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The TJCAA Quarterly

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Message from the President

Are you ready for the 2013 California Building Code?

Industry News - Obsolete Programmable Logic Controller Platforms

TJCAA's Business Certifications

- Alameda County Small, Local Emerging Business
- City of Oakland Local Business Enterprise
- California DGS Micro Business (SB (micro))
- Port of Long Beach SBE
- San Diego County Water Authority SBE
- SoCal Network SBE
- CA PUC WBE
- City of Sacramento SBE
- Sacramento Municipal Utilities District (SMUD) SEED Vendor

Message from the President Gianna Zappettini



Spring Training is almost over and Major League Baseball teams are working with rookies and veterans to fill out their rosters for the upcoming season. They are looking for players that work well together in pursuit of the World Series trophy.

We at TJC and Associates, Inc. are always at the top of our game and ready to "hit one out of the park" when it comes to teaming with new or old clients. Give us a call and let's "play ball" together on your next engineering project.

Are you ready for the 2013 California Building Code?

If you are engaged in a long-term design effort for a project in California, you may want to consider whether your project will need to meet the requirements of the 2013 California Building Code. The CBC comes out every three years, and the newest release will become effective in January 2014.

The CBC references hundreds of other standards. One change in the 2013 version is a reference to ASCE 7-10, which presents design loads for developing minimum building load requirements. According to ASCE, version 7-10 "offers a complete update and reorganization of the wind load provisions, expanding them from one chapter into six. It also updates the seismic, snow load, live load, and atmospheric icing provisions." Another change is a reference to the 2010 Aluminum Design Manual. The 2010 ADM contains updated information for the design of aluminum structures and is a complete reorganization of the 2005 ADM.

We will have an opportunity to finalize our review of the major changes in the new CBC when it is published in July, and will apply it to any California project permitted after January 1, 2014. If you would like assistance in deciding how and when to start planning for compliance with the new Code, please contact us.

Industry News - Obsolete Programmable Logic Controller Platforms

The Soviet Union had just collapsed, there was a brand new 386 computer with 2 MB of RAM on your desk, and the college grad living in your basement was still a promising infant. It was the early 1990s, and a new generation of programmable logic controller platforms was storming the water/wastewater market, offering incredible advances in automation, speed, communications, reliability, and treatment process performance.

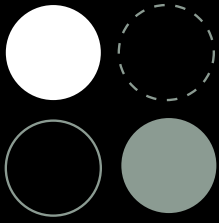
Those PLC platforms have either become obsolete or will be within the next few years, and the industrial networks that support communications on these platforms are also approaching obsolescence.

For example, the Schneider Automations' Modbus Plus®, GE Intelligent Platforms' Genius Bus®, and Rockwell Automations' ControlNet® are being replaced by Ethernet Industrial Protocols that offer higher performance, off-the-shelf infrastructure components, flexible and redundant topologies, and greater range.

Why not just keep the "old" ones running? The difficulty with that approach is that as product lines approach the end of their lives, parts for them become increasingly rare, prices increase significantly, and manufacturers no longer offer technical support. Replacement parts can only be acquired through online refurbishing facilities, or on Ebay at three to five times their original price.

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Our Own Upgrade

Featured Employee:
Paul Giorsetto P.E.
LEED AP BD+C

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Further, software packages used to program and troubleshoot obsolete lines will not be updated to run on new operating systems. To keep the obsolete lines functional, critical application programs must be maintained on older computers that are likely well beyond their own design lives.

Some manufacturers periodically offer incentives that substantially reduce the capital cost of replacement equipment. Manufacturers realize that when their client upgrades, the client has an opportunity to replace the existing equipment with a competitor's product. TJCAA can assist agencies in negotiating with PLC manufacturers to ensure the best possible pricing for replacement equipment.

Most manufacturers offer adapter kits that minimize installation time when migrating from an obsolete line to the latest technologies. TJCAA can provide design services to minimize potential process disruptions during hardware replacement, ensure accurate as-built documentation going forward, and establish a system maintenance plan to keep the control system components current.

Many PLC programs can be imported from their original format into the latest programming software. In those cases where a direct import isn't available, the original programs can be translated by TJCAA and the programs updated to take full advantage of the latest features, such as user-defined function blocks, descriptive tags and symbols, sequential function chart programming, and structured program organization.

Our Own Upgrade

We recently upgraded our computer servers and key software packages such as AutoCAD, structural analysis packages, Exchange, and virus protection (which also helps protect our clients). We make investments such as these so that we can continue to provide our clients with reliable communications and excellent service now and in the future.

Featured Employee:
Paul Giorsetto P.E. LEED AP BD+C

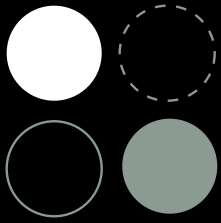
If you take the stairwell in our Oakland office at the right time of day, you will hear something

Do you have obsolete PLCs? If your old PLC appears in the table below, call us to talk about an approach for upgrading.

Manufacturer	PLC Series	Introduced	Obsolete	Recommended Replacement
GE Intelligent Platforms	90-70	1991	2011	RX7i or RX3i
GE Intelligent Platforms	90-30	1990	2017	RX3i
Allen Bradley/Rockwell	PLC-5	1986	2014	ControlLogix or CompactLogix
Allen Bradley/Rockwell	SLC-500	1991	TBD	CompactLogix or MicroLogix
Modicon/Schneider	984 Series	1986	2006	Quantum or M340
Modicon/Schneider	Compact 984	1986	2007	M340
Modicon/Schneider	Micro Series	1986	2006	TSX Micro
Modicon/Schneider	Momentum	1996	TBD	New Unity Model in late 2013
Siemens	S5 Series	1984	2007	S7 Series

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Did You Know?

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beyond the usual footsteps and elevator hum. You might hear our lead electrical designer, Paul Giorsetto, practicing his trumpet. When Paul joined



TJCAA in 2006 to lead our Instrumentation, Controls, and Electrical group, he brought not only his extensive engineering experience, but also the energy and talent associated with his other career as a jazz musician.

His first paying gig was when he was only 12 years old, just a few years after he started playing in fourth grade. When asked why he chose the trumpet, he noted with a smile that the answer should have been obvious to the interviewer. "Because it was cool," he said.

It still is, as you can see for yourself if you catch Paul with one of the groups he plays in regularly. He has been hitting the high notes with the Junius Courtney Big Band for 5 years, a 20-piece swing band that was formed more than half a century ago.

He also plays with SOL, a 12-member band that plays a Latin-infused blend of rock, soul, and salsa. Paul says that he enjoys the Latin music most of all, citing Jesús Alemañy of Cubanismo as one of his favorite trumpeters, along with Tom Harrell and Roy Hargrove.

Paul occasionally works with a soul-funk group, The GTS Band, and recently sat in with the "Big O" band, a group of Oakland school teachers, to play a benefit for Oakland school music departments.

His musical resume' even includes the Bay Area institution "Beach Blanket Babylon." Paul started with the show when it first opened in 1975 at Club Fugazi. While his 3-year stint with Beach Blanket Babylon is long past, the show is still going and is America's longest-running musical revue.

Practicing is important for maintaining the muscle memory required for playing, Paul explains, as the trumpet is a physically challenging instrument. Clients who have worked with him know that he enjoys a challenging engineering project, as well, and that his ability to listen and interpret their needs helps to achieve great results for their projects.

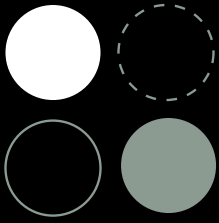
Did you know?

Did you know about Maker Faire? Maker Faire is billed as "A two-day, family-friendly festival of invention, creativity, and resourcefulness, and a celebration of the Maker movement." (makerfaire.com) Terry Cavanagh describes the Faire as "Geek meets Burning Man." He adds, "We have attended the Faire in San Mateo for the past two years, and I can attest that it is an extravaganza of originality—both fun and functional. There is something for all ages, including my 8 year old!" Another Maker Faire is held in New York in the fall, and there are mini-fairs in many other locations around the world.

Booths at the event are hosted by Makers, who seem to have endless energy for sharing their ideas. Exhibits cover everything from solar systems to steampunk. You might be able to take in a robotics, gardening, or paper airplane-making demo, or watch a race featuring homemade bicycles. Designer/builders will enjoy perusing the Legos and 3D printers. We challenge you to attend

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Dates to Note

and come home without at least one idea for a project of your own!

The Faire includes displays, interactive learning exhibits, demonstrations, entertainment, food, and drink, accompanied by a variety of Burning Man-style mobile artwork. This year's Bay Area Maker Faire will be May 18 and 19 at the San Mateo Event Center.

Dates to Note

- March 20 The Vernal Equinox see tinyurl.com/TJCAAspring
- March 24 March 24 Formula 1 Malaysia Gran Prix in Kuala Lumpur (the second race in the 19-race season, which opened on March 16)
- March 29 **SOL** at Slim's in San Francisco
- March 30 **Junius Courtney Big Band** at Berkeley's Freight and Salvage
- March 31 Major League Baseball Opening Day (Rangers @ Astros)
- April 8-14 Golf - The Masters at Augusta
- April 15 Taxes Due
- April 27 **SOL** Dinner Show and Dance at Angelica's Bistro in Redwood City
- May 4 139th Running of the Kentucky Derby
- May 18 Pole Day for the Indianapolis 500
- May 18-19 **Maker Faire**, San Mateo Event Center
- May 19 Bay to Breakers in San Francisco
- May 24 Carburation Day for the Indianapolis 500
- May 25 The Flower Moon (a full moon)
- May 26 The Indianapolis 500
- June 4-6 ICC-ES Hearing in Los Angeles
- Apr 29-May 6 ICC Committee Action Hearing in Dallas, TX
- July 8-11 InterSolar Conference and Exposition in San Francisco
- June 5 **Junius Courtney Big Band** at Yoshi's in Oakland
- June 9-13 ACE 13 – American Water Works Association Annual Conference and Exposition in Denver

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