James Holdcroft   Summary

Available From	January 2015
Preferred Role	C++ Software Development (Real Time, Full Lifecycle).
Preferred Location	Daily commuting distance from Reading, Berkshire (see below for details).
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WWW	http://www.bugblatter.co.uk/cv_james_holdcroft.doc

I'm interested in any kind of software development work, covering the full project lifecycle from the specification and analysis stages right through the design and coding stages to the debug and test phases. My most recent experience has been in C++ Real Time Telecoms.

My long-term preference is for a local or London permanent job at £45-£55k, but I will also consider contracts at around £30-£40/hour. I will treat each situation on its own merits, and would give consideration to work outside these ranges. The terms of any contract must be oriented towards the supply of services rather than akin to employment.

I live in Reading (Berkshire) and will only consider work within daily commuting distance:
- From Bristol to London.
- From the South Coast to the M42.

I've usually been in long-term employment with blue chip companies, including 15 years continuous contracting with Digital/Compaq (now HP), 8 years (including a few breaks) with SchlumbergerSema (now *Mavenir Systems*), 2 years with Alcatel-Lucent for Vodafone, and most recently 3 years with Enghouse Interactive. I have many years of experience designing, coding, debugging, testing and 3rd line support to the very highest standards of quality and reliability. I'm a proven quick learner of new programming tools, often becoming considered an expert after only a short period of time. I particularly excel in the troubleshooting of tough problems. I would be a valuable asset to any software development project, as has been proved time after time in the past.

For most of the last 14 years, I have been a **Real Time Software Developer** working in a **Telecommunications** environment. Since 2011, I have been a **Senior Software Engineer** working on Real Time CTI (Computer Telephony Integration) with **C++** and JavaScript in a Windows environment. For 2 years before that, I was a **C++ Real Time Software Developer** working on **Linux** based **GSM IN** (Intelligent Network) components such as **HLR** and **SEP** (Service Execution Point). For most of the previous 8 years, I was a **C Real Time Software Developer** working on a high performance **OpenVMS** and **Linux** based **SMS** system (mobile phone text messaging for **GSM**, **GPRS** and **SMPP**). This was punctuated in 2004/5 by five months as a **Real Time Software Developer** working in a **Financial Trading Systems** environment using **C** and **Pascal** on **Alpha** and **Itanium** running **OpenVMS**. Further back during this period, I also spent six months as a **C Software Developer**, working on the **UNIX (Solaris)** based **Vodafone Live!** mobile phone content charging system which operates via **Portal Infranet** and **XML SOAP**.

If you've lost it, or for future updates, my latest CV is always available from http://www.bugblatter.co.uk/cv_james_holdcroft.doc, last updated 16th December 2014.

James Holdcroft   Summary

Title	C++ Software Developer (Real Time, Full Lifecycle)
Qualifications	University of Birmingham, BSc. (Hon.) Mathematics & Computer Science

Introduction

I've usually been in long-term employment with blue chip companies, including 15 years continuous contracting with Digital/Compaq (now HP), 8 years (including a few breaks) with SchlumbergerSema (now *Mavenir Systems*), 2 years with Alcatel-Lucent for Vodafone, and most recently 3 years with Enghouse Interactive. I have many years of experience designing, coding, debugging, testing and 3rd line support to the very highest standards of quality and reliability. I'm a proven quick learner of new programming tools, often becoming considered an expert after only a short period of time. I particularly excel in the troubleshooting of tough problems. I would be a valuable asset to any software development project, as has been proved time after time in the past.

Relevant Experience

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For the six months prior to all the above I was doing GIS (Graphical Information Systems) Web development using ASP, MapInfo MapXtreme, JavaScript and MS SQL Server on Windows NT. For the most of the preceding 5 years, I was an Applications and Systems Software Developer working on a variety of GIS, billing and other applications and systems for various OpenVMS, Intel PC and UNIX based systems. For the preceding 8 years, I was an Applications and Systems Software Developer developing a variety of GIS, financial, mail, and network applications and systems software for OpenVMS VAX and Alpha.

For the previous 4 years, I was a Real Time Embedded Software Developer developing software mainly for various Z8000 and M68000 microprocessor based equipment.

	Real Time Applications		SMS (GSM/GPRS)	IN (e.g. HLR & SEP)
Expert Skills *In which I have expert knowledge and experience*	**SMPP**	**TCP/IP**	**Diameter CCA**	**ASN.1 & MAP**
	USSD	**OpenVMS**	**DCL (script language)**	**C++**
	CTI (Computer Telephony Integration)		Salesforce	SQL
	GIS (Graphical Information Systems)		MS-Access	Pascal
Major Skills *In which I have substantial knowledge and experience*	Linux/Unix	AWK	Shell scripting (inc. ksh)	Itanium
	Portal Infranet	MapInfo Professional	MapInfo MapX	MapInfo MapXtreme
	Visual Basic	Win32 & MFC	Borland Delphi	Windows NT/2000/XP
	ASP	MS SQL Server	HTML, DHTML, CSS	JavaScript
	Oracle (inc. Rdb)	MS-Word	SMTP	Rational Purify
	Rational ClearCase	Visual SourceSafe	SYNERGY/CM (formerly Continuus)	Subversion
	DEC/RMS	make	DEC/Forms	DEC/CDD
	DEC/Basic	VAX/SCAN (like AWK)	DEC/FMS	DEC/ACMS
	MS-Excel	DECnet (inc. Nontransparent)	DEC/TDMS	OpenVMS Systems Programming
	Fortran	M68000 & Z8000	MASCOT	ODBC
Other Skills *In which I have some knowledge and experience*	XML (inc. SOAP)	Java	X.25 (VAX/PSI)	DECwindows & Motif
	GKS	Tektronix 8540	M6800 & Z80	

James Holdcroft   Employment History

August 2011 to December 2014 *Permanent*	**Enghouse Interactive**, Reading, Berkshire **Senior Software Engineer**, part of a team working on Enghouse's CTI Connect **multi-threaded real-time** Computer Telephony Integration server-based product, and the CTI for CRM (Salesforce and Oracle/Siebel) client. CTI Connect provides a standard API to a large variety of PBX switches. I was the lead developer of the **Salesforce** CTI Adapter SoftPhone. This work involved enhancements to the existing C++ client-based softphone, and also development of the new **JavaScript** clientless "OpenCTI" (cloud-based) softphone. The software was developed using **C++** on **Windows**, and **JavaScript** with some **Visualforce Apex**.
April to July 2011 *and* **December 2008 to January 2009** *and* **June 2004 to September 2004**	**Bugblatter**, Reading, Berkshire Personal Computer Specialist, operating my own PC supply, set-up and troubleshooting business. See www.bugblatter.co.uk for more details of what I have been offering over a period of about 10 years, in my spare time and "in-between contracts". Most of the business has actually been the troubleshooting of PC issues for numerous small businesses and private individuals, which has involved direct contact with end-users in order to resolve their (often tricky) issues.
February 2009 to March 2011 *Contract extended seven times and called back once*	**Vodafone UK**, Newbury, Berkshire – Subcontracted via **Alcatel-Lucent**. **Real Time Software Developer**, part of a team working on Project Alaska migrating Vodafone's **PLMN GSM IN** (Intelligent Network) components from legacy in-house systems to replacement Alcatel-Lucent systems. I was specifically involved in enhancements to the SRP (Service Relay Point, a routing component sitting between MSC and SEP, Service Execution Point), HLR, and VoiceMail. The software was developed using **C++** on **Linux** and **OpenVMS**. **Integration and Test Engineer**, part of a team integrating the Alcatel-Lucent SDM (Subscriber Data Management) system into the new network test environment, and subsequently specifying and running tests to verify its compliance to requirement.
May 2005 to November 2008 *and* **October 2004 to November 2004** *and* **May 2003 to May 2004** *and* **November 2000 to October 2002** *Contract extended eleven times and called back six times*	**SchlumbergerSema Messaging Solutions** (later *Airwide Solutions*, now *Mavenir Systems*), Reading, Berkshire Real Time Software Developer, part of a team developing the Airwide Solutions **SMSC** (Short Message Service Centre) and its derivatives as used by mobile phone operators to provide their text messaging service (**SMS** and **USSD**) in **GSM**, **GPRS** and **UMTS** networks. This is an extremely high performance **multi-tiered multi-process multi-threaded real time** system. Communication with other components (e.g. **MSC**, **SGSN** & **HLR**) of the operators' network is principally via **SS7** and in accordance with **ETSI GSM 03.40** and **ETSI 09.02 (MAP)**. The tiers include **PLMN Router**, **Store** and **Gateway**, all communicating via **SMPP**. A range of protocols is available for communication with remote applications, including **SMPP V3.4**. A great deal of my involvement was in the implementation of **SMPP** and **Real-Time Pre-Pay Charging** (including **Diameter CCA** to **Alcatel-Lucent SurePay**), these being protocols layered upon **TCP/IP**. I also implemented part of the **PAYT** (**Pre-Pay Charging**) interface to the **Vodafone UK HLR**. The SMSCs are used by many of **Vodafone**'s and other operators' networks worldwide. The software was developed using **C** on **Alpha** running **OpenVMS** and **UNIX**. I was directly involved in many stages of the project lifecycle, including requirements specification, analysis, high level design, low level design, coding, debugging, testing, and the diagnosis & resolution of support issues. All of these stages followed a rigorous system of documentation and peer reviews that ensured a very high standard of quality (certified to **ISO 9001**) in the products seen by the customer. I worked well within the project teams, being equally happy initially as a subordinate to the more experienced members, and more latterly as a lead designer and "fountain of knowledge". Despite having become considered an expert by many of my peers, I continued to learn constantly from them, and always found that the discussion of problems with others led to better solutions. A great deal of time was spent testing and debugging a very complex system, and many custom tools were developed to help automate this where possible, including the use of **AWK** to help format the output. The diagnosis and resolution (possibly including a temporary work-around) of a complex problem is something that I am particularly good at, and which I find extremely satisfying. Different teams worked on different tasks simultaneously, with multiple releases of the same product being in the field and under development at any one time. All developments and faults were managed using **Rational ClearCase** and the **Telelogic SYNERGY/CM** change management tool in which over 7000 source modules are stored.

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December 2004 to April 2005 *Contract extended twice*	**patsystems**, London SE1 Real Time Software Developer, part of a team enhancing the Order Routing Engine, a core element in patsystems' Financial Derivatives (Futures and Options etc.) trading systems as used by investment banks such as Lehman Brothers and Morgan Stanley. The software was developed using **C** and **Pascal** on **Alpha** and **Itanium** running **OpenVMS**. I was particularly involved in the porting from **Alpha** to **Itanium** and in the development of performance enhancements (by a factor of 4) to a large system that had been developed over many years.
November 2002 to April 2003 *Contract extended twice*	**Vodafone Global Content Services**, London WC2 – Subcontracted via **Atos KPMG Consulting**, London EC4 Software Developer, part of a team developing the **Vodafone Live!** mobile phone content charging system. The **multi-tier** system was designed around **Portal Infranet** (version 6.2) for authorisation, rating, charging and subscriber account handling. Communication between tiers was via **XML SOAP**, and the underlying database was **Oracle**. The software was developed using **C**/C++ on **UNIX (Solaris)** with various build and other utilities using **Shell scripting** (**ksh**). My main involvement was in the customisation of Portal Infranet Opcodes, and the development in C of wrapper routines that contain the business logic. The wrapper routines are used by the client application to perform the required business functions, and they use Opcodes to perform Infranet operations.
April 2000 to October 2000 *Contract extended twice*	**BT Cellnet** (now **O₂**), Slough, Berkshire – Subcontracted via **MapInfo**, Windsor, Berkshire **GIS/Web** Software Developer, part of a team developing a **GIS/Web** application providing textual and geographical details of Customer Service Centres and **GSM** and **GPRS** Coverage. See http://www.webmap.o2.co.uk/. A prototype of the application was also written to be available via **WAP**. The software was developed using **ASP**, **MapInfo MapXtreme**, **SMTP**, **JavaScript** and **MS SQL Server** on **Windows NT**.
December 1984 to March 2000 *Contract with numerous extensions*	**Compaq Computer Corporation**, Reading, Berkshire (formerly Digital Equipment Corporation, now **Hewlett-Packard**) Numerous Software Development roles, working with a wide variety of applications and platforms. Full details are available on request, but the most significant aspects were: - 5 years as an Applications and Systems Software Developer working on a variety of GIS, billing and other applications and systems for various OpenVMS, Intel PC and UNIX based systems. - 8 years as an Applications and Systems Software Developer developing a variety of GIS, financial, mail, and network applications and systems software for OpenVMS VAX and Alpha. - 2 years as a Real Time Embedded Software Developer developing software mainly for M68000 microprocessor based graphics devices.
September 1984 to December 1984 *Contract*	**Wormald Data Systems**, Slough, Berkshire Real Time Software Developer working as part of a team developing the software for a M6800/M68000 based multiprocessor fire and gas protection system for unmanned gas rigs. The software was interrupt driven and was written in PASCAL and M6800/M68000 Assembler on a Motorola Exormacs MDS running VERSADOS.
September 1982 to September 1984 *Permanent*	**British Aerospace Dynamics Group**, Bracknell, Berkshire The development of a number of real time applications, including a fast multiprocessor MASCOT executive, a guided missile's inertial navigation system and a plotting table. The software was interrupt driven and was written in PASCAL and Z8000 Assembler on a Tektronix 8560/8540 MDS running UNIX.