

Lee Goddard, *BA (Hons), MSc*

cv@leegoddard.net

Maple Ave, Yiewsley, Middlesex, UK
+0044 771 99 000 90
Fenyvesi Nagyut, Godollo, Hungary
+0036 28 788 725

Education: MSc Intelligent Systems

University of Sussex Graduate Research Centre for Cognitive Science (1999 – 2000)

EPSRC scholarship. My course, hardware, software, and books, as well my living expenses, were paid for by a grant from the Engineering and Physical Science Research Council — thank you!

Java, C, Prolog, Perl, Software Design & Dev; Software Development Lifecycle; Human/Computer Interaction; Programming for AI. Automatic route finding; automatic music; XML converters, low-level socket communications; agents. XML/XSLT implementing DATR/PROLOG. Considered one of the best programmers on the MSc. Was encouraged to follow-up with a PhD, but chose a career as a consultant in industry over signing the Official Secrets Act at an early age.

BA Honours in English, 2:1, University of Sussex, 1996-1999

Key Technical Skills

Full stack, server- and client-side software life-cycle design and development of web apps with Perl and JavaScript (and some others) since 1996, in a variety of UK and European environments from start-ups to blue chip, agencies to public sector.

OO analysis, design, implementation, TDD, BDD, Gitflow-based Jira-managed Agile continuous integration, technical and end-user documentation for varied audiences.

On-site and remote developmental project planning, work allocation, mentoring, XP, with Agile/spiral management and SCRUM (member of Agile Alliance since 2007, practitioner since 1999) for small teams of two to six people using issue trackers (eg JIRA) and continuous build and integration (eg Jenkins).

Multi-thread, multi-process software development in Perl, JavaScript, Java, ANSI C.

Familiar with all common and some unusual design patterns: CMS, RDMS, MVC, MV*, archive- and workflow-management.

System automation for a variety of tasks. Vagrant, Docker, EC2 provisioning and deployment.

Large-scale refactoring and migration built upon solid regression tests. / Mapping / Advanced Photoshop, ImageMagick, Imager, GD and libjpeg (last two optionally in C). / A joy in new libraries, frameworks, techniques, and languages.

Likes: BDD and TDD in virtualized copies of production environments, with CI pushing to production (after manual review of two week sprints) via rpm/npm/mvn/ppm/etc. Regardless of language, framework, or paradigm, I value clean, self-documenting code that is designed to be reusable, testable, with a distinct separation of concerns, ultimately componentized with zero side-effects, throwing errors to be caught by whoever is most appropriate, logging in detail. ie SaaS/SOA, BDD, TDD, CI, OO/functional hybrids, pragmatics. Language agnostic — logic, planning, manageability are paramount.

Key Professional Skills

Generally: Agile/SCRUM, SOA, SAAS, client/server pairs, test-driven/behaviour-driven development, continuous integration, virtualized environments, automated provisioning, configuration, deployment, high-level docs and design patterns, self-documenting code with distinct and obvious separation of concerns. I find languages easy to learn, since their differences are trivial in comparison to their commonalities.

Perl – daily from 1996-2015 – all levels, any scenario, any library, including mod_perl, XS and Inline C. OO, ‘Modern’. Catalyst, (Mojolicious, Dancer, bespoke), Moose, Plack, DBIC, Kino/Lucy, TK, IPC, all template systems. Fast prototyping or fully-maintainable, modularised codebase development. Creator of 40+ CPAN modules.

Node/Client JavaScript/ECMA, HTML/CSS – daily since 1996 – all levels, happy in any scenario, with any library or framework, including low-level bare-bones prototype-based OO JS. Glad to see server-side best-practice finally appearing on the frontend. 'leegee' on GitHub.

- **ES6:** modularity, async/Promises, pub/sub, no global, prototype ‘inheritance’.
- **Libraries & Frameworks:** Electron, Polymer, jQuery, Backbone, Angular, Bootstrap, Modernizr, React, Require, Prototype, Underscore, MooTools, some Phaser, some Ember, some Knockout. Currently: Ionic3/Angular4, Typescript.
- **Node.js:** Electron, npm packaging, http, connect, express; mysql, mongo, etc; log4js, elastic, Phantom.JS, Bluebird.map, etc, etc.
- **Testing (client/node):** functional GUI, unit, acceptance, TDD, BDD: Mocha, Jasmine, chai, nodeunit, qUnit, should.js, accept, Sinon, Karma, Selenium/webdriver, webdriverio, Protractor, Nightwatch, chai-webdriver, Hudson/Jenkins (wanted: Travis), some Enzyme.
- **HTML5:** WebAPIs, AJAX GUI SPWA, (Web Audio API, Web Workers, Web Sockets client and server), EventStream, etc), SVG/canvas animations, CSS3, media queries/responsive design, Geolocation, local storage/forage, etc
- **Visualisation:** MilkChart, Highcharts, some d3, raw canvas plotting/animation (eg PCM mp3 visualisations)
- **Tools:** grunt, bower, jshint, docco, js-doc and Google coding/documentation guidelines, npm, rpm, require.js, webpack, bespoke Perl/Shell for packaging.
- **Fun JS projects:** Pac Man, Defender, Plonk (collaborative music with web sockets), MooTools XHR level 2.0, MooTools rotary knob plugin, bare-bones and MooTools SoundCloud-like plugin, interactive video subtitler, real-time multi-track audio sequencer, L-system fractal graphics and music, interactive data grids and graphs, and much more.
- **Preferences:** Angular, Backbone, jQuery or native, grunt/gulp, Mocha or Jasmine, git, Jenkins. Above all, self-documenting clear code.

ElasticSearch, Lucene: full implementations for Companies House, CAA, Northfoto, others in C, C#, Perl, Java, and JavaScript.

Java – occasionally since 1999 – competent in Core Java, servlets (Tomcat, Jetty containers), Spring, Hibernate, many varied libraries, junit TDD, Maven deployment, multi-threaded client-server pairs with specified/bespoke protocols, various AI 'standards', WindowDesignerPro.

Linux – daily since 1997 – dev administration and configuration, building from source, virtualisation. Debian, Centos, Ubuntu, RedHat, Solaris, Irix, OS X, etc.

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Databases – daily since 1999 – schema design, optimisation, testing, stored procedures: MySQL, Postgres, Ingres, Oracle, SQLite (including C API); CouchDB, Mongo.

ANSI C – occasionally since 1999 – Perl-XS, libjpeg, libsqlite, libcgi, sound-file graphing for BBC Radio, CGI, Kohonen networks, back-propagated ANN.

XML – regularly since 1999 – DTD implementation and writing, XSLT, FO (PDF), large-volume processing; MSc project converted DATR to XML; conversion of Word .doc and HTML to XML for ABPI; SCORM manipulation for BBC; DB ingestion for BBC Jam, BBC FM&T; KML and GeoXML for Future Lab and Izel Plants.

Virtualization — Vagrant, VirtualBox, Vmware Fusion, EC2, Docker.

Visualisation — Google Maps, Leaflet, some d3, PostGIS, ogr, etc

Also — LDAP, OO PHP (WordPress), PROLOG, Google Maps, POP3, geospatial SQL and very large mapping, many APIs (Facebook, Flickr, etc) and many, many more..

Professional Experience

Just for fun (present)

Android text-over-image app with the lovely Ionic 3 / Angular 4 / Typescript, and Cordova plugins.

Izel Plants (9/2017 - 11/2017, remote freelance for US)

MySQL, Perl service with a custom Vanilla JS front-end to maintain and manipulate Google APIs (IAM, Fusion Tables, Maps, Drive) to provide county-level plant species distribution maps. Front-end testing with Nightwatch and chai.

HCL at Deutsche Bank (4/2017 - 7/2017, Eschborn Frankfurt, Germany)

Functional programming on parts of what they called ‘the world’s largest React.js application.’ Negotiating old-fashioned, non-Agile hurdles such as technical and functional specifications being the only goal, but being out of date, and ‘unique’ architectural design choices made without reference to existing models, as well as very high staff churn and consequent knowledge loss.

Building reusable code and libraries for future use in React JS
Creating React JS frameworks and best practises for the team members to use
Ensuring the technical feasibility of UI/UX designs
Optimizing applications for maximum speed and scalability
Assuring all user input validated before submitting to back-end services
Collaboration with other team members and stakeholders
Reviewing team members' code and ensuring best practises are followed

Thomson Reuters (1/2016 - 7/2016, Canary Wharf, London)

Working with the London-based leader of a team spread between London, Paris, Bangkok, and NYC to speed development of a second version, Angular-powered version of their flagship market-monitoring application.

Testing was a prerequisite for the project, and when I joined, was a single test, so I provided two full test frameworks to run from gulp — a full set of Karma-run Jasmine unit tests, the other a large

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set of Cucumber.js-Protractor tests (not straight-forward for an embedded browser). I mentored two developers in London in testing best practice, and informed the direction of the project alongside the PM.

Regular addition and maintenance of GUI and business-logic features, as well as patching the underlying Closure code.

Added gulp-launched deployment and patching, with full version control along the principles of Git Flow.

replaced all legacy GUI components with Polymer components, typing them into the Angular 1/templating framework neatly, rewriting massive sections of code when necessary.

Normalised and rationalise the object event model

CAA (Remote for London - 8/2016 - 2/2017)

The design and delivery of automated systems for tracking hate crime on Facebook to facilitate legal action.

Facebook Graph API feeds ElasticSearch to produce static and dynamic reports in Electron (ie Node-enabled Chromium).

Am currently imagining taking a histogram of each user, and using them to form a landscape for a Kohonen self-organising network (may write a node.js wrapper for SOM_PAK). This would allow us to find the natural categories of the user-base, and better understand their interests.

Blismedia Ltd (3/2015 – 6/2015, Belgravia, London)

Full stack Perl (Dancer) and JavaScript (ugly combination of Foundation, Kendo, some Knockout observables, mis-used require.js). Rewriting and extending RESTful b2b API for mobile-routed traffic (authentication, registration, direction). Internationalisation of a live legacy Perl/JS/MySQL system (introduction of countries, currencies, time zones). Introduction of live and scheduled currency conversion. Introduction of a test framework, unit- and integration-tests. Covering bug fixes for staff fired for incompetence.

Magyar Haute Couture (2/2015, Remote for Budapest)

Front-end internationalised gallery/shop for a Hungarian designer/tailor: grunt, bower, require.js, Backbone, Underscore, jQuery, responsive semantic HTML5, Masonry, Promises reading JSON from file/CouchDB. Includes bespoke vertical slideshow with onScroll a la Valentino.com, and bespoke 'magic zoom,' with pure JS PayPal shopping basket using Mozilla's localForage for local storage. Waiting on the photographer for launch.

Izel Plants (2/2015, remote for NYC, America)

Generated unique US county-level plant species distribution maps for all native US species.

Sourced data, converted ESRI Shapefiles to PostGIS and KML/KMZ using Perl, Clipper, GPC, ogr2ogr, SQLite, and PostGIS. Finally served with Google Fusion Tables. An update to the client's

earlier project.

Companies House (5/2014—11/2014)

As part of the Government's GDS revamp of its web services, and a total rewrite of all Companies House public-facing web services, I gently took ownership of the ElasticSearch facet of the project, and using Agile TDD, rewrote all the data injection, all scheme/indices, all queries, all the Perl/Mojolicious/MongoDB SAAS REST interface, and single-page object-oriented JavaScript application, allowing the public to find any UK company and any officer of a UK company.

Single-page app to search two types of predictive text, as well as full-text search on single and multiple fields and single and multiple collections.

Managed to obtain the only full written specification in the whole Companies House GDS project: I designed, prototyped, developed and fully tested the production code for the product's next phase, a cross-domain search of varied data sources.

Successfully delivered months ahead of schedule, having negotiated multiple levels of management new and resistant to the Agile process and several layers disregarding the Government guidelines.

Mentored and trained a graduate junior dev in both the technology and the Agile process.

Rewrote all the rest of Companies House project's JavaScript as a multi-page application with require-js, for AMD and optimization, Grunt for building and testing, the latter using first qUnit, and then Mocha/Chai, both 'live' in browser, and automated for CI.

Contributed to other parts of the CH project with various tweaks, bug-fixes, subtle suggestions on modelling and Perl/JS best-practice, as well as successfully pressuring for Jira and an adherence to Agile methodologies.

Izel Plants (2/2014, remote for NYC, America)

Generated unique county-level plant species distribution maps for all native US species. Sourced data, converted ESRI Shapefiles to PostGIS and KML/KMZ using Perl, Clipper, GPC, ogr2ogr, SQLite, and PostGIS. Served via Google Maps and GeoXML3.

Symbox Ltd (11/2013 – 31/1/2014, Newmarket, England)

Provider of highly-configurable workflow solution to beat Jira. Clients include Vodafone, MTN (BT of South Africa), RedBee, Carphone Warehouse, etc. When they ran out of developers, I provided consultation on development best practice, code quality, source control management (with SVN), automated configuration, provisioning and deployment (Vagrant with bash), system analysis and documentation, refactoring their legacy, undocumented codebase of: Perl (very legacy, requiring much NYTProf and Log4perl), Java (jBoss), JavaScript (jQuery, Prototype, Yeoman predecessor, require.js). Dev-ops bug fixing (including MySQL and Oracle); performance enhancements through code quality improvement and caching.

15 Gifts Ltd (10/2012 – 08/2013, remote for UK and Moscow)

Remote working for tiny but very lucrative Brighton-based private company, a b2b provider of online wizards to ensure customer best-purchases. Two main projects, and lots of management consultancy. Clients include Virgin, Vodafone, Orange, T-Mobile, News International.

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The bulk of my effort was in providing technical direction in the absence of a formal technical director: selling Agile, JIRA, GIT, the benefits of clear, formal models, including: MVC, JSON-powered JS-app front ends), test-driven development, tri-tier development architecture (identical VM dev environments, continuous integration, staging, prior to live), architectural analysis, mapping and consultation on future direction within tight fiscal limits.

- System analysis, introduction of modularisation of logical units with formal REST APIs
- Automated deployment through Vagrant to OSX and Ubuntu and Windows.
- Set-up, provisioning, and management of Amazon EC2 Ubuntu servers
- Workflow analysis to advise on role-creation in the company (leading to my own redundancy)
- Liaison with workers and management in the Brighton and Moscow, with varying levels of IT, management, and academic experience.
- Introduced standard Agile project management and build systems: task and issue tracking and Agile planning with Jira code management in BitBucket git, test-driven development for Perl (and some JS with PhantomJS and qUnit, integrated in Perl), continuous build integration using scripted Hudson jobs. Lots of mentoring and consulting with the owner of the company.
- Porting to Perl/JavaScript of an GOFAI system to the brief MATLAB-prototype for a MATLAB-only consultant PhD
- Development of Javascript/Perl code to track user mouse movements and clicks, heat-mapping with jQuery, Node.js, and PhantomJS
- Programming Perl with Catalyst and PDL, MySQL, memcached: XLST/CSV imported to RDB; RDBMS' conversion of scientific MATLAB code to perl, mod_perl, SQL; bi-lingual acceptance tests; CRUD and fuller REST interface to legacy system; RDB-importing and converting.
- Programming dynamic Javascript GUI with require.js-loaded AMD-Mootools for AJAX-based front end to the above Perl, and server-side Javascript (node.js) to support heat maps of user mouse movements/clicks.
- For the company's distributed team, introduced Agile project planning, review, and management, via Jira, Bitbucket, and Google Hangouts/Skype.
- Some updates to strange, bespoke code base to cover holiday leave and new requirements
- Dynamic database mapping and automated ERD production
- Graphviz maps of multiple-option wizards

Personal Projects in 2012/13

- A copy of Plink (labs.dinahmoe.com/plink): HTML5 WebAudio API, WebSockets, Canvas, MooTools.
- HTML5 drawing application with realistic dynamic brushes, in Mootools.
- A copy of someecards.com, cards.leegoddard.net in Perl, Moo, Node.js
- L-system dynamic music composition, in Perl, HTML5 and Java, with visualizations in HTML5.
- WebAudio API analyser visualisation in 3D
- HTML5 Audio (PCM) to image library for MooTools (on MooTools Forge/GitHub)
- HTML5 PacMan in 12 hours
- An HTML5/JavaScript library to track and store mouse movements for use in generating

heat-maps to describe website use, as well as a Chinese-brush painting application.

Active Securities Ltd – 8/2012

Telecommuting for a London-based financial organisation and repeat client. Full software lifecycle development and management of a Perl/mod_perl web application, and supporting software, to allow HTTP clients to send SMS via a variety of service providers, automatically manage resending of failed messages.

**Northfoto – Freelance Developer – 4/2012 – 7/2012, 9/2012-10/2012
— Remote for Budapest/NYC**

Whilst taking time-off with my young children, I maintained and developed the Northfoto.com photographic agency website (a long-standing client), extending Lucene search facilities in Perl CGI and Java (through Tomcat), user-management and security in Perl, and the complex AJAX-powered OO public-facing GUI in Mootools Javascript/HTML, as well as the MySQL database, all of which I developed for this regularly recurring client in the past. Developed a fresh multi-threaded photo indexer and IPTC metadata reader in Lucene Java using Swing and Sanselan.

AdamLebor.com – Web-developer – 2/2012 — Remote for Budapest

Dynamic website for Times and Economist journalist and author. Graphic design, Mootools in-place editing, dynamic content generation, Twitter integration.

Reliance Mutual Insurance Society — Consultant analyst, architect; developer – 7/2011 - 2/2012 — Tunbridge Wells, UK

I ran the full software lifecycle from inception to deployment: bespoke database introspection, data management, and workflow management tools for the data governance pillar of EU Solvency II. Solaris 10, undocumented Ingres 9.1, Perl, AJAX JS, very limited (and manual) access to CPAN. The company's first Agile project, completed before their estimated delivery time – as with all my projects. Much advocacy and consultation advice on the Agile methodology, since adopted for other projects within the IT department.

Fully-documented bespoke IT strategy for new infrastructure as part of the acquisition of subsidiary company, from development strategy and time-table, to staff hiring- and hardware-specifications.

Fully-documented strategy for redevelopment of the in-house IT department, including Agile methodology, 'modern Perl' modules, TDD, continuous integration, version control, database introspection, coding and documentation standards in Perl, MooTools and JQuery.

BBC Buyers' Guide – Developer – 5/2011 – 7/2011 — Remote for London, UK

Sub-contracted to update and partially-rewrite the Administration interface for the BBC's Commercial User Journeys / Buyers' Guide. Addition of extra fields to Perl and HTML (TT); conversion of httpd (Apache) to SSL/TLS with authorisation and authentication via BBC Forge digital certificates. Much refactoring of Perl (Pinwheel, DBIx::Class) and XHTML (TT). Added

dynamic AJAX-based GUI.

Se7en Limited – Architect / Developer – 4/2011 – 7/2011 — Remote for London, UK

For a London-based start-up, website and web application: Relational database (MySQL) schema correction, and population from webservices (Flickr, Twitpix); dynamic page generation and templating using Perl (TT) and Mootools JavaScript accessing JSON via AJAX from Perl Catalyst reading DBIx::Class schema. Geo-spatial searching and tagging integrated with Google Maps. Javascripted templates via AJAX; both JS-paged and infinite scrolling of search results. Clean, documented OO-code.

Northfoto.com – Perl / Java Architect / Developer – 10/2010 – 03/2011 — Remote for Budapest/NYC

Central and Eastern Europe's largest image agency, a client to whom I have acted as adviser and consultant for some years. Reporting directly to the CEO.

Greenfield design and development of: Bespoke Perl multi-tiered user-management system (front and back) to integrate with Apache mod_auth and ImageFolio

Migration of customer base to new system, user-management system.

AJAX-based W3C cross-platform image and video agency website

AJAX IPTC metadata search interface to integrate with Lucene indexes (mootools.js, XHTML Strict, CCS2/3)

Perl-based CMS with bespoke AJAX click-to-edit functionalities

Creation of a bespoke Java Tomcat web app to query Lucene indexes and respond with JSON

Live bespoke RSS feeds for articles and searches. Cross-platform beta testing

Active Securities – Architect / Developer – 12/2010

mod_perl project to develop a web application for CRM SMS messaging, to tight brief, with XHTML/JS interface and cron'd message queues.

FreeDharma.com – Architect / Developer – 9/2010 – 12/2010

Refactoring of Perl-based website that publishes multiple translations of a variety of Asian texts, in a variety of formats. Recently added new object mapping, cached site generation, improved search, an AJAX-based indexes. Written in Perl, coded in Dublin Core/RDF/RDF Microformat XHTML. Publishing engine also produces XML DocBook, RDF and PDF, via XSLT. Work includes Form::Sensible::Reflector::MySQL, Lucene search index. .

Net-a-porter.com – Perl test engineer – 6/2010 – 9/2010

On-site contract, creating a new test framework for legacy code: Self-creating data units and fixtures based upon introspection into a database of several hundred linked (and often erroneously unlinked) tables; to be used by expert operators' Selenium/HTTP::Recorder recorded UA sessions. Implementation of Hudson Perl builds. Organisation of legacy test framework. Documentation of Perl testing best-practice.

BBC Earth

Lead Developer, Information and DB Architect, Perl and Java Architect and Developer – 12/2008 – 2/2010

75% telecommute. In his year-end e-mail of 2009, BBC Director General Mark Thompson singled-out this website as “sum[ming] up for me what I want the BBC to be,” complimenting praise from senior management for its design and implementation, and from all UK broadsheet newspapers for its intent, content and usability.

Design of two bespoke REST DB-exploring prototypes in Perl, for two DBs, in as many weeks.

Design and implementation of Maven-built bespoke RDMS Java/MySQL Tomcat web application
Custom regular-expression mapped controllers six months before Spring's implementation.

Use of Spring JDBC Template, extension of Spring MVC 2.5 (prior to 3 release) for JSON I/O, regular-expression path definitions in controllers, Etag and custom cache control.

Custom Junit and Jetty test suite for use on Hudson CI.

Data sourcing from a variety of sources and formats – RDF, XML, XLS, CSV, HTML, SQL, Arc Shapefiles

Data normalisation, optimization, cross-referencing, mapping in Per.

Data served in a variety of formats – JSON, XML, GIF, KML

Perl system to automatically associate Wikipedia pages with several taxonomies

Bespoke Shapefile to SQL, AWT images, and KML, optimized with JTS and relations.

Encouragement and enforcement of Scrum and Agile management (introduced daily stand-up scrums; sprint planning with story points; sprint retrospectives)

Liaison with slow-to-delivery, politically sensitive departments such as iPlayer.

Liaison with expert and inexperienced staff, with some mentoring.

Regular reports to Technical Project Manager and Producer; occasional reports to higher-level management.

FreeDharma.com – Developer / Architect – 7/2008 - 9/2008 — Remote

Conversion, indexing and publication of a variety of ancient Asian texts in standards-compliant Dublin Core, HTML, RTF, PDF and plain text, using Perl Template Toolkit, MySQL, a variety of inverse-frequency indexing tools, including Lucene, Kino, and finally Apache Lucy. AJAX indexes and search interface using Mootools.

Northfoto.com – Developer / Consulting – 6/2008 – 9/2008 — Remote for Budapest/NYC

100% telecommute. Regular client. Perl search-engine, ImageFolio extension, and CGI tweaks for Eastern Europe's largest photo agency.

FutureLAB AG – Developer / Architect – 2/2008 - 5/2008 — Remote for Zurich

99% telecommute. Two-part Perl contract with a Swiss provider of online services.

The design and implementation of a Google map to reflect data gathered by a public-facing

German-language RDMS, with a variety of prototypes culminating in post-processing of Google MyMap Javascript, KML, and HTML to produce a variety of switchable map overlays, interacting with a partially-documented bespoke server-side system.

Also, a service to create semi-random but aesthetically-pleasing XML layouts with PNG previews, for printable photo albums.

GSK – Automated Functional Testing – 2/2008 - 5/2008

With a system admin, updated unique legacy drug discovery software to run on Linux, after 20-plus years of installation on Irix. Coded in Perl, TCL, C, Fortran, many integrated shell scripts in a variety of flavours. We succeeded largely by my ruthless enforcement of the project owner's excellent plan: a full test suite (Selenium and Perl) prior to the OS move, plus a new build system, with my own strict coding standards. On completion, learnt that the project had twice failed before, even though I have seen it marked as “completed” on another person's CV. Was offered an extension to add new features, but the 100-minute in, 100+ minute out commute made a longer stay impractical.

Advertising.com – Senior Systems Developer – 3/2007 - 8/2007

Developed from conception this AOL/TimeWarner company's first two workflow production systems. Coded in Perl. User case analysis and rapid prototyping lead to an unusual e-mail front end to a fairly standard pair of workflow systems. Some corporate infrastructure improvements. Some extension of legacy Perl applications. Reported to the European Technology Manager. Projects commissioned by (and reported directly to) Vice President of European Technology. Projects supported and beta tested by business team managers.

BBC Radio & Music Interactive – Research & Development – 4/2006 – 1/2007

Audio Annotation Service: Full implementation in mod_perl/MySQL of a web service. Conceived of by R&D as a Wiki for web-accessed mp3 files of BBC radio programmes. Implemented as a Perl-coded RDMS CMS with bespoke version control and ACLs. Output in bespoke XML and RSS. Restrictive mod_perl environment (Apache::Registry) with very limited access to CPAN. Written quickly with batch tests to a REST protocol to interface with an already developed Flash interface. Extensively evolved specification. Extensively documented. Secret public (*sic*) trial under-way on R4.

SMS Visualisation Cron'd Perl code (using Task::Schedule) and forking Perl daemons to monitor a Spread bus of live SMS messages. The SMS XML had a stop-list and inverse-frequency (TFIDF) filter applied, and the remaining data, along with databased records of its frequency within a 'decay' period made available to live servers in a variety of forms: PNG pie and bar charts, XML and CSV structures, as well as in more *avant garde* forms. Project extended to accept HTTP input for the **BBC Electronic Proms**. Latest: SMS to be used by Radio 1 on their homepage. Currently running live on the **BBC Radio 1** website, coming to Five Live soon.

Radio Four Website Prototype: mod_perl extension to Apache to provide pragmatic RDMS and some CMS, interfacing with external XML REST interface, Template::Toolkit and various output

formats (full HTML, SSI HTML, XML, JS objects), within an environment lacking a data model or sufficient data-source.

Audio Graphing: Perl, C and XS code to create graphs (PNG, XML) of mp3 files' PCM content, using existing Open Source software. Reported to Head of BBC RMI R&D; Project Manager Radio 4 Website.

Documenting and usability testing of the BBC External Developers' Server, specification of requirements for the new external development system which led to implementation of the current FM&T development system, The Forge.

Lead Developer – The European Aviation Safety Agency of the European Commission – 6/2005 - 2/2006

EASA is a recently-created independent Agency of the European Commission, responsible for aviation safety across the European Union, planned to replace the national aviation authorities of EU member States.

Sole analyst and senior developer working directly under the Software Development Manager. Responsible for design and set-up of Linux development environment, from choosing and building software (Apache, Subversion, RT, etc) to implementing development policy documents. Full software development lifecycle, from user requirement/system meetings and analysis, functional analysis, system design, implementation and development. Instructing Oracle PL/SQL developer on requirements for DB business logic and API, for effective interaction with my mod_perl and Template Toolkit OO modules. VMware-hosted RedHat within a Windows environment. All projects were self-initiated spiral-model test-driven development, sole analyst/programmer with a dependent Oracle programmer. Included:

Web-based authenticated auto-versioning for Windows' Explorer using Perl, Apache, mod_perl, OpenLDAP, Subversion. AuthLDAP authentication within Apache for full auto-versioning Subversion WebDAV. Formed the basis of the next item.

Si2 Electron Document- and Workflow-management System integrated into standard European Commission DB architecture, working with EC accounting documents, compliant to legal framework..

CRT Electron Document- and Workflow-management and Publication System integrated into standard European Commission EC legal framework, working with legal documents.

User base reusable OO libraries for internal and external system users.

Consultation on Internet and Intranet website content management and distribution systems.

BBC – Digital Curriculum / BBC Jam – 11/2004 – 5/2005

The Digital Curriculum (now BBC Jam) is the £150-million BBC flagship project to provide electronic support for teachers and students of the British National Curriculum. Media includes the web, SMS, and cable TV. In co-operation with Microsoft and Siemens.

Sole developer implementing SCORM package CMS / RDBMS, within larger technical team. Analysis and development in a high-pressure environment. Self-initiated spiral development of an

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Apache mod_perl extension to process zip archives of SCORM XML documents, using OO Perl, SOAP, Template Toolkit/HTML, and interacting with an alpha-level Microsoft bespoke server. Debian, Windows. Introduced RT and test-driven “extreme programming” development.

ProCheckUp Ltd – 10/2003 - 11/2004

ProCheckUp are the most advanced penetration and subversion security testing company in the world, using artificial intelligence techniques to test any IP, and to automatically discover new vulnerabilities, thus cutting testing time from days to minutes. FTSE500/NASDAQ clients. Recent winners of the Queen’s Award for Innovation in Industry and a SMART award.

Lead developer of a team that varies in size from four to two, with individuals from developer, security expert, technicians, QA. Full life-cycle management, responsible for all aspects of the ProCheckNet Appliance:

Analysis of the situation and documentation of needs from a verbal brief.

Project planning, spiral development model: initial fast prototyped version developed with the “extreme programming” practice of frequent releases. Allocation of human resources.

Hiring of staff: job descriptions, fielding of agents, interviewing with and without the Technical Director.

Development of extant code base – a poorly-written but effective linear command line/flat file Perl application – into an object-oriented Apache mod_perl server application. Multiple user-levels and diverse functionality. Design and implementation of relational database. DTD design. GUI design.

Documentation of every class and method, project overview, and end-user manual.

Server-side technologies used: Red Hat, Debian; Perl, Apache mod_perl (multiple hooks), relational SQL databases in (DBI) Postgres and MySQL, SVG/JPEG graphing; Blowfish encryption; XSLT manipulations of XML from DBI/SQL; RTF template manipulation from DBI/SQL.

GUI design/dev: DHTML/CSS, event-based JS, HTML DOM; Perl Win32::GUI.

Teaching object-oriented design, perl, object-oriented perl, mod_perl

Reporting to Chief Technical Officer.

PhotoWebserver, Northfoto Kft – 7/2002 - 10/2003 — home office

100% telecommute. Online photo archiving and sales software developed with leading press photographer, and winner of the Times Press Photograph of the Year, Mark Milstein, in Budapest (northfoto.com). Apache mod_perl interface to relational database of (IPTC) image information embedded within images. User tracking and monitoring, graphing and reporting. Image manipulation. Reports in HTML, RTF, PDF via HTTP. Various interfaces: HTTP, FTP, POP3/SMTP.

Singapore Bookshops – 4/2002 - 6/2002 — Remote for Singapore

Curriculum Vitae: Lee Goddard, BA (Hons), MSc

100% telecommute. Simple custom e-com engine in Perl for what was then Singapore's only online bookstore. Perl, HTML, JS. HTTP B2B interfaces (WorldPay, PayPal, etc).

Polygon Kft – 2/2002 - 5/2002 — Remote for Budapest, Hungary

99% telecommute. Consultant providing analysis, bug-shooting and technical documentation of proprietary client-server AS/400-Windows middleware application used by Europe's biggest banks. IBM-sponsored. Found and resolved major threading issue within live production system.

The Java application is a server (should have been an Apache extension), that sends and receives XML to describe forms composed of SWING widgets, which are used to provide a graphic interface to financial software running on the banks' AS/400s.

ABPI / Virtual Health Network

www.medicines.org.uk/emc Virtual Health Network & Datapharm – 9/2000 – 8/2001

100% telecommute. The Virtual Health Network act with Datapharm – an off-shoot of the Association of British Pharmaceutical Industries – to provide industry-related data to professionals the wider medical industry and consumers.

Sole developer, working directly under the Technical Director, to implement 100% of the project, which was initially to convert a repository of several thousand badly-formed HTML documents to XML. After successful completion before schedule, this was extended to create a web-based application to convert MS Word documents to XML in real-time.

The documents in question were summaries of medicinal products, which British law requires be readily available in the public domain prior to the release of a drug. The sooner these documents are available, the sooner the drug can be released. Prior to my work for VHN, drug companies had to stay the release of a drug until the annual publication of a reference book.

Analysis of the situation and documentation of needs from a verbal brief.

Project planning, spiral development model: initial fast prototyped version developed in three-month stages.

Development of DTD; Perl used to turn badly-formed HTML to XML. Java and XSLT used to turn XML into HTML/JavaScript, XHTML/CSS, and PDF.

Documentation of every class and method, project overview, and end-user manual.

Server-side technologies used: Windows Server, Perl, Java/XSLT manipulations of XML (see Java/XSLT in 'Skills Summary'). SQL databases in (DBI) Oracle 8i.

Reporting directly to the Chief Technical Officer.

General Electric Lighting, Europe

Curriculum Vitae: Lee Goddard, BA (Hons), MSc

www.gelighting.com with agency Design Motive - 6/2000 - 8/2000

Web-design functionality for what was at that time a largely print-based design house. Excel spreadsheets into DHTML/JavaScript through Perl; multiple dynamic layers/animations; to within a pixel of the strict designer's brief. Mac/Windows network

Ready 2 Shop / Victoria Real (1/2000)

The dot-com venture of BBC1's Trinny and Suzanna. Use of HTML, JS, Perl for user-input SSL/HTTPS ordering section of the fashion site. Unix/Linux network.

Visa Euro / Victoria Real (12/1999)

HTML and Perl modifications and updates to the secure high-security multi-national Visa finance site. Real-time work in synch with telephone conversations with Visa in Geneva. Windows/Unix network

University of Sussex Students' Union Website Owner (1997-1999)

Website developer and then also manager, implemented one of the world's first Wiki Content Management Systems. Solaris environment.