

# Gary Brown

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## Career Profile

Electrical Engineer with broad design and commissioning experience – fields include process control systems, switchgear, drives (VSD and Servo), electronics, machine vision, and automated machinery. Skilled project manager having successfully completed a number of long term projects from product conceptualisation to final production - including design, development, field trials and manufacturing.

## Key Skills

- Highly experienced electrical, electronic, software and process engineer.
- Process Analysis skills – FD's
- Business and departmental management experience.
- PLC programming IEC61131-3
- Wide range of design, build and commission experience across many industries.
- Project Management Skills
- Electrical Design – ETAP skilled.
- NIR spectroscopy inline experience.

## Career Highlights

- Design, implementation and commissioning of a Scada and PLC based control system for the 8MW Trigenation plant at Melbourne Airport.
- Business partner in a world recognised company manufacturing automated equipment for agricultural produce handling, quality analysis and sorting.
- Contract project engineer for plant upgrade at Boral Plasterboard.
- Developed several inline products to measure the internal properties of fruit.
- Initiated and participated in a joint venture partnership with CQU University for the development of NIR Spectroscopy based products for measuring sugar, dry matter and internal defects in produce.
- Designed, implemented and brought into production a multispectral digital camera.
- Successful implementation of the RTI500 and RTI1000 programmable controller. Worked closely with BHP, James Hardie, and SECV in application development and technical support for the RTI family of products.
- Process design engineer for ABB.
- Global commissioning engineer for ABB. (Papermills, Steelmills, Container Cranes, Mining Equipment and Industrial Robots).

## Technical Capabilities

Programming Languages: Labview, MatLab, HTML, PHP, SQL and C.

PCB design: CAD, AHDL, VHDL

PLC Programming: Omron, AB, Mitsubishi, Beckhoff, IEC61131-3.

Electrical Design: Elecdes, ETAP

Education: Bachelor of Electrical Engineering (RMIT).

Continuing Education: Enrolled for Masters in Power Distribution (50% complete)

## Recent Employment History

### 2012 – Present

### Aust. Innovative Engineering Pty Ltd

AIE is an Electrical Engineering firm specializing in automation and electrical engineering services for the manufacturing and building sector. Website: [www.aieglobal.com.au](http://www.aieglobal.com.au)

### Positions Held

Automation / Electrical Engineer

### Key Projects:

- Designed, programmed, and commissioned the Scada/PLC automation system for the Melbourne Airport Trigenation plant. Seven networked PLCs control various aspects of the process with one central SCADA system used for operator monitoring both onsite and remotely.
- PLC program development for automated double/triple glazed wooden window manufacturing machine. Comprised 3 servo positioning drives, HMI, and general control using Beckhoff PLC.

- Managed electrical installation and commissioning of CoGen unit. Used ETAP to perform electrical fault analysis and protection design verification.

## **2011 – 2012**

### **Boral Plasterboard Ltd**

Boral Plasterboard in Port Melbourne were undertaking a major upgrade to double the capacity of their plasterboard mill.

#### **Positions Held**

Contract Electrical Engineer

#### **Key Responsibilities:**

- PLC program design including FD and Graphcet documentation for the Wet End plasterboard section.
- Manage PLC programmers and electrical contractors during the shutdown/upgrade period.
- Participated in Safety Assessment and implemented design to appropriate SIL level.
- Designed and produced detailed CAD electrical drawings for the Wet End and Kettle processes. Both of which use PLC's, variable speed drives, and closed loop instrumentation with an integrated SCADA system. The detailed electrical drawings were critical in achieving competitive fabrication and installation tenders.
- Commission upgraded Wet End equipment back into production.

## **1990 – 2011**

### **Colour Vision Systems - CVS**

*Before the sale of CVS to MAF the Australian owned company specialised in the development and manufacturing of automated fruit sorting and handling equipment for the local and international market. The equipment handled all aspects of fruit processing from the field to the shipping container, and included automated equipment like - bulk container robotics, carton feed systems, vision based conveyors for sorting fruit quality, and automated bin/carton/bag filling stations. At its peak CVS employed over 50 people and exported 45% of its turnover.*

Website: [www.cvs.com.au](http://www.cvs.com.au)

#### **Positions Held**

*Design and Development Engineer*

*Director*

The Engineering role included the design, development, and support of all aspects of the equipment manufactured by CVS. High speed camera based vision inspected the surface of the fruit, whilst NIR Spectroscopy equipment measured its internal properties. Additional responsibilities focused on leading a team of technicians responsible for the fabrication, testing, and repair of CVS electronic circuit boards.

#### **Contributions and Achievements**

- Support for design, development, and field commissioning of the CVS range of products required both electrical, electronic and mechanical engineering aptitude, always in rural areas, many of which were overseas.
- Introduced MRP system to reduce and better track manufacturing costs.
- Worked extensively with Central Queensland University as a joint venture partner to establish the NIR Spectroscopy project. Established Hortical Pty Ltd as the company that formalised the relationship between the University and CVS.
- Project managed the implementation of the InSight and IDD products utilising the NIR Spectroscopy technology. These products are utilised to measure - sugar, dry matter and internal defects of fresh fruit. Successfully patented the InSight product in Australia and overseas.
- Personally developed software for the machine vision, InSight, and IDD products.
- Designed and developed the CVS digital multispectral video camera.

#### **Key Responsibilities:**

- Undertake and facilitate extensive testing to ensure product reliability
- Source and negotiate joint venture relationships for leading technology projects
- Provide project leadership during hardware and software design and development projects
- Provide business support and direction management as director and partner
- Personally develop software and hardware to meet project requirements

## Early Career Achievements and Positions

**1985 – 1990**

**AIE Pty Ltd**

*Electronic Hardware and Software Development Engineer*

*AIE was formed for the sole purpose of designing and building specialised computer based industrial control systems. As a foundation partner, responsibilities were on product design and planning as well as business management and technical leadership.*

### **Contributions and Achievements:**

- Established the business with four Engineers focussing on the design and development of specialised computer based industrial control systems.
- Facilitated software development and hardware builds during concept, planning and testing phases. Supported all aspects of systems integration including testing and analysis.
- Key stakeholder during all corporate product purchase negotiations. This included the purchase of the solution by national leaders for example BHP, James Hardie, SECV and Mt Isa Mining. Assisted in sourcing new business opportunities and engaging with stakeholders to establish appropriate process control solutions.
- Drove the development and implementation aspects of each of these projects to ensure that each product was supported, and met the client's requirements and expectations. Personally managed the successful implementation of the RTI500 and RTI1000 programmable controller systems.

**1980 – 1985**

**ASEA (ABB)**

*Commissioning Engineer*

*As a commissioning engineer, key responsibilities focussed on driving and supporting technology projects whilst ensuring that products were implemented in accordance to requirements and plan.*

### **Contributions and Achievements:**

- Provide all aspects of control and management during the commissioning stages for dc/ac motor drives, programmable controllers and multi axis robots. Supported the business as a technical specialist and leader.
- Developed outstanding technical skills especially in mine winders, plastic extruders, container cranes, multi axes robots, programmable controllers and microprocessor based real time controllers. Developed a reputation as a strong technical expert and assisted in identifying key issues and risks with products.
- Personally facilitated the software system design for the 'exit section' at the Smorgans Steel Rolling Mill located in Laverton.
- Appointed by management to the global commissioning team. This was in recognition of technical capabilities as well as business professionalism and resulted in undertaking commissioning of commercial equipment globally including a Paper Machine in Vietnam, Container Cranes in Taiwan and a Steel Rolling Mill in Norway.

### *Professional Referees*

**Dr. Kerry Walsh**

*CQU/Hortical*

*Mobile: 0418 981 361*

**Mr Lester Welton**

*CEO*

*CVS (2002-2007)*

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