

A. Digby – Chartered Engineer

NAME OF PERSON	A Digby	YEAR OF BIRTH	1953
NATIONALITY	English	PROFESSION	Chartered Engineer
CURRENT POSITION	Senior Lead Systems Integration Engineer		
SPECIALISATIONS	Radio Communications, Radar, Navigational Aid Systems		
QUALIFICATIONS	Chartered Engineer (CEng) – {formerly Incorporated Engineer; IEng., held since 1989} Member of the Royal Aeronautical Society (MRAeS) Member of the Institution of Engineering & Technology (MIET {formerly IEE & IEEIE}) Member of the Institute of Electrical & Electronic Engineers (MIEEE) Member of the Institute of Systems Engineers (MINCOSE) Bachelor of Science Degree (BSc{Hons}) Technology & Management Higher National Diploma (HND) – Marine Engineering		
KEY EXPERIENCE	Air Traffic Control (ATC) Airfield, Air Defence & Marine Radar Computer Programming - C, Pascal, Basic, Assembler Control Rooms Flight Information Display Systems (FIDS) Installation, Commissioning & System Test Maritime Control Electronics Maritime Propulsion Units & Diesel Engines Navigational Aids Preparation of specifications and / or system requirements Project planning, control and management (incl. design & construction contracts) Public Address Radio Communications (MF – SHF) System design and integration Technology (incl. IT) Telecommunications		

PROFILE

A well qualified, experienced Chartered Engineer holding a Bachelor of Science Degree with Honours, specialising in Radio Communications, Radar and Navigational Aids in land environments. An achiever, who delivers. Andy's byline is "Consider it Done". A proficient user of Office PC tools to produce and deliver to an audience at any level, of any technical (or non-technical) ability. Has the capability to put his point across.

A professionally qualified engineer who happily meets with and listens to clients, identifies and responds positively to identified client needs and real abilities, then manages client expectations, risk and his team of people to produce excellent results, including bids based on the Shipley process that do win projects.

Andy's experience is extensive, ranging from 1969 as an apprentice onwards through to the present day. That wealth of experience has seen him maintaining, installing, commissioning equipment first hand, and most recently specifying and designing systems associated with radio communications, radar and navigational aids both the UK and overseas.

Technology has advanced out of all recognition during that same period, and it has been essential to maintain current in-depth knowledge of these systems and the techniques that accompany them. There has been an increasingly rapid convergence of technologies recently which allow more of the routine tasks to be computer automated and therefore more human time to be spent considering and making decisions.

Andy's specific systems knowledge include :

- Air Traffic Control systems
- Automated terminal information services (ATIS)
- Automatic direction finder systems (ADF)
- Distance measuring equipment (DME)
- Global positioning satellite systems (GPS & DGPS)
- Information display systems
- Instrument landing systems (ILS & MLS)
- Land mobile radio (LMR)
- Meteorological systems
- Microwave systems
- Non-directional radio beacons (NDB)
- Omni-directional radio beacons (VOR & DVOR)
- Precision approach path indicators (PAPI)
- Precision approach radars (PAR)

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- Primary airfield and air defence radar systems (1 GHz to 10 GHz)
- Secondary airfield and air defence radar systems (1 GHz)
- Public address systems
- Surface movement & ground control radar (SMGCR)
- Troposcatter systems
- Visual approach slope indicators (VASI)
- Weather information dissemination systems

Most recently, Andy has been working with ITT in Basingstoke as a Senior Lead Systems Integration Engineer within an IPT / matrix structured organisation, providing his expert knowledge as input to a range of projects and bids.

Immediately prior to this post, Andy was working for Selex SI in Portsmouth in a project role as the Systems Design Authority (SDA) for the seamless transition of RAF St. Mawgan Aerodrome to Newquay Cornwall Airport (NQY).

Prior to that post, Andy was working for Rockwell Collins (UK) Limited as a Senior Systems Engineer designing, problem solving and running teams of staff installing the Defence High Frequency Communications System (DHFCS) worldwide.

In a telecomms and IT role, Andy worked as the infrastructure design authority (IDA) to the consortium driving the Colchester Garrison redevelopment PFI and to BT as a fibre optic network designer.

Andy holds a Department of Transport (DoT) ENEM Certificate on Maritime Electronics comprising radio communications, navigational aids and radar (including ARPA). He is a qualified Maritime Radio Officer and also has a good working knowledge of marine engines, their control and affiliated peripheral systems.

Andy is also a fully qualified radio amateur and regularly operates on the HF, VHF and UHF bands worldwide, on SSB, CW, FM, AM and Digital. Callsigns currently held are GØJLX, ZD8AD and VP8DJO. He teaches Amateur Radio at all three UK licence levels to would-be and advancing amateurs, and is a morse code tutor and examiner. He is also an active member of RAYNET, the Radio Amateurs Emergency Network and helps deliver the essential communication services RAYNET provide to Emergency Planning Authorities in his area (Hampshire).

He is thoroughly computer literate and has over 30 years of experience to draw upon. In 1995 he supplemented his existing Higher National Diploma (HND) in Engineering by gaining a B.Sc.(Hons) in Engineering, Technology and Management from the Open University whilst on assignment in the Middle East.

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EXPERIENCE WITH CURRENT EMPLOYER

October 2007 – Date

ITT DEFENCE LIMITED, BASINGSTOKE, UK.

Employed as a Senior Lead Systems Integration Engineer within an IPT (Integrated Project Team) structure, within the global defence communications business of ITT, currently working on the market launch of a brand new product line.

The current project includes integration of civil radios into the ITT portfolio and demonstrating capability of the same to overseas customers with a view to their large scale purchases for Police, Fire, Ambulance and other Public Services, as well as specifying the radio and ancillary equipment, calculating the risks attached to the optimal operating configuration on a per-customer basis and ensuring individual customer security.

Systems Design Integration of HF and VHF products into one contiguous, secure communications network.

Other IPT work to date has included the design, commissioning and hand-over to production of a completely new product for mounting military radios on whilst charging the battery, C² (command & control) mapping and positioning applications, C³ (command, control & communications) applications, provision of HF expertise and the introduction of an HF capability to a previously VHF-and-above manufacturer, being a key team member providing domain knowledge to a huge (\$US multi-million) bid for a major European communications update project, with specific responsibility for all aspects of Air Traffic Control, HF to UHF communications, power generation and power distribution systems within the project, including initial and detailed design for FOA (forward operating airfields). On an equally huge (\$US multi-million) Middle Eastern communications system update bid, capturing the customer's requirements and translating those into a set of Systems Requirements which translated into a design and commissioning role for a UHF data link.

Providing 'Back Office' Radio Communications knowledge and expertise to a North African Royal Guard and ensuring that the required communication requirements and security expectations of that customer were met, in their non-English primary language.

Providing Radio Communications expertise to a European Ministry of Interior and ensuring that the security expectations and aspirations of that customer were exceeded.

Andy has also worked on a considerable number of other communications-orientated projects with / for multiple clients in a variety of roles. Within ITT, Andy enjoys almost complete autonomy, whilst maintaining a loose-knit team identity on a matrix basis.

From a supplier viewpoint, Andy has provided a key interface point with the ITT supply chain, ensuring that the customer demands have been fully met with any solution provided.

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EXPERIENCE PRIOR TO CURRENT EMPLOYER

March 2007 – August 2007

SELEX SISTEMI INTEGRATI, (A FINMECCANICA COMPANY), PORTSMOUTH, UK. Employed initially as Senior Air Traffic Control (ATC) Engineer, but reassigned to a project role as the Systems Design Authority (SDA) for the seamless transition of RAF St. Mawgan Aerodrome to Newquay Cornwall 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's requirements and identifying the risks involved in the project. 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 the optimal COTS solution was found and used in the seamless transition from military aerodrome to civil airport with minimal risk. The work was broken down into a number of packages (WBS) and tracked.

NQY's equipment fit Andy had responsibility for was to include an "S" band primary radar, an "L" band secondary monopulse radar, an "X" band surface movement radar, VHF AM & UHF FM radio communications, Category I & Category III Instrument Landing Systems, Distance Measuring Equipment, Non-Directional Beacon, DRDF, IRVR, celimeters and other meteorological instrumentation, UPS, generators, displays, radar & audio recorders / playback, station clock and a new ATC tower.

Tight deadlines were met in the early days and a gantt chart programme of WBS based upon the delivery to site, installation, commissioning, SAT (Site Acceptance Testing) and SIT (Site Integration Testing) schedules of the multiple sub-systems based on the availability of the new buildings and systems was produced, ready for the next phase of the works to be implemented. With the Preliminary Design complete, notice to quit was received. The tardiness of the anticipated EU funding stream impacted the work programme, and the lack of permission for "advanced works" from the RAF had impacted the building of the civil works contractors' compound on the aerodrome where the sole project access point to airside was scheduled to be. These risks had been factored in.

December 2003 – March 2007

ROCKWELL COLLINS (UK) LTD., READING, BERKSHIRE, UK. Employed as part of a team working on the global Defence High Frequency Communications System (DHFCS) programme. Employed as the Senior HF Systems Engineer with specific responsibility for RF components on the programme. This included all the high powered solid state HF transmitters, programming fixed frequency and scanning receivers, power amplifiers, antenna exchanges and inter-connections with the IT equipment via LAN and WAN connectivity. Designing other system components and links using COTS equipment wherever possible to meet the customer's expectations.

The programme is intended to provide joint UK users with a global communications facility that permits the exchange of data or voice messages over HF radio circuits. The voice circuits will eventually be able to be set up on demand via DTMF telephone signalling from suitably-authorized desk phones in Whitehall. The satisfactory integration of the new IT equipment with the older legacy equipment was essential as the circuits may be established on either new or legacy equipment by the operators.

Detailed systems level planning across multiple sites, coordination for equipment, tools and test equipment shipping to sites, assigning staff to site and then leading the teams to carry out the installation and commissioning activity were all key elements. Once installation and commissioning was complete on a site, undertake both informal and formally witnessed testing of the newly-installed systems, ensuring all signed acceptance sheets were taken back to HQ for inclusion in the DOORS database by the requirements engineer as evidence. Testing was conducted at site level, station level and finally at overall system level with independent witnesses being present on all sites.

2000 – December 2003

ATKINS (FORMERLY WS ATKINS) (CONSULTANTS) LTD, EPSOM, SURREY. Employed as a Chartered Consultant Engineer operating in a variety of developing roles over 3.5 years:

Technical communications authority to TfL for the radio communications and public address work to be undertaken on the Rotherhithe tunnel in London. This comprises all emergency service channels (AM & FM in VHF & UHF), FM VHF maintenance channels, domestic radio ranging from LW to FM with VHF DAB rebroadcast. All domestic radio channels shall also have voice break in facilities for the police.

Airport Engineer specialising in aeronautical communications, radar and navigational aids to PrimeServe, a consortium bidding for the contract to replace an aging air traffic control tower at a key MoD airfield in the South West Region as part of the overall MoD modernisation programme.

A12 Blackwall Tunnel refurbishment programme as technical communications authority to TfL, with overall responsibility for the whole of the tunnel communications system being satisfactory for both the emergency services and for the travelling public whilst in the tunnel, which is essentially identical to the work detailed above for Rotherhithe.

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In an IT and communications convergence role, 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.

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

Communications Design Authority to the Highways Agency (HA) for the A3 Hindhead (Devil's Punchbowl) road tunnel project being undertaken by Atkins as part of a framework agreement with the HA in very similar vein to the Blackwall Tunnel, except that the A3 shall be operating at National Speed Limit. Work to include the design, installation and commissioning supervision of all the communications for use by the emergency services, the maintenance authority and other authorised users to be fitted into the new tunnel from one of two Tunnel Service Buildings.

Engaged by a client in Swindon who was facing a severe radio frequency interference (RFI) problem to their multi-million pound silicon chip test beds in their clean test room facility. The problem was identified, analysed and satisfactorily resolved.

Poole Borough Council. Feasibility study into the synergy between a proposed real-time information public transport system employing LAN / WAN technology and standard private mobile radio (PMR) technology, to facilitate a complete replacement PMR and computerised vehicle tracking system.

Department of Trade & Industry. Nuclear Power Station, Armenia. Design and procurement of an emergency radio communications network and radiation monitoring network for use by both the plant's monitoring teams and the Armenian nuclear regulator.

MoD (UK) Colchester Garrison PFI. Design of IT, communications and telecommunications networks in both fibre and copper for the proposed new home of the British Army. Also provided an independent study on standby power generation capacity for the Regimental HQ's.

Highways Agency 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. Resolution of embedded landline issues and multi-transmitter, multi-user interference issues.

HA Area Maintenance Authority, East London sector. Investigation into a series of difficult radio issues concerning safety of life in the wider service area and two major London road tunnels. Investigation of embedded landline issues and multi-transmitter, multi-user interference issues.

TfL. A12 Blackwall tunnel, London. Feasibility study into provision of emergency radio communications between police and public in the tunnel.

Confidential client. Lee-on-Solent Airfield. Consultancy concerning sterile exclusion zones in and around aircraft approach paths with respect to regulations on landing height clearance minima.

1999

TRAFFIC CONTROL SYSTEMS UNIT (TCSU), CENTRAL LONDON. Communications projects engineer, responsible for management of communications projects with additional engineering, research & development. Provision of radio communications expertise to the emergency services for both surface and underground radio communications. R&D work investigating the potential GSM networks held for the secure transmission of traffic light data. Essential areas of knowledge included radio, antennas, leaky feeders, computer software & hardware, interfaces and protocols.

1996 - 1998

EUROCONTROL, BRUSSELS. are the International Agency responsible for Air Safety & Navigation across Europe. Spent 2 years working with psychologists and human factor experts as their expert technical authority on a range of subjects from database applications to computer preparation & use limitations of application to the distribution and use of sensitive data across the 36 member States around Europe in connection with Air Traffic Control. Preparing and delivering technical presentations to the joint CAA conferences. R&D work investigating the application of integrated databases with use of multimedia on the WWW as a pre-recruitment tool for Air Traffic Controllers. Authoring technical deliverables (e.g. *"A Systems View of Manpower Planning and Management"* and *"Personnel Development: Identification of Human Potential"*).

1996

SPEEDWING AIRPORTS, LONDON. Consultant engineer, providing technical expertise for bids being made on the intelligent layer of the New Incheon Airport in South Korea and airport facility upgrades for a commercial client operating across Europe from bases at both Köln (Germany) and Liege (Belgium).

1991 - 1996

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ZUHAIR FAYEZ & ASSOCIATES, JEDDAH, SAUDI ARABIA. Airport systems engineer providing expertise on a multi-site, multi-faceted airport survey project, with overall responsibility for the development of all airport and air defence systems aspects (including creation of the Master Planning reports, GIS & FMS databases).

1990

BECHTEL CONSTRUCTION COMPANY INC., SAN FRANCISCO, USA. Supervising construction engineer on the King Fahd International Airport construction project, Dammam, Saudi Arabia. Specific responsibility for overseeing the Flight Information Display (FIDS), Land Mobile Radio Communications (LMR) and Public Address (PA) System contracts on behalf of the Client.

1982 - 1986

PLESSEY INSTALLATION & COMMISSIONING GROUP, ADDLESTONE, SURREY. Field engineer working on company products world-wide on both civil and military airports. Responsibility for commissioning and testing of airport radio, radar and navigational aid systems, management of site staff. Some territorial management experience.

1981 - 1982

BENDIX FIELD ENGINEERING (PCA) PROGRAMME, RIYADH, SAUDI ARABIA. Field engineer employed to maintain integrity to component level of all flight-safety radio, radar and navigational aids on nine separate sites with a large geographic sector. Day-to-day team management.

1980 - 1981

MARCONI INSTRUMENTS, LUTON. Senior workshop test engineer employed to repair and recalibrate test equipment to original manufacture's specifications. Considerable RF experience in screened rooms with precision components. Report writing, establishing repair and recalibration QA procedures.

1969 - 1980

ROYAL AIR FORCE. Originally an apprentice, learning the radio, radar and navigational aids necessary to maintain the Strike Command air traffic control and aircraft recovery 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

Italian – some spoken

Arabic – some spoken

COMPUTER SKILLS

Completely computer literate in all respects (builds & rebuilds computers !)

Intimate knowledge of MS Office and associated peripheral applications

Systems Administration of operating systems such as DOS, NT4, Windows 2.0 to Windows XP

Image and other data file manipulation

Website design, coding and management

PROFESSIONAL AFFAIRS

Andy is a member of several relevant professional bodies and is a Professional Review Interviewer on several panels for a range of disciplines. He maintains his own Continuous Professional Development (CPD) folder and attends as many professional events, seminars and presentations as his busy schedule permits. He acts as Mentor to several up-coming graduates / young engineers.

CONTACT

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