

Richard Jennings

I am highly experienced senior design engineer with key skills in digital hardware design, software design, and system debug. I work well in a close team environment and used to working under pressure. I am adaptable in the work I undertake and enjoy solving problems and meeting new challenges.

Personal Details:

Name: Richard Michael Jennings **Email:** richard@mills-jennings.co.uk

Skills:

Hardware:

- Processors including PC750, PIC, C515
- CAN bus
- Real time DSP implementation
- PCB level design
- Higspeed design for EMC compliance
- FPGA design (VHDL & Verilog)
- System debug and QA
- System Productisation
- EDA tools including Hyperlynx, Modelsim, Synplify, HDL Designer, Veribest,
- FPGAs including Xilinx Virtex-II, Actel Proasic3
- Experienced with a range of digital and analogue test equipment
- Experienced in surface mount repair and modification

Software Programming:

- C & C++
- Perl & Tk
- Javascript
- CGI
- HTML

Software Applications:

- CVS
- Source Safe
- Bugzilla
- Microsoft Office
- Microsoft Project
- Microsoft Visio

Employment History:

July 2003 - Present

Senior Design Engineer

Surrey Satellite Technology Ltd

<http://www.sstl.co.uk>

Job role:

Project work:

Work package manager for OBC750 new flight computer development.

Requirements capture

Architectural design

PCB design

FPGA architecture

VHDL Power PC to wishbone bus interface

VHDL wishbone SDRAM controller

Work package manager for OBC386 build for RapidEye constellation

Manage build

Test and debug of 13 OBC386 flight computers

Integration and test in each spacecraft

Work package manager for GIOVE-A payload TTC-B01 interfaces

Requirements capture

PCB design

FPGA design

Software Debug

Build test and integration

Other responsibilities:

Participation in various material review boards (MRB). Involvement in development of company processes for discrepancy reporting, software and FPGA development. Involved in setup and management of department wiki.

Jan 1996 – July 2003
Senior R&D Engineer

Sony Broadcast & Professional Research Labs
<http://www.sony-bplabs.com>

Job role:**Project work:**

PCB & FPGA Design of HD-SDI & SDI video interface card.
PCB design
1.5Gbits/s serial video interface design.
FPGA based SDRAM controller design
Test software design
Debug

FPGA Design of real time HD video effects accelerator for XPRI non-linear editor.
Design of linear address generator for real time picture transforms and transitions
Working closely with software engineer to develop driver software
Debug & test

FPGA Design of wipe generator for MVS-8000 Multi format production switcher.
Design of real time picture transition generator
Development of GUI based test software using Perl TK
Test & Debug

Development of 3D view interpolation algorithm using C.
Development of software algorithm to generate intermediate picture from a virtual camera between two real camera pictures. Intended applications include virtual conferencing & 3D TV

Design of HD-SDI Input & Output cards for HDS-7000 HD production switcher.
PCB level design of multiple serial video inputs and output at 1.5Gbits/s
Debug & test

Design of wipe graphics card for HDME-7000 HD digital video effect system.
PCB level design of picture transition generator, and graphics overlay
FPGA design of graphics overlay generator
Design of software driver with software engineer
Debug, test, QA & productisation

Design of video effects card for HDME-7000 HD digital video effect system.
PCB level design of high definition picture effects generator. Including colour & luminance effects, time based effects, posterisation, and solarisation effects.
Design of software driver with software engineer
Debug, test, QA & productisation

Other responsibilities:

Set up, customisation, management and maintenance of Stellant based document management system, and PC based web server.
Set up and maintenance of Project servers and local project network.
Management of EDA tools

Other professional interests:

Web site development including IIS, Apache, HTML, CGI, Perl, and Javascript.

Sept 1994 – Jan 1996
Engineer

Leicester Sound FM
<http://www.musicradio.com/>

Job role:

Maintenance, installation and repair of both the broadcast radio equipment and studios, along with the office and studio PC's and network. Setting up and operating equipment for outside broadcasts, roadshows & promotional events.
Component level repair of analogue and digital audio equipment

Design of custom interface equipment such as analogue distribution amplifiers, and RS232 control interfaces.
Installation of hard disk layout system for jingles, adverts, and audio matrix switching
Installation of digital PSTN switch

1990 – 1994

Sound & Lightning Technician

Hawthorn Theatrical

<http://www.hawthorntheatrical.co.uk/>

Job role:

Maintenance, installation, repair and operation of permanent and temporary sound, lighting and power distribution systems for theatres, concerts, festivals and conferences.
Working on large electrical installations for theatres
Electrical & mechanical safety testing in theatres
Component level repair of analogue audio and lighting control systems
Event rigging

Abilities:

- Like learning new skills
- Enjoy solving problems
- Work well in a close team environment
- Work well under pressure
- Prepared to take on responsibilities outside normal job role
- Committed to good communication within and between project teams

Training:

- High speed digital design for EMC compliance (Elya B. Joffee)
- CVS Training (Afora)
- Verilog application workshop (Esperan)
- C++ for C programmers (QA)
- Broadcast fundamentals (Sony)

Education:

1991 - 1994 **Kingston University**

BEng (Hons) 1st Class in Electronics Computing & Business.

1989 - 1990 **Nottingham Polytechnic**

HND in Electronic & Electrical Engineering

1987 - 1989 **Peoples College Nottingham**

A Level: Physics(D), Chemistry(E) & Mathematics(U)

1986 **Southwolds Comprehensive**

O Level: Physics(A), Chemistry(B), Mathematics(C), English(C), Control Technology(C), Geography(C), Humanities(C). CSE: Technical Graphics (Grade 1)

Personal Interests:

I enjoy watching motor sport and own a Moss Monaco kit car. I do a lot of DIY around the home, and I am good at electrical wiring and plumbing. I am interested in cosmology and physics, and enjoy reading popular science books on the subject.