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ICON technologies

ICON Technologies
Capabilities Statement

Contact:
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Managing Director
ICON Technologies Pty Ltd

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1. What We Do

ICON Technologies designs and supplies custom one-off or small production run measurement and automation systems for:

- Monitoring and Control;
- Data Logging; and
- Industrial Test.

We have particular expertise in creating systems to address challenging measurement and automation problems that require high levels of local processing power to be deployed into harsh environments.

As a Silver-Level Certified National Instruments Alliance Partner with over 26 years experience, we also offer a range of professional support services for the National Instruments' LabVIEW Development Platform.

2. Services

A more detailed description of the services we offer can be found on our website: www.icon-tech.com.au

In summary, we can:

- Scope and design your measurement and automation system;
- Scope and design an associated data management and data analysis system;
- Supply all hardware components, including sensors, cables, and processor(s);
- Supply all software components, including full custom application development where appropriate;
- Supply the system in a ready-to-install enclosure or instrument rack;
- Install and commission the system, including integration with your existing measurement and automation infrastructure;
- Supply full system documentation, including all electrical drawings;
- Provide post-installation maintenance and support; and
- Provide additional consulting, training, and technology transfer services as required.

3. Work Practices

ICON Technologies is certified to the ISO 9001 standard for Quality Management Systems. We operate a team-based system development process, with the flexibility to move our System Developers between teams as required. This means that we can provide extra resources if your project is on a time-critical path.

Our system development process works well for both local and remote/interstate customers. We develop application software according to industry-standard software engineering practices, and all our System Developers code to common Company standards for software architecture and coding style. This means that we will always have a Developer available to respond to any issues associated with your application.

4. Our Staff

We currently have seven full-time staff based in our Perth office. All our System Developers are tertiary qualified in an engineering or science discipline, and have multiple years of experience with the National Instruments' LabVIEW Platform.

As a Silver-Level Certified National Instruments Alliance Partner, we support the National Instruments Certification Programme, an independently administered certification programme that guarantees expertise with National Instruments hardware and software. We currently have one Certified LabVIEW Architect, one Certified LabVIEW Embedded Developer, three Certified LabVIEW Developers, and a Certified LabVIEW Associate Developer on staff.

Senior engineering staff include:

Mark Trotman
Title: Managing Director
Education: PhD, BSc Hons (Physical Chemistry), University of WA
NI Certification: Certified LabVIEW Developer
Time with ICON Technologies: Twenty-six years (Owner/Director)

Nick Perkins
Title: Engineering Manager
Education: BEng (Mechatronics), Curtin University
NI Certification: Certified LabVIEW Embedded Developer
Time with ICON Technologies: Eleven years

Michael Balzer
Title: Lead Programmer
Education: BSc Hons (Computer Science), Curtin University
NI Certification: Certified LabVIEW Architect
Time with ICON Technologies: Nine years

Sze Howe Koh
Title: Application Engineer
Education: BEng (Electrical/Electronic), University of WA
NI Certification: Certified LabVIEW Developer
Time with ICON Technologies: Five years

Mike McKenzie
Title: Application Engineer
Education: BEng (Mechatronics), Curtin University
NI Certification: Certified LabVIEW Developer
Time with ICON Technologies: Two years

Julien Lopez
Title: Lead Technician
Education: Advanced Diploma in Electrical Engineering, Challenger TAFE
NI Certification: Certified LabVIEW Associate Developer
Time with ICON Technologies: One year

5. Our Facilities

Our Perth Office is at:
22 Thorogood St
Burswood WA 6100

Our facilities include a training and demonstration area, and a dedicated workshop that can accommodate the testing of distributed systems, and the assembly of system enclosures and instrument racks for small production runs of around 1 to 10 units.

6. Business Partners

Our Core Technology Partner
Our core technology partner, National Instruments, is recognized as one of the world's leading suppliers of measurement and automation hardware and software. Their LabVIEW Platform of hardware and software tools is ideally suited to the task of integrating diverse measurement and automation requirements under a unified, consistent operator interface.

Our Support and Maintenance Partner
We back our systems with professional installation, support, and maintenance delivered in partnership with Boltstress Ultrasonics. Boltstress Ultrasonics partners with ICON Technologies to provide installation, commissioning and maintenance support for measurement and automation systems on industrial and mining sites throughout Australia.

7. Example Projects

More details of some of the projects we have done for our clients are given on our website: www.icon-tech.com.au

Three recent examples are:

7.1 Spookfish Pty Ltd: High-Resolution Aerial Imaging

Spookfish is an innovative Western Australian company that is developing a unique new airborne imaging platform for the capture of cost-effective, high-resolution, wide-area geospatial imagery. Spookfish engaged ICON Technologies to provide the system integration framework for their imaging platform.

The scope of the project covered the full product development cycle, from "proof-of-concept" R&D, to the development of instrument prototypes, and the supply of deployable instrument units in commercial quantities.

You can find details of the project, which has been independently recognized for its potential to impact the aerial imaging industry, in the following papers:

- Winner, Industrial Machinery and Control Category, National Instruments ASEAN/ANZ Region Engineering Impact Awards, September 2016.
  Link to paper: ftp://ftp.ni.com/pub/branches/asean/2016_eia_eye_in_the_sky.pdf

- Runner Up, Aerospace and Defence Category, National Instruments Global Engineering Impact Awards, May 2017.
  Link to paper: http://sine.ni.com/cs/app/doc/p/id/cs-17369#

The National Instruments Engineering Impact Awards are judged by a panel that includes independent experts from major engineering companies and the engineering press.

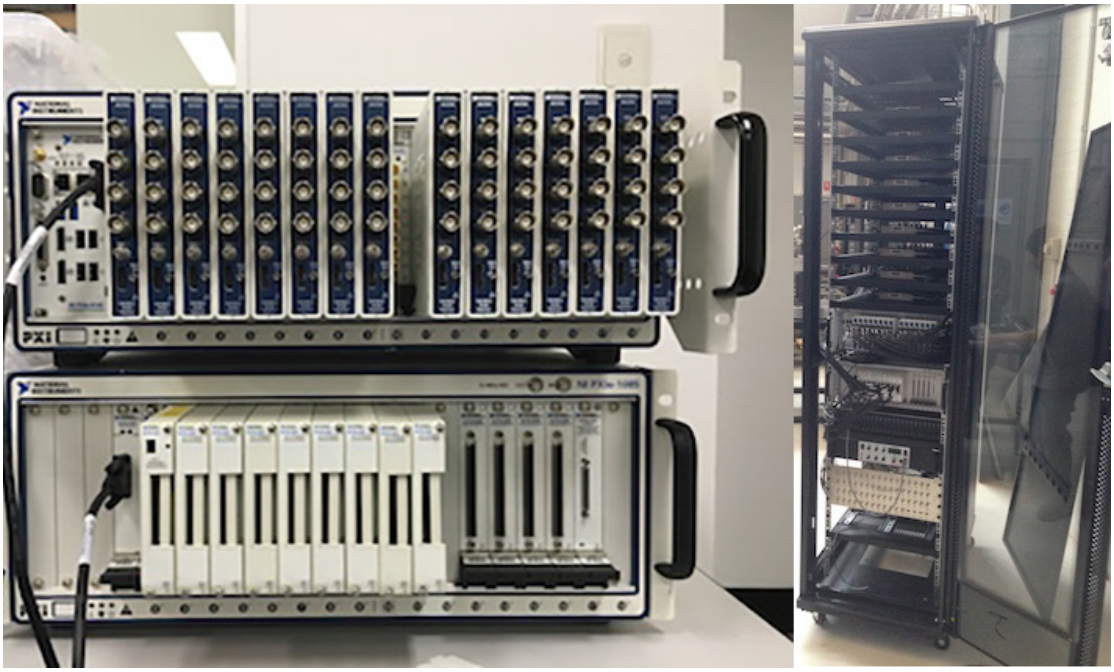
7.2 Curtin University/CSIRO: Instrumentation of New TTSC Facility

This system is a response to a very demanding challenge to develop a unique world-leading microseismic measurement system. It requires the tightly synchronised acquisition of 60 channels of ultrasonic data from a geological sample at up to 20 MSa/s/channel, with auto-switching between two modes of acquisition (passive mode and dynamic mode) based on real-time calculation of the sample state. The composite image shows the base acquisition system, and fully assembled instrument rack. The system was developed on the National Instruments PXIe modular instrumentation platform.

This project has been recognized for its innovation and technical excellence at the National Instruments' Engineering Impact Awards. Projects are judged by a panel that includes independent experts from major engineering companies and the engineering press.

- Winner, Energy Category, National Instruments Global Engineering Impact Awards, August 2016.
- Paper of the Year, and Best Paper in the Advanced Research and Energy Categories, National Instruments ASEAN/ANZ Regional Engineering Impact Awards, September 2016.

  Link to paper: http://sine.ni.com/cs/app/doc/p/id/cs-17203#



7.3 Bradken Resources: Dynamic Measurement of Ball Mill Bolt Tension

Bradken Resources engaged ICON Technologies to supply a Data Logger capable of measuring the dynamic load on critical bolts that were part of an operational Ball Mill. The logger is mounted on the Ball Mill while it rotates at around 6-8 RPM. It logs four or more channels of dynamic strain, plus one channel of inclinometer, at 100 Sa/s/ch. Logging is triggered automatically once the Ball Mill starts to rotate.

The Logger is used to verify the dynamic load on critical bolts immediately following maintenance on the Ball Mill. It can operate for up to 48 hrs on battery at its full log rate.

The project had a very demanding time-line – three weeks from initial discussion of the concept to delivery of the Logger to the customer for commissioning.