN, MOTOROLA OMC, TEMS |
| Oct 1995 - Jan 1997 | HIGH-TECH GmbH (MOTOROLA), Vienna, Austria | Consultant Engineer TACS | Motorola | EMX2500, PLANET |

KAPSCH CARRIERCOM, VIENNA, AUSTRIA *

Title: GSM-R Planning & Optimisation Expert

July 2012 - Present

Assisting the pre-sales engineering team in bid preparations for GSM-R projects in various international markets. Prime engineer for RF planning, engineering design and configuration of GSM-R networks post-bid and into implementation. RF Prime for GSM-R project in Hungary covering 900km of rail track to ETCS-L2 standards. Optimisation and Acceptance testing for line sections to EIRENE standards using Comtest Wireless Netprobe tool. Mentoring of junior engineers and regular liaison with all stakeholders. Almost all verbal and written communications in French and/or English, some occasional work in German.

** Kapsch CarrierCom is the company which took over the European operations of Nortel Networks after the breakup of Nortel.*

ERICSSON FRANCE, NOUMÉA, NEW CALEDONIA

Title: RF Optimisation Expert

September 2011 - April 2012

Assisting the client (OPT-NC) to optimise and monitor the new Ericsson 2G/3G network after swap from the existing Alcatel 2G network and the addition of new sites and the 3G layer. Creation and optimisation of statistical reports using the Ericsson ENIQ tool. Monitoring of network performance pre and post swap. Creation of new optimisation processes. Site selection for densification project. Training and knowledge transfer in all areas of RF optimisation to the local staff. All verbal and written communications in French.

DMN GLOBAL INC. PLANO, TX. USA

Title: Pre-sales engineer and Lead Optimisation Engineer *January 2011 - July 2011*

Preparing technical responses to various RFP's for UMTS optimisation services and leading the integration of a team of sub-contractor engineers into the Ericsson pre-launch 3G optimisation group.

The work involved the initial technical assessment of RFP's and SOW's for providing sub-contract optimisation services to three major vendors. This was followed by the creation of a team of subcontractor engineers plus the necessary liaison, management and negotiations required to successfully integrate the team into the Ericsson 3G optimisation centre in Plano Texas.

MOTOROLA PTY LTD, AUSTRALIA. - TAHITI, FRENCH POLYNESIA

Title: RF Planning & Implementation Manager WiMAX

August 2010 - December 2010

Planning and managing the implementation of a WiMAX trial network in Tahiti, French Polynesia as the onsite Motorola representative. Managed sub-contractor services and customer relationships to successfully build the trial network for the city of Papeete and started planning of the future network with the customer. Contract for full network was delayed by customer funding delays.

MOTOROLA LTD, SWINDON, U.K. / VIENNA AUSTRIA.

Title: *MV-IOS - Subject Matter Expert*

December 2006 - July 2010

Initially working for the MVIOS Engagement Support group in Swindon, and then for the EMEA & APAC Professional Services Group, I was supporting, training and assisting various Motorola local offices worldwide to deliver Motorola's Intelligent Optimisation Service (IOS) for multi-vendor networks (MV-IOS). I helped to deliver the service on networks using hardware from Ericsson, Huawei, Motorola, Nokia, Alcatel, and Siemens.

The (MV)IOS service provides a highly detailed analysis of a GSM network based upon probed interface data which is then used to identify hardware and RF design problems, identify interfering cells, perform neighbour list optimisation and finally to produce a network or region-wide frequency plan resulting in significant improvements to customers' networks. At the same time I supported various general BSS Optimisation Projects on non-Motorola networks.

This work was in France, UK, Spain, Morocco, Kuwait, Saudi Arabia, Egypt, Malaysia, China, India, South Africa, UAE, Georgia, Ukraine, Nigeria, Ghana, Uganda and Rwanda.

In February 2010, attended a 3 day Motorola LTE introduction course covering network architecture, air interface, protocols and call processing.

INCODE TELECOM, NANTES, FRANCE.

Title: *Technical Project Manager*

December 2005 - October 2006

Returned to Incode to run a project in Nantes for Alcatel to monitor the Quality of Service in the western region of the SFR network during the upgrade of the network to EDGE capability. I was the main point of contact with both Alcatel and SFR with responsibility for all aspects of the project; QoS monitoring, problem resolution, drive test team management, report production and presentation as well as overall project tracking and reporting. The original project was extended due to problems with site access and completed finally at the end of August 2006. The entire project was run in French, both written and spoken. After the end of the Alcatel project I performed a 2 week network audit for SFR Toulouse (Nokia BSS) and a GSM and GPRS audit and performance analysis project for a customer with a Siemens network.

ERICSSON UK, HAYES, UK.

Title: *3G Optimisation engineer*

November 2005 - December 2005

A short project, as the original leadership role which was offered became unavailable due to Ericsson contractor policy and the contract was terminated by mutual agreement. In the time I was there, I was directly involved in the analysis and optimisation of the Vodafone 3G network in 4 districts of south London.

INCODE TELECOM, BRUSSELS, BELGIUM.

Title: *Technical Project Manager*

February 2005 - October 2005

Originally employed as a lead analyst for the EDGE upgrade of the entire Mobistar network, providing deep analysis and mentoring to the junior engineers, I was then promoted to project manager with responsibility for the timely delivery of the project which had fallen many weeks behind schedule. I was responsible for 15 engineers and technicians and sub-contracted drive testers. I was the primary liaison with Nortel and Mobistar and the primary reporting point to Incode country management. I was also the local IT and networking (wired and wireless) administrator for the temporary project office. The project was completed on time in October 2005. All meetings and communications, except the formal reports, were in French.

O2 GERMANY, COLOGNE, GERMANY.

Title: *GSM / GPRS Network Performance analyst*

November 2004 - December 2004

Working for O2 Germany's West region, I developed a suite of reports and macros to analyse the performance of the GSM 1800 network, for both Circuit switched and Packet switched traffic (GPRS). The reports will be used by the optimisation engineers and parameter planners in their daily work.

O2 UK, LONDON, ENGLAND.

Title: *RF Planning and Optimisation team lead*

October 2003 - September 2004

Working for O2, I was responsible for the team planning and optimising Central London, covering some of the busiest areas in the O2 network. As the senior engineer working on the 2G network, I was responsible for quality of service, coverage, traffic management and network density improvements. I had full responsibility for the radio interface parameters and link quality. This included macro and micro cell layers as well as localised picocells, indoor solutions and corporate in-building solutions. I interfaced with the acquisition, build, implementation and maintenance personnel, as well as with site providers and sub-contractors. I was additionally responsible for capacity planning in the M25 Core area which consists of 12 BSCs in the central London area.

ERICSSON INC, DALLAS, U.S.A.

Title: *Lead RF Optimisation engineer*

April 2002 - September 2003

Working for Ericsson USA. I was the lead RF engineer for the rollout, optimisation and handover of a GSM overlay on an existing TDMA network for AT&T Wireless services in the Boston and New England markets. The project involved on-site supervision of a team of 9 RF engineers and 10 drive test teams, as well as hands-on optimisation, for the initial site testing and cluster optimisation pre-launch, followed by the post launch optimisation. This involved regular liaison with the Ericsson project managers and the customer as well as use of the TCP planning tool, TEMS Investigation and the Ericsson OSS. Following the official handover in November 2002, the customer requested me to stay in the market to provide mentoring and technical support for the local engineers. This involved using Business Objects to obtain statistics and the Ericsson OSS to implement changes to the network.

In late February 2003 I was transferred to Pittsburgh PA to manage the post launch optimisation project for the Great Lakes region of AT&T Wireless which consisted of 6 markets. This project ran for a little over two months and was completed successfully when the performance statistics for all 6 markets were within the customers' defined targets.

From May 2003 until September 2003 I was based in Dallas Texas at Ericsson HQ providing support for the conditional acceptance testing phase of the GSM roll-out for Cingular Wireless.

M.T.N, LAGOS, NIGERIA (FOR O2 WIRELESS)

Title: *Optimisation Consultant*

February 2002 - March 2002

I was engaged by the consultants O2 Wireless in Lagos to make an assessment of the new network being rolled out by MTN Nigeria. I made the assessment and performed a clean up of the network parameters, neighbour relationships and frequency plan. I then wrote a document outlining the problems found and providing guidelines for maintaining the quality of the network during the rollout phase. This document is being used by MTN as the basis of their Optimisation process.

ONE (CONNECT AUSTRIA), VIENNA, AUSTRIA

Title: *Optimisation Co-ordinator*

November 2000 - December 2001

I was working as the Optimisation Co-ordinator for Region East, leading a project team of 5 engineers. Our team was responsible for the optimisation of the Nokia equipped GSM 1800 network with HSCSD and GPRS in Vienna and the surrounding area. I had overall responsibility for the hardware and parameter optimisation within this geographical area which represents about half the population of Austria.

We completed an antenna re-design project to optimise the antenna configuration for capacity and quality. We implemented a city centre micro-cell layer plus indoor solutions and optimised the traffic management between layers. We introduced an optimisation process to monitor the network performance and direct our efforts for further improvements. We introduced two new hardware types from Nokia, the Metro-site and the Ultra-site BTSs. I had direct access to the NMS/2000 OMC system and made daily parameter changes, both through the GUI and via NPS/X file transfer. I made use of the PLANET RF planning tool, METRICA statistics tool, TEMS drive test equipment and MAPINFO GIS software.

OPTIMUS TELECOMMUNICATIONS S.A, Lisbon, Portugal

Title: *Radio Engineer Special-Projects*

May 2000 - November 2000

I was working in a mature dual-band GSM network using Ericsson BTS and OSS, operational since October 1998 in Portugal, with particular responsibility for optimisation of all existing special projects and the planning and realisation of new special projects as required. These included one of the longest road bridges in Europe (15km), Lisbon & Faro international airports, several large and medium sized shopping centres, the football stadium of FC Sporting Lisbon, the Portuguese parliament and the Prime Ministers official residence. I also worked on the optimisation of the on-street micro cells and various issues regarding traffic management in a multi-layered frequency-hopping network. I liaised with the macro-layer radio planners, the acquisition and construction personnel, frequency and parameter planners to optimise the performance of the micro and indoor BTSs into the overall network, particularly with a view to absorbing traffic from the macro cells. I made use of the PARCELL RF planning tool, METRICA statistics tool TEMS drive test equipment and MAPINFO GIS software.

TELE:RING GMBH, Vienna, Austria

Title: *Radio planning Special-Projects*

November 1999 - May 2000

I worked on a new GSM1800 network rollout in Austria, with responsibility for all special projects. These included, the selection of repeater equipment, selection of drive test equipment, indoor coverage at Vienna International airport, the Vienna underground railway (U-Bahn), the Vienna Exhibition centre and various shopping centres, railway stations and other important buildings. I liaised with the macro-layer radio planners, the acquisition and construction personnel, frequency and parameter planners to integrate the micro and indoor BTSs into the overall network. I made use of the ChirPlus Mobile RF planning tool, and Arcview GIS software.

TMN, Portugal

Title: *Customer Support Engineer*

September 1999 - November 1999

Based in Lisbon, I worked in the operators planning office to provide support for a combined project of BTS replacement and enhancement. I was responsible for assisting the customers engineers in planning the new sites and integrating them with the existing sites once changed out and upgraded. I made daily use of the NPSX RF planning tool.

VIAG INTERKOM (O2), Germany

Title: *Senior Optimisation Engineer*

November 1997 – September 1999

Based in Frankfurt, I was responsible for frequency and parameter planning, as well as network optimisation for approximately 250 base sites in the area of Frankfurt, Wiesbaden and Mainz for a new GSM1800 network roll-out. I was a member of the company wide frequency planner's forum and parameter planners' forum, which defined the planning rules and procedures for the network. I provided additional technical support for measurement systems, OMC operations and radio planning. I was required to assist the development and training of the locally employed radio planners and optimisation engineers. I made extensive use of Metrica/NPR statistical reports and Rhode & Schwarz TS5x-K1 drive test equipment, using OPAS and MAPINFO for post processing and analysis. I made daily use of the ODYSSEY RF planning tool.

MOBILIX A/S, Copenhagen, Denmark

Title: *Network Optimisation Supervisor*

May 1997 - November 1997

Based in Copenhagen, I was originally the team leader of the radio design team for Copenhagen and suburbs. After one month I was promoted to Optimisation Supervisor with total responsibility for the definition of integration and optimisation procedures and supervision of radio network design process. I was involved in the definition and choice of the performance management tool, for which Metrica/NPR was chosen. I specified the standard performance indicators and provided technical support in the specification of quality monitoring equipment. I assisted in the design of indoor coverage at the national airport to ensure seamless integration of the indoor sites into the macro network. I was responsible for writing and the company optimisation manual and training locally employed optimisation engineers. I was frequently required to conduct meetings in French due to the significant number of personnel from France Telecom involved in the project.

HIGH-TECH GMBH (MOTOROLA), Vienna, Austria

Title: *Optimisation Engineer GSM*

January 1997 - May 1997

I converted to GSM optimisation on the Austrian A1 network. I was involved in the collection and analysis of OMC performance and traffic statistics from Motorola BSC and BTS equipment. I used the Siemens K1103 A-interface analyser to identify interworking problems with MSC and between BSCs. I also used TEMS drive test equipment to collect data and the FICS tool for analysis.

HIGH-TECH GMBH (MOTOROLA), Vienna, Austria

Title: *Consultant Engineer TACS*

October 1995 - January 1997

I was involved in the frequency migration project to downsize the analogue TACS network to provide spectrum for the growing GSM system. I was initially involved in the re-planning of BSS hardware and software reconfiguration and also the planning and implementation of switch database modifications. I was responsible for the collection and analysis of network statistics and system performance data before and after changes. Following the migration project, I was involved in further TACS system optimisation involving development of utility programs for analysis of statistical and maintenance reports, drive test data, and self testing of problem areas to improve system performance, reduce interference and improve quality. I was responsible for the development of a drive test data collection and analysis program to improve efficiency of drive testing. I was then involved in a second migration project where a completely new planning strategy was implemented involving complete traffic and frequency re-planning using the Motorola NETPLAN tool.

CELLNET (O2), Manchester, UK

Title: *Consultant Optimisation Engineer TACS*

October 1993 - October 1995

Consultant engineer to Cellnet UK responsible for network quality of the analogue TACS cellular network in Manchester and NW England. Responsible for collection and analysis of switch statistics, optimisation of switch and base site parameters and databases, identification & rectification of frequency planning and topology problems, field testing and analysis of data from drive test equipment, identification of coverage problems and implementation of network improvements.

CONNECT COMMUNICATIONS, Maidstone, UK

Title: *Engineering Contractor*

October 1991 - October 1993

Operated an independent communications contracting company, employing up to 20 technicians and labourers, initially for Motorola Land Mobile Products Ltd. and then for London Buses Ltd. I organised and managed several projects for the enhancement and improvement of the London Buses Band III trunked radio network, being involved in all aspects of the contracting process, from initial costing and bid through to project management and implementation.

MOTOROLA E.C.I.D, Swindon, UK

Title: *Engineering Contractor*

November 1984 - October 1991

Self employed cellular base station engineer under contract to Motorola Ltd. and later to Motorola European Cellular Infrastructure Division. Performing installation, commissioning, optimisation, maintenance, software upgrades and de-commissioning of Motorola base site equipment on the Cellnet UK TACS system. Installation and commissioning of PCM transmission equipment and low voltage DC power supplies.

BRITISH RADIOPHONE LTD, London, UK

Title: *Field Service Engineer*

July 1984 - November 1984

Field service engineer for British Radiophone, maintaining VHF & UHF radio systems. British Radiophone is no longer trading.

SOCOM SERVICES LTD, London, UK

Title: *Field Service Engineer*

September 1979 - December 1981

Socom Services Ltd.- trained as bench radio technician, installing and repairing VHF & UHF hand portable & mobile radios. Further trained as base station engineer installing and repairing base stations & control systems. Promoted to field service engineer in 1980 maintaining complete systems for airlines, public service organisations, transport operators and major construction companies. Most experience on systems manufactured by Motorola. Socom services was acquired by Securicor Communications in the mid 1990's.