Andy Digby

An Experienced Chartered Engineer (CEng) holding a Bachelor of Science Honours Degree (B.Sc.(Hons)).

Specialities: Engineering & Project Management; Technology; Airports; Maritime; Land, Marine & Aeronautical Radio Communications; Systems Integration; Navigational Aids; Radar Systems.

EDUCATIONAL, PROFESSIONAL & POST GRADUATE QUALIFICATIONS

Chartered Engineer (CEng)
Bachelor of Science Degree with Honours (B.Sc. Hons) Engineering Management & Systems Technology
Higher National Diploma (HND) – Marine Engineering , Radar & Communications Systems
Member of the Royal Aeronautical Society (MRAeS)
Member of the Institution of Engineering & Technology (MIET) {by amalgamation of the IEE & IEEIE}
Member of the Institute of Systems Engineers (MINCOSE)
PRINCE2 Practictioner (Project Management – APMG International)

KEY KNOWLEDGE AREAS

Management (Engineering , Project & Programme, PRINCE2 Practitioner, FIDIC)
Airport & Maritime Radio Communications, Radar & Navigational Aids
Client Requirements Capture & Documentation
Systems Specifications Documentation
Systems Design
Systems Engineering & Integration
Emergency Power Generation
Control Systems
Office Business Tools plus
Computer Systems & Networking
LAN & WAN Technologies
SCRUM, Agile Project Management Methodologies

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CONTACT DETAILS

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MOST RECENT EXPERIENCE

Sept 2015 to Oct 2016: Jacobs Engineering Inc. (Construction Management Authority to ADAC) on the Abu Dhabi (and others) Airport Expansion Programme as Commissioning Manager (Airports).

"Supervising the building and commissioning of Air Traffic Control systems at airports and knowing you have contributed to the safety of hundreds of thousands of air passengers who pass through that airport every year is both a massive personal challenge, and incredibly rewarding."

Andy has ownership and accountability for the Contractor's design works, as well as the 'systems' elements of the works, including the implementation of an A-SMGCS to ICAO standard Level 4, which will incorporate control of the airfield lighting to reduce the Air Traffic Controller burden. He leads the testing and commissioning of these systems and will provide input to the operational (ORAT) element, for their necessary integration into a fully operational international airport. Andy is a Subject Matter Expert (SME) on ATC and their multiple systems and successful integration, in all things Air Traffic Control e.g. Air Traffic Management Systems; Airfield Ground Lighting and Control Systems; Meteorological Systems; Radio & Line Communication Systems; Radar, SMR & MLAT Sensor Systems; Navigational Aid Systems.

PREVIOUS EXPERIENCE

Dec 2012 to Sept 2015:

HILL INTERNATIONAL INC. (Construction Managers to the Ministry of Transport & Communications) on the Omani International Airports Development Construction Project, Muscat, Sultanate of Oman.

Initially headhunted by Hill Middle East to provide SME expertise at Senior Level by becoming part of the "Transition Team" from the old Engineer (Cowi-Larsen JV) to the new Engineer (Hill) in a FIDIC-based contract.

Became Interface Manager then Resident Engineer for two "Standardized National Contract (SNC)" packages comprising the
Air Traffic Control Systems;
Air Traffic Management Systems;
Meteorological Systems;
Radio & Line Communication Systems;
Radar & MLAT Sensor Systems;
Navigational Aid Systems;
all within a major FIDIC-based construction management programme covering the works at Muscat International airport, Salalah airport and four regional airports (a total of six airports).

The Flight Information Region (FIR) is controlled from Muscat. Day-to-day management of the team supervising two world-class contractors , organising and running meetings; agreeing and implementing courses of action to resolve issues; reviewing / approving / rejecting contractor designs; ensuring approved design is implemented correctly; ensuring coordination between package contractors and multiple others; making inputs to other contractors responsible for the provision of aspects such as TETRA, GSM, ATEX, AGL etc.

Writing input to the monthly reports; assessing contractors performance; assessing team members performance; technical assessment of claims and requests for extension of time; participating in Operational Readiness (ORAT) Committees; presenting to Client ad-hoc ; interfacing daily with multiple other disciplines within the construction work environment.

PREVIOUS EXPERIENCE (Continued)

Oct 2007 to Nov 2012: EXELIS DEFENCE LTD (formerly ITT UK Ltd), BASINGSTOKE, UK
Employed as the Senior Systems Integration Engineering Lead within a matrix-based structure, within the global defence communications business of Exelis Defence Limited.

Originally bought in to provide HF and NVIS (Near Vertical Incidence Skywave) communications expertise for a specific bid, and to provide platform-wide Systems Integration of HF, VHF and UHF radio products into one contiguous, secure, communications network within a Military Architecture.

Last projects include the CE Marking of a range of Exelis products, including radios and filters, ATEX Certification and National Police Improvement Agency (NPIA) Certification of First Responder radios.

Other areas of work included making inputs to the integration of a range of civil radios into the Exelis portfolio and demonstrating capability of the same to EU and overseas customers for First Responders e.g. Police, Fire, Ambulance and other Public Services. Specifying the radio and ancillary equipment, calculating and mitigating risks attached to the optimal operating configuration per-customer and ensuring total customer satisfaction.

Bids to major UK customers looking to replace a significant number of Air Traffic Control ground management communication radios; Leaky Feeder maintenance and / or replacement programme management; Addressing several Urgent Operational Requirements (UOR) for key MOD programmes including IED detection with risk mitigation; Co-site filters; Providing 'Back Office' Secure Radio Communications knowledge and expertise to assist a North African Diplomatic Protection Group; Providing Secure Radio Communications knowledge and expertise to a European Ministry of Interior and Providing Secure Radio Communications knowledge and expertise to a small team of dedicated personal protection specialists.

Other specialised work has included inputs to the design, commissioning and production operations attached to producing a completely new radio mount product for a military radio whilst providing a battery charging capability for users whilst out on mission. Radio remains a ‘grab & go’ for rapid dismount capability. Specific responsibility for bid work on Tactical Air Traffic Control, (HF to UHF communications, landing lights, power generation & distribution systems), including initial and detailed design for Forward Operating Air Base. I have also worked on a considerable number of other communications-orientated projects.

March 2007 – August 2007: SELEX SISTEMI INTEGRATI, PORTSMOUTH, UK. Employed initially as Senior Air Traffic Control (ATC) Engineer, but reassigned to a senior project role as the Systems Design Authority (SDA) for the seamless transition of RAF St. Mawgan Aerodrome to Newquay Cornwall International Airport (NQY), on a Commercial Off-The-Shelf (COTS) basis within 3 days of starting.

As SDA for Newquay, the post entailed capturing the customer requirements and identifying the risks involved for the project as well as approving the civil airport design. Translating the customer requirements into a set of Systems Requirements Specification Documents, working very closely with all other members of the team (including the Procurement Chain Management) to ensure an optimal COTS solution was found and implemented to ensure a seamless transition from military aerodrome to civil airport with minimal retained risk to the company.

PREVIOUS EXPERIENCE (Continued)

NQY's equipment fit I had responsibility for as SDA included an "S" band primary radar, an "L" band secondary monopulse radar, an "X" band surface movement radar, VHF AM & UHF FM radio communications, a main runway to be fitted with both a Category I and a Category III Instrument Landing System (ILS), Distance Measuring Equipment (DME), Non-Directional Beacon (NDB), Digital Resolution Direction Finder (DRDF), Runway Visual Range Indicator (IRVR), ceilometers, anemometers barometers, and other meteorological instrumentation, Uninterruptable Power Supplies (UPS), standby power generators, a range of displays, radar & audio recorders / playback, station clock and of course, a new ATC tower to house it all in. Value of programme circa £20.5m excluding the £23.4m development zone grant from the EU.

December 2003 – March 2007: ROCKWELL COLLINS (UK) LTD., READING, BERKSHIRE, UK. Employed as the Senior HF Systems Engineer with specific responsibility for helping to plan and implement the integration of new 'control and delivery' systems with legacy 'control and delivery' systems as mission-critical elements of the new global Defence High Frequency Communications System (DHFCS) programme.

DHFCS is intended to provide authorised users with a global communications facility that permits the exchange of data or voice messages over financially economic HF radio circuits. The satisfactory integration of the new equipment with the legacy equipment was essential as a DHFCS circuit may be seamlessly established on either the new or legacy equipment by the users.

Detailed systems level planning across multiple sites, followed by project management to ensure maximum coordination for equipment, tools and test equipment, shipping of assets to sites, availability of key staff at site and then leading teams to carry out the installation and integration activity. Upon completion of commissioning, structured testing was conducted three levels: site, station and finally at overall system level with independent customer and end-user witnesses present.

The system included high powered solid state HF transmitters, programmable fixed frequency and scanning receivers, very high power RF amplifiers, RF antenna exchanges and all their inter-connections with various IT equipment, including LAN and WAN connectivity. The system overall was designed using COTS equipment wherever possible to meet or exceed the customer's expectations of the new system in terms of speed of delivery and minimising the retained risk to the programme. Overall programme value £25m.

PREVIOUS EXPERIENCE (Continued)

Apr 2000 – Dec 2003 : WS ATKINS (CONSULTANTS) LTD, EPSOM, SURREY. Employed as a Senior Specialist Consultant Engineer operating across a huge variety of roles over 3½ years.

In summary, roles included:

Technical communications systems authority to T*f*L for the radio communications and public address contract to be let on the Rotherhithe road tunnel under the River Thames. Value £7m.

Airport Engineer providing specialist knowledge in aeronautical communications, radar and navigational aids to a consortium bidding for an ATC tower replacement project. Value circa £20m.

Technical communications systems authority to T*f*L for the radio communications and public address contract to be let on the Blackwall Tunnel (A12) refurbishment programme under the River Thames. Overall responsibility for the whole tunnel communications system including broadcast. Value £35m.

Providing specialist input to the construction refurbishment of some very deep cable-carrying tunnels under London in connection with the design of a fibre optic cable network and two control centres. An IT and communications systems convergence role. Value £2m.

Radio communications System Design Engineer for an overseas Nuclear Power Plant project.

Communications Design Authority to the Highways Agency (HA) for the new A3 Hindhead (Devil's Punchbowl) dual road tunnel project. Overall Project Value £371m.

RF Interference expert providing solutions to a client in Swindon who was facing a severe radio frequency interference problem to their £multi-million silicon chip test-bed facility. Value £250k.

Feasibility study into the synergy between a proposed real-time public transport information (PTI) system employing LAN / WAN technology and standard private mobile radio (PMR) technology, to cost and facilitate a combined replacement tracking and PTI system. Value £788k.

Colchester Garrison PFI. Design of secure IT, communications and telecommunications networks in both fibre and copper.

HA Area Maintenance Authority, East London Sector: Resolution of a series of difficult radio issues concerning safety of life in the wider service area and two major London road tunnels.

Lee-on-Solent Airfield. Consultancy concerning safeguarding zones around aircraft approach paths with respect to CAA regulations on clearance minima.

Aug 1999 – Apr 2000 : TRAFFIC CONTROL SYSTEMS UNIT (TCSU) CENTRAL LONDON. Employed as the Radio Communication Projects Engineer. Responsible for management of numerous radio communication projects with additional engineering, research & development input. Provision of radio communications expertise to all the emergency services for both surface and underground (e.g. road tunnel) radio communications.

1998 – 1999 : UNEMPLOYED. Seeking alternative contracts.

1996 – 1998: EUROCONTROL, BRUSSELS. Employed on a contract basis with the International Agency responsible for Air Safety & Navigation across Europe providing Technical Expertise to psychologists and human factor experts.

1996 : SPEEDWING AIRPORTS. Short term contract providing expertise into clients operating an overnight express delivery service and major international bids for the intelligent layer of the New Inchon Airport.

1991 – 1996 : ZUHAIR FAYEZ & ASSOCIATES, JEDDAH, KSA. Employed as an Airport Systems Engineer.

Providing expertise on a multiple site, multi-faceted airport survey project, with overall responsibility for the development of all airport and air defence systems recording and reporting aspects (including creation of the Master Planning Reports, the GIS & FMS databases). Day to day control of up to 120 data collection staff .

Accuracy checking, collation of all data and uploading to databases. Authoring reports.

During this same period, also studied in my free time for my B.Sc. (Hons) with the Open University.

1989 – 1990 : BECHTEL CONSTRUCTION COMPANY INC., SAN FRANCISCO, USA. Short term contract as a supervising construction engineer on the King Fahd International Airport construction project, Dammam, Saudi Arabia.

Specific responsibility for overseeing two live and one dormant contracts; Flight Information Display (FIDS), Land Mobile Radio Communications (LMR) and Public Address (PA) System on behalf of the Client.

Initial hostile actions leading to the First Gulf War caused rapid demobilization of the entire crew.

1987 – 1989 : FULL TIME HND STUDENT, Southampton Institute of Higher Education. Returned to full time education in order to improve qualifications. Became a Fully Qualified Sea-going Radio Officer (Merchant Navy). Maritime Radio Communications, Navigational Aids and Radar Engineering, SOLAS , Fire Fighting and 1st Aid - plus core subjects.

1986 – 1987 : UNEMPLOYED. Seeking alternative contracts and / or suitable vocational courses with secured funding.

1982 – 1986 : PLESSEY INSTALLATION & COMMSSIONING GROUP, ADDLESTONE, SURREY. Employed as a field engineer installing, commissioning and maintaining company products world-wide on both civil and military airports. Some territorial management experience, management of site staff.

1981 – 1982 : BENDIX FIELD ENGINEERING, RIYADH, KSA. Short term contract as a field engineer employed to maintain the integrity of all flight-safety radio, radar and navigational aids on nine separate sites with a very large geographic separation. Day-to-day team management.

1980 – 1981 : MARCONI INSTRUMENTS, LUTON. Employed as a senior workshop test engineer to repair and recalibrate test equipment to original manufacture's specifications. Report writing.

1969 – 1980 : ROYAL AIR FORCE. Originally an apprentice, learning the radio, radar and navigational aids skills necessary to maintain the Strike Command air traffic and air defence control ability. Those skills usefully employed in a wide variety of roles over 11 years in a number of operational posts world-wide.

LANGUAGES

English – mother tongue.
French – some spoken & written.
Arabic – some spoken (learning the script).

COMPUTER SKILLS

Expert technical PC user with all standard business applications plus other tools.
Proficient www user for research and information gathering.
Database designer and manipulator.
Some web site design.

SECURITY CLEARANCES

UK SC

PERSONAL ETHICS

Integral to the position of a professionally qualified Chartered Engineer. I consider ethical behaviour inside and outside the workplace to be of critical importance. Understanding of the potential adverse effects.

INTERESTS

Amateur Radio (Portable, NVIS, HF, CW, PSK Data, RAYNET, Teaching)
Advanced PADI Open Water Scuba Diver (with SSI EAN40 Nitrox certification)
Underwater Videography
Archery
Cycling
Athletics
Sailing

COMMUNITY ASPECTS

Teaching / Examining Amateur Radio to local Scouts and others (all three UK licence levels).
Volunteer with RAYNET as Deputy NW Hampshire Group Controller. Planning & controlling safety communications to major events such as cross country's (runs, cycles, sleds, horse rides etc) or supporting County Council Emergency Planning Officers.
Volunteer Athletics Event Official (County Level).
JustGiving account active for charitable donations.