Brian Hay – Curriculum Vitae

Personal Details

Full Name:	Brian Linden Hay
Date of Birth:	23 May 1971
Place of Birth:	Perth, Western Australia
Nationality:	Australian citizen
Marital Status:	Long-term relationship (13 years), no children
Drivers License:	Queensland 'Class C' license
Personality:	INTJ

Contact Details

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Experience

Apr 2009	**Full-time Web Development Manager**	
Oct 2010	Ingenero (Brisbane HQ & Noosa, Australia)	www.ingenero.com.au

Ingenero is a leading Australian solar power and solar hot water company, designing and installing quality solar systems for residential, corporate and government customers. Ingenero was recently awarded the contract to build Australia's largest roof-mounted solar system (1.2MW) at the University of Queensland's St Lucia campus.

During my time at Ingenero I have had the opportunity to work in a variety of roles, straddling both the IT and marketing departments, through a time of rapid growth and constant change culminating in a corporate merger. I have been centrally involved in the design and implementation of the key internal and client-facing projects that have been critical to the company's success to date.

Initially I was responsible for managing the maintenance and support of a legacy system while I designed and planned the implementation of its replacement, SOLACE (**SOLA**r Back-offi**CE**), in conjunction with the key stakeholders. This tailor made system (written in PHP, MySQL and AJAX atop the Drupal platform) was developed over a six month period and is now running most of the residential arm of the business, from front-end website quoting, through to CRM, document creation, internal workflows, reporting and much more.

Most recently I've moved into the role of web development manager, both designing and project managing the implementation of the new Ingenero corporate website and another, yet to be released, web community portal called Solar Pulse, which aims to provide unbiased information and

tools (like real-time monitoring and solar calculators) for existing and potential owners of solar power systems, within a social networking environment.

Throughout each of the above projects I've collated and prioritised (the often changing) stakeholder requirements and also managed development teams comprised of internal and external human resources.

Key responsibilities
- Business systems analysis
- Workflow process design and documentation
- Systems architecture design, development and integration
- IT project management – agile development methodology
- Website and graphical user interface design
- Usability, accessibility, web standards and SEO
- Google AdWords and Analytics management
- A/B split testing

Aug 2008	**Full-time User Experience Manager**
Feb 2009	ExitReality (Melbourne, Australia) www.exitreality.com

ExitReality develops and operates web-based interactive 3D virtual worlds (ExitReality and vSide) as well as offering 3D design and development services to corporate and government clients.

I was engaged as User Experience Manager to help refine the ExitReality platform for its first public beta launch. My past experience in interactive 3D development, user interface design and web usability came in handy as I liaised between graphic designers, developers and upper management to enhance the user interface and workflows. This involved closed end-user focus group testing, reporting of findings to senior management and actioning suggested changes, all within an extremely tight timeline.

In addition to my above duties I was also regularly called upon to do development work for key external clients such Warner Bros, Bebo, Blinkx and others. This usually involved sophisticated user interface design and code implementation within interactive 3D environments.

Lastly, due to my experience and familiarity with the underlying technologies, I was also responsible for writing much of the technical documentation in a language that lay readers could readily understand and apply to their own creative 3D projects.

Key responsibilities
- User experience review, testing and product interface (re)design
- Liaising with department heads and developers to implement changes
- Development of internal products and 3D assets
- Development of various external client projects
- Writing of technical documentation and tutorials

Sep 2005	**Full-time Software Engineer**
Aug 2008	Bitmanagement Software (Munich, Germany) www.bitmanagement.de

Bitmanagement develops a range of web 3D software products (client, server, authoring tools) and also offers 3D software development services to a growing number of international clients. Their flagship 3D engine, Contact, has a strong reputation for stability, cutting-edge features, high performance and standards compliance.

As a former middleware client of Bitmanagement, I was engaged due to my past experience and intimate knowledge of 3D content development in general, and deep familiarity with their software API and tools in particular. I was flown to Munich for an initial 3 month contract and subsequently hired as an employee, residing in Germany for a number of years.

My primary role involved 3D design and development for both internal and external projects. In my time at Bitmanagement I worked as part of a diverse, international team on projects such as the Bertelsmann 3D Atlas, SpaceTime 3D web browser, traffic simulator prototype and many others.

I also assisted heavily with corporate image and marketing activities, most notably in the translation of German marketing materials to English, writing of tutorials and redevelopment of their corporate website. As the only native English speaker in the company, I also had the privilege of representing Bitmanagement in various 3D industry working groups and at conferences and trade shows.

Key responsibilities
- Development of various external client projects
- Writing of X3D demo content, technical documentation and tutorials
- Product design and usability testing
- Represented Bitmanagement at trade shows (SIGGRAPH 06, Intergeo 06)
- Represented Bitmanagement in Web3D Consortium X3D working groups
- English client liaison and technical support
- English rewriting of selected German press releases and website content
- Graphic design of print marketing materials
- Corporate website redesign

Sep 2000 Sep 2005	**Full-time Self-Employed, Company Founder and CEO** Virtual Realms Pty Ltd (trading as Construct 3D)　　　　www.construct3d.com

Virtual Realms was established to develop interactive 3D software solutions for corporate and government clients.

As founder and CEO I took the company from initial concept through planning, research and development, multiple successful client projects and right through to angel investment and beyond, learning much along the way. As a small IT start-up with limited resources, my responsibilities initially included every facet of business from strategic plan writing, capital raising, R&D, sales, marketing, project management and human resource management.

Our most prestigious project was the development of a cutting edge interactive 3D visualisation of the iconic, Harry Seidler designed Riparian Plaza skyscraper at Brisbane's Riverside precinct. This involved the detailed 3D modelling of the entire building, inside and out, with interactive features such as alternating fixture and finish packages, operational virtual elevators, doors and appliances and accurate views of Brisbane city from multiple vantage points. Although its primary purpose was as a marketing tool, this interactive 3D simulation also became a key reference, along with the CAD plans, for the architects, builders, council and other project stakeholders.

Early recognition and success lead to pressure to grow and develop faster than we were ready to in hindsight and we were also "ahead of the market" in many ways, a technology before its time so to speak. We found that in addition to developing our products and services we also had to develop and educate the marketplace about the benefits of utilizing interactive 3D. Despite the challenges and steep learning curve, I am proud of what we were able to achieve.

Key achievements
- Awarded place in Queensland Government i.lab technology incubator

▪ Successful in winning and completing a number of high-profile contracts
▪ Successful in winning various government business development grants
▪ Successful in securing private-sector, angel investment
▪ Company remains solvent, but is in a "holding pattern" at present

2005   **Contract 3D Terrain and Urban Planning Visualization**
Terranean Geospatial   www.terranean.com.au

Terranean offers accurate geographic mapping, airbourne laser and satellite surveys plus a range of GIS and CAD services to corporate and government clients.

I was involved in a number of projects aimed at visualising in 3D the large-scale terrain datasets of proposed developments, for the purposes of environmental impact study and community consultation. In the course of developing these projects in close collaboration with Terranean staff I was instrumental in building the in-house capabilities and knowledge to integrate real-time 3D into Terranean's future service offerings.

Key responsibilities
▪ Real-time 3D simulation of large-scale, detailed terrain and GIS datasets
▪ Conducted formal and on-the-job training of Terranean staff in the application of real-time 3D

2005   **Contract Teaching** (in Seoul, South Korea)
Conics (formerly PMM)   www.conics.com.au

PMM required someone proficient in interactive 3D and teaching to travel to Seoul on their behalf to train the staff of their South Korean business partner. This required the rapid preparation of tailored course materials for students who were wholly unfamiliar with 3D technology and who spoke English as a foreign language. The experience was professionally invaluable and great fun.

Key responsibilities
▪ Real-time 3D course development, preparation and delivery

2000   **Part-time Tutoring**
Queensland University of Technology   www.bee.qut.edu.au

Due to my prior teaching at Qantm I was invited to tutor part-time in a similar course called "Introduction to Synthetic Environments" at QUT's Faculty of Built Environment and Engineering. The course attracted post-graduate students from multiple disciplines including architecture, industrial design, landscape design, engineering and surveying.

To complement the lecture materials I developed a comprehensive online companion tutorial featuring a fully interactive and operational 3D Sony digital camera as the subject. This tutorial empowered students, who'd never been exposed to interactive 3D before, to learn basic through to intermediate skills that they could then apply to their own assessable coursework and in their future careers.

Key responsibilities
▪ Online 3D tutorial development, preparation and delivery
▪ Student assessment, project supervision and support
▪ Teaching of VRML (CosmoWorlds), 3ds max, ProEngineer, ArchiCAD, ArcView GIS
▪ Output of student work to ImmersaDesk and CAVE environments

1998-1999	**Full-time Teaching and 3D Development**

Qantm College (formerly Silicon Studio Training Centre)   www.qantm.com

Qantm provides accredited training to students seeking careers in digital / new media (e.g. 2D and 3D graphics, games, video, web and multimedia design).

As a former scholarship student of Qantm College, who was now working professionally in the web development industry and had created a portfolio of interactive 3D demos, I was invited back to prepare and teach new course material for the college.

As my first experience of teaching I initially found it rather nerve racking but soon rose to the challenge and began to enjoy the interaction with students.

When not preparing for or delivering classes I was also engaged by Qantm to work (largely in isolation) on a number of interactive 3D projects for Boeing Australia. These were my first experiences of developing interactive 3D commercially and the early success and appreciation for my work certainly whet my appetite for more.

Key responsibilities
▪ Course development, preparation and delivery
▪ User support for SGI IRIX 6.x on O2, Origin and Onyx computers
▪ Teaching of VRML (CosmoWorlds), Java (CosmoCode) and HTML (CosmoCreate)
▪ Teaching of Adobe Photoshop and Macromedia Fireworks
▪ Completion of two Boeing defence simulation projects   www.boeing.com.au

1998	**Full-time Web Developer**

Chamber of Commerce and Industry Queensland   www.cciq.com.au

The chamber of commerce hired me to join their new business unit, developing websites for their members. These numerous projects ranged from simple "brochure ware" to full e-commerce sites.

Key responsibilities
▪ Web development for chamber of commerce members

1992-1997	**Casual IT&C Sales**

Retail Sales (Myer and Harvey Norman)

Whilst studying at UQ I was employed in a number of casual retail sales positions in the computer and communications sectors. I found these jobs highly instructive as I learnt a great deal about my personal strengths and weaknesses, business, how better to interact with and "read" other people and most importantly how to close a deal – experience that would be invaluable later in my career and business life.

A trusting and forward-thinking boss at Harvey Norman allowed me some time and autonomy around my sales duties to develop a full e-commerce website for his computer superstore franchise. From this challenging exercise I cemented my love of web and 3D design, which would become the central foci of my future career.

Key responsibilities
▪ Computer and communications sales
▪ End-user technical support
▪ Web design and implementation

Formal Education

1997	Qantm College (formerly Silicon Studio Training Centre)	www.qantm.com

Awarded and completed a VR and Web Development Scholarship
- SGI IRIX 6.x on O2, Origin and Onyx computers
- VRML (CosmoWorlds), Java (CosmoCode), HTML (CosmoCreate)

1989-1993	University of Queensland – Saint Lucia campus	www.uq.edu.au

Bachelor of Arts (*incomplete*)
- Completed double-major in Political Science
- Minor study in IT, Philosophy, Psychology and Future Studies

1987-1988	Mount Maria Senior College	www.mtmaria.com.au

- Mathematics I (intermediate), Mathematics II (advanced), Physics
- Chemistry, Geometrical Drawing, English, Biology, Art

1981-1986	Mount Maria Junior College	www.mtmaria.com.au

- Mathematics, Science, English, German, Art, History,
- Geography, Business Principles, Woodwork, Metalwork

Short Courses

2008	Northey Street City Farm	www.northeystreetcityfarm.org.au

- Permaculture Design Certificate (PDC)
- Practical and theory (10 weeks x 8 hours + major landscape design project)

2008-2010	Marcel Desbiens	www.marceldesbiens.com

- Introduction to Painting with Oil (5 weeks x 3 hours)
- Advanced Painting in Oil (5 weeks x 3 hours)
- Mentoring (casual / ongoing)

2007	Martina Matussek

- Foundation Drawing (5 weeks x 3 hours)
- Practical Drawing (5 weeks x 3 hours)

2000-2004	i.lab Technology Incubator	www.ilab.com.au

Various business training workshops for i.lab Incubator CEOs
- Media and public relations, investment capital raising, presentations
- Sales and marketing, finance and taxation, trade and export
- Intellectual property law, recruiting and human resource management

1998	TAFE Open Learning	www.openlearning.tafe.qld.gov.au

Study course and certification for trainers and assessors
- Category 1 Workplace Trainer, Assessment Methods, Assessing Trainees

1996	Adobe / Tech Pacific	www.adobe.com.au

Adobe in-house product training
- Photoshop, Illustrator, PageMaker, PageMill and Acrobat

Professional Memberships

2008-Present   ACM SIGGRAPH   www.siggraph.org
    ▪ Association for Computing Machinery
    ▪ Special Interest Group on Graphics and Interactive Techniques

2005-Present   Web3D Consortium   www.web3d.org
    ▪ Currently an individual Professional Member
    ▪ Formerly a Corporate Member (as staff of Bitmanagement)

Personal Interests

Fitness   ▪ Cycling, swimming, walking, weight training
            ▪ Committed vegan, non-smoker, occasional social drinker

Reading   ▪ Fiction – fantasy, science-fiction, cyberpunk, steampunk
            ▪ Non-fiction – science, computing, psychology, philosophy, Zen Buddhism

Music   ▪ Eclectic – dance/trance, world music, pop, rock, classical

Cinema   ▪ Eclectic – science-fiction, fantasy, world cinema, documentary

Creativity ▪ Photography, drawing, painting, architecture, woodwork

Green issues ▪ Politics, environment, conservation, permaculture, organic gardening
            ▪ Sustainable design, renewable energy, electric vehicles
            ▪ Community development, future studies, voluntary simplicity

Referees

Hugh Butler
Manager Business Systems (former), Ingenero Pty Ltd
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Alexander Kohl
Founder and CEO, SolarPay Pty Ltd
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Danny Stefanic
Founder and CEO, ExitReality
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Peter Schickel
CEO, Bitmanagement Software
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Aptitude Self-assessment Grid

3D	
3ds Max (overall)	■■■■□
▪ Modelling (both low and high polygon counts)	■■■■■
▪ Texturing (for pre-rendered and real-time output)	■■■■■
▪ Character rigging and animation	■■□□□
▪ Animation (non-character)	■■■□□
▪ Lighting (GI, radiosity, sky, IES, and area lights)	■■■■□
▪ Special effects	■■■□□
▪ Rendering (scanline, finalRender, mental ray, some VRay)	■■■■□
Vue Pro, Bryce, Leveller, Nendo	■■■■□
Blender, Lightwave, CAD (AutoCAD, Revit, ArchiCAD)	■■□□□
CosmoWorlds (old)	■■■■■

Multimedia	
Fireworks	■■■■■
Photoshop, Illustrator, Dreamweaver	■■■■□
Flash, InDesign	■■■□□

Code & Technologies	
VRML, X3D, XML, XHTML, CSS, ECMAscript, COLLADA	■■■■■
PHP, SQL, MaxScript, AJAX, Drupal module and theme development	■■■■□
D, Tango, OpenGL, SDL, Qt	■■■□□
C, C++, Java, GLSL, HLSL, Cg, ActionScript, DirectX	■■□□□
C64 Basic, 6810 Assembly (old)	■■■■■

Platforms	
Microsoft Windows 9x/NT/2k/XP/Vista/7, Server 2003, DOS	■■■■■
Linux (mostly Ubuntu, some Debian and RedHat)	■■■□□
Apple OS X, SGI IRIX 6.x (on O2, Origin and Onyx)	■■□□□
Amiga (Workbench 3.1, AmigaDOS), C64 (old)	■■■■■

Design	
Real-time 3D architecture, design, usability, Web3D Consortium standards	■■■■■
Web design, information architecture, accessibility, W3C standards	■■■■■
Graphical user interface design (2D and 3D)	■■■■■
Corporate image design and printed page layouts	■■■■□
Industrial design, architecture, conceptual art	■■■□□
Audio design for real-time 3D and multimedia	■■□□□
Video composition, effects and titling	■■□□□

Business and Communication (English)	
Technical writing for a lay audience (tutorials, manuals and documentation)	■■■■■
Research, planning and strategic development	■■■■■
Creative writing (marketing and advertising, especially Web)	■■■■□
Business writing (capital raising, tenders, grant application documents)	■■■■□
Presentations and sales pitches	■■■■□
Group training and assessment	■■■□□
Human resource management	■■■□□
Technical support	■■■■■

Aptitude key		
	Expert	■■■■■
	Proficient	■■■■□
	Intermediate	■■■□□
	Basic skills	■■□□□
	Beginner	■□□□□

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