

steelXML and an integrated electronic interchange approach can help bring your business—and the structural steel industry as a whole—in line with present-day standards for ordering and procurement.

Ordering UP Integration

BY SHARON-MARIE GILLOOLEY

“WHAT YEAR IS IT?” This is not a trick question.”

This question was posed by Luke Faulkner, AISC’s director of technology integration, at the 2015 NASCC: The Steel Conference session “AISC BIMSteel Initiatives” this past spring. (You can view that and other sessions from the show at www.aisc.org/2015nasconline.)

His point was that in this day and age when we order everything online—plane tickets, books, clothing, everything—it seems ridiculous that steel is still ordered the old-fashioned way, via fax.

steelXML is hoping to change that. The comprehensive XML schema—which has been developed by a working group consisting of fabricators, steel mills, steel service centers and software developers, with oversight by AISC—accommodates all transactions in the procurement process. Fabricators, mills and steel suppliers can use this industry specific schema as a platform to develop an electronic data interchange (EDI) for all their procurement transactions.

EDI is any methodology that enables the computer-to-computer exchange of business documents. EDI documents flow straight from one computer’s application (e.g., a steel fabrication management information system) through to the appropriate application on the receiver’s computer (e.g., the order management system) and processing begins immediately. All EDI documents must use a standard “language” format so that the computer will be able to read and understand the documents.

That language is steelXML. It boasts the advantage of having been developed in a world of shared software development, determining the best way to streamline and standardize every aspect and transaction involved in the steel procurement process. Using steelXML means that any two steel industry organizations (such as suppliers and fabricators) can communicate if they’ve both adopted it.

steelXML will provide a common standard platform for the electronic exchange of:

- Inquiries
- Request for quotations
- Purchase orders
- Schedules
- Material test reports
- Customer sales order quotations

This will ensure that all documents are quicker and easier to compose and compare. When integrated with a management information system (MIS) and working with a supplier who uses the same system, it will deliver the added ability to:

- Create and manage customer material lists
- Nest or optimize material
- Automatically consider and consume inventory
- Spontaneously replenish inventory through purchase orders
- Provide accurate and automatic cutting lists for steel-work fabricator clients

Benefits

There are five key benefits of adopting steelXML:

1. Speed. The process:

- Replenishes inventory automatically, saving time
- Creates automatic bill of material lists through intelligent 3D CAD interfaces, saving labor hours and enabling employees to be more productive while reducing overhead
- Shortens lead times on product delivery and increases profitability
- Reduces delivery cycle times, meaning reduced lead times and lowered inventory carrying costs
- Removes repetition and duplication and the risk of human error

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2. **Accuracy.** It provides 100% accuracy by removing the need for data to be transferred via transcription or data entry, thus eliminating the possibility of user errors. As electronic data is derived from a prior validated MIS database, it accurately manages inventory and cost analysis.
3. **Visibility.** Clarity is provided to all: Mills, suppliers and fabricators are able to track status and measure performance throughout the entire order process.
4. **Cost reduction.** It has the potential to reduce or avoid certain costs by:
 - Reducing the overhead required to detect or reprocess erroneous documents
 - Reducing costs to expedite goods that are late or lost
 - Reducing material waste and thus increasing sustainability
 - Reducing inventory and therefore carrying costs through shortened order processing and delivery cycles coupled with faster, more accurate order processing
5. **Competitive Advantage.** Adopting steelXML will result in better record-keeping, fewer data errors, reduced information processing time, standardized interpretation of data and reduced unproductive time. Financially, it reduces billing cycles, as orders are delivered quicker, resulting in increased cash flow. And using steelXML in conjunction with a steel fabrication management information system offers the additional advantages of:
 - Nesting and optimization, which provide maximum material efficiency
 - Providing accurate information about business processes that can be used to identify efficiency improvement priorities

Findings from Across the Pond

In the UK, we've received reports from our customers incorporating integrated EDI that satisfaction of *their* customers has improved due to faster response times with accurate information; if a product is unavailable, it is immediately flagged and the fabricator can source from elsewhere, all within the day.

Using integrated EDI in trials, Tata Steel, with steelmaking in the UK and Netherlands and manufacturing plants across Europe, managed to process orders at an average of metric 100 tons per hour.

"We've been able to remove the manual stages of checking against stock manually and keying the order back in again, in

addition to saving labor costs by eliminating the need to search for errors and answer many queries, which historically could have taken half a day to resolve," reported Neil Mann, technical services manager for Tata Steel. "We are saving four hours a day processing, which removes a day off deliveries. Any issues are resolved on the day, as the order processing department has the time to sort them out that day rather than the issue running over to the next day and then delaying the order."

"Historically, only one user could input into our system at any one time, whereas Integrated EDI allows for multiple users at a time," said Darren Hartley, Tata's head of operations in Teesside, UK. "The whole order process has been reduced to hours instead of days, which is essential considering that our facility has a total output exceeding metric 170,000 tons per year."

Benefits have also been realized on the fabrication side. Billington Structures, one of the UK's leading structural fabricators, successfully uses Integrated EDI with its MIS to receive and dispatch metric 1,150 tons per week.

"By linking our inventory with procurement and production, we've been able to optimize our project planning and shop floor routing," said Mark Bingham, Billington's production controller. The integrated setup has strengthened and enhanced our materials logistics process, enabling superior administration of our production cycle and resulting in better time management and cost savings for our business."

Avoiding Inertia

Changing the way you do business is never a task to be undertaken lightly, especially when current processes and procedures seems to work well. The good news is that steelXML and integrated EDI can be implemented in phases, allowing your business to target specific areas for immediate improvement, while migrating gradually to full implementation. The first portions of the schema (inquiries and requests for quotations) are now available for free; other schemas are available as a pre-release for organizations that are willing to provide feedback. Several participating companies have already implemented part of the schema, and AISC is looking for steel suppliers to test and review it. Visit www.aisc.org/steelxml and let us know if you're interested in helping to bring steel procurement into 2015 and beyond. ■