

BRAD STEPHEN CARLBERG, P.E.
P.O. BOX 1219 • HOODSPORT, WA 98548

PHONE: (251) 454-1200 • E-MAIL: brad.carlberg@bsc-engineering.com • HOMEPAGE: <http://www.bsc-engineering.com>

PROFESSIONAL SUMMARY

Registered Professional Control Systems Engineer with over thirty years' experience in Process Control Engineering specifically with Distributed Control Systems, Programmable Logic Controllers, and Human Machine Interfaces combining extensive experience with both Hardware and Software Design, Programming, Implementation and Startup, including Advanced Continuous and Batch Control Programming.

EQUIPMENT EXPERIENCE:

- Emerson (Westinghouse) Ovation
- WonderWare FactorySuite (InTouch 7/8/9, InSQL)
Wonderware System Integrator Program 2000-2002
- Rockwell Software FactoryTalk, RSView, RSLogix, and RSBatch
- Ci Technologies SCADA MMI/HMI
CiTect System Integrator Program 2002-2003
- Monitor Pro (Factorylink) HMI
- Modicon Quantum PLC
- Modicon 584 PLC
- Siemens S5 & S7-1215 PLCs
- Allen-Bradley ControlLogix, PLC/5 & SLC/500
- Siemens/TI Simatic Net, APT, TISoft, WinCC - TIA Portal V13
- Triconex 1131 Tristation
- Bently-Nevada 3500 System Vibration Monitoring
- Honeywell Experion Distributed Control System (DCS)
- Honeywell TDC3000 Distributed Control System (DCS)
- ABB Bailey Net- & Infi-90 (DCS)
- Siemens APACS (DCS)
- Ethernet I/O:
Moore Industries Net Concentrator System
Opto22 Ultimate I/O
Phoenix Contact InLine I/O, SMS Relay

PROVIDED ENGINEERING CONSULTING SERVICES:

- Created Software Integration Plan, Software Requirements Specifications, Software Design Description, and Software Requirements Traceability, and Software Configuration Management Plans per IEEE & NRC guidelines.
- Software Quality Assurance, specifically NQA-1 2008/2009 requirements
- Specifying and Requisitioning of Hardware
- Developing and Implementing Configuration
- Human Machine Interface (HMI) Graphics
- Factory (FAT) & Site (SAT) Checkout
- Commissioning, Loop Check and Tuning
- P&ID's, Instrument Loop Sheets, & Data Sheets
- I/O List, Instrument Index, Alarm/Interlock Lists
- IJB Termination Layout Wiring Drawings
- Process Functional Specifications
- Training of Operators, Maintenance, And Instrument Personnel

PROCESS INDUSTRY EXPERIENCE:

- Anoxic/Oxic and Secondary Clarifier
- Manufacturing Bulk Chemical Handling Facility
- 250 GPM Hazardous Industrial Waste Treatment Facility
- Gas Desulfurization Plant
- High Fructose Corn Syrup Batch Plant
- Cogeneration Plant Fuel Handling System

PULP & PAPER TECHNICAL EXPERTISE

- Bleached and Unbleached Kraft Mills
- Sulphate & Sulphite Pulp Mills
- Power and Recovery Boilers
- Paper Machines Extruder & Rewinder "Flying Splice"
- Stock Preparation including Starch Cooker
- Recycle Advanced Control Packages
- 450 TPD Secondary Fiber Mill (with Automatic Control Of Pulpers)

CLIENTS:

- Andritz Automation
- Worley Parsons
- Pasadena (CA) Water & Power Glenarm Repowering Project
- Hanford MSA at the Volpentest Hammer Federal Training Center
- MPC Consulting Ltd; Sidney, BC for Education City in Doha, Qatar
- Potlatch Mutual Water Company Pumphouse Automation
- LUKOIL Kandym project near Karakul, Uzbekistan
- Refinería Batalla de Santa Inés project in Venezuela
- Gulf Intercoastal Waterway West Closure US Army Corps of Engineers.
- International Paper; Franklin, VA & Bogalusa, LA.
- Pacific Gas & Electric; Diablo Canyon Project
- Abu Dhabi Gas Industries Limited (GASCO);
- Syncrude Canada Ltd.; UE-1 Project; Fort McMurray, AB
- Air Liquide America; Houston, TX
- Ultramar Diamond Shamrock; Three Rivers, TX
- Northeast Philadelphia Water Treatment Plant
- Escambia County Utilities Authority; Pensacola, FL
- Wellman Chemical Plant; Bay St. Louis, MS
- British Petroleum; Prudhoe Bay, AK
- GAF Building Products; Mobile, AL
- American Electric Power/Houston Pipeline/Louisiana Interstate Gas; Houston, TX
- Kerr McGee; Theodore, AL
- Mobile Energy Services Corporation; Mobile, AL
- Weyerhaeuser Company; Plymouth, NC; Oglethorpe, GA & Port Wentworth, GA
- Boise-Cascade Corp., St.Helens, OR & Jackson, AL
- Celulosa del Pacifica, Mininco, Chile
- Wisconsin Tissue; Menasha, WI
- Riverwood International; West Monroe, LA
- Inland Container; Rome, GA
- Mead Coated Board Inc., Cottonton. AL
- Potlatch Corp., Cypress Bend, AR
- Georgia-Pacific, LLC; Brewton, AL
- Port Townsend Paper Corporation; Port Townsend, WA

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PROFESSIONAL RECORD

Boeing Commercial Airplane Division; Everett, WA; September, 2018 –present
Port Townsend Paper Corporation; Port Townsend, WA; January, 2017 –April, 2018
BSC Engineering; Hoodsport, WA October, 2013— January, 2017
Hyundai Engineering & Construction – Process Plant Division; Seoul, South Korea November, 2012–July, 2013
Maverick Technologies; Charlotte, NC; May, 2012 – July, 2012
Invensys-Triconex; Lake Forest, CA; February, 2011 – March, 2012
Schweitzer Engineering Laboratories, Inc.; Pullman, WA; September, 2009 – April, 2010
Bechtel International Inc.; Asab, U.A.E.; May, 2007 – August, 2009
Bechtel National Inc.; Richland, WA; February, 2007 – April, 2009
Honeywell Canada Ltd; Fort McMurray, AB July, 2005 – May, 2006
Air Liquide Process & Construction; Houston, TX January, 2004 – April, 2005
GE Industrial Systems; Pensacola, FL November, 1999 – April, 2000
Raytheon Engineers & Constructors; Birmingham, AL; April, 1998 – March, 1999
Bailey Controls; Hong Kong; November, 1997 – December, 1997
Honeywell IAC; Phoenix, AZ; May-October, 1995 & February-December, 1996
Instrument Control Services; Pensacola, FL December, 1991 – August, 1993
H.A. Simons Ltd.; Vancouver, BC CANADA July, 1989 – November, 1991
CS Technologies; Poughkeepsie, NY February, 1987 – July, 1989
Wright Schuchart Harbor; Tacoma, WA February, 1986 – July, 1986
Atlantic Gulf; Woodinville, WA August, 1985 – December, 1985
American Technical Services; Eugene, OR February, 1985 – May, 1985
Weyerhaeuser Company; Springfield, OR (Summers 1977 – 1981) & Cosmopolis, WA (May–October, 1984)

EDUCATION

Ci Technologies CiCode & Advanced CiTect Course; Charlotte, North Carolina *June, 2002*
WonderWare Basic InTouch Course; Mobile, Alabama *July, 2000*
Registered Control Systems Engineer; *License No. 43988, State of Washington October, 2007 - Current*
Registered Professional Engineer; *License No. 23362, State of Alabama January, 2000 - Current*
Rockwell Software Basic RSView Course; Birmingham, Alabama *September, 1998*
The Dale Carnegie Course; Mobile, Alabama *September, 1993*
Bailey Basic Graphics (SODG) Course; Vancouver, BC Canada; *December, 1990*
Bailey Basic Configuration (CADEWS) Course; Vancouver, BC Canada; *April, 1990*
Bachelor of Science / Mechanical Engineering; February, 1984; **Washington State University; Pullman, WA**

PUBLICATIONS

"Implementing a Cellular Router& Controller with Embedded Webserver in a Rural Water Company Pumphouse"; November, 2017; ISA Process Control & Safety Symposium; Houston, TX
"Optimizing Your Process Through Lignin Management"; November, 2015; ISA Process Control & Safety Symposium; Houston, TX
"Manage your KPIs over the Web and Smartphones" *November, 2013; ISA Automation Week 2013* Nashville, Tennessee
"Ethernet I/O" *October, 2010; ISA Automation Week 2010* Houston, Texas
"Optimization in the Pulp & Paper Mill" *October, 2008; ISA 2008* Houston, Texas
"Configure Your Ethernet I/O: A "Hands-On" Tutorial" *October, 2003; ISA 2003* Houston, Texas
"Ethernet PLC's Reduce Oxygen Consumption (Tutorial)" *September, 2001; ISA 2001* Houston, Texas
"Automated Recovery Boiler Sootblowing Control System" *March, 2001 TAPPI/ISA Symposium;* San Antonio, TX
"Recycled Advanced Control Package" *March, 1996 TAPPI Recycling Symposium;* New Orleans, Louisiana

PROFESSIONAL MEMBERSHIPS

INTERNATIONAL SOCIETY OF AUTOMATION (ISA); [Industries & Sciences Department Vice President - Elect \(2018 - 2019\); Geographic Assembly Chairman \(2016 - 2017\); Society Executive Board Member & District 9 Vice President \(DVP\) for WA, OR, ID, MT, WY, UT, & AK \(2014 - 2015\); Pulp & Paper Industry Division \(2001 - Present\); Technical Conference Committees \(1997 - 2016\); & CSE PE Review Course Instructor \(2015\).](#) Member of [ISA18, Instrument Signals and Alarms, ISA99, Industrial Automation and Control Systems Security, and ISA101, Human-Machine Interface](#) Standards Committees