RPC Supports ERP Channel Partners with Eclipse

"Eclipse gave us a robust and flexible application framework. It let us focus on the business logic and not building a workbench from scratch."
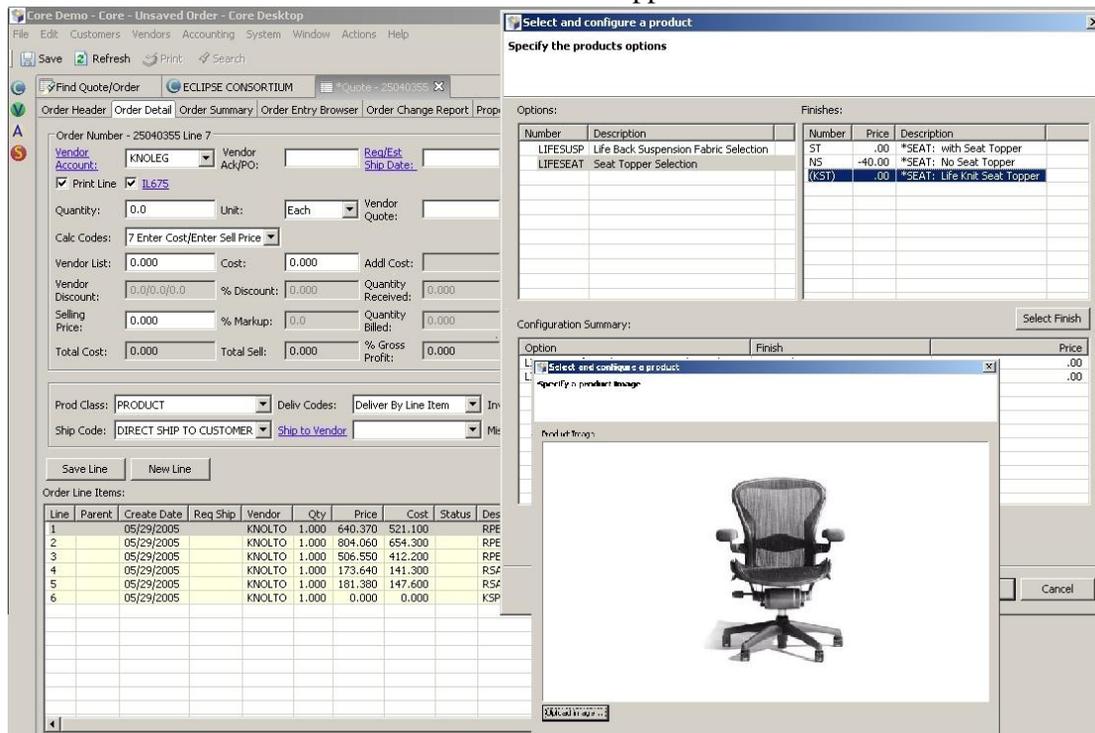
When RPC Software of Chicago was approached to provide Enterprise Resource Planning (ERP) software for a contract commercial furniture supplier, they thought they would find an open source project to use as a starting point.

But a careful look at available

business architecture that would allow easy development of industry-solutions beyond furniture supply-chains, they needed a platform more than a single-purpose code-base. Jon Smith, president of RPC Software explains that "our business model was to develop a framework that ASPs and vendors in specific industries such as tier-2 warehousing, office supplies and construction could license to rapidly

RPC's Core ERP solution platform includes modules written as Eclipse plug-ins for a wide range of business functionality.

projects uncovered no suitable initiatives. Since RPC not only wanted to solve their client's immediate problem, but also to create a flexible

assemble solutions from RPC-supplied building blocks."

To meet the immediate challenge of providing order management software for the furniture supply industry, while building a solid technology basis for their business model, RPC Software explored technologies for building a business framework.

An Enterprise-ready Approach

Since ERP demands user interaction, processing and calculations on large amounts of data, a server-based design was inappropriate. They briefly looked at C# for a desktop solution, but it was in its infancy. NetBeans and Swing, although capable technologies for less ambitious applications, lacked the native look and feel and performance that the Standard Widget Toolkit gives Eclipse on every platform. The cross-platform nature of Eclipse also gave them the flexibility to support channel partners and end users in industries where Windows is not the standard.

RPC Software found Eclipse very easy to get up and running with. Smith relates that they had outsourced some of their development to India,

TIME SHEET

Day	Location	Rate	FMAN	Time In	Time Out	S.T.	O.T.	D.T.	Total Hours	Total Pay
Friday	CALIFORNIA	37.50	0.00	11:00:AM	01:00:PM	2.00	0.00	0.00	2.00	75.00
Wednesday	CALIFORNIA	37.50	0.00	08:00:AM	05:00:PM	9.00	0.00	0.00	9.00	337.50
Wednesday	CALIFORNIA	37.50	0.00	09:00:AM	02:00:PM	5.00	0.00	0.00	5.00	187.50
Wednesday	CALIFORNIA	37.50	0.00	02:00:PM	04:00:PM	2.00	0.00	0.00	2.00	75.00
Thursday	IVANA TRUMP	37.50	0.00	07:00:AM	05:00:PM	10.00	0.00	0.00	10.00	375.00
Totals	2 Locations					28.00	0.00	0.00	28.00	1050.00

RPC Software's CORE includes a wide range of Eclipse-based modules for ERP-related activities.

and that it only took these new developers about two weeks to get up to speed on the framework.

Building a Solid Core

The whole Eclipse plug-in philosophy, that software should be modular and flexible, has been key to making RPC's CORE product – and their whole business model – a reality. They work extensively in the Eclipse-supplied Plug-in Development Environment (PDE) to develop custom plug-ins and extension points, interfaces

that allow plug-ins to be extended by other plug-ins. Customizing their framework to meet customer needs is fast and simple using the plug-in approach. They can add additional customer-specific functionality using easily managed plug-ins.

Because the code in plug-ins can be isolated, testing is much simpler, and they can manage code changes without the risk of impacting other functionality. In fact, testing had been the bane of RPC's existence, consuming significant time and resources. The Eclipse Test and Performance Tools Platform (TPTP) has helped speed development by streamlining the quality process. As Smith explains "TPTP's monitoring, tracing, profiling and testing tools give us a very robust cradle-to-grave solution."

RPC's developers also found it easy to support Apache Tomcat, using the SWT browser widget to display pages within CORE.

Supporting Business Content

The Eclipse Update Manager is another key component for RPC's strategy of building a generic ERP framework that channel partners can customize for their vertical markets. Not only does the Update Manager make it easier for RPC and partners alike to maintain deployed software, it also enables easy content publishing. As Smith explains, "ERP systems commonly integrate with parts catalogues and other business data that change frequently. Using the Update Manager, we can push content updates to desktops quickly and inexpensively, allowing our clients to be more responsive."

Smith estimates that the first release of their CORE product, which took fourteen months, would have required thirty months without Eclipse. Having so much of the underpinnings for the framework development in place, and

such a rich set of components to choose from, has let them develop functional software faster. "Eclipse was the right tool for the job. It not only enabled the CORE software architecture, but gave us the technology framework for our business model of licensing CORE to channel partners."

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