

# Curriculum Vitae

## Paul Richard Gowers

IT Consultant with 32 years experience (ex-Oracle and freelance for 23 years)

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## Skills Summary

### **Design Skills**

Data modeling (logical, class, physical), data flow, state transition, sequence, process  
Object oriented design, SOA, integration.

Database design (transactional and data warehouse using Kimball)

Appreciation of big data (Apache Cassandra)

### **Teaching**

Learning Tree instructor since 2001 (Perl and Oracle PL/SQL courses)

### **Programming Languages**

Oracle PL/SQL, Perl, 'C, XML Schema, Java

### **Relational Database**

Oracle 11gR2, 10gR2, 9i, 8i, 7 , SQL Server, Mysql, TOAD

SQL, PL/SQL, Pro\*C.

### **Other**

XML Schema, XML, Jira, XSLT, SOA, SOAP, JavaScript, Apache, ASP, IIS, Oracle  
Webserver, HTML

### **Reporting Tools**

Business Objects v6, v5, v4. (Designer, Reporter, Supervisor) , Web Intelligence v2.5

### **Platforms**

Unix (Linux, Solaris, OSX, HP-UX), Vista, Windows (7/XP/2003)

### **Office**

Microsoft Office Excel VBA.

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## Client List

Centrica (British Gas)  
Oracle  
Scottish and Southern Energy  
Glaxo SmithKline  
BT  
General Electric  
Learning Tree  
EDS  
Rank Xerox  
SpinVox  
Miramedia  
River Island

## **Centrica PLC**

Staines, Middlesex

### ***Contract Data Architect – 07/2018 – Current***

- Data Architect leading team of four working on a brand new energy industry facing application. The application is being designed and developed as a configurable framework. My team is responsible for the application database design plus all configuration documents, data and mappings between back-end systems and the industry for nineteen business processes such as Change of Supply Gain/Loss, New Registration, Disputes etc.

## **Scottish and Southern Energy PLC**

Havant, Hampshire

### ***Contract Technical Analyst – 05/2015 – 06/2018***

- Subject matter expert for SMETS2 smart metering, DCC, DUIS, MMC, GBCS and SEC. Working as part of Design Governance with external suppliers to ensure that requirements and designs meet with technical and regulatory requirements. Represented SSE at industry meetings and provided critical review feedback. Provided expertise to internal Smart Design Authority.

## **Centrica PLC**

Staines, Middlesex

### ***Contract Data Designer – 04/2010 – 04/2015***

- Data architecture and design for British Gas Enduring Smart Infrastructure Program. Subject matter expert for DCC web services (DUGIS, MMC) down to XML schema level. Deep knowledge of SMETS2 smart meter standards and GBCS. Worked with Enterprise Architects, Solution Architects and SAP functional architects to support delivery of programme level data architecture. Closely worked with external suppliers to agree interfaces (XML schema based) for web service and file interfaces including smart readings data storage (MDUS). All data design artifacts produced using System Architect and mapped to business data model.
- Represented British Gas at several Energy UK meetings in review of GBCS alerts and MMC interface design.
- Solution Architect for real time credit vet service solution for British Gas Business based on Experian web services, SAP CE BRM, Java, JPA and Business Objects Data Services. Responsible for high-level design and detailed data design and implementation (Oracle 11GR2). Also responsible for review of all detailed design documents from outsourced provider (Cognizant).
- Technical lead for British Gas data archive and retention project to ensure compliance with British Gas Archive and Retention standards and identify activities to resolve issues.
- Designed Synergy Oracle 10GR2 database for British Gas Business Service Management and Contract Management tactical systems. Designed and implemented stored procedure API and load procedures in PL/SQL. This database was subsequently significantly extended and updated to 11GR2 to support "BRITE" debt management engine, a business rules based debt chase engine written in SAP CE and Java, and support the real time credit vet service (see above). Worked closely with SAP CE, JPA and BODS supplier teams.
- Designed data interfaces in XML schema and SAP ESR for Enterprise SOA services using System Architect, XML schemas and Enterprise Systems Builder.
- Data modeling using entity modeling in IBM System Architect (version 11).
- Agile scrum master and data designer for Merlin Home-Move project, mainly on web service design.
- Technical interviewer

## **SpinVox Ltd (now Nuance)**

Marlow, Bucks

### ***Contract Software Engineer – 03/2009 – 03/2010***

- Designed and built tools in Perl and intranet web site for analysis of messages to identify common text patterns. Implemented in Perl 5.8 using Mysql, Apache2 and Linux.
- Designed XML schema for configuration of automated speech conversion tool. Built evaluation web tool in Perl for assessing, creating and amending the configurations. Worked with senior management team within SpinVox on this project.
- Re-styled internal dictionary management web application using CSS2. I liaised with users and then designed and built a new CSS framework for all menus and re-styled all pages after which the tool was accepted by users.

## **Glaxo SmithKline**

Brentford, Middlesex

### ***Contract Technical Architect – 02/2008 – 02/2009***

- Large data migration project to re-implement Agile PLM from v8.5 to v9.2.2.3 and migrate application and business data from old to new data structure. Data model mapping of old and new versions and definition of data migration paths and mappings.
- Data migration implemented using Oracle PL/SQL on 10G release 2 for moving data between fields, change field data types, mapping data for 130 fields. Complex PL/SQL using extensive dynamic SQL and manipulation of Agile 9.2.2.3 data dictionary.
- Designed and built suite of 35 XML stylesheet documents (XSLT v2) to extract, filter and sort data from Agile ACP exported XML files to support Agile configuration comparison using windiff. I built a Java module to apply XSLT files to XML files.
- Wrote SQL data extracts against Agile 8.5 and Agile 9.2.2.3 databases in preparation for data migration
- Oracle database tuning work to drastically improve slow running PL/SQL and SQL queries.
- Liaison with offshore development team in Hyderabad, India including offshore work period.
- Documentation using GSK internal standards (iQMS) that are regulated by FDA and other pharmaceutical regulatory bodies.
- All work at GSK was in close co-operation with GCV, the audit group of the company.

## **Learning Tree International**

Central London

### ***Contract Consultant – 01/2001 - ongoing (4-6 weeks per year)***

- Freelance instructor for Learning Tree International, teaching courses: “Oracle PL/SQL Programming” and “Introduction to Perl Programming”. In addition to technical skills, this role requires excellent communication and presentation skills, class, time and people management.
- Paul is in Learning Tree’s top grading range based on class evaluations.

## **SpinVox Ltd (now Nuance)**

Marlow, Bucks

### ***Contract Software Engineer – 05/2007 – 02/2008***

- Perl and ‘C’ software developer with some C# support. Developed several SMS sender modules in Perl for communicating with customer systems. Modules are run using Daemontools on Linux, and fetch messages from mysql database using DBI and send SMS messages using Net::SMPP. Some programs have to work asynchronously to respond to server ‘keep alive’ requests, so required signals and alarms.

- Significantly enhanced 'C' SMS server program to make it multi-threaded to improve throughput and made it utf8 compatible to handle foreign language messages. Program acts as SOAP server (via Gsoap 2.6), to accept incoming messages via SOAP, breaking them and storing them in mysql database for later processing.
- Developed several new web pages (Perl/FastCGI/Apache) for monitoring and controlling SOAP servers. Basic input/output using HTML fields and server communication via Perl SOAP::Lite module.
- Database tuning work to improve slow running queries in Informix.
- Improvements to message injection and ejection Perl programs to cater for specific requirements of new customers (usually custom email header parameters).

## **Versatile Delivery Systems**

Harrogate, Yorks

### ***Technical Director – 06/2006 – 04/2007 (full time)***

- Continuing in similar role as consultant, but on a full time basis as V.D.S. gets new software developed and launched. Paul is a shareholder in this business.
- Liaison with offshore development team in Mangalore, India including offshore work period.

### ***Contract Consultant – 09/2002 – 05/2006 (part time)***

- Provide technical expertise as part of ongoing relationship with V.D.S as they develop digital asset management tools. Work includes requirements definition, customer visits and detailed technical research. Designed Frameline 47 product XML mappings to MPEG7 XML schema.

## **BT Global Services**

Central London

### ***Contract Consultant – (09/2002 –05/2006)***

- Managed successful decommission of legacy data warehouse to replacement system. Wide ranging role requiring technical skills - Business Objects universe and report creation, Oracle8i, training skills (developed and delivered Business Objects training to 65 people over 4 sessions), analysis skills (gap analysis between legacy and new system features), communication skills (developed web site to communicate project aims, progress etc and presentations to users).
- Technical lead for Global Services Wholesale business migration from legacy system to Siebel for prospect and customer management. Short project with aggressive timescales to transfer data from legacy system into Siebel with minimal interruption to business. Developed integrated reporting tool in MS Access 2000 to merge old and new system data together during transition period.
- Developed Siebel account visibility web site based on MS Access and ASP to allow users to easily check which accounts they had been set up to see, and to allow account owners to manage account teams.
- Voice reporting data warehouse based on SQL\*Server 2000 with Excel connected workbook front end.
- Analysis of new features required in billing and finance systems for international carrier services business. Implementation of Business Objects universe (v6), reports against Oracle9i database.
- Technical lead on introduction of sub-system to correct traffic recordings that replaced manual process with spreadsheets.
- Analysis of business requirements to introduce time-of-day recording, accounting and finance into GS Wholesale processes and systems.
- Dashboard owner for Global Telecom Markets responsible for delivering Siebel Analytics reports.
- Technical specialist on high-benefit projects with fast turnaround times.

## **Concert Communications**

Central London

### ***Contract Consultant (10/2001 – 08/2002)***

- Working as business analyst and technical expert in billings and finance areas of international carrier business. Various responsibilities including requirements capture and documentation, data analysis (Access and Excel), report writing (SQL and Business Objects) against Oracle Financials (AP/AR) and bespoke billing system (Oracle) and technical support to financial analysts.

## **BT Fastrack**

Croydon, Surrey

### ***Contract Consultant (05/2001 – 10/2001)***

- Supported business process reengineering project to improve accounts payable/receivable process. Worked closely with the business to define requirements. Designed and built several complex Business Objects reports against Oracle database using SQL and PL/SQL.
- Designed and built several reports against international billing system database to support corporate reporting and fraud detection in traffic declarations. Business Objects, Oracle (SQL and PL/SQL).
- Developed and delivered technical 1 day internal course "Introduction to Business Objects".
- Tuning work to improve performance of existing reports.

## **Miramedia**

Tunbridge Wells, Kent

### ***Sub-Contractor (07/2000 – 04/2001) – work offsite on fixed price project basis***

- Developed online timesheet Internet application to enable submission and authorization of contractor timesheets. Timesheet content and presentation were separated by using a canonical XML model and different XSLT style sheets for custom rendering according to agency requirements. Developed using Perl, SQL, JavaScript, XML, XSLT on Mysql and Linux.
- Designed and developed intranet jobs board for Merrill Lynch. Admin components for data entry, image uploads and user components for content display. Developed using ASPs (Jscript), SQL Server 7 (SQL and stored procedures), ADO, IIS on NT server platform.
- Built various Perl/Linux/Mysql web registration systems for the exhibition industry.

## **EDS (Xerox account)**

Hounslow, Middlesex

### ***Contract Consultant (07/2000 – 09/2000) – part time***

- Support of data extracts (ProC/Oracle) developed in first phase of project.

### ***Contract Consultant (03/2000 – 07/2000) – full time***

- Design and build of data extract modules from Xerox UK legacy marketing database to Xerox European standard marketing database solution. Extract programs written in ProC V2. Analysis of key area of Xerox organization units and employees and mapping to equivalent hierarchy on new system.
- Design of weekly data feed between legacy and new system to support transfer of Xerox equipment information.

## **GE Lighting Europe**

Kingston-Upon-Thames, Surrey

### ***Contract Oracle Consultant (08/1997 – 03/2000)***

- Design and build of “SMART” customer services data warehouse. Captured requirements from SAP and Business analysts and then designed and built an Oracle data warehouse for cross-functional reporting and analysis. All data requirements were captured using Designer 2000 v2, which was used to generate the physical database. Nightly ETL to the data warehouse developed in Perl, SQL\*Loader and PL/SQL.
- Working with HR director I designed and built web-based recruitment tracking system. Responsible for requirements capture (using Designer 2000), design and build using Oracle7 database, Oracle web server v3, PL/SQL, JavaScript and FrontPage 98.
- Built proof of concept order entry system with Oracle database server and web based user interface and back end order posting to SAP R/2. This was built according to fairly loose specifications to prove to senior management the feasibility of a web based order entry system. The prototype was written in PL/SQL using Oracle Web server v2.1 and Pro\*C against an Oracle database.
- Complete end-to-end data warehouse performance audit and tuning project to ensure current and future performance would satisfy anticipated growth in user base and data warehouse size. Y2K audit and test plan.
- Business Objects 5/Web-I 2.5 upgrade. Evaluation of upgrade from V4/Web-I 2.0 to V5/Web-I 2.5 to discover potential issues before upgrade of production system. Configuration of repository, broadcast agent and Web-I on Windows NT4.
- Redesign of Business Objects security domain to improve control and maintainability of user access and module usage.
- Designed and built standardized Perl modules for use in Windows NT environment. The modules are generic to allow reuse in different systems implemented on Windows NT and provide facilities such as SMTP email, Oracle utilities, message logging etc. Built data load for lost sales data in Perl using the modules. This was the first GE Lighting production data load on Windows NT.

## **EDS (based at Xerox)**

Uxbridge, Middlesex.

### ***Contract Analyst/Programmer (02/1995 – 08/1997)***

- Successful 8 month project to build interfaces between Xerox marketing database (MDB) and Xerox territory configuration tool and to roll out to 6 regional offices. Responsible for analysis of business requirements and their mapping onto functionality provided by the tool, and subsequent design and implementation using ProC V2, PL/SQL V2 and database triggers. Supported year-end activity to upload data into MDB, and produced Excel spreadsheet data analysis reports.
- A 3 month project to analyze, design and implement a data feed from a remote marketing database to MDB so that data amended by remote sales people using laptop PCs could be reconciled with the MDB. Implemented in ProC V2 , PL/SQL V2 and database triggers.
- Responsible for analysis, design and server implementation of a data load from an external company into the MDB using sql\*loader, PL/SQL V2 and ProC V2.
- Completed modules for an application called Early Warning System (EWS) which collected data from other systems and databases, analyzed the data and reported the customers who could potentially be lost to competitors. Work involved communicating with end users, designing and implementing new data extracts and analysis routines in ProC V1.6 and PL/SQL V2 and supporting the system in production.
- General: SQL performance tuning work, using tkprof, to improve performance of MDB and related applications. Designed and implemented standards for PL/SQL error handling and trapping. Technical guidance and assistance to other team members and technical interviewer during recruitment activity.

**Oracle UK (Permanent Staff)**

**Human Resources (HR) Product Development Group**

Bracknell, Berkshire.

***Principal Software Engineer and Team Lead (06/1992 - 02/1995)***

- Responsible for developing FastFormula V2, a tool used to express payroll calculations in a simple end-user language. FastFormula is a compiler that parses a 'formula' and generates pl/sql code. It was written in 'C' and Pro\*C and had a SQL\*Forms v4.5 interface.
- Developed custom database schema generator to satisfy highly specific requirements of HR products. Written in Pro\*C, it reads CASE\*Dictionary tables and generates SQL to create tables, primary keys, foreign keys and check constraints.
- Actively involved in recruitment including interviewing and graduate assessment days.
- Technical guru providing guidance and assistance to other department members on design, Oracle tools, Unix, coding techniques, debugging and new technologies.

***Senior Software Engineer (07/1990 - 06/1992)***

- Defined departmental standards for coding 'C' and PL/SQL and the use of Oracle7 features.
- Conducted user review of FastFormula product and completed major enhancements including database re-design and language improvements and SQL\*Forms v3.0 version to promote the tool.

***Software Engineer 2 (07/1989 - 07/1990)***

- Responsible for porting Oracle Personnel v3 to a variety of Unix platforms, including a 6 week secondment to the porting group in California.
- Member of 3 man team developing FastFormula V1. Responsible for design and build in 'C' and Pro\*C of pl/sql code generator modules.
- Designed DateTrack, a mechanism to enable SQL\*Forms to maintain time related data. DateTrack is used throughout the HR products to provide an historical view of data.

**Protek Ltd (Permanent Staff)**

London.

***Software Engineer (08/1987 – 07/1989)***

- Completed a consultancy study for Courtaulds into the computer requirements for monitoring viscose production lines at their Grimsby factory.
- Designed and implemented in 'C' a PC based system to control and capture data from an instrumentation unit.
- Ported graphics library of Protek's technical database product (TekBase) from HP Pascal workstation to Unix and rewrote (Pascal) to use Starbase graphics library.
- Implemented a Fast Fourier Transform and associated functions in 'C' used in a signal-processing library integrated with TekBase.

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***Education***

**University of Surrey 09/1982 – 03/1986**

Master of Engineering (MEng) in Electronic & Electrical Engineering  
- Pass with Distinction

**Hounslow Manor School 09/1975 – 07/1982**

'A' levels - Maths(A), Physics(A), Electronics(A), Chemistry(B)  
'O' levels - Maths(A), Physics(A), Chemistry(A), English Lit.(A)  
English(B), German(B), Electronics(B), Geography(B)  
GCSE- Italian (A) (1996 at evening classes)  
Head Boy: 1981 – 1982, House Captain: 1980 - 1981

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**References** (*phone and email on request only*)

Steve Thomas  
Senior Project Manager  
British Gas

George Kolodynski  
Data Architecture Manager  
British Gas

Roger Bray (ex BT)  
EMEA & ASPAC Transition Manager  
Xerox UK

Neil Bowers (ex SpinVox)  
CTO  
Cogendo