

# CURRICULUM VITAE

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## EDUCATION

**1983 - 1986** BSc 2.2 Hons. (Hull University) Applied Physics with Lasers.  
Final year project: Determination of scaling laws in X ray lasers, by computer modelling of expanding plasmas.  
My time at university was sponsored by British Telecom

## PUBLICATIONS

- June 2003** “Authoring; in and out of the real world”  
Invited workshop at *MesMuses 2003*, Florence  
<http://xcml.org/papers/Authoring.doc>
- April 2002** “Today’s Authoring Tools for Tomorrow’s Semantic Web”, Dingley A. & Shabajee P.,  
presented at *Museums and the Web 2002*, Boston  
<http://www.museumsandtheweb.com/mw2002/papers/dingley/dingley.html>
- August 2001** “Use of RDF for Content Re-purposing on the ARKive Project”, Dingley A. & Shabajee P.,  
presented at ICALT (*International Conference on Advanced Learning Technologies*) 2001, Wisconsin  
<http://research-information.bristol.ac.uk/en/publications/use-of-rdf-for-content-repurposing-on-the-arkive-project%28934f73fa-e14b-4759-b829-943ae105ddb6%29.html>

## PATENTS

**Storage and Management of Semi-structured Data**  
Use of SQL relational databases as an RDF triple store  
Hewlett Packard, GB2384875, US2003145022

## BACKGROUND

Since my time at HP Labs and the Arkive project, also in conjunction with ILRT, I've had a growing interest in SemWeb topics and their use for the publishing of content and the exchange of metadata to support such publishing. Having waited so long to find another project working in the same field, I'm particularly keen to join the BBC's efforts in this direction. In the meantime, oiling the wheels of commerce with high quality Java paid the bills.

## SKILLS

### *Coding*

I've considerable experience of a wide range of programming languages, most recently Python, Java, XSLT and SQL.

My Java experience is through web services and web applications: first HTML-based, then AJAX / JSON, and now moving towards an environment of deliberately architected web services and SOA. Particular fields of interest have involved Hibernate and Lucene.

Standards-compliant and accessible HTML / CSS is a particular interest of mine, although the distinction between this and WYSIWYG tools are rarely appreciated. Applications of PK crypto beyond the obvious encryption/decryption to provide trust frameworks based on authorisation and proof without disclosing identity are another interest.

In the past I've also written a sufficient quantity of JavaScript, Perl and VB. I also write Arduino and would like to be writing more Scala.

### *Semantic Web protocols*

I have experience with both XML and RDF, using tools such as Jena. I'm also interested in ontology development, using Protégé to produce OWL, as well as more mainstream XML Schema work. Although these are still unusual techniques commercially, I've already seen measurable benefits from using ontologies in customer-tailored ETL or web service applications rather than simpler data-typing-only schemas.

### *Project management*

The most effective methodologies I've been using recently are all from the Agile approach of iterative, adaptive approaches rather than the old prescriptive and linear tradition. As usual, these have been a mixture of snippets taken from Agile, XP and Scrum. I do use UML, but try to limit it to whiteboards, not unread piles of uncomprehended hieroglyphs.

I would now consider fully automated continuous integration and unit test to be a basic minimum for any software project. I'm an advocate of Test-Driven Development, but recognise that this is a cultural shift that's hard to introduce to existing practices.

## CAREER

### **2012 – current**

#### **YourLaser, South Wales**

<http://YourLaser.co.uk>

Contract laser cutting for creative people. This is my own start-up and a move to a more physical medium. My giant laser cuts and engraves wood, plastics, card and leather, mostly as a bureau service for other craftspeople. The most recent major project was 6,000 cut pieces for the #bristolbookhive, an interactive installation of 400 animated books to celebrate the 400<sup>th</sup> anniversary of Bristol library, in conjunction with puppeteers Rusty Squid.

### **2011-2012**

Sundry Python contracts. Usually under-resourced and over-worked sticking-plaster projects to connect together various uncommunicative legacy systems.

Also produced the Waltz on the Wye, a couple of steampunk festivals.

### **2006 - 2010**

#### **Experian, Bristol**

Build & Release Manager for a Java software house building a J2EE web app for the finance and utilities sectors. The product was a combination of on-going development to a core product, with extensive customisation to a small number of high-value customers.

The need for both reliability and rapid turn-around made traditional end-of-line QC impractical and so an Agile approach with continuous integration and automatic test (CruiseControl, JUnit and FitNesse) was essential. The typical open-source development tools of Eclipse, Ant/Maven, Ivy, Jenkins, Bugzilla/JIRA and Subversion were used throughout.

The final work was in extending automated unit test into acceptance and regression testing, thus changing the role of the QA team from reactive to pro-active, helping to boost usability and *change* design, not merely to check compliance with a prior design.

Additional scripting in Python was used to manage the complex customer-specific build process. Another significant task was in integrating all the internal documentation repositories through MediaWiki (the wiki engine behind Wikipedia).

### **2004 – 2005**

#### **Future Publishing, Bath**

XSLT-based Content Management for web publishing. A remarkably extensive XSLT system, first architected by Jeni Tennison. Platforms were Microsoft for authoring and LAMP for production. Publishing also supported integration with major portal sites at Yahoo and MSN, RSS / Atom feeds and support of mobile phones. The final project was a complete (accessible and W3C-valid) re-implementation of their flagship site `gamesradar.com`.

**2002****ARKive, Bristol**

Continuing my involvement with the ARKive project and the W3C's Semantic Web initiative after HP, I worked on the development of metadata-driven publishing tools, particularly the intelligent storage of rich-media assets through a transcoding media store, as a Java-based Web Service. This was a large intelligent store capable of front-ending multiple terabytes of video or image content. Within the store, content was automatically re-formatted (size etc.) according to pre-defined rules and monitoring of previous usage requests.

This work also gave rise to patents for a high-performance triple store for RDF, hosted on commercial SQL.

**1999 - 2001****Hewlett Packard Laboratories, Bristol (BBCwild & ARKive)**

The first project built off-the-shelf solutions for picture libraries selling digital images over the web. My role involved content management and image management tools (XML / ASP / SQL Server) for both the initial scanning / loading process, and for IP rights management based on PK. Some work was also done the development of a fungible licensing model for music downloads, with a pay-per-play rights model that allowed user resale or trading of their purchased rights and a practical implementation over distributed servers.

Most of my time as HP was connected with ARKive. The project spurred my interest in metadata handling and semantic content publishing. Initial development was in ASP / JavaScript / MS SQL, then in Java / JSP. As a major research laboratory, this was an opportunity to work at the very leading edge of the web, in close collaboration with the W3C and groups like MIT's DSpace project and Bristol University's ILRT.

**1999****boo.com, London**

As one of the initial boo technical design team, I prototyped a system for supplier order placement, using XML to replace EDI. boo's original business model relied upon this to provide JIT stock handling and a no-warehouse operation.

**1997 - 1998****Lucent Technologies, Swindon**

Web-integrated applications (Microsoft ASP) for a GSM supplier. Tools were developed for pre-sales consultancy and the planning of GSM mobile phone networks. Most of the project was on the management of engineering documents. Both SGML (too complex) and XML (too immature) were examined as potential solutions, before choosing PDF and SQL.

**1987 - 1993****CODESMITHS, Newcastle Upon Tyne**

Proprietor of my own software house, Codesmiths. Awarded £500 in the Industrial Society / Evening Chronicle Young Entrepreneur Awards. Codesmiths employed 5 staff in addition to myself. We specialised in industrial control & monitoring software, involving data capture, analysis & hardware interfacing.