

EDI and Darwin—Survival of the Fittest

If you would have asked a B2B practitioner in 1998 whether EDI would still be in use ten years from now, chances are high that he or she would have predicted no. With the emergence of the Internet and new XML technologies, EDI was sure to be replaced by “newer, better, more powerful” e-commerce standards. Yet, as we approach the halfway point in 2008, EDI continues to be the dominant standard in B2B globally. Not only does EDI remain popular, but its use is growing more accepted, not less. For example, Microsoft recently added an EDI adaptor to its BizTalk Server 2006 R2 product to make its integration platform more competitive in the B2B segment.

Forrester Research published a study last year titled “B2B Integration Trends: Message Formats” in which they estimated that 85-90% of all B2B transaction volumes are based upon EDI. This is consistent with transaction reporting GXS conducts on GXS Trading Grid® as well. The “newer, better, more powerful” XML standards are growing quickly but remain, at best, 15% of transaction volumes.

EDI’s dominance is a subject that mystifies many outside of the industry. How does a technology dinosaur such as EDI manage to remain so popular and prevalent through an era that has witnessed the birth of unprecedented levels of disruptive technology? If Charles Darwin were alive today he might enjoy studying the characteristics that have led to EDI’s survival despite the introduction of genetically-superior species to its ecosystem.

Six Survival Characteristics of EDI

There are six factors, in my opinion, that lead to the continued prevalence of EDI as the world’s dominant e-commerce standard:

1. **EDI is mature.** It has been in use for over 20 years resulting in a proven, reliable, business critical reputation among its widespread users. If you are selecting a tech-

nology to run your business on—would you select a new, emerging framework or a proven, mature standard?

2. **EDI is working.** Why fix what isn’t broken? EDI is successfully supporting the value chains for many of the world’s largest companies today. Corporations need a compelling business benefit to migrate to XML. The business plan must justify the expense to perform a migration, risk of possible business disruption and opportunity cost compared to alternative investments.
3. **EDI is cheap.** The costs of EDI were often cited as its top barrier to adoption throughout the 1990s. However, the barriers to entry for EDI based technologies have declined significantly in recent years. As the de facto standard almost all B2B integration software packages and SaaS-based services include out-of-the-box EDI functionality, XML often requires customization, especially for low-end packages.
4. **EDI is ubiquitous.** EDI had the advantage of being the only standard for e-commerce for over a decade. During that time, EDI became pervasive in a number of industries such as health care, automotive, banking and retail. As a result, businesses that choose to utilize EDI have a high level of confidence that their trading partners will be able to receive their documents. By contrast, businesses that try to standardize on XML face significant challenges as their entire trading partner community must become XML-enabled.
5. **EDI is not industry specific.** EDI’s lack of industry-specific data fields and process models is often listed as a short-coming. However, one of the keys to EDI’s ubiquity has been its applicability across multiple industries and geographic regions. Very few industries in today’s world are truly vertical—leading to challenges when partners transact commerce across industries. For example, some of the fastest growing channels for high tech manufacturers are the aerospace, retail, medical and automotive sectors, none of which use the high tech XML standard—RosettaNet.

6. **EDI is network protocol independent.** It works across value added networks. It works with legacy dial-up protocols. It works with newer Internet standards such as AS2.

EDI Adapted to the Internet

EDI's continued ability to thrive is even more remarkable when considered in the context of recent history. Rewind the clock 10 years and you will recall countless marketplaces, exchanges and industry standards organizations each proclaiming themselves 'as "EDI killers." Few technologies have survived as many focused attacks as EDI has. These attempts to replace EDI were not ill-conceived. The introduction of the new disruptive technologies that emerged during the Internet era would have been a natural transition period to migrate from EDI to XML. But while the new XML messaging standards groups were busy plotting to exterminate their predecessor, EDI found a Darwinian way to adapt to the changing ecosystem by evolving in two new directions:

- **ASX Models**—Much of the negative sentiment around EDI in the late 1990s was actually unrelated to the standard itself, but instead focused on the expensive communications and transmissions processes for EDI documents. With the Internet perceived to be "free," many questioned why there was continued use of expensive VANs and private networks for transmission. From this vision the ASX (e.g. AS1, AS2, etc.) standards were borne and EDI's lifespan was extended indefinitely. EDI documents could be wrapped in a popular Internet protocol such as HTTP or SMTP then transmitted directly between trading partners or using a third party network.
- **Web EDI**—Another key limitation of EDI was its complexity. Many small businesses struggled to find the budget or expertise to deploy a translator. The user-friendly, universally deployed Internet browser was an obvious choice to simplify B2B e-commerce. With just an Internet connection and no B2B software, an end-

user could access web-based applications to send and receive electronic documents. The web application converted the user inputs into an electronic document for exchange with business partners. Of course, EDI, due to its ubiquity, was the default output format for these new web portals. The result? A further extension of EDI's longevity.

EDI is Reborn in Emerging Markets

Is EDI's incumbent community of users the reason for its continued success? What if EDI were introduced into a completely new field environment where companies have little use of B2B e-commerce? If EDI were to compete in such an ecosystem along its genetically superior competitor, XML, what would the outcome be? In fact, such a scenario has been played out over the past ten years in the world's emerging markets such as China and India. And EDI appears to be winning! Western automotive manufacturers such as Volkswagen, Daimler, Ford and GM imported EDI standards to China years ago along with the new plants they constructed. Similarly, western retailers such as Metro, Kingfisher, Home Depot and Wal-Mart, each of which source billions in merchandise from emerging markets, have driven adoption of EDI among manufacturing communities in Southeast Asia and Eastern Europe. As a result, every day hundreds of businesses in emerging markets are implementing new B2B platforms based on EDI, because it is the standard their customers prefer to use when communicating with them.

Will EDI Ever Die?

My guess is "no." In today's world of multiple, competing e-commerce frameworks, dominance will come from survival of the fittest. However, I do think most large companies will standardize on XML for new projects going forward. As a result, in the next decade we will see a gradual increase in XML-based standards to represent 40-50% of e-commerce transactions.



About GXS

GXS is a leading global provider of B2B e-commerce solutions that simplify and enhance business process integration and collaboration among trading partners. Organizations worldwide, including more than 70 percent of the Fortune 500, leverage the on-demand services on GXS Trading Grid® to extend supply chain networks, optimize product launches, automate warehouse receiving, manage electronic payments and gain supply chain visibility. GXS Managed Services, GXS' B2B outsourcing solution, empowers customers with the expertise, technical infrastructure and program support to conduct B2B e-commerce with trading partners globally. Based in Gaithersburg, Md., GXS has an extensive global network and has local offices in the Americas, Europe and Asia-Pacific regions. GXS can be found on the Web at www.gxs.com.

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