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Combating Everyday Data Problems with XBRL

BY MIKE WILLIS AND NEAL J. HANNON

In conjunction with XBRL International's 11th conference, held in Boston this past April, the Institute of Management Accountants (IMA) issued a press release supporting XBRL (see www.imanet.org/ima/docs/3100/3052.pdf). Several members have asked questions about this position statement. We will discuss some of the points they raise and introduce an underlying concept that explains why XBRL is a compelling technology for businesses today. First, a little background information to set the stage. IMA has been actively involved in the XBRL community from the very first meeting in October 1999. In 2000, members of the IMA joined the XBRL steering committee and have been active ever since in helping to shape a business reporting specification that is beneficial to management accountants worldwide. As the early approaches to tagging business information evolved, IMA's presence helped shape the present XBRL specification, which has been stable since January 2004.

The past five years have seen dramatic changes in the fabric of gathering, collecting, and reporting business information to management. With Y2K, the threat was systemic and needed to be addressed across all legacy programs and computer platforms. Fortunately, most companies experienced little disruption and used the Y2K preparation period to strengthen and enhance their operational and reporting systems.

The Sarbanes-Oxley Act has driven a number of improvements in the documentation of internal controls and has created compelling reasons for top management to pay attention to how business data is collected, controlled, analyzed, and reported to external entities. The resulting identification of opportunities for strengthening the processes link between internal business reporting and external reporting will pay dividends to companies for years to come.

The eXtensible Business Reporting Language (XBRL) isn't a product in terms of a software application—it's an information format designed specifically for business reporting. As such, XBRL holds promise to take the improvements initiated by Y2K and SOX and extend them into better internal reporting processes and better utilization of the externally reported data by users of company data. As an information format, XBRL is designed to work within your software applications, enhancing them, rather than be a separate or supplemental product.

To examine these claims, let's look at some typical problems many companies face today, as presented by PricewaterhouseCoopers Partner Mike Willis at a recent XBRL conference held at Bryant University in Smithfield, R.I.

Problem Summary

The following are common problems that companies face today when dealing with data used for management reporting and analysis. Table 1 shows a comparison of a typical existing business reporting scenario to the XBRL Standards model.

Manual Audit Trail. Information has no shared context as it moves between applications. Once data is moved from its origin into another application(s), its context (definition, currency, period, entity, etc.) is lost and must be assessed through the manual efforts of the management accountant. For example, once data is extracted to a spreadsheet, the individual data loses its ability to identify anything about its origin or source. This requires manual auditing of the data sources and related context as to the related period.

Poor Data Quality. Due to the loss of context during movement, data often isn't validated independently as it moves between applications. Independent validation is a difficult and usually manual process and leads to decision analysis being based on poor data quality. This problem almost always arises when a centralized data warehouse is utilized and data is being accessed or consumed from a wide range of disparate underlying data stores with different charts of accounts and/or data definitions. Often this problem is associated with "multiple versions of the truth" scenarios where data is replicated across applications to enhance data management and use.

One-Way Traffic. Information goes in one direction—from an ERP warehouse to Excel, from a subsidiary system to a consolidation application, or from one Excel worksheet to another. That isn't a problem, but information going in the other direction is. In such situations, manual processes are required to post "top side" journal entries into the appropriate subsidiary system or record adjustments from tax provisioning estimates calculated in Excel in the related entity subsidiary system or to cut and paste data from one Excel worksheet to another.

Table 1 Typical reporting scenario vs. XBRL model

Application-Specific Data Model	XBRL Standards Model
1. Data is replicated at the application level, resulting in multiple versions of the truth.	1. Data stays at its origin and is used when necessary. One source of the truth.
2. Elimination information is often obtained manually from the data sources below the consolidation application layer.	2. Data is transparent in its original source and can be automatically accessed for purposes of eliminating entries.
3. Data validation processes are often conducted manually at the consolidation application level.	3. Data validation processes are automated at the source rather than at the consolidation application level.
4. Business rules are embedded within specific applications: either the consolidation application or the analysis application.	4. Business rules are articulated based on domain-level standards and managed across multiple applications.
5. Controls, like business rules, are embedded within specific applications or applied manually.	5. Controls, like business rules, are managed based on domain-level standards and free up data for analysis based on the business rules.

The Solutions

XBRL isn't the silver bullet, but it *is* an international information standard designed specifically to address the common problems identified above and many others. How does XBRL solve these problems? First of all, it provides a common standardized data format that enables all applications to seamlessly share and process data. Second, it connects standardized data to other concepts—from context (definition, currency, period, entity, etc.) to business rules that can be expressed in terms of the standardized data to other resources. Let's see how an XBRL-Standards-based solution makes a difference.

Automated Audit Trail. Information has a shared context as it moves between applications. Its context (definition, currency, period, entity, etc.) is retained and can be passed from application to application and easily accessed by the management accountant regardless of where the data resides. For example, data extracted to a spreadsheet retains its identity as provided by its source of origin, enabling an automated audit trail and enhanced control.

Improved Data Quality. The shared-data context allows validation rules to be applied automatically as data moves between software applications. This allows a significant amount of analysis typically conducted after data receipt to be moved forward in the supply chain and applied prior to data access. The ability to independently and automatically validate data provides for enhanced accuracy and greater reliability of data prior to its use.

Two-Way Traffic. The shared data context also allows for information to be passed in both directions, to and from ERP, spreadsheet, BI, and

other applications. Journal entries identified in a consolidation application now have the complete context that allows for them to be "pushed down" to the appropriate subsidiary applications for immediate posting. Applications that speak the same language can now begin to "discuss" a wide range of topics from journal entries to elimination entries to general ledger activity to any relevant business information.

Common Definitions and More. XBRL provides both an enterprise-level (via the XBRL Ledger taxonomy) and a market-level (via the XBRL External Reporting taxonomies) platform for a common data model. In these situations, XBRL can add contextual information to data at its inception that isn't lost when the data becomes part of internal and external reporting information.

XBRL also provides a platform to link these common data definitions to a range of other highly relevant concepts, such as contextual information, presentation labels, calculation or validation concepts, relevant business rules, and other related resources (policies, regulations, business rules, etc.).

Although we have provided some answers, our material also probably generated more questions. To put this into context, what we are attempting to explain is similar to explaining the impact of HTML on the market in late 1994, before most people had ever heard of the Internet. In 1994, browsers were new to the market and research on company financial statements typically included paper documents received from companies by way of the U.S. mail. Following this analogy, you should expect that XBRL will soon be embedded within many of the software applications that you use today. For a list of software applications that are already XBRL-enabled, see www.xbrl.org/tools. Using XBRL within the context of your existing software applications is the fastest possible way for you to understand its capabilities. This will provide you the quickest path to understanding how XBRL is transforming corporate reporting processes while increasing process effectiveness and decreasing process costs.

Next month, we'll explore additional ways XBRL can help solve everyday data problems. ■

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