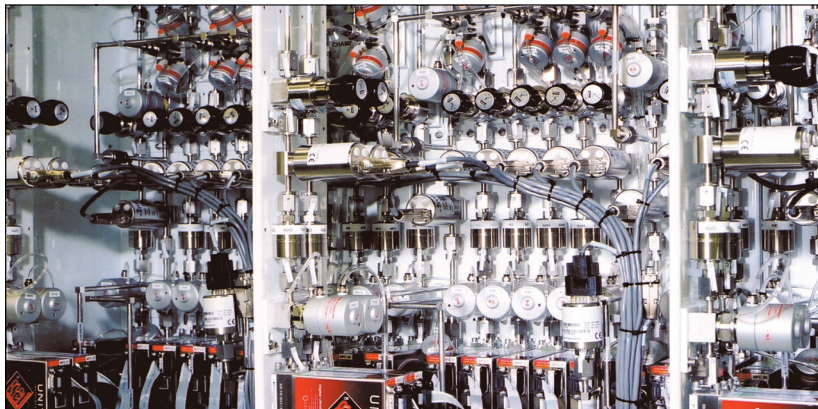


High-tech module manufacturer Celerity creates data synergy with SMARTEAM



"With SMARTEAM, we have a centralised database that replicates all the data every 10-15 minutes among three different sites. It provides the engineers with a way to view the exact same data at each site." – Vince Brown, Project Manager, Celerity

Highlights

- *Multiple computer aided design (CAD), bill of material (BOM) and enterprise systems with no central database led to duplicate data versions, resulting in inconsistencies, errors and unnecessary rework*
- *SMARTEAM's centralised data management and multi-CAD capabilities keep everyone in synch and working off the same document versions*
- *Revision handling is now simpler and faster, errors are reduced and the costs of excessive rework and duplicate part creation due to data inconsistencies have been eliminated.*

SMARTEAM solves manufacturer's data dilemma

Celerity is a leading manufacturer of gas- and chemical-delivery process modules for manufacturing semiconductors, biopharmaceuticals and other industrial products requiring high precision and control. But with development staff spread across three major sites, Celerity faced a challenge common to many manufacturers: the difficulty of ensuring that everyone everywhere was working off the latest available data.

This challenge was further complicated by Celerity's multiple CAD softwares. With no central database or common data format,

projects were slowed by the need to constantly translate data from one system to another while trying to keep track of which version was which.

Version variation wastes time and money

"Before SMARTEAM, when two or three of our sites were working on the same assembly, some of the components in the assembly could change," said Vince Brown, Project Manager for Celerity. "Site A could have one revision and Site B could have something totally different. Neither would know since the data was not in one central location. Without really good communication between the sites, something could possibly be left behind."

The challenge was especially frustrating for Celerity's 3D modelling group, which needed much better control over pre-production data. The native PDM system initially implemented by Celerity for production data made handling revisions cumbersome and unwieldy, resulting in excessive rework and costs for duplicate part creation and administration.

Every workstation is a database

"Under the old system, engineers had to write ECOs and go through an approval cycle for a simple part that might never be built," Brown said. "As we dove deeper, we found we didn't have a central location for a lot of our R&D and pre-production work. We did not have an efficient way to track specific pre-production data. We needed to get the documentation from the local work stations and from various servers in our different business units to one central location."



Brown knew that what Celerity needed was a top-notch PDM system, but his initial research didn't seem promising. "One PDM system we looked at didn't work well with certain CAD applications. Another worked well with one but was not very efficient managing another, and so on. One didn't work with parametric models and another didn't control parent-child relationships."

SMARTEAM multi-CAD to the rescue

Then IBM Business Partner MSC Software introduced Celerity to SMARTEAM. SMARTEAM has the ability to control revisions and to view 250 file formats, including all of Celerity's CAD applications, in their native formats. By pulling all of Celerity's data into one database, SMARTEAM helped Celerity reduce the errors caused by inaccurate or out-of-date documentation, realising a major cost savings.

Implementing SMARTEAM also led Celerity to better standardise its data processes, creating more synergy among its various locations.

"Even though we're the same company, we have slightly different processes on how we conduct our businesses," Brown said. "To finish our SMARTEAM implementation, we had to change some of our processes to accommodate each group. Now the processes are more uniform across the board. The changes in our processes weren't driven by SMARTEAM, but the recognition that there were differences between our different sites and SMARTEAM allowed everybody to conform to a higher standard."

Centralised data protects IP as well

Since implementing SMARTEAM, Celerity also has realised its contribution to preserving the company's intellectual property. "Without a centralised PDM system, each site had a database and each engineer had their own private library on their hard drive," Brown said. "If an engineer left the company or had problems with their workstation that wiped out the data, it was irretrievably lost. The lost manpower hours were enormous. The best thing about SMARTEAM is its ability to centralise our pre-production data, and the fact that it facilitated collaboration between our different sites and customers."

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