



### ***Flying High***

## **Boeing Selects Teamcenter from UGS as its Enterprise Data Management System**

By Monica Schnitger

July 20, 2006 -- UGS announced on July 17 that Boeing has selected Teamcenter as its enterprise data management system, meaning that current and future programs within Boeing's commercial and military divisions will standardize on Teamcenter. While this is not a contract win that immediately funnels license and services fees to UGS, it is an important endorsement by Boeing's PLM czar Dave Fennell of Teamcenter, of UGS' commitment to openness and its ability to service very large installations of its Teamcenter product.

Boeing is (pardon us) flying high. The company says its order book exceeds that of rival Airbus due to strong demand for Boeing's mid-size 787 and 737 planes. Boeing sees a rosy future in commercial aviation, saying that about \$2.6 TRILLION in new commercial airplanes will be delivered over the next 20 years. This will double the commercial fleet to nearly 36,000 planes by 2025—many of which, it hopes, will be built by Boeing. Commercial aircraft currently make up around 40% of Boeing's business overall but Boeing looks to make this at least half of its revenue going forward. The other 60% of Boeing's total revenue comes from military aircraft, weapons systems, satellites and other defense-related projects. In total, Boeing had revenue of \$55 billion in 2005, almost one and a half times that of nearest rival, EADS Airbus.

### **But back to the announcement**

Boeing was an early adopter of Teamcenter's predecessor product, Metaphase. In 2000, when it was looking for a commercial alternative to its internally developed bill of materials (BOM) system, the Boeing Commercial Airplane Group (BCAG) selected SDRC's Metaphase to be its primary BOM repository. At the time, Boeing representatives told Daratech that Metaphase won the benchmarks because it met Boeing's criteria for a product that was standards-based, could be rapidly implemented and easy to use. After a successful pilot, BCAG expanded the implementation to include as many as 40,000 users of the new Define and Control Airplane Configuration/Manufacturing Resource Management (DCAC/MRM) system, the internal Boeing name

for the Metaphase implementation. BCAG felt that this implementation provided a way to update both the legacy and new BOM repositories, easing the transition from the legacy Boeing systems to the DCAC/MRM system. According to Boeing at the time, this "enable[d] Boeing users to work with one interface—the Web—and thereby greatly simplify data management." Boeing reports that today there are about 30,000 Teamcenter users at BCAG, making its UGS' largest installation in the aerospace and defense markets. It also important to note that BCAC is reported to have 15,000 engineers. If this is true, half of all Teamcenter users are in other parts of BCAC.

Clearly, the success of this implementation in BCAC led to the announced expansion into the military part of Boeing's business. While no exact numbers were given, if there are currently 30,000 users on the commercial side, and the defense business is larger, it is likely that there is potential for another 30,000 Teamcenter seats within Boeing.

On the defense side, the first program to migrate legacy data to Teamcenter is the Joint Direct Attack Munition program (JDAM), which develops a low-cost kit that converts existing unguided free-fall bombs into accurately guided "smart" weapons. This program began in the mid-1990s and, since 1998, Boeing has produced more than 120,000 JDAM kits. JDAM highlights the reasons, according to UGS, that Boeing chose Teamcenter: an open platform and scalability.

Other programs that are expected to migrate to Teamcenter include the C-17 military-transport aircraft, the second-generation Global Positioning Satellite system (GPS II), the Super Hornet fighter jet, the F/A 18 E/F and the Boeing Satellite Design Center. Having all programs on one data management platform will allow Boeing greater flexibility in staffing, enhance collaboration and promote data reuse.

### **So what does this really mean?**

It appears that there is no immediate revenue impact to UGS, but it is clear that UGS expects to see incremental license revenue as Teamcenter is rolled out to more programs within Boeing—and that Boeing is signaling its supply chain partners to consider Teamcenter as their own data management backbone. The Department of Defense is increasingly asking suppliers to use a standard platform across an entire program to make support easier in the field, so it would seem to make sense that Boeing will favor suppliers also using Teamcenter. But even if Boeing does not mandate the use of Teamcenter, this announcement gives UGS a welcome endorsement and easier access to prospects. For example, a consortium that included Boeing, Northrop Grumman, GE Aircraft Engines, Raytheon and over 1,500 suppliers in the United States and Canada built the Super Hornet fighter jet, the F/A 18 E/F. UGS counts all of the majors among its customers today, and will now likely have the opportunity to expand its footprint in these accounts as well as gain easier access to literally thousands of suppliers.

Too, there is the services component of migrating so many other programs to Teamcenter. It is also likely that UGS and its systems integrator partners, in conjunction with Boeing, will be involved in planning and executing these migrations. UGS clearly hopes to see a

significant bump in both license and services revenue as these programs retire their legacy systems in favor of Teamcenter.

### **The fallout**

Needless to say, the announcement by UGS led to a flurry of spin from UGS competitors—and one press release from Boeing. Competitors want to make sure that analysts do not jump to the conclusion that they have been dealt out of the Boeing account. And this is true. Daratech sees this announcement as an affirmation of the status quo and the lifting of any doubt about the solid and long-term nature of Boeing's commitment to Teamcenter as a keystone of its PLM strategy.

Indeed, Boeing itself issued a release confirming the status quo as part of a larger statement about the progress of the 787 program at the Farnborough air show.

So what does this mean? That Boeing, like every other large, complex manufacturing company finds it difficult to find one solution provider that meets all of its needs. The relationships between supplier and buyer are complex; perhaps Boeing allowed UGS to issue its news as a way of pressuring its other suppliers to do something they were reluctant to do. Perhaps Boeing seeks to create a more competitive environment in PLM. But it is very interesting that the intense rivalry between suppliers can cause the customer (yes, Boeing is the customer here) to have to appease its suppliers.

Ultimately, the news belongs to UGS. Teamcenter will form the data management backbone for all future programs in Boeing's commercial airplane, defense and space programs as well as many programs currently underway. Right now, this is bragging rights; it should turn into revenue as more programs migrate to Teamcenter. According to UGS and Boeing, Teamcenter will manage all bill of material data for these programs, and the companies are investigating the implementation of other Teamcenter application areas such as maintenance, repair and operations (MRO) and supplier relationship management.