David Paul Beynon

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DOB: 30th July 1975   **Nationality:** British

Education:

Degree: Computational Physics BSc(Hons) from UMIST, Manchester.

Key skills:

Programming languages and APIs:

- C, C++, Python and Visual Basic.
- MFC, COM, Windows API, POSIX.
- Multi threaded software development using Windows and POSIX threads.

Development skills:

- Graphics: Ray tracing, Global illumination algorithms, OpenGL, Shading.
- Design: UML, design of multi-threaded algorithms.
- Internet: HTML, Sockets API.

Software:

- Operating systems: Windows (XP, 2000, NT), Unix (Linux, Solaris, Irix, HP/UX, MacOS-X, POSIX)
- Software development: Microsoft Developer Studio, MagicDraw UML, Intel VTune profiler, PC-Lint, Xcode, UNIX tools.
- Source control: Perforce, Microsoft Visual Source Safe, RCS.
- Office: MS Office, LaTeX.

Employment history:

October 1999 - present : Software Engineer - **LightWork Design Ltd.**

LightWork Design are a leading supplier of 3D rendering solutions for developers of 3D graphics software. The main focus of my current work is the development and maintenance of a set of software libraries for photo-realistic 3D rendering. These libraries are used in over 80 different applications, mainly in the architectural and industrial CAD sectors. The work involves C and C++ development under a number of different architectures and operating systems. Supported platforms include:

- Microsoft Windows, UNIX and Macintosh.
- UNIX platforms supported include: Linux, Solaris, Irix, HP/UX and AIX.

My responsibilities include:

- Design and development of new software.
- Monitoring current research trends.
- Selection and development of algorithms.
- Drafting customer documentation.
- Maintenance of a large existing code base.
- Providing assistance to customer support department.
- Evaluation of third party software.
- Supervision of external contractors.

- Writing and maintaining internal coding standards.

Projects I have been involved with include the following:

- Design and implementation of a module to provide "final gather" functionality, which can be used to substantially, improve the appearance of lighting simulations.
- Design of parts of a "photon mapping" module for lighting simulation.
- Developing a real-time shading architecture compatible with "Cg" and "GLSL" hardware shading languages.
- Development of a multi-pass rendering architecture to support interactive rendering with shadows and other effects.
- Development of non-photorealistic "sketch" rendering software.
- Development of a number of "shaders", for a wide variety of material and lighting effects.
- Development of a set of cross platform memory monitoring & debugging tools. These have lead to a reduction in memory usage in many areas, the elimination of a number of memory leaks and improved stability.
- Design of a copy protection mechanism for content licensing.
- Development of various internal tools, including content creation and demo applications.
- Development of a number of tools for internal use.
- Supervision of external contractors involved in a MacOS-X porting project.

May 1999 - Sept 1999: Developer - **ANC ltd.**
ANC ltd is a national parcel delivery company. The job entailed using C, C++ and Visual Basic to develop a number of systems to support the delivery operations. Projects included:

- Design of embedded software for symbol 3100 series data acquisition terminals.
- Design of desktop item tracking software for warehouse & clerical staff, using MFC, VB & ODBC.
- Miscellaneous file processing utilities.

March 1998 – May 1999: Software engineer - **ACT financial systems ltd**.
ACT was a leading financial software company. The day-to-day work consisted of C++, Visual Basic and COM development of "back office" software for financial settlement processing. During my time at the company I was involved in:

- Cross platform C++ batch processing systems for Windows NT, Solaris and HP/UX.
- SQL & stored procedures on Oracle and Ingress databases.
- Visual basic interface development.

Jan 1997 - Feb 1998: Software Engineer - **netFusion ltd.**

netFusion ltd were involved in the development of a number of tools for the international networking an telephony markets. While employed with them I was involved in the development of a LAN analysis and simulation tool for Windows NT, using C++ and MFC.

References:
References are available on request.

Interests:
Climbing, Walking, Cycling, Ancient History, The game of Go.