

GRAHAM NASBY, P.Eng., PMP

Guelph, Ontario, Canada

Tel: (519) 767-2638

gnasby (at) ieee (dot) org

www.grahamnashby.com

PROFILE

Graham has a varied background spanning several industries that includes control system design, user interface design, electrical and I/C design, software development, and construction management. At present, he is involved with design, implementation, and commissioning of control systems, instrumentation and remote monitoring systems for the municipal water/wastewater sector. Prior to working in water/wastewater, he did control system design, bioprocess engineering, and commissioning/validation work in the biotech, pharmaceutical, and semiconductor/aerospace industries. He has also worked as a marine electrician and has held various IT and software development positions. Graham has a strong background in technical writing, user needs assessment, and project management. He is familiar with a wide variety of SCADA platforms including various Historians, HMIs, OITs, and PAC/PLC/RTUs. Graham also has a background in both front-end and detailed design of electrical, process, and I/C systems. In addition to his design experience, he has hands-on experience with construction sites, startup/commissioning, troubleshooting, and providing training for plant staff. In addition to being an active member of the International Society of Automation, Graham is a contributing member of the ISA18 "Alarm Management", ISA101 "Human Machine Interfaces", and CSC/IEC TC65 "Industrial-process measurement, control and automation" standards committees.

TECHNICAL SKILLS

- Coordination/management of engineers and designers, organizing and leading meetings for clients/vendors
- Project scheduling, budget estimating, preparing tender docs, preparing summaries of work, bid evaluation
- Specification preparation (design brief, URS, FRS, PCN, SDD, equipment, instrumentation/controls, pumps, tanks, piping, etc.)
- Supervision of contractors, inspection of construction, site reports, coordinating work between trades
- Training of plant staff on new equipment, preparation of training materials, health/safety/environment coordination & strategy
- Experience in both union and non-union environments

- Experience with design, specification and implementation of electrical and electronic systems
- Familiarity with protective relaying, resistance/hybrid grounded systems, MV/LV systems, zone-selective relay coordination
- PLC: Allen Bradley, SLC500/PLC5/ControlLogix, Koyo/AutomationDirect, DL05/06, Eurotherm, Yokogawa
- HMI/SCADA: iFix, Wonderware, QuickPanel, PanelView, PanelMate, RSView, Cmore, Apogee Insight, Matrikon, VisualBasic
- Industrial Networks: Fieldbus, Ethernet, DeviceNet, ControlNet, DH+, DH485, CAN, RS232/422/485, Modbus, GPIB, OPC
- RSLogix, PanelBuilder, RS Studio, DirectSoft32, Stepper Motors, PID, ladder/stage/interrupt logic, IEC 61131 languages
- Microcontroller selection and applications (Z-world BL2100, M68000, 68HC11/12, AM188es, Intel, etc.)
- Software Development: LabVIEW, VB, C/C++, C#.Net, SQL, php/perl/python, FORTRAN, Assembler
- System identification, modeling, stability analysis and optimization

- Hands on experience installing and troubleshooting electrical protection and control equipment
- System start up of utility and skidded process systems, preparation of and execution of test plans
- Experience with the design and sizing of pharmaceutical clean utilities, water/wastewater treatment and high vacuum systems
- Commissioning and validation (protocol preparation, approval, execution, signoff) in GxP/GAMP environments
- Field experience with troubleshooting, tuning and optimizing process systems
- Experience with writing and presenting engineering reports

LICENSURE

P.Eng. - Professional Engineers Ontario

CERTIFICATION

PMP - Project Management Professional – Project Management Institute

Standard First Aid and CPR Level C – Livesaving Society

Currently working towards CAP certification (ISA – International Society of Automation)

MEMBERSHIPS

PMI - Project Management Institute

ISA - International Society of Automation / Instrument Society of America

IEEE - Institute of Electrical and Electronic Engineers

IEEE Control Systems Society

IEEE Computer Society

ACM - Association for Computing Machinery

AVS - American Vacuum Society

ISPE - International Society of Pharmaceutical Engineers

OSPE - Ontario Society of Professional Engineers

EDUCATION

B.Sc. (Engineering) - Honours (2004)

-University of Guelph
-Major: Engineering Systems & Computing
-Minor: Computer Science
-Thesis: Control System for Soccer Robots

Certificate in Project Management (June 2010)

-University of Waterloo

B.A. in History - Honours (in progress, 2007 to present)

-University of Guelph
-part-time for personal interest – night and online classes

RECENT PROFESSIONAL DEVELOPMENT

July 2011 GE Proficy iFix Advanced – Graymatter Systems (4 days)
Jun 2011 Gold of the Desert Kings: Leadership/Team Building – Eagle’s Flight (1 day)
Jan 2011 Project Management Training Update – Eramosa (1 day)
Oct 2010 Loop Tuning: One size does not fit all – ISA Automation Week (1 day)
Oct 2010 Instrumentation Rules of Thumb – ISA Automation Week (1 day)
Jun 2010 Comprehensive Project Management – University of Waterloo / Procept (6 days)
May 2010 Electrical Power Distribution Systems For Industrial Plants - EPIC (3 days)
May 2010 Grounding and Bonding for Electrical Systems – EPIC (2 days)

WORK EXPERIENCE

Engineer (July 2010 – present)

ERAMOSA ENGINEERING INC. – Guelph, Ontario

Eramosa offers electrical, instrumentation/control, SCADA, and system integration services to the water/wastewater sector.
-duties include control system design, alarm/instrumentation design, electrical design, PLC/HMI/SCADA design and programming
-additional duties include managing projects, supervision/inspection of field work, and site commissioning/troubleshooting

Controls and Commissioning Specialist (2007 - 2010)

CHEME ENGINEERING INC. - Campbellville, Ontario

Cheme provides engineering and validation services to the biotech, pharmaceutical, and food industries
-duties included controls/instrumentation design, requirements analysis, commissioning and validation
-supervision of junior staff for design and start-up activities, coordination/scheduling of trades for construction and start-up
-assisted with technical feasibility studies, process design, cGMP analysis, project management and costing

Control Systems Consultant (2007)

INVENTURE SYSTEMS LTD. - Concord, Ontario

Inventure Systems provides turnkey engineering solutions for the concrete industry, from upgrades to complete batch plants
-provided control systems engineering and process monitoring support for a 3 month project.

Control Systems Specialist (2006)

INTLVAC - Georgetown, Ontario

Intlvac designs and manufactures custom high vacuum systems for ion-beam etch, vapour deposition and thin film applications
-designed, implemented, and commissioned control systems for systems used in semiconductor, optics, and defence industries
-extensive use of PLCs, LabVIEW and embedded microcontrollers for process and motion control
-provided ongoing technical support for installed systems, developed training materials and wrote user manuals

Technical Coordinator – R&D (2005)

RWDI, Consulting Engineers & Scientists - Guelph, Ontario

RWDI provides a wide range of design services including wind engineering, air quality, wind/snow loading, vibration analysis
-assisted with engineering studies of air movement, vibration and wind tunnel simulations
-developed calculation tools using C/C++, C#, .NET, VisualBasic, Web Services, SQL, Excel Macros, FORTRAN and dbase

WORK EXPERIENCE (cont'd)

Web Designer / Programmer (1998 – June 2010)

WEB MASTERING SERVICES

WMS provides web development, online identity and database management services utilizing a wide range of technologies.
-my own consulting business I ran in addition to my day job

IT Help Consultant, CCS (1998-2005)

UNIVERSITY OF GUELPH - Guelph, Ontario

CCS is the UofG's central IT department which provides a wide range of services for the campus's 40,000+ user accounts
-provided 1st and 2nd level support for staff, faculty and students (both on site and call centre)
-team-lead for drafting support policies, maintaining documentation and web development
-developed and taught training seminars for staff, faculty and students

Teaching Assistant (2002-2004)

UNIVERSITY OF GUELPH, Department of Marketing and Consumer Studies - Guelph, Ontario

-assisted with a second year course in business information systems and Microsoft Office
-duties included lesson planning, lecturing, creating/marking assignments, invigilating exams and office hours

Graham's Telecom Services (2001-2003)

-my own business installing telecommunications/network cabling into new and existing buildings
-projects often included other construction tasks such as drywall, framing, electrical work and painting

Graham's Marine Electrical Solutions (1996-2004)

-my own business installing/upgrading electrical systems in boats 20-100 ft
-involved system design, specification writing, cost analysis, procurement, and installation

Support Analyst (1996)

McNEIL CONSUMER HEALTHCARE (a division of Johnson & Johnson) - Guelph, Ontario

McNeil is a pharmaceutical manufacturing facility that produces trusted brands such as Tylenol, Motrin and Benylin.

-managed MIS help desk and provided support for 400 seat network (HP9000, NFS, AS/400, Notes, Win3.1, MS Office)

OTHER ACTIVITIES

Volunteer Committees

ISA

ISA Water/Wastewater Industry Division – Newsletter Editor

ISA Hamilton Section – VP & President-elect

Standards Committees

CSC/IEC/TC65 “Industrial-process measurement, control and automation” – Canadian committee member

ISA18 “Instrument Signals and Alarms” standards committee

ISA18.02/TR3 “Basic Alarm Design” working group

ISA18.02/TR6 “Alarm Design for Batch and Discrete Processes” working group

ISA18.01 “Alarm Annunciators and Sequences” working group

ISA101 “Human Machine Interfaces” standards committee

OSPE

PAN Initiative Volunteer – Ontario Society of Professional Engineers

Recent Publications

Nasby, G and Phillips, M. “SCADA Standardization”, ISA InTech Magazine, May/June 2011, pages 18-22.

Nasby, G and Phillips, M. “Modernization of a Municipal Waterworks with SCADA Standardization”, 6th Annual ISA Water/Wastewater and Automatic Controls Symposium, June 22-23, 2011, St. Louis, MO, USA

Recent Conferences

2010 ISA Spring Leaders Meeting: June 12-15, 2010 – Las Vegas, NV, USA

2010 ISA Automation Week / Fall Leaders Meeting: Oct 4-7, 2010 – Houston, TX, USA

2011 ISA Spring Leaders Meeting: June 25-29, 2011 – St. Louis, MO, USA

OTHER INTERESTS

-playing clarinet, dinghy sailing, squash, mountain-biking, canoe-tripping