

## Joe Walker – Curriculum Vitae

### Personal Profile

I have gained a wide experience of the software industry from both customer and vendor perspectives. I have good business experience gained from running my own company, working with major corporate customers, and in turn working with their clients. Most of my technical experience is in building software that performs measurement and test of computer systems and services. Communication skills at the written, interpersonal and presentation levels are all excellent.

### Experience

- Delivering software and hardware products and consulting solutions for service measurement and testing.
- Extensive software engineering experience covering multiple languages and platforms.  
MS Windows – API/internals level, programming in Delphi, C, C++, JavaScript.  
HP-UX – programming in C  
Mid-range – programming in COBOL and C  
IBM mainframe – programming ASM/COBOL, SAS (Statistical Analysis System)
- Managing computer performance, service levels and capacity planning.
- Modelling and statistical techniques in support of service management.
- Teaching and preparation of course material for commercial technical training courses.
- Selling product ideas and product technical pre-sales, conference and user group presentations.

### Achievements

- Taking three software products from idea to implementation. All three products were sold or licensed to HP and became part of their OpenView service measurement product range. HP sold more than 20,000 licences based on my software products.
- Building over the air mobile service testing for a Scandinavian telco. This included writing software, design of test appliances, management of sub-contract assembly, assisting with implementation and maintaining and enhancing service testing over a 6 year period.
- Implementing service level reporting, performance analysis and service delivery based capacity planning.
- Design and programming of a run time debugging system which won a BT internal award for exceptional contribution (IBM CICS/VS).
- Running a software business for 19 years.

### Career History

#### European Performance Systems Ltd, 1993 to date.

Owner manager, my main role is software engineering for our products. The company operated as a two person team up until 2011. Since then I have worked alone either on product work or contracting due to the fall off in software sales.

#### *2013 September – current*

Working on change and modernisation of VB6 software that controls test and calibration of aircraft nose cone RADAR. This requires gaining an understanding of an undocumented code base, replacing source code that has been lost and making changes for new test requirements.

#### *2013 January-July. Software development.*

I built the control software for a PC based test station for testing radio based utility metering PCB's and calibrating completed units. The software control of instruments used Agilent VISA framework. The hardware was controlled through interfacing with Siemens PLC controllers.

#### *2012 May-December. Integration with network management software.*

Converted Probe Builder product (see below) to operate with MIDAS boom (business open operations manager). This was done as investment in my business in the hope of future sales. These did not materialise due to a change in direction at the company with which I was partnering.

*2012 February-April. Contract support programming.*

Support work on VB6 based software used for control of industrial test equipment using serial interfaces and vendor API's.

*2005 to 2012. Service measurement solutions for a Scandinavian mobile phone operator.*

EPS provided measurement solutions of high quality that addressed complex services and provided original solutions.

- Design of an integrated measurement appliance for performing service measurements over the air on cellular networks. Managed outsourced design and manufacturing.
- Provided a test configuration management system using Delphi and SQLite embedded database.
- Built Delphi software that interfaced with industrial PC features, USB cellular modules and USB DAC control and sensing device. Mixture of AT commands, device driver interface (IOCTL), vendor API's and Windows API's.
- Processing GPS NMEA records to provide location awareness for service tests.
- Network routing and statistics collection software based on Windows device management API's and knowledge of Windows sockets implementation (TCP/IP). Enabled testing over different vendor cellular networks on multi-homed test appliances.
- Produced Delphi application for content based testing of PCM (audio) signals together with a user interface for building test definitions visually. Voice and tone content testing, generation of voice and tone signals. Analysis and matching of music samples.
- Integrated another vendor's C++ objects so that they could be used in a scripted test system by presenting as COM (ActiveX).

All the above were built as scriptable (MS Script) objects for use in our Probe Builder JavaScript based service testing platform. Numerous tests were scripted for the operator covering messaging (SMS), IVR services, music based value added service (RBT), SIM applications (R-SAT), GPRS/3G testing, WAP, roaming tests, and broadband based application testing.

*2010 to 2011 Citrix .NET load and performance testing*

Load and performance test of .NET based energy trading system for Houston based oil company using Probe Builder. Enabled the customer to detect causes of poor performance in a vendor supplied software system, establish realistic configurations, and provided measurement expertise to challenge vendor over performance issues.

- Building of workflow scripts that simulated multiple Citrix users running .NET trading application.
- Building load test scheduler to control a network of test stations.
- Collection and analysis of measurement data, determining causes of poor performance, estimating maximum user counts, likely future performance and reporting to client.

*2008 Roaming measurement for UK operator*

Software for testing the registration behaviour of roaming SIM identities on a UK operator's network.

- Technical presentation of prototype solution to the network operator together with partner company.
- SIM card file system manipulation to simulate arrival from overseas network and detect various preferred operator settings.
- Timed operator registrations, recorded network selections and signal strengths. Performed call origination. Results provided in integration ready form to partner company.
- The software was used in mobile test equipment using laptop PC's and cellular modems.

*2003-2010 Probe Builder JavaScript based application layer service measurement product.*

This product was built to fill a gap I saw in the HP OpenView product line. HP licensed this product and used it to compete with Mercury Interactive products WinRunner, LoadRunner and Vugen. The product was supplied to HP on an OEM basis as a finished install package together with all customer documentation.

- IDE for customer to develop JavaScript test programs.
- Special purpose service testing script host using MS Script technology.

- Record/replay for Windows, Web (Internet Explorer) using Win32 API, MSAA (Microsoft Application Accessibility), browser objects, IE DOM.
- Citrix record/replay using lower level COM interfaces to work with the Citrix client object and ICA protocol.
- Java GUI record/replay using Java Accessibility API.
- Terminal record/replay using Win32 graphics API to work with typical IBM 3270 and VTnnn terminal emulations.
- Headless replay of all GUI automation scripts allowing secure, scalable replay without requiring dedicated workstations.
- TCP/IP sockets networking for status, messaging and probe distribution and remote test.

#### *1998-2002 Supply of HP OpenView Response Time Workbench*

I built this product as there was clear business need for Windows application instrumentation. I sold the intellectual property to HP while still in development and then worked at HP labs in California with their engineers, technical authors and marketing professionals to bring to product status. The product was used by enterprise customers to instrument call centre applications to measure response times and workflow execution.

- Event based instrumentation for Win32 programs using operating system hooks, interception of API calls, MSAA and Java Accessibility API event hooks.
- Integration with HP OpenView agents through linking instrumentation to ARM (Application Response Measurement) API. (ARM is an Open Group instrumentation standard.)
- Visual workbench enabling customers to build policies linking instrumentation to their business transaction and response time start and stop points.

#### *2001 Supply of Reports and Alerts system to mobile telco*

Supplied a bespoke web reporting system using Delphi and SQL/Server for a Canadian mobile telco. Reported RTW measured response information from their call centres. Allowed setting response thresholds and raising alerts, and provided web based graphical reports.

#### *1995-1997 Supply of HP OpenView MeasureWare Desktop*

Developed from a client consulting engagement where I linked Windows for Workgroup (later Windows 95) desktops to HP's HP-UX based OpenView network management product. HP bought the IP from me and re-worked as a product and engaged me to work at their labs in California to assist in this.

- Measurement of Windows GUI activity using Windows hooks.
- Measurement of lower level activity (e.g. CPU busy) using VxD (virtual device driver).
- Provided response measurement API, later re-worked to then nascent ARM standard.
- TCP/IP Socket layer, Windows service and HP-UX daemon for collection of measurement and direct OpenView integration based on collaboration with HP engineers.
- GUI elements for management and monitoring of desktop PC's.

#### *1996-2007 Instructor and consultant*

- I wrote the training materials and worked as an instructor throughout EMEA and North America for all three products. Although I have had no formal training as an instructor, HP were impressed with my internal presentations and teaching in their labs. They subsequently engaged me to deliver public training over a long period. My courses all received high marks from student feedback forms.
- HP engaged me on many occasions to provide pre-sales and implementation consulting for these products. I was instrumental in HP gaining and retaining business with major customers such as Rogers, Vodafone, Munich Re, Orange CH, Johnson and Johnson, Heidelberg Press.

#### *1993-1995 Contract and Consulting*

A variety of contract work, associate with HP, and some consulting. Sizing, performance, VB6/ MS Access programming, benchmarking.

### **Minitech Ltd 1991-1993**

Support engineer on pre- and post sales and conducted an extensive, sales oriented, benchmarking programme for high speed disk arrays.

- Built benchmark to TPC (Transaction Processing Performance Council) specification. TPC schema implemented on Oracle, programmed in C using Oracle Pro\*C API.
- Run on IBM AIX, HP-UX, SCO UNIX,
- UNIX File system benchmark on AT&T UNIX to simulate mail system loading.
- Measurement collection, analysis and reporting using awk and shell scripting.
- Analytic modelling software developed for sizing work. (Multiple class, multiple server with prioritised workloads based on Quantitative Systems Performance, Lazowska et al.)

### **Sedgwick Group Ltd, 1986-1991**

Application sizing and performance modelling, performance analysis, capacity planning, service level reporting.

- Extensive SAS experience. Mainframe performance data extract and storage. Statistical analysis: descriptive statistics, outlier exclusion, workload characterisation, regression based models, paper and screen graphics reporting.
- Analytic modelling (queuing models) using product software for capacity planning.
- Application performance analysis and modelling using product software.
- Cost allocation for shared computer services using SAS programming and spreadsheets.
- Five papers presented at UK CMG, one published by ACR in the USA.

### **British Telecom, 1980-1986**

Worked on software that supported their telephone network, mainly circuit routing and design, for 5 years. Final 2 years as an IBM mainframe systems programmer.

### **Education and qualifications**

- Educated to degree level: John Ruskin Grammar School, University of Lancaster
- BCS Systems Analysis qualification (1981), various BTEC for telephony and electronics in support of BT network programming (1982-83).

### **Personal Details**

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