

Introduction

Good afternoon. My name is Scott McDonald. I am the Senior Vice President of the Energy and Telecom Practice at Proxicom, an Internet consulting firm that helps companies develop and implement E-Business strategies and solutions. I am here today to present a paper called "Internet Innovation Under FERC 587. How to Stand out in a Standardized World?"

Before I begin, however, I've got some good news and bad news about the Internet that I would like to share with you. The bad news first. The bad news is that during the last 12 months, VC firms in Silicon Valley have spent \$4.5 billion dollars to launch over 400 new Internet companies whose primary mission in life is to take away business from companies like yours. These companies typically are well capitalized, have aggressive business models, and perhaps most frightening, have no mandate from investors to turn a profit, at least not anytime soon.

So what's the good news? The good news is that few of these companies are competing in your industry. The dot.com attacks have not made their way into natural gas like they have in such industries as retail, financial services, and telecom. Your industry has the luxury of time --- time to develop its own transformational E-Business strategies and systems. Time to define the role that the Internet will play in helping streamline operations across your organizations and across the natural gas supply chain. This paper is about that opportunity.

Internet Innovation under FERC 587

How to Stand Out in a Standardized World

For years, natural gas pipelines have invested enormous effort and dollars into developing proprietary electronic bulletin boards (EBBs) to distinguish their products and services. Every year, EBB developers and product managers wait anxiously for the NG Magazine Annual EBB rankings to see how their systems fared relative to the competition. A higher ranking cause for celebration; a lower ranking cause for concern and perhaps a system rewrite. After many years of hard work fine-tuning these systems to meet their customers' needs, pipelines have become heavily invested in their EBB offerings, both financially and emotionally.

Today, FERC Order 587 threatens to render these EBB's obsolete. According to this Order, pipelines must implement fully functional interactive web sites to replace their current EBB systems by June 1st, 2000. Furthermore, these systems must comply with the standards being developed by GISB. Standards that narrowly define the "look and feel" of the interface prescribing such details as the order of the fields and the labels of the function buttons.

The new FERC/GISB program represents an unprecedented level of uniformity in the regulation of pipeline information systems. The challenge, now, is for pipelines' to determine how to differentiate their on-line offerings in a standardized world.

Why Standardize?

Moving to the Web will benefit most pipeline customers and improve the liquidity of the pipeline` grid. Pipeline customers with web access and a browser will be able to access *any* pipeline from a single computer, without worrying about the compatibility between different pipeline software products. No longer will separate machines be needed to conduct business on each pipeline. Additionally, because each system's "look and feel" will be the same across all pipes, less training will be required to use multiple systems. Shippers will find it much easier to move gas from the wellhead to the burner tip as they bounce between nomination order entry screens using a single Web browser.

As MircoSoft demonstrated with the standardization of the graphical user interface, form is liberating. Uniformity brings consistency to the marketplace and in turn improves liquidity and operational efficiency. GISB standardization will do the same.

How to Stand Out?

While the case for standardization is a strong one on behalf of the customer and grid liquidity, it begs the question --- how do pipelines stand out in a standardized world. More importantly, why should they bother?

Before answering this question, it is important to remember that the Internet is built on both a philosophy and an infrastructure of openness and free communication. The Internet

levels the playing field by eliminating the advantages of proprietary technology and creating a common network that crosses organizational boundaries. The Net creates and enables markets by providing a platform for consistent behavior that operates at real time speeds. The winners in the Internet world are those companies who best leverage the synergies of this open network to: 1) deliver new and improved products and services; 2) reduce transaction time; and 3) improve operational efficiencies.

So then, how does the philosophy of the Internet apply to pipelines questioning the value of innovation in a standardized Internet-based world? Proxicom believes the answer is focus. Pipelines need to expand their field of vision to include any organization that provides or can provide value to their customer or value to their customer's market. Pipelines need to look beyond the silos of their scheduling departments to identify strategic partners that can help streamline processes across the value chain and in turn differentiate their service offerings.

Pipelines should focus on all departments within their organization and within their customer's organization. Pipelines should focus on trading partners and service providers that can help create seamless transactions and reduce cycle time. Pipelines should even focus on their competitors, who can help increase regional market liquidity and throughput by creating communities of value.

In other words, pipelines should look to structure their services as joint ventures rather than as independent offerings. They should establish connections that are virtual rather than organizational. They should open up their interactions with their customers and trading partners to support the inevitability of growing global standards and networks.

While the concept of value-based communities and joint venture services sounds appealing from a macro-economic perspective, it must eventually be translated into practical, real-world applications to make an impact. I have chosen three examples to illustrate how pipelines can leverage the Internet to provide innovative services that will distinguish their on-line offerings, provide new value to their customers, and improve the bottom line.

Customer Self Service (pipeline to customer)

One of the most compelling models for leveraging the openness of the Internet is outsourcing customer service functions, not to other firms, but to the customers themselves. In a real-time world, customers are more than happy to assume such functions as credit tracking, contracting, and financial administration. Why? Because they save time dealing with their product and service providers, and they reduce costs by eliminating the need for policing and trouble shooting. Simply put, customers make the best customer service representatives for their own accounts.

For example, Proxicom recently helped a large pharmaceutical distributor develop an Internet-based application that allowed its medical supply customers to set up and manage their own accounts via the Web. The system transferred full control of the transaction life cycle over to the customer by web-enabling the distributor's general ledger and order entry systems.

The benefits of this application far exceeded the expectations of even the most optimistic scenarios. Not only did customer satisfaction ratings increase by several percentage points, but the distributor's interest expense declined by millions of dollars due to a 50% reduction in days sales outstanding.

As EBB's move to IBB's, Proxicom believes pipelines should adopt a similar approach. By expanding the functionality of their IBB's beyond FERC requirements to include such

areas as credit approval, contracting, and bill payment, pipelines can increase operational efficiencies and customer service at the same time.

Self-service should become the foundation for the next generation of on-line systems. The fewer calls a customer makes to a contract, billing, or scheduling representative the better. Why? Because human interaction is fraught with error and delay. Shippers need seamless and real time service to keep up with the demands of an ever-accelerating market. Shippers operate on thin margins and under extremely dynamic conditions. They need accurate and detailed information as soon as it is available. Even small delays or errors in communication can result in lost profits.

While many pipelines have made great progress empowering their customers through their EBB systems, few have reached the point of truly seamless and transparent on-line transactions. Daily phone calls between shippers and pipelines are still the norm in the industry. However, moving to the Internet provides pipelines with more incentive and a better vehicle to distinguish themselves through truly seamless transactions.

Why more incentive? Because the Internet is changing the way customers think about interaction with their on-line service providers. Once a pipeline implements an Internet offering, a new form of competition emerges: the experience that pipeline customers have using other Internet applications. Having to pick up the phone to complete a transaction or

answer a question can quickly become an annoyance to those customers who have grown accustomed to serving themselves using other Internet-based systems.

Why does the Internet provide a better vehicle for seamless transactions than EBB's? The browser is an excellent mechanism for orchestrating connectivity across an organization because it can access any application using just one interface. Most EBBs were built as client-server applications that established a dedicated connection between the shipper's computer and the pipeline's gas transportation system. To provide access to information from other applications, pipelines typically constructed one or more interfaces between back-end systems.

With a browser, pipelines can open up multiple applications without building interfaces between back-end systems. With a browser, shippers can directly access the nomination and scheduling system, the credit tracking system, and the billing system, without experiencing the errors and delays that result when pipelines move information between these systems. Simply put, the Internet model represents an opportunity for pipelines to open up and consolidate the customer service function.

Capacity Exchanges (customer to customer)

Another way that pipelines can use the Internet to improve the value of their on-line systems is to develop services that facilitate interaction between their customers. Capacity exchanges represent an excellent play for pipelines to maximize throughput, increase

customer service, and develop new channels of revenue. Exchanges are one of the most powerful business-to-business models on the Internet because their value increases exponential to the number of participants. In other words, market efficiency is maximized when companies can simultaneously connect to multiple buyers and sellers.

Perhaps the most appealing aspect of the capacity exchange model is that third party software already exists to develop the exchanges. Companies such as TradeX, Dynamic Trade, and OpenSite have established exchanges for numerous industries ranging from plastics to mortgages. All that these software companies require is a sponsor who has the domain expertise and the relationships necessary to establish critical mass. Pipelines are perfectly poised to provide the expertise as well as the customers necessary to launch a successful capacity exchange. Moreover, the FERC/GISB mandate to move transactions to the web provides the electronic foundation for such exchanges to flourish.

Other technologies such as instant messaging, chat rooms, and Internet-enabled wireless services may be used to foster communication between shippers looking to buy and sell capacity. Imagine the utility of these technologies layered on top of a capacity exchange system in a curtailment situation. The pipeline sends out a business alert via fax, e-mail and page to shippers indicating that a curtailment situation is in effect. Shippers immediately send out instant messages to their favorite trading partners indicating an interest in either buying or selling capacity. Offers are quickly posted onto the exchange and shippers begin making trades via their PC's or perhaps their wireless devices because the curtailment was called on a

Saturday. As deals are closed, the pipeline recognizes the transactions in real time immediately reflecting the newly awarded capacity. By allowing shippers to immediately exchange positions, the impact of the curtailment can be greatly mitigated.

As pipelines begin to look past their organizational boundaries for models of Internet innovation, they should ask themselves what businesses their customers are really in. Do shippers make money shipping? Is transportation what shippers purchase from pipelines? A quick look around the industry would indicate that the answer to both these questions is no. Shippers make money trading natural gas. They broker, trade, and speculate because their customer's loyalty is driven primarily by price. Pipelines simply provide the playing field for shippers to trade on. They provide the physical exchange for settling commodity transactions, the mechanism that allows shippers to take positions in the market. Capacity exchanges are an excellent example of how pipelines can begin to support the business that their customers are really in.

Transaction Hubs (pipeline to pipeline)

A final example of how pipelines can leverage their standardized IBB's to develop innovative service offerings is a transaction hub. Under this model, pipelines in a given region form a consortium to allow for seamless transactions and trading across their collective girds. This model requires that pipelines embrace their trading partners and in some cases their competitors to develop a combined service offering that encourages activity in their

particular market. With several pipelines under one system, shippers could more easily buy and sell gas across an entire region. Super nominations, regional imbalance trading, and inter-hub trading could all be supported as the pipelines began to merge into one regional pipeline system. Eventually, as different regions began to consolidate, the focus of competition would shift from pipeline vs. pipeline to region vs. region.

Proxicom recently built a transaction hub for the oil pipeline industry called Transport 4. The system was sponsored by four major oil pipelines companies that together deliver one-third of all refined petroleum in the United States. These oil companies formed a joint venture company with the objectives to improve customer service, share the costs of technology investments, and establish the market power of a much larger pipeline network.

Listen to one of the justifications given for building the system, and I quote: “In focus groups, companies like Amoco, Shell, and Texaco asked for standard content and information fields. The customers wanted to decrease employee time spent learning the ins and outs of carriers’ proprietary information systems and also to enable carriers to push delivery information more quickly out to the customer.” Doesn’t this sound very familiar?

Transport 4 is also an interesting example of how companies can begin building applications once for both internal and external use. The system has five dimensions of security access: carrier, customer, user type, location, and product types. As a result, pipelines can use the same system for employees on loading docks as well as executives back at

headquarters. Moreover, different carriers can all use the same system because they do not have access to each other's competitive information.

Transport 4 plans to open its services to all companies within the petroleum distribution business --- including other pipeline carriers, barge companies, rail companies, and terminal operators. Their intent is to link up the entire value chain using just one system hosted by just one service provider.

There is no reason that gas pipelines across the U.S. cannot adopt a similar model. By focusing on the value of the combined grids and leveraging the establishment of new Internet-based interfaces, pipelines can streamline operations across their grids resulting in increased customer satisfaction, reduced system operating costs, and new opportunities for revenue.

Conclusion

In summary, the GISB standards provide the foundation for a new frame of reference: from singular to joint venture; from organizational to virtual; from inward thinking to outward thinking. Standardization and form merely represent the potential for the next level of innovation. As the leading strategist Gary Hamel the E-Business visionary recently said in Fortune magazine: "Truly innovative strategies are always the result of lucky foresight." The challenge then – is for pipelines to begin to see the possibilities and to remember that form is, indeed, liberating.