



Southland Industries' Southern California Division Selects Prolog[®] Software to Manage \$80M Hospital Project

Southland Industries is a full service commercial mechanical contractor that operates using an integrated design-build-maintain delivery model. Founded in 1949 and headquartered in Irvine, CA, Southland has four divisions across the United States: Southern California (SoCal), Northern California (NorCal), Southwest and the Mid-Atlantic division (MAD). The company serves a wide variety of markets that depend on highly controlled environmental systems, including hospitals and government facilities.

Southland has received many awards recognizing their success, including the 2007 Environmental Award in Sustainability by the General Services Administration (GSA) and multiple awards from both the Design-Build Institute of America (DBIA) and ASHRAE. With annual revenues approaching \$500M, Southland is one of the largest mechanical contractors in North America.

At Southland Industries, innovation has become a hallmark of their success. The company has championed lean construction since its inception and was an early adopter of building information modeling (BIM) technology. When the SoCal division was awarded an \$80M hospital project, division leaders naturally concluded that their project management processes would benefit from innovation. "A few years ago," explains Planning Manager David Francis, "Southern California was a \$40M a year division. Now, a single project can be \$40M or more, and we have large projects scheduled into 2015. We needed to put a tool in place that would support our growth over the next five to seven years."

Although Prolog Manager from Meridian Systems had been used throughout the company in a limited capacity for nearly a decade, a formal technology search was launched by SoCal to evaluate current project management systems. "We looked at other solutions, but Prolog had a larger, more satisfied user base. And many of the general contractors we work with were using Prolog, which was a driving factor in our decision," Francis says. "We had seen the software in action on job sites and knew what it could do."

Southland decided to upgrade to the current version of Prolog Manager and add Prolog WebSite to their solution set. The first objective was to standardize project documentation by eliminating spreadsheets and word processing documents. This, in turn, would eliminate the inefficiencies and risks related to manual document creation and tracking.

Once implemented, Prolog would replace SoCal's typical paper-based job binder with a centralized database of information with electronic document controls. "The problem with using binders is that someone always pulls something out to make a copy, but they don't put it back in the right place," Francis says. "Prolog eliminates that problem."

A Champion for Success

Francis has become the champion responsible for setting up the logistics and leading the charge forward for the SoCal division. Instead of trying to implement the software on his own, Francis turned to Kelar Pacific, a California-based construction software consulting firm and authorized Meridian reseller, for help. "I went to Kelar and said, 'What does it take to implement Prolog correctly?' Then we sat down and put a plan together."

A phased implementation strategy was devised to allow SoCal to fully incorporate each aspect of Prolog into the division's operational standards. Document Management was tackled first, followed by Field Administration and then Cost Control, including contracts, budgets, change orders and purchase orders. Custom forms and letters were also created.

Initial training was performed by Kelar and has been supplemented by monthly Web-based "lunch and learn" presentations. Each month, Kelar presents a specific topic and Southland employees participate from office conference rooms or job sites. One month might focus on submittals, another on requests-for-information (RFIs). "Kelar shows everyone the bells and whistles, what the function does and how to use it within our business model," Francis explains. "The presentations have been a great supplement to our main training sessions." Additionally, SoCal developed an in-house instruction manual that outlines specific Prolog processes and defines the standardized folder structure for storing information electronically.

"Kelar has done an excellent job with our implementation," Francis states, "and their experience has been the key factor in making Prolog 'stick' this time. Since they've worked with so many different construction companies, they understood what we needed."

Prolog Becomes the Division of Standard

Although Francis feels their Prolog implementation is still a work in progress, nearly 40 users utilize the software each day. Project managers use Prolog to manage budgets and change orders, while administrative staff and documentation managers process submittals and document contract and shop drawings. Engineers and detailers use Prolog for RFIs and submittal tracking, and to access drawing logs. And the detailers and field foremen use Prolog to check on things like RFI and submittal status.

Prolog WebSite offers Southland's intermittent users, as Francis describes it, a "streamlined version of Prolog" to enter things like RFIs, daily work journals, safety notices and inspection reports from the field. This allows the company to save money by using shared Prolog licenses, while simplifying the end user experience.

Prolog is now being used as the project management standard on all SoCal projects with contract values exceeding \$500K.

Standardize, Centralize and Automate

Immediate benefits for Southland included the standardization of documentation and forms and the establishment of a centralized database for all project information. "I just can't stress the importance of standardization and centralization to us as we've grown," Francis states. "Prolog forces us to do the same things over and over. When you start getting 125 or 130 people in a single division, having everyone inputting information in the same place and in the same format is vital."

These benefits have led to an automation of previously time-consuming tasks. In the past, finding information related to an issue was challenging at best. Now, SoCal's e-mail system has been integrated with Prolog to capture all related electronic correspondence. "If we're doing an issues hunt," Francis says, "all of the e-mail is consolidated in one place, which makes it easy to discover who talked about what and when."

Prolog also helps expedite RFI management and resolution because there is visibility during each step of the process, including historical visibility. If a project manager requests information on an RFI from two years ago, Southland can quickly access the entire history, along with associated e-mails and PDF files. "Our project managers love this versus digging through file folders," Francis says. "Prolog gives us an efficient tool to access current and historical information, which eliminates potential conflicts before they escalate into risk situations."

An Investment in Long Term Growth

For Southland's SoCal division, standardizing on Prolog gives them a competitive edge when discussing potential work with general contractors because they can speak the same language and instill confidence that they have the systems in place to handle the work.

Francis is pretty sure Southland wouldn't have made it this far without Kelar. "Hiring a professional to drive our implementation of Prolog was absolutely the right decision. Kelar has simplified the process for us, always taking the time to answer our questions and being proactive when we request something new."

The consulting firm has even expanded their relationship with Southland to support SoCal's Autodesk products and create unique integration links between Prolog and other business tools to further automate information sharing.

"Our core purpose is to build customers for life, and to become the design-build mechanical contractor of choice," states Francis. "Getting there requires that we select the right tools and ensure that people use them efficiently. With Prolog and Kelar, we are making solid investments in our future."

Southland Industries Project Profile

Kaiser Downey Hospital Located in Downey, California

Southland Industries was selected by Kaiser Permanente to perform the design-build mechanical construction for a new 651,370 square foot acute care hospital in Downey, CA. The hospital includes a seven-story patient tower, a four-story diagnosis and treatment center and central plant. The central plant consists of a 3300 ton chilled water system, 1500 HP heating hot water system and 300 HP high pressure steam system. The 352-bed, full-service hospital is one of the largest construction projects ever undertaken by Kaiser Permanente.



Key Project Elements

- Medical gas distribution system, medical air system, medical vacuum system and lab air system
- Emergency water storage tank (30,000 gal.) with Ozone generator
- Direct digital control (DDC) system using an open protocol BACnet compliant product line
- 100% OSA constant volume air handling system with heat recovery coils and re-circulating pumps
- Fuel oil system that feeds emergency generators, with two 40,000 gallon underground storage tanks
- Decontamination waste system
- Clean steam system for humidification
- Nuclear medicine, negative pressure isolation rooms, emergency patient care, MRI and CT scan capabilities and 13 operating rooms

Contract Amount: \$86M for HVAC and plumbing design-build

Completion Date: October 2008

Results: This project was completed ahead of schedule and under-budget – and innovations in heat recovery systems have created continued energy savings for the owner. A riser style vent, waste, air, water and heating hot water distribution system was implemented, which reduced the costs of construction and enhanced the owner's usability. A massive pre-construction/construction coordination effort greatly reduced field impacts. The use of pro-press fittings reduced the cost of constructability and increased productivity.

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