

Customer Case Study

Harris Construction Co., Inc.



Prolog® Software Helps Harris Construction Improve Communication, Enhance Subcontractor Management and Keep Pace with Changing Technology Trends

Founded in 1914, Harris Construction Co., Inc. has become a leader within the Central California building and construction services industry by keeping pace with the constantly changing demands of architecture, materials and building techniques. Harris offers preconstruction and construction management (CM) services, along with a multitude of project delivery methods, including design-build, design-bid-build and lease-leaseback. The contracting firm has an impressive resume of completed and current projects in the education, food processing, industrial, healthcare, corporate, religious and civic markets, with a completed construction volume of nearly \$2B.

In addition to longevity and knowledge of various project delivery methods, Harris is also recognized as an experienced self-performing general contractor. The company's staff routinely manages work in the field and installs work in-place. Harris maintains a full-time workforce that is skilled in framing, concrete and other specialty trades. This self-performing capability allows Harris to identify and resolve problems early, which saves time and money. As of April 2010, Harris is the only contractor in the California Central Valley that has a LEED® Silver certified corporate office by the U.S. Green Building Council (USGBC).

When a general contractor like Harris has been in business for nearly 100 years, change isn't easy. Although the "yellow tablet" had long been the preferred project management system among the company's seasoned leaders, in the mid-1990s, Harris recognized the value that technology would deliver to their productivity levels and their projects. Automating manual processes was vital to the company's future. "To keep pace with the rest of the industry, we needed to consider replacing the 'yellow tablet' with project management software," states Harris' Director of Administration, Leann Sehon.

Back then, project management software was a fairly new concept within the construction industry. Yet Meridian Systems, a relatively young technology firm at the time, had already established itself as a project management software leader. Because of this, Harris purchased Meridian's Prolog® Manager software. "When Harris selected Prolog, there weren't many options out there," says IT Director Armando Diaz. "But Prolog had all the features that the company needed at the time."

Within five years, Harris grew their Prolog system from a single desktop installation to a server-based system that was used to manage up to a dozen jobs at any given time. Today, Prolog is part of a comprehensive Harris technology toolset that is deployed to various locations via Citrix. "To

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stay informed about industry developments, we have looked at other project management programs over the years,” Diaz says. “Prolog is the only program that we’ve found that meets our needs.”

A Customized Tracking Tool

“One of the great things about Prolog,” says Systems Administrator, Paul Clark, “is that it gives us the flexibility to tailor the system to our audience by turning specific features and fields on or off depending on the end-user’s skills.” For less computer-savvy individuals, Harris may turn off all but a few fields. On projects with Prolog power users, available functionality is easily expanded. “From an IT management side, the software is very user-friendly,” Diaz adds.

The company currently has 25 Prolog users, although at peak construction times that number can reach 35. Harris’ project managers and project administrators are the primary users of Prolog, who use the Cost Control and Document Management modules to manage and track a substantial amount of information, including contracts, vendor invoices, change orders, requests-for-information (RFIs), meeting minutes and subcontractor insurance certificates. “Prolog is such a great all-around tracking tool,” Sehon says.

Better Communication and Visibility

When discussing the benefits that Prolog delivers to Harris, information visibility and increased communication are common themes.

Increased efficiency. Integrating Prolog with the company’s e-mail system makes it faster for Harris to communicate with vendors, subcontractors and owners. The company has also added standardized language to documents like contracts and RFIs, which expedites and simplifies the creation of correspondence and turns previous time-consuming tasks into ones that takes less than five minutes to complete. “Tracking information in Prolog is much more efficient than keeping information in folders and spreadsheets,” Diaz says. “And the search capabilities within Prolog make it easy to retrieve information.”

Meeting preparation. Preparing for a project meeting is a prime example of how Prolog increases efficiency. “Printing a job log and other reports can be done in minutes, which is a real benefit when everyone is busy,” Diaz says. “Since the reports provide a running update of the job, a project manager doesn’t have to spend hours collecting information for a meeting. In Prolog, information really is just a few clicks away,” Clark adds.

Sehon couldn’t agree more. “Our Prolog reports are an excellent communication tool during owner and subcontractor meetings,” she says. “We use documents like RFI logs, submittal logs and change order reports to discuss outstanding items so we can move the project forward.”

Subcontractor management. Having project information documented and accessible in Prolog allows Harris to quickly respond to issues in the field. “In moments, we can pull up correspondence with a specific subcontractor to address an issue,” Sehon says. The ability to track subcontractor insurance documentation and expiration dates, for example, reduces Harris’ risk and improves job site safety. “Tracking insurance details is a big deal for us. Our logs in Prolog tell us if a subcontractor isn’t properly insured so we can take appropriate action.”



Customized reporting.

Diaz and Clark have used Crystal Reports to customize most of Harris’ reports and forms, both for aesthetics and usability. “Armando and Paul have really simplified our reports and forms by removing the information we don’t need,” Sehon says. “This makes them much easier to use in the field.”

Moving Forward with Prolog Converge

When Meridian introduced Prolog Converge, a Web-based project management application powered by Prolog, Harris saw this new innovation as their next opportunity to expand utilization of the software and further decrease the use of paper. With Prolog Converge, collaboration with project owners and subcontractors would be further improved and the ability to create role-based user interfaces would increase usability – an important factor in Harris’ ongoing efforts to improve adoption of Prolog. “We want to move away from Citrix due to cost and speed. It’s more efficient to use .NET programs and Web pages,” Diaz explains.

“We started looking at Prolog Converge as a way to improve communication with our subcontractors and reduce the amount of paper we are sharing back

and forth," Diaz continues. "Prolog Converge will allow our subcontractors to remotely respond to RFIs directly in the software, rather than responding by fax or e-mail. This should significantly reduce response times and eliminate the need for our project administrators to re-enter RFI responses into Prolog."

Harris also anticipates that, by using Prolog Converge to eliminate paper, their project close-out process will be streamlined. "At the end of a project when we are ready to create an archive, instead of having information in multiple places, we will have it all in one location," Diaz adds. "This is another reason why we are heading down the path to Prolog Converge."

Small Changes, Significant Benefits

Out of consideration for their internal user base, Harris will continue taking small steps toward change. "We only use about 10 percent of Prolog's capabilities, but the benefits we receive still surpass those we would receive from any of the competing solutions," Diaz states. "It's good to know that, when we are ready to expand our use of Prolog, our benefits will expand as well."

Harris Construction Project Profile

Construction of the Clovis North Education Center located in Fresno, California



Harris Construction served as the construction management firm during construction of the Clovis North Education Center in Fresno, California. The 100-acre project included construction of two schools, Granite Ridge Middle School and North Clovis High School, along with common areas and shared athletic facilities, and took two-and-a-half years to complete.

Key Project Elements

- › Construction of two schools with common areas and shared athletic facilities on a 100-acre educational campus
- › Technology labs
- › A concert hall
- › Separate gymnasiums for middle and high school students
- › Roadway improvements to provide easier access to the Center



Project Cost: \$131M

Project Architect: Darden Architects, Inc.

Completion Date: August 2007

Results: The Clovis North Educational Center opened in August 2007, just in time for the 2007-08 school year. The culture of the campus supports the core values and beliefs of the Clovis Unified School District, which include cutting edge curricular and instructional innovation, and is designed to provide a seamless, focused and dynamic 7th through 12th grade educational experience.



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