

Accelerating RosettaNet

Linear Technology uses a Microsoft beta to put Arrow Electronics online.

By Philip Burgert

Taking first steps into electronic commerce through electronic data interchange or Extensible Markup Language is not always seen as being the easiest process. And despite its reputation as being among the top manufacturers of electronic components, chip maker Linear Technology Corp. was also among the companies that took longest to get going with an online supply chain.

"We'd actually been looking at various EDI implementations for years here and we never were really comfortable with it," says David Quarles, vice president of international sales for Milpitas, Calif.-based Linear.

But earlier this year, the \$1 billion-per-year maker of high-performance integrated circuits took less than 12 weeks to implement online trading using XML with distributor Arrow Electronics Inc. Linear's implementation is described as one of the first beta deployments of software giant Microsoft Corp.'s BizTalk Server Accelerator for RosettaNet. Redmond, Wash.-based Microsoft first announced its accelerator in April, and is releasing the product this fall.

RosettaNet is a consortium of more than 400 companies, including leading information technology and electronic component developers, working to create and implement open e-business XML standards.

Linear channels about a third of its daily orders and almost all of its North American distribution through

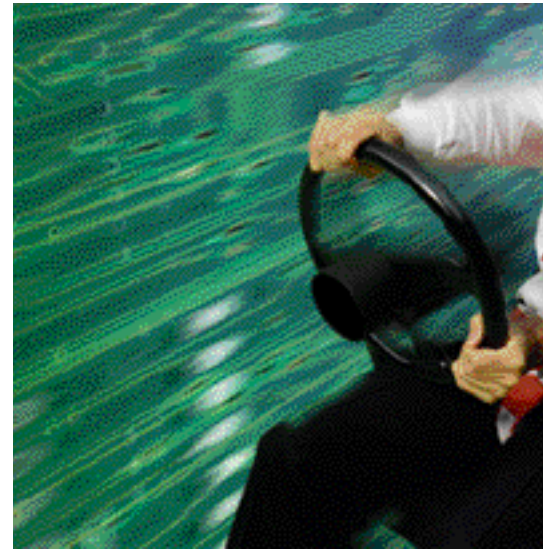
Melville, N.Y.-based Arrow, which claims to be the world's largest distributor of electronic components and computer products.

Systems integrator Syncata Corp. of El Segundo, Calif., completed the XML-based RosettaNet deployment for Linear in 90 days. Syncata was engaged to automate the flow of purchase orders and order status between Arrow and Linear as well as the subsequent introduction of orders into Linear's back-end systems.

"Vendor selection was actually kind of the interesting phase for us because it was a pretty long process," Quarles says. "We really put a lot of effort into it toward the beginning of this calendar year. And we saw kind of two different paths to go down."

The first path was to use traditional EDI vendors like Peregrine Systems Inc. or Sterling Commerce, a subsidiary of SBC Communications Inc., which were investigated as possible out-of-the-box solutions that could be tailored for Linear.

"We weren't really comfortable with that," Quarles says, noting that the main reason was Linear's desire to keep internal processes. "We just wanted to make things more efficient. So when Syncata came along and they said that they could make a custom solution based on the Microsoft platform and do a lot of customization to keep our internal processes, that's really what tilted the scale in their favor and why we chose them."





Quarles notes that the cost of similar products from traditional EDI vendors can be close to \$100,000 with a year of maintenance. Microsoft's software was about a tenth of that cost, he says. "That was the big advantage that we saw going with Microsoft, and Syncata was able to be the glue around it to make sure that the system that we built really fit into our internal processes," Quarles says. "So it's a best of both worlds."

Scoping of the project, which started in March, involved interviewing personnel at Linear and gathering information on requirements and business processes. Syncata also initiated talks with Arrow to integrate the distributor into Linear's automated processes, working with an Arrow team that had been involved in a number of supply chain automation and RosettaNet implementations. "Arrow is committed to providing whatever our suppliers and customers need and moving forward with electronic technology to support the business changes," says Pamela Webber, Arrow's senior manager of application development.

Arrow had lots of experience with RosettaNet and was among the first to implement the automated purchase order management process for RosettaNet early last year. Since then, the company has implemented several partners with RosettaNet Partner Interface Processes, or PIPs, in the purchasing and logistics areas.

PIPs that were implemented in the initial project included numbers 3A4, or purchase order management, and 3A7, which is notification of purchase order acknowledgment. "When Linear came to us, it was a natural fit for us to help them with the technology," says Webber.

Among the criteria for the project were speed of implementation and time to market as well as reasonable cost and scalability. Linear was also in the process of going from two national distributors to one at the time the implementation was undertaken. "I'm now the only guy he's got. He's putting all the eggs in my basket. There's no margin for error. You've also got this declining market," says David Powers, corporate supplier manager for Arrow. "We had 90 days and there was only going to be one way this would work. This was pass-fail and fail was not an option."

The challenge was linking BizTalk server to legacy systems.

The Linear-Arrow project is called the first step in automating and improving efficiency throughout the entire Linear sales and marketing department. The company is also planning to link up both external partners and a number of internal systems. Linear was looking for a platform that would provide a base for future phases and ended up looking at Microsoft's BizTalk solution, which provides a flexible framework that can be extended.

Syncata's executives found that the RosettaNet accelerator was a product that was likely to be fairly easy to implement, providing something like an out-of-the-box solution for RosettaNet. "Really what we needed to do was assess that and work out exactly what we needed to change in order to fit in with Linear," says one participant in Syncata's effort. "Because of the flexibility

within BizTalk, we didn't have any problems with that."

In any month, Arrow processes orders or updates files for more than 3,000 part numbers for almost 4,000 Linear customers in North America. Most sales are under \$1,000 per order and are processed through one facility with less than a dozen employees in Denver.

"I would say that the leap forward that this now provides me is that I now have automatic updates to the current order status that are visible for all users to see 24-7," says Powers. "The manpower that had been handling that was stretched, but it wasn't real time."

Before the implementation, it would take Linear two to five days or even longer to process an order. "We entered it into internal systems, and then we re-entered it into other internal systems after doing some more checking on it," says Quarles. "With this new implementation, I would say almost all of our orders are entered in less than a day now."

"If you consider that it's taking Linear Tech upwards of one week to enter that data, there's probably an additional week it takes that information to be collated and then transmitted for me to post it," says Powers. "So I've gone from two weeks behind in this process to within 24 hours for the vast majority of it."

"The gray hair index is way down," he adds. "The smoothing out of the information flow has just been incredible."

In the future, Linear would like to start exchanging inventory information with Arrow and use a supplier-initiated PIP that is currently under discussion for exchanging information on scheduling changes. "Right now, we're really at stage one and it's really just the basics," says Quarles. "It's just accepting orders. But we'd like to exchange a lot more information with them in the future." ^{E_CW}

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