

## Mac MacLaren - CV

**Address** 15 Clifton Street, St Albans, Herts, UK AL1 3RY  
**Working Status** Eligible to work in the UK/Europe (British)

**Telephone** 01727 847611 / 07853 209050  
**E-mail** [mac@hitechcomms.co.uk](mailto:mac@hitechcomms.co.uk)  
**Web** <http://www.hitechcomms.co.uk>

**Qualifications** University of Durham  
B.Sc. (Hons) Computing and Electronics, 2(ii)  
Certificate in Education (Further Education), Middlesex Polytechnic

### Lemonrock : ***iPhone, Web & Database Design/Engineering***

**iPhone** **2000/2012** Designed, coded and managed live music gig guide [www.lemonrock.com](http://www.lemonrock.com). Site written in PHP5, MySQL5, JavaScript, jQuery, XHTML, CSS and Ajax. Dedicated server.  
**LAMP**  
**HTTP**  
**jQuery**  
**SQLite** Integrated with Google Maps, [WorldPay](#) Select Junior (HTTP), phpBB forum, Milonic menu, FPDF, WURFL.  
**E-commerce**  
**HTML5** Designed Lemonrock [iPhone App](#) using Xcode, Objective-C (OO/MVC), iOS, Cocoa Touch, SQLite, HTTP. App requests changes via HTTP, and updates iPhone SQLite database.

### PCG, London: ***WorldPay Credit/debit card and Direct Debit module design***

**PHP/MySQL** **2006** Designed and coded WorldPay software for PCG (Professional Contractors Group) web site. The module interfaced to the WorldPay Select Junior system, allowing one-off and repeat purchases using *FuturePay* to be made online using HTTP/HTTPS. Secure HTML forms using MD5.  
**XHTML/CSS** Implemented callback and remote admin interfaces.  
**HTTP/XML**  
*WorldPay,*  
*Subversion*

### Marmot Technologies Ltd, London: ***Java Consultant (Design/Coding)***

**J2ME/MIDP** **2003** J2ME/MIDP : designed, coded, tested and delivered a custom multi-threaded Layer 1 + Layer 2 protocol stack in Java for mobile devices and a Java Web server and client.  
**protocol stack**  
*Analysis*  
*Design* Designed both acknowledged and unacknowledged services for reliable delivery and streaming of real time financial data across GPRS networks. The design contained many security features. Delivered the product on time and within budget.  
*Coding*  
*Documentation*  
*Delivery* Designed, coded and delivered a complete Java J2ME HTTP client / proxy server layer for the system.

## **UbiNetics Ltd (now CSR), Herts: Software Consultant (Design/Coding)**

### **C Test tool design**

Analysis  
Design  
Coding  
Planning  
Delivery

**2001/2002** Specified, designed, coded, tested and delivered a comprehensive Windows-based test tool system for embedded UMTS/GPRS/GSM systems. Used Bison to create a compiler that analysed binary messages sent between embedded tasks. Wrote Windows application to log, filter and display the data in real-time as C data structures.

Win32 API, multi-threaded MDI application, TCP/IP and RS232 links to target. On-time and on-budget delivery.

## **Trend Communications Ltd, Bucks: Software Engineer**

### **New product engineering**

Embedded C  
Power PC  
(MPC860/850)  
Nucleus RTOS

**2001** Designed new software framework for Motorola MPC850 PowerPC embedded communications tester, using *ATI Nucleus PLUS RTOS*, *Diab Data* tools, *MKS Source Integrity* and *SDS SingleStep BDM* debugger. Designed and wrote (ANSI C and assembler) serial drivers, low-level APIs, and a PPP server connection.

## **TTP Communications Ltd (then Motorola), Herts: Senior Software Engineer**

### **Real-time protocol software design**

GSM  
GPRS  
PPP  
C  
embedded  
Windows API

**1993/2000** Designed, coded, tested, documented and delivered:

- embedded PPP for mobile GPRS Internet using RFC1661, RFC1662; LCP, PAP and CHAP authentication, IPCP and TCP/IP header compression.
- SNDCP and SM protocol stack layers for GPRS, and MM and CC protocol layers for GSM.
- a Windows software test tool that interfaced via RS232 to the embedded target and displayed activity in real time.

## **Nortel, Essex: Senior Software Engineer**

**1990/1993** Analysis, design and coding of GSM Layers 2/3 (ISDN Q.921/Q.931, HDLC, MM and CC). Wrote C coding standard.

## **Syntek Ltd, London [Software Consultancy]: Software Engineer**

**1988/1989** Designed real-time embedded SWITCH card processing software and low-level communications drivers for communication with Centrefile. C, Z80 macro assembler, in-circuit emulators.

**Please note : I'm based in St Albans, Herts, and would prefer that work is carried out here, or nearby. Thank you!**