

# Curriculum Vitae

## Ian Fletcher

### Personal Information

Name	Ian Fletcher
Home Town	Saxmundham, Suffolk, UK

### Degrees/Diplomas and Qualifications

1977-2000	Numerous internal BT training courses over the period
1999	Class B Full(M1DQE)
1998	Radio Amateurs Examination, Class B Novice (2E1GPA)
1984	MSc Degree in Telecommunications Systems, University of Essex, Colchester
1981	BSc(2i Hons) in Electrical and Electronic Engineering, University of Manchester (UMIST)
1975-1977	3 passes at GCE 'A' level, 2 passes at GCE 'A/O' level, 8 passes at GCE 'O' level

### Work History

2003 - Present: Datawave Ltd - Chief Technology Officer

- Oil and Gas – Comparative analysis of alternative technology solutions, followed by outline technical designs for voice and data solutions supporting offshore exploration and production activity in USA, Africa and Europe.
- Feasibility Study – Development of technical and strategic views for the board on introduction of fibre technology in oil fields.
- A variety of small-scale consultancy tasks focussing on specific technology areas relating mainly to telecom facilities supporting oil and gas production.
- Consultant engineering and financial services to the global submarine cable industry.
- Detailed engineering – Consultant designing technical specifications for new networks and analysing detailed technical issues relating to inadequately specified existing systems.

2000-2003: PricewaterhouseCoopers - Manager, Global Fibre Networks

- Technical Consultant - to the submarine cable industry, specialising in transmission engineering and network analysis.
- Expert Witness – successful defence of a supplier against a claim of inadequate installation quality.
- Due Diligence – assessment of likely network performance and availability supporting an investment decision.
- Strategic Advice – a supplier of new technology into the industry was advised of market openings and contacts.
- Valuation – supporting a bank's investigation of the current value of a distressed and indebted company.

1996-2000: BT Labs- Head of Submarine Cables R&D

- This was a further expanded role covering the previous role plus new responsibilities relating to the strategy and tactics for the delivery of new technologies into the revenue-earning global network.
- Manage a team of Project Managers delivering submarine cable joints and services.
- Assess performance / upgrade potential of installed submarine and backhaul cables, with and without repeaters.
- Quantifying the technology risks and performance benefits associated with new technologies in planned systems.



- Establishing links with suppliers likely to be active in the industry for future systems as yet undefined.
- Training and deployment of an optical measurements team, tasked with assessing both terrestrial and submarine optical fibre wherever BT was considering acquisition of an interest.
- Technical due diligence including broken fibres, PMD, attenuation and inadequate cable installation practices, ensuring a correct technical view of the valuations.

#### 1993 -1996: BT Labs- Submarine Cables Technical Area Leader

- Define, assemble and manage the portfolio of R&D projects funded by BT departments for technology support in the procurement, operation and repair of undersea cable systems.
- Ensure that the R&D effort was optimally applied to the procurement of long haul optically amplified systems such as TAT-12/13, as well as providing guidance in repair strategies and operations.
- Maintain a useful personal technical load including contributions in the fields of undersea cable design, cable handling and testing, high voltage, power feeding and surge protection, temperature effects, transmission performance and EDFA systems modelling, for example.

#### 1992 -1993: BT Labs- Manager of Submarine Cables R&D Section

During this period, I took responsibility for the management of a number of groups in addition to my permanent one, from cable joint design through to leading edge transmission R&D – a total of about 45 professionals and 20 technician staff. The work included negotiation with customers to create an order book for 1993/4 with value approaching £4m and the installation of management systems consistent with ISO 9001 registration. In addition, it was necessary to reorganise the section in order to meet the changing customer unit structures. The role ended when a reorganisation combined the Submarine Systems team with a Network Operations section, already with its own manager.

#### 1988 -1992: BT Labs- Submarine Cable Systems Technical Group Leader

This was a middle management role with a responsibility for a mechanical/optical cable testing facility as well as a greatly expanded version of my previous job. I became responsible for the successful selection of new optical transmission technologies for purchase and deployment in BT's subsea cable network.

Work included:

- Provide advice and support to BT cable purchasing and operations teams, in particular.
- Co-ordinate BT Labs responses on subsea system related queries.
- Attend system development tests and meetings to reinforce the BT technical presence.
- To maintain 'test bed' laboratories in sample technologies, and field trials, to support current systems.
- Manage the BT Cable Testing Facility as a business, in particular.
- Maintain and operate test equipment covering mechanical and electrical loads with optical testing, also high and low temperature functionality under high environmental pressure loads.
- Supply an effective in-house mechanical testing service for BT internal customers developing the Universal Joint.
- Liaise, negotiate and balance the workload with external (non-BT) customers, manage finances to run at a small profit.
- Install and operate a recognised quality system with traceable calibration standards.

#### 1981 -1988: BT Labs, Martlesham Heath, Ipswich - Executive Engineer (2nd Line Supervisor)

I was appointed directly from the sponsored student scheme into a post as a second line supervisor with a highly technical job. The work consisted of detailed engineering support into the parts of BT concerned with the specification and purchasing of the first and second generations of optical fibre subsea cable systems.

In particular:

- Power feeding and surge protection for long-haul submerged cable systems.
- Cable location studies for optical systems, and high-reliability low power dc-dc conversion.
- Line coding and error detection schemes, timing extraction and jitter in systems, and laser drive circuits.



- Design of hybrid circuit modules for Transatlantic no.8 system (TAT-8) repeater supervisory system.
- Represent BT in the design, execution and assessment of TAT-8 and TAT-9 multi-vendor integration tests.
- Documentation of the annual customer sponsorship review presentations.

#### 1977 -1981: BT (British Post Office / British Telecom) - Sponsored University Student

- 20 weeks of experience in customer-facing BT District and Territory units, covering core and access functions.
- 19 weeks experience inside BT factories divisions, mostly customer premises equipment and PBX refurbishment.
- 15 weeks of other academic training courses in BT (mainly electronics and mathematics).
- 5 weeks international training - with the Swiss PTT - terrestrial microwave and cable in difficult territory.
- 16 weeks summer project at BT Goonhilly Earth Station – (a very early project on interconnected networks or 'internet').

### Professional Membership

- Institution of Electrical Engineers, Member (MIEE)
- The Engineering Council, Chartered Engineer (C.Eng)
- Federation of European National Engineering Associations, Member (FEANI, Eur-Ing)
- British Institute of Management, Member (MIMgt)