software to smile about

John Yardley's Professional Biography

1968-1972: NPL, Signature Validation

John Yardley joined the Pattern Recognition group, part of the Division of Computer Science at the National Physical Laboratory (NPL), Teddington in 1968. His first project was to develop a graphical input tablet to investigate the automatic validation of human signatures by computer. Once the hardware development was complete, John learnt to program a computer (Honeywell DDP516) to analyse the data.

By 1972, John had developed the first software able to validate signatures captured digitally in real-time. The hardware input device, developed by John and Peter Pobgee was granted a patent and the software was subsequently licenced to Quest Automation for commercialisation in the banking and security industries.

Although now primarily a software engineer, John actively continued his interest in electronics in his spare time. He successfully developed an electronic apparatus for judging human response times in quiz games. This was originally done for amusement but, on realising it had commercial potential, John sold the system to the BBC for use in "Top of the Form" and "Quizball" TV shows. To help understand the contribution of John's device to these shows, watch this.

Having studied for an HNC in electronics while working at NPL, John won a civil service bursary to study computer science full-time at City University, London.

1972-1975: City University; NPL, Ship Division

City University was one of the first UK universities to offer a degree course in computer science.

During his time at City, John's main area of interest was in low-level system software. His final year project was a WYSIWYG text editor written entirely in assembler for the PDP-11 and a new funky device called a VDU!

Between terms at university, John spent time in the Ship Division of NPL. (This was where Barnes Wallis developed the bouncing bomb.) John's project was to model the movements of trawlers in
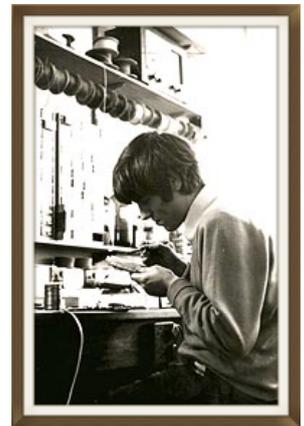
beam seas in an attempt to discover why, at that time, so many fishermen were being lost without trace in the North Sea. Unfortunately, although John took on-board a great deal of knowledge about nautical engineering, the experience did little to help fishermen in the North Sea.

1975-1982: NPL, Speech Recognition and PhD

John returned to the Computer Science Division of NPL after City University in 1975. There, he joined the Speech Recognition Group under Dr Chris Evans and Brian Pay to develop software for phonetic analysis.

John became the chairman of the DECUS Specialist Interest Group on real-time operating systems. John was also seconded to oversee a government-funded project on Programmable Logic Arrays at Essex University. Contacts with Essex University led to John submitting his research work on Speech Recognition ("Word Identification in Speech by Phonetic Analysis") for an external PhD in 1981. This work was supervised initially by Professor Brian Gaines and later by Professor Ian Witten.
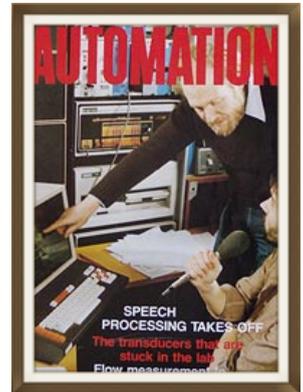
Also during this period, John was elected as a Member of the Institution of Electrical Engineers (sadly renamed the Institution of Engineering and Technology) and a Member of the British Computer Society. The IEE membership also qualified John as a Chartered Electrical Engineer.

John left NPL at the end of 1981 to start his own company called JPY Associates Ltd.

1982-1990: JPY Associates Ltd, TSX-Plus, AlisaShare, EtherShare, Etherlink and DataLock

Starting with an operating system called TSX-Plus, John's initial objective was to create a business selling third-party system software products from which to launch JPY's own products. John's expertise in speech and real-time operating systems also resulted in a significant amount of specialist consultancy work in Europe, the USA and the Far East.

JPY's first "own" product was EtherLink, a file transfer system using Ethernet. EtherLink was followed by DataLock, which combined John's knowledge of device drivers and the encryption expertise of Donald Davies, his former superintendent at NPL. DataLock was a software implementation of Data Encryption Standard (DES). DataLock was successful in the UK, but the UK government (GCHQ) blocked it from export on basis that the DES encryption standard was too strong. Nevertheless, DataLock did result in some kudos for JPY as the first company to commercially implement the DES in software, at viable encryption rates and transparently to the user.

Meanwhile, JPY's distribution business was expanding - partly on the back of JPY's early adoption of the Apple technologies. Distribution agreements for AlisaTalk and HELIOS EtherShare resulted in substantial sales of VAX/VMS and Unix file server products for Apple networks.

1990-2006: JPY Ltd, ISDNShare, Cumulus, PresSTORE and MRX

The transition from specialist software vendor to a value-added distributor required the setting up of a new company - conveniently named JPY Ltd. JPY Associates Ltd continued with sales to direct end-users, while JPY Ltd concentrated on resellers mainly in the publishing marketplace

By 1996, John had firmly established JPY Ltd as a major player in pre-press networking.

Around the same time, John conceived JPY's 3rd own product - ISDNShare - which was uniquely able to 'spoof ' AppleTalk network packets which were then tunnelled over TCP/IP, thus creating one of the first Virtual Private Networks for AppleTalk. This made ISDN a suitable technology for creating AppleTalk WANs at a much lower cost than dedicated leased lines. ISDNShare was eventually licenced to 3Com.

In 2000, John added the Canto Cumulus digital asset management software and in 2006 the Archiware backup software to JPY's product portfolio. At the same time, JPY Ltd was converted into JPY plc as part of the process in raising external capital to develop JPY technologies.

Throughout this period, JPY had developed an internal CRM system capable of ingesting and sharing email messages. This was known as Mail Robot X or MRX for short.

2006-2015: JVolution, Threads, KTP and TED

Archiware, HELIOS and Canto continue to provide the core of JPY's distributed products - a testimony to their products' design and longevity.

However, the success of JPY's distribution business was assisted by the massive improvement in customer handling brought about by MRX. It soon became clear that this could form the basis of JPY's 4th product. MRX was re-engineered and expanded to include VoIP (Voice) and Instant Messaging to evolve as a new Cloud-based Software as a Service called Threads.

In 2009, JPY plc acquired the content-managed software development company called JVolution Ltd. to help in the ambitious undertaking of Threads. With it, JPY expanded its activities to bespoke software development to help fund the Threads development.

Threads has brought John full-circle in that a major part of its design has involved many of the technologies first researched by John during his early career at NPL - in particular, speech recognition, pattern recognition and digital signal processing. The work contributed to JPY winning, in 2014, a Knowledge Transfer Partnership award with Kingston University to investigate Speech processing within the Threads environment.

A patent application was filed in early 2015 covering the novel technologies in Threads. Shortly after, JPY published the Threads ENRON Database (TED) the world's first ever on-line searchable resource containing the ENRON public-domain message corpus.

Also in early 2015, JPY plc reverted to JPY Ltd.

Qualifications

- 1960: Cycling Proficiency Certificate
- 1961: St John's Ambulance Brigade First Aid Certificate
- 1965: Radio Amateurs' Examination
- 1972: Higher National Certificate in Electronic Engineering
- 1975: BSc (Hons) in Computer Science; City University, London
- 1976: Member of the Institution of Electrical Engineers
- 1976: Chartered Engineer
- 1981: PhD in Electrical Engineering; Essex University; Thesis subject: Word Identification in Speech by Phonetic Analysis
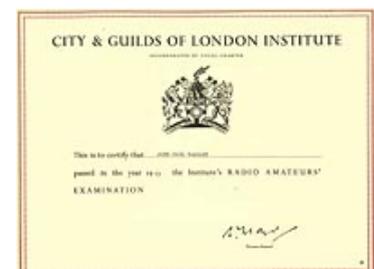
- 1995: Grade 6 classical saxophone (alto); Associated Board of Music
- 2009: Grade 8 jazz saxophone (tenor); Guildhall School of Music

Professional Interests

- Data networks and messaging
- System software
- Data encryption and security
- Speech and digital signal processing
- Artificial intelligence
- Human factors engineering

Personal Interests

- Playing saxophone - jazz, blues and funky music
- Science and history of science (Authorised guide at Science Museum, London)
- English industrial and social history (mainly 18th and 19th century)
- Italy and pretending to speak Italian
- South America and South American history
- Making and growing things
- Irony and English slang