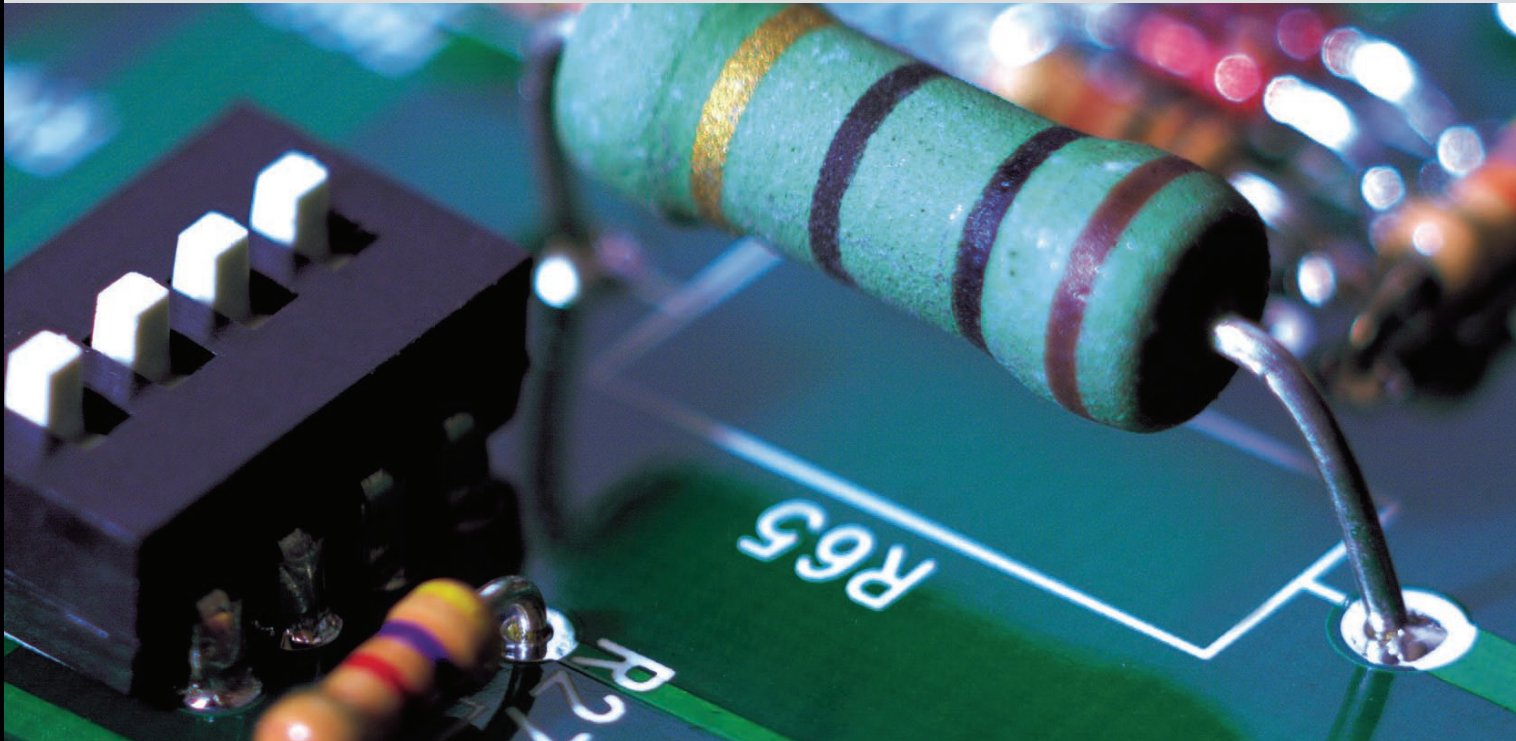


Freescale Semiconductor and Primavera: A Single Source of Truth

Project Management Highlights:

- Project Management Office established based on Primavera
- Primavera system provides needed flexibility to manage different development techniques employed
- System integrated with Siebel and SAP
- Consistent time savings and reduction of redundant work now possible



David Rose likes to use the phrase “a single source of truth.” As operations manager for Freescale Semiconductor Inc., it’s his job to ensure that his division’s project management system is providing accurate, up-to-date and easily accessible information to all stakeholders: engineering, HR, finance, marketing and executive management.

To that end, Rose is heading up an ambitious project to integrate Freescale’s Primavera implementation with LaborLogix, Siebel, SAP and other internal systems. The multiphase project, now well underway, will improve project management processes, reduce redundant tasks and deliver that elusive “single source of truth.” The result should be better resource management, more informed decision making, improved response to customer demands, and higher profit margins in a fiercely competitive market.

Silicon sizzle

Rose works in the Development Technology Organization, or “DevTech,” of Austin, Texas-based Freescale, which has been designing and manufacturing computer chips since 1953. Originally part of Motorola, the company was spun off in 2004, when it saw \$5.7 billion in revenues, placing it among the top 10 chipmakers worldwide.

Freescale produces silicon for the automotive, computer networking, wireless and telecommunications industries. Its products wind up in everything from BMW sedans, where they control things like braking systems and power windows, to Motorola cell phones, where they power features such as games and color graphics. The DevTech organization – until recently a subsidiary called Metrowerks – makes “silicon-enablement” tools. Its flagship offering is the CodeWarrior

suite of software development tools. DevTech's products enable Freescale customers to get chips to run faster or use less power or support snazzier features.

Flexible development

Rose joined the company seven years ago, at about the time it established a Program Management Office (PMO) and deployed Primavera software. "We had been using Microsoft Project and Access," Rose says. "We needed a best-of-breed, integrated solution to get control of commitments, resources and deliverables."

Rose and his team use Primavera to manage the portfolio of projects for creating and enhancing the tools DevTech produces. "As Freescale silicon is developed, we have to continually adapt our tools," Rose explains. "We have about 40 ongoing projects at any time, with about 160 releases per year." DevTech has settled on a kind of hybrid approach to project management. At a strategic level, "we continue to weigh whether we want to be a functional or a projectized organization," Rose says.

A functional organization is one in which all workers with a particular skill, such as engineering, are grouped in a single department and report to a single manager. A projectized organization, on the other hand, segregates key resources into a dedicated team focused on individual projects.

"When you're projectized, project managers have better visibility into budgets and better control of resources," Rose observes. "In a functional organization, you don't have as much visibility or control. A tool like Primavera can help, but there's a tradeoff, because you can spend too much time in the project management tool."

Likewise, DevTech has debated over a waterfall versus a spiral software development model. A waterfall model is more conventional for software development, consisting of a series of steps typically defined as analysis, design, construction, testing and implementation. In general, one phase doesn't start before the preceding phase is finished.

A spiral model combines the waterfall life cycle with a prototyping model in which an early approximation of the final system is built, tested and fine tuned until a prototype is achieved from which the final system can be developed. The spiral model is often favored for large, complex projects.

"We try to stay away from a waterfall model," Rose notes. "We need flexibility to adapt to changing customer needs. We develop to a certain point, validate that with the customer and then update the requirements based on their feedback. Only at the end of the process do we use a waterfall model."

Fortunately, Primavera gives DevTech flexibility in how it manages projects. "We can be functional or projectized, we can use a waterfall or a spiral model," Rose says. "The team can use predefined templates, as well as project, activity and resource codes, and then determine how they want to develop the project."

Closer to the source

Primavera has proved a valuable tool for the 400 people who are part of DevTech. Project managers can use the entire suite, while other stakeholders can access Web-based Primavera data.

But Rose and his PMO cohorts had been spending too much time capturing data in Primavera and disseminating it to HR, finance and executive management. They needed a way to extend that single source of truth to the entire organization, with timely access to data, robust analytics dashboards, and consistent reporting and measurement.

The solution? An easy-to-use interface that enables all stakeholders to access Primavera data "without having to know the ins and outs of Primavera," Rose says. "HR and finance can get the information they need directly via the new interface, without having to poll engineers and managers. Project managers can manage their key milestones more easily, so they spend more time managing their projects and deliverables and less time in the software."

That goal will be reached in three phases:

Phase I: Primavera/LaborLogix integration – The first task was to "take the thinking out" of accessing Primavera data. To that end, DevTech worked with LaborLogix, a maker of project applications and a Primavera Premier Technology Partner, to help develop an executive interface that rides on top of the Primavera database.

The team reviewed existing business processes and identified requirements of a dashboard system. They analyzed how

resources, projects and activities were coded and came up with detailed business rules that drove the requirements for the implementation. They fed the results into the LaborLogix visualization and analytics engine, which automatically generates the output Rose provides to stakeholders.

Now, users can access the information they need by role, such as project management, HR, finance and executive management. Stakeholders can get weekly metrics reports or monthly operations reports that show details on headcount, resource allocation and use, and key project milestones. There's no need to set up a portfolio or interact with the database. "Information is available in real time, all the time," Rose reports.

Rose is in the last beta stages of Phase 1 evaluation and expects to implement final changes soon. "When we deployed it, we had immediate visibility into our project portfolio and resources, along with status against official baselines and stoplight charts based on business rules we defined," he says. "The information is right there, and everyone can trust that it's accurate."

Phase 2: Defect-tracking integration – Rose has already started planning the next phase, in which he'll integrate Primavera data with defect tracking. Currently, engineering defects are tracked in a Scarab database, while customer-reported defects are captured in Seibel. "By integrating these sources, we'll get a clear picture of what we're delivering to customers, without having to interact with various databases," Rose says.

Phase 3: Financial data integration – The final phase will integrate financial data from SAP and Great Plains databases. This will give DevTech a better view of financial metrics such as internal rate of return.

Delivering tangible benefits

Looking ahead, DevTech plans to upgrade to Primavera 5.0. "And I'm excited by what I see coming in version 6," Rose says. There's also interest throughout Freescale in replicating the project management success of the Development Technology organization.

The Primavera integration project is already delivering tangible benefits. "The integration has saved considerable time and avoided redundant work," Rose says. "We don't waste resources in meetings or generating PowerPoint presentations. We can trust the data, and we have a single source of truth." Beautiful.

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