

Goal:

To implement an alternative, customer-oriented software solution that is situated between ERP-standard and tailor-made software and based upon a component-based, personalized system solution.

Challenge:

To meet specific manufacturing requirements in ERP systems – quickly and at low cost.

Solution:

Cincom Smalltalk™

Benefits:

- Excellent technical foundation for the modeling of business processes.
- Flexible and open framework for ERP tasks.
- Transparent, supple tool with technical orientation.
- Short development times for browser frontends. Using Smalltalk server pages, internet-based inventory inquiries can be programmed within just a few hours.
- Compact ERP objects ensure high efficiency.
- Dynamic data model that is independent of the database scheme.
- Strong identification between development teams and developed results.

Profile in Success: **CS Component Studio**

CS Component Set

A solution for all ... but not always the same



CS Component Studio GmbH (based in Rimpar near Würzburg, Germany) uses the Cincom Smalltalk development environment for its strategic product CS Component Set. CS Component Studio provides customer-specific ERP solutions for companies that require broader functionalities than standard ERP systems traditionally provide.

Using the Framework CS Component Set, medium-sized ERP specialists have a broad, flexible, and extendable component base to satisfy the requirements of mechanical-engineering and manufacturing enterprises. Highly complex ERP applications can be developed quickly and at low cost compared to tailor-made software. CS Component Studio employed this solution to achieve a significant competitive edge and open up a whole new market segment using Cincom Smalltalk.

The software market for Enterprise Resource Planning (ERP) provides standard systems for many typical applications in traditional mechanical engineering. Highly specialized manufacturing procedures as well as highly personalized products, however, require customer-specific software solutions. With its ERP-framework CS Component Set, a component-based, personalized system solution, CS Component Studio proves that this bandwidth offers a reasonable business alternative between inflexible ERP standard systems and expensive tailor-made software. Wherever possible, the ERP system will be designed using proven standard components. Individual user requirements determine how many specific ERP components must also be developed. The modular structure ensures that these specifically programmed ERP systems are extendable and open to all current and future standards.

Smalltalk at CS Component Studio

CS Component Studio GmbH emerged from a cooperation between the Dutch software house, Amsterdam-based Soops b.v., and the management team previously associated with the former CAI Systemhaus GmbH. This cooperation resulted in the development of one of the largest object-oriented software libraries in Europe. Not only can both companies now serve their customers even more efficiently, development times and cost can also be optimized.

"Cincom Smalltalk lets us provide economical and technologically effective solutions for complex ERP problems."

– Doris Müller, Development Director

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FORM CS010712-1 3/08

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Smalltalk for Object-Oriented Component Systems

According to CS Component Studio, the main advantage of Smalltalk versus hybrid programming languages such as Java or C++ is that Smalltalk is an object-oriented language. This means that its software development is also strictly object-oriented. Software components and modules are the elements of the ERP component system that are used to map the relevant business processes of typical modern manufacturing enterprises.

At CS Component Studio, a major challenge in ERP development using Cincom Smalltalk was the new way of "thinking" – i.e., strict object-orientation. The Smalltalk programmers now completely identify with "their" technology. Above all, they design their development tools themselves!

New Market Segment with Cincom Smalltalk

The ERP framework's Smalltalk basis provides high flexibility and speed for CS Component Studio so that they can support customer requirements, which sometimes do not become apparent until after the start of the project. Strict object orientation ensures that all kinds of modifications can be implemented quickly and smoothly. Thus, developers and customers can create and customize the ERP system in an iterative way. Taking part in the customized product-development process makes it much easier for users to sign off on the system and to accept the completed program as "their own system" – a simultaneous "win-win-win" situation for the ERP specialist, the customer, and the user!

Smalltalk helped the system house to significantly improve its efficiency at a time when none of its direct competitors used the same technological approach. Georg Walk, CS Component Studio Managing Director, explains: "We've opened up a whole new market segment with our Framework CS Component Set: large companies looking for a tailor-made ERP solution, as well as smaller companies with extremely specific requirements."

Two powerful tools are available in order to meet the customers' requirements in an efficient way. CS Component Set comprises a dynamic architecture for data modeling, which does not require a close connection with the selected database. This means that modifications to the data model can be smoothly implemented during operation. The integrated workflow solution ideally complements the dynamic data model. In order to guarantee that all procedures within the business processes provide the same dynamics, all factors that affect the process are maintained within the database. This ensures that the application can be modified without changing the program code.