

Fraz Anwar Makki

Senior Control Systems Engineer – MIEAust CPEng NER

📞 +61 434 207 899

✉️ fraz.anwar@makki.au

🌐 linkedin.com/in/-fraz/

🇦🇺 Australian Citizen 🏠 Perth, Australia

Control Systems Engineer with extensive experience in programming, testing, commissioning, and troubleshooting PLC, SCADA, and DCS systems across oil & gas, mining, maritime, rail, and process industries. Proven ability to design and implement control solutions, optimize existing systems, and enhance reliability and performance.

Technical expert in PLC, SCADA and DCS systems	Adept at troubleshooting and producing solutions to issues	All-round work experience as a system integrator, end user and OEM	Proven record of handling multiple projects under pressure	Team player with coaching and mentorship experience
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Career Summary

- » Program, test, commission, troubleshoot and maintain PLC, SCADA, HMI and DCS systems
- » Collaborate with the team for seamless project execution, safely, efficiently, and with cost-effectiveness
- » Lead projects and ensure timely delivery whilst upholding quality standards
- » Perform decision-making and problem-solving, mitigating project risks and fostering innovation
- » Analyse, investigate and produce reports for control systems performance, downtime and incidents
- » Diagnose faults and prepare root cause analysis and recommendations to prevent recurrence
- » Initiate and recommend changes to systems, procedures and practices to improve overall performance
- » Participate in risk assessments, HAZOPs and HAZIPs as applicable and required
- » Manage contractors directly to ensure deliverables are met on-time, budget and as required
- » Work closely with stakeholders to implement control system requests such as management of change
- » Produce and develop control systems related design work including system architectures, system block diagrams, IO schedules, wiring diagrams, bill of materials, FAT/SAT plans, inspection test and maintenance plans, alarm matrix's, functional specifications, procedures, manuals and handbooks

Experience



Senior Engineer
Yokogawa Electric

Perth, Australia
Jul. 2024 – Present

Achievements include:

- » Worked on the Front-End Engineering Design stage for Chevron's Gorgon Stage 3 project which involved providing ICSS integration options in a detailed FEED report, creation of deliverables including graphics list, test system architecture, inspection & test plans, bill of materials and design drawings
- » Worked on the typical development for Chevron's Gorgon Stage 3 project which involved creation of logic typicals for subsea infrastructure, creation of graphics templates which interfaced with the third-party subsea system and also produce test procedure documents for the typicals
- » Lead Engineer for the Kalgoorlie Nickel Detailed Feasibility Study project from Ardea Resources, for which was responsible to produce a engineering specification proposal to achieve the aims of the process plant along with detailing all the control system requirements by producing engineering drawings and documentation as part of the feasibility study
- » Performed changes on test kit cabinets for Chevron's Gorgon Stage 2 Master Control Station upgrade project including design drawing updates, FAT and DCS programming

Technologies (hardware, software) experience:

Yokogawa (Centum VP, ProSafe-RS, CI Server), Switches (Hirschmann), Infrastructure (VMware vSphere, SAP), Documentation (MS Office, SharePoint), Programming (Functional Block Diagrams, Logic Chart, Sequential Function Chart, SEBOL)

Achievements include:

- » Review, action and implement an average of 10 control system modification and/or management of change requests a month which include bridges, permanent modifications and new equipment installs
- » Performed site-wide fire panel upgrades which required modification of the existing logic and graphics, and standardise them. Upgraded 40+ fire panels on the control system and re-commissioned them
- » Upgraded the version control and disaster recovery mechanisms in-place on-site for control system assets to instead utilise FactoryTalk Asset Centre rather than AutoSave MDT (which was obsolete)
- » Coordinated and executed the upgrade of the CitectSCADA system from version 7.40 to 2018 site-wide which included 4 servers and 25+ client computers. Ensured the solution met cyber-security requisites
- » Added an alarm filter functionality in the site CitectSCADA system as a site-wide improvement resulting in improved troubleshooting efficiency for operators
- » Implemented 10+ new interlocks on two cranes for long travel, cross travel and hoist movement in order to improve their safety and reliability

Technologies (hardware, software) experience:

Allen-Bradley (PLC-5, SLC-500, MicroLogix, ControlLogix, RSLogix 5, RSLogix 500, RSLogix 5000, Studio 5000, FactoryTalk View Studio, Connected Components Workbench), ProSoft (Modbus, Ethernet/IP bridges), Switches (Hirschmann, Moxa), AVEVA (CitectSCADA), Yokogawa (Centum VP, ProSafe-RS), Monitoring (IPAM, PRTG, Graylog), Infrastructure (VMware vSphere, UCME, Veeam, SQL, FactoryTalk Asset Centre, Autosave MDT), Documentation (MS Office, SAP, Track-It, Management of Change), Programming (Ladder Logic, Functional Block Diagrams, Cicode, Logic Chart, Sequential Function Chart, Instruction List, SEBOL)

SCADA Engineer
 *Systra – formerly Rail Systems Australia*

Perth, Australia
Oct. 2021 – Mar. 2022

Achievements include:

- » Delivered OT design packages for multiple stations (Ellenbrook, Noranda, Malaga, Whiteman Park, Morley) and Line Wide scope, including drawings, BOMs, IO schedules, and RATM documentation.
- » Built and maintained OT/IMS system models using PTA's Parallels/DAD platform, ensuring accurate network and systems interconnectivity.
- » Streamlined documentation workflows by migrating deliverables to Asite and training project teams on best-practice usage.

Technologies (software) experience:

CAD (AutoCAD), Working with 2D/3D Models (AutoCAD, Revizto, Parallels/DAD), Documentation (MS Office), IIoT (Asite, SharePoint)

 **Control and Monitoring Engineer**
Austal Ships

Perth, Australia
Jan. 2018 – Oct. 2021

Achievements include:

- » Design, program, test and commission the control and monitoring system used in 10+ Austal ships
- » Led 5 projects with on-time completion, despite limited resources and ever changing priorities
- » Fulfilled 2 system upgrade projects which included feasibility study, R&D, proposal related documentation including drawings, in-office programming/testing and commissioning on-vessel
- » Perform service and warranty work to diagnose, troubleshoot and resolve issues raised by clients in relation to the control system on a regular basis with positive client feedback
- » Mentored 4 junior engineers and provided training and guidance to complete project and work objectives
- » Create documentation and perform surveys to demonstrate conformity of vessel systems with the required standards for certification purposes
- » Part of development team for a new SCADA system using Node-RED
- » Produce macros/scripts automating repetitive process workflows reducing time spent by up to 95%

Technologies (hardware, software) experience:

Schneider (Modicon PLC, Quantum PLC, Premium PLC, Unity Pro, Control Expert, CitectSCADA, Vijeo Designer, PL7, TwidoSuite), Wago (CoDeSys, e!COCKPIT, Network Switches), Moxa (MGate, Network Switches), ComAp (GenConfig, LiteEdit), Excel (VBScript), MacroExpress, Node.js (Node-RED), Visual Studio (C, C++, C#), CAD (AutoCAD, DraftSight, LibreCAD), 3D Modelling (Blender), Documentation (MS Office, OpenOffice, LaTeX), Programming (Functional Block Diagrams, Instruction List, Statement List, Cicode, VBScripts, MacroExpress)

Other Experience

	Control Systems Engineer <i>Ecanet Engineers</i>	Perth, Australia <i>Apr. 2016 – Dec. 2017</i>
	Graduate Control and Instrumentation Engineer <i>Flowtronix Arabia</i>	Khobar, Saudi Arabia <i>Oct. 2014 – Mar. 2015</i>
	Electrical Engineer Intern <i>Worley – formerly WorleyParsons</i>	Khobar, Saudi Arabia <i>Aug. 2012 – Sep. 2012</i>
	Design Engineer Intern <i>Alazzaz Trading and Contracting Company</i>	Khobar, Saudi Arabia <i>Jun. 2012 – Jul. 2012</i>

Education

	Master of Science in Control Systems Engineering, MSc(Eng) <i>The University of Sheffield</i>	Sheffield, England <i>Sep. 2013 – Jan. 2015</i>
	Bachelor of Engineering in Electrical Engineering, BEng(Hons) <i>The University of Sheffield</i>	Sheffield, England <i>Sep. 2010 – Jul. 2013</i>

Certifications

	Chartered Professional Engineer in Mechatronics Engineering, CPEng <i>Engineers Australia</i>	Perth, Australia <i>May. 2021</i>
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Courses

	CI Server Engineering Training <i>Yokogawa Electric</i>	Perth, Australia <i>Oct. 2024</i>
	ProSafe-RS Engineering & Maintenance Training <i>Yokogawa Electric</i>	Perth, Australia <i>Sep. 2024</i>
	Details on Functional Safety GMS-600-14-01 Training <i>Yokogawa Electric</i>	Perth, Australia <i>Aug. 2024</i>
	Centum VP Engineering Training <i>Yokogawa Electric</i>	Perth, Australia <i>May. 2023</i>

References

Arun Murugesan

Lead Engineer
Yokogawa Electric
Perth, Australia
📞 Available upon request

Naveed Zia

Senior Control Systems Engineer
BHP
Kalgoorlie, Australia
📞 Available upon request

Keith Hudson

Control and Monitoring Manager
Austal
Perth, Australia
📞 Available upon request

