

## Business Objects

### Delivering Electronic Commerce

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Discussions of electronic commerce usually focus on technology, plying the myth that “two bits and a cup of Java” will launch any business into the electronic marketplace. But technology does not produce the real value in electronic commerce. *It is an enabler.*

Success with large-scale electronic commerce depends on being able to deliver innovative business solutions to customers and suppliers over the Internet. The electronic-commerce juggernauts of the this decade will be companies that plug-and-play in virtual corporations as opportunities arise, that network-enable their core business processes rather than their sales order forms, that shatter the traditional corporate and applications boundaries by delivering demand-driven value chains rather than inward-looking point solutions.

#### What is Electronic Commerce?

In my usage, *electronic commerce* refers to transacting business between people and companies in a wide-area distributed computing environment – usually the public Internet. This rather broad definition encompasses such diverse implementations as:

- Touch-tone telephone ordering or information retrieval services
- Touch-tone or computer dial-up banking and bill payment
- Placing order via web sites or b-boards
- Internet “shopping malls” or on-line catalogues
- Electronic distribution of software
- Information content services – news, books, magazines, music, movies
- Electronic data interchange (EDI)
- Internet-based value chain integration between companies

Excepting the last two items, these are simply electronics-assisted variations on ordering, delivering and paying. EDI is different. It integrates applications point-to-point. Value chain integration is very different. It integrates entire businesses, possibly in very non-linear ways. So the full spectrum of E-commerce extends from telephone-driven ordering to virtual corporations that exist only in Internet-space.

#### Large-Scale E-Commerce Requires:

- **Net-Readiness – being technology enabled**
- **Business-Readiness – having a well-defined business model**
- **Organization-Readiness – having the capabilities to deliver and manage the business model**

#### What is Value-Chain Integration?

Value-chain integration involves connecting businesses at the business process and business component level. A supplier’s demand-filing processes must integrate seamlessly with its consumers need-generating processes. Plans are shared so that demand is anticipated. Needs are met as demand is generated, so large inventories of raw materials and finished goods become unnecessary. Orders are inferred from projected demand moderated by actual consumption. Payment processes dovetail with billing

processes, with cash flow managed to minimize total cost of handling funds.

Value chain integration is important because global businesses are selling 24-hours each day, every day. Business transactions arise and close faster. Companies select suppliers with more regard to quality and margins, less to location. Shrinking margins demand faster response and lower cost-per-transaction (i.e. sale, order, shipment, billing). Electronic commerce leverages global distributed public networks to move faster, reach farther, work smarter. Value chain integration elevates electronic commerce from order forms to a focus on critical business processes. Integration of business processes across supplier-consumer boundaries is a prerequisite for substantial competitive gains.

### **How is this Integration Implemented?**

High levels of business integration in an networked electronic business environment require a componentized view of business – both in business operations and software implementations. Business people describe their plans, operations and metrics in terms of components. Systems implement these components.

Business objects are a well-known approach to business componentization. Business objects capture the people, places, things, concepts, processes and events that comprise every business. By engineering business processes specifically for business-level plug-and-play, and implementing these processes business objects and their component (business object) parts as servers in a securable, transactionable, manageable distributed computing environment like that specified by CORBA IIOP, businesses can integrate value chains through information technology.

Various approaches have been taken to identifying, engineering and implementing business objects. One such approach is *Object-Oriented Business Engineering*<sup>™</sup> (*Oobe*<sup>®</sup>), which is based on the notion that many central business objects – and in fact entire sub-assemblies of business objects – are common between businesses irrespective of industry. This business-patterns-based approach ferrets out the key elements of business processes – the points of connection between value chains that are exposed to integrate value chains. These key business components become the pillars of large-scale E-Commerce implementations.

### **Conclusions**

Technology provides the delivery platform, the enable for sophisticated electronic commerce. Business objects provide the component view of business. Business object engineering approaches provide the mechanism to engineer pluggable business processes and transform them into software components. But the bottom-line value comes from the value chain integration delivered out of such mechanisms. Practiced at this level, electronic commerce is not simply the marriage of glitzy technology with traditional business. It is a challenging rethink of the boundaries, processes and interfaces that define companies and their competitive value-add.

Robert E. Shelton is President & CEO of Open Engineering, Inc., a San Francisco-based consulting firm specializing in business objects, business engineering and electronic commerce. He is Chair of the OMG Common Business Objects Working Group. Shelton will speak on E-Commerce at Object World West, and may be reached by email at [rshelton@openeng.com](mailto:rshelton@openeng.com) with comments or questions.

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