

## A Solution to the Financial Last Mile Problem

XBRL could be a solution to the delays and risks caused by manual processes in preparing financial statements says **Jayanth R. Varma**

**T**he last mile problem is well known in the telecommunications industry. It is more expensive and difficult to provide the last leg of connectivity to the customer's premises than to provide backbone connectivity across oceans and continents.

Financial reporting faces a similar last mile problem not so much in terms of cost but in terms of speed and reliability. In all large organisations today, the accounting data comes out of sophisticated ERP systems that provide a high degree of assurance of reliability and accuracy.

These transaction processing workhorses can process millions of business transactions in real time and provide management with an updated view of operations. However, the last step of preparing financial statements relies extensively on spreadsheets, word processors and manual processes.

I always worry about the error prone nature of this financial last mile. Auditors and CFOs assure me that there is no problem. One senior auditor told me with a wink that, at the very end, he gets everything totalled up manually with a pocket calculator and so the entire computing revolution has made no difference. Over the years, I have allowed myself to be convinced that in this contest between the accountant's nitpicking skills and the inherent risks of a spreadsheet, the accountant somehow manages to prevail every time. Yet, the sceptic in me refuses to die.

Putting scepticism aside does not eliminate the last mile problem. The problem resurfaces as one about speed. Let me give three examples

from my experience at different companies:

1. In a board meeting one morning, we were informed that an accounting pronouncement had been published on the regulator's web site the previous night. The impact was minor: one line item in the income statement would be amortised over three years instead of being expensed immediately. We were informed that the accountants and auditors would redo the numbers to reflect this. The audited accounts were therefore taken up in the afternoon instead of in the morning. That such a simple change should take 3-4 hours to implement was by itself an excellent illustration of the last mile problem. More interestingly, while the accountants did answer in the affirmative when asked whether the numbers in the press release and the investor presentations had all been updated, I thought I saw a fleeting expression of unease on their faces. I cannot blame them: pressure of time

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loads the dice against accountants in their battle against spreadsheet risk.

2. On another occasion, the audit committee made a minor change affecting only the presentation of the financial statements and not the key reported numbers themselves. Again, it was several hours before the modified financial statements could be made available for signature.

3. Another senior auditor once told me that in some companies, decisions regarding alternative accounting treatments are frozen the day before the audit committee meeting. Management and auditor thrash out their differences before that and so the question of making changes in the financial statements at the last minute never arises. I could not help wondering whether the audit committees in those companies are somewhat redundant.

I am now convinced that the last mile problem in financial reporting can be solved only by cutting out the spreadsheet and the word processor from the process loop. I would be the last person to deny that a spreadsheet has its uses. My desktop search utility reports well over a thousand spreadsheets on my computer and I do not even run a business. In an organisational context, the spreadsheet is often the only weapon available to fight the tyranny of inflexible information systems. Thus spreadsheets can never be completely exorcised.

However, financial reporting has two characteristics that make it a prime candidate for spreadsheet elimination.

1. First, financial reporting is a critical process with very low toler-



ance for error. The costs of even minor errors in financial statements are so high that organisations would go to great lengths to eliminate any source of error.

2. Second, by its very nature financial reporting formats are largely inflexible as far as the individual organisation is concerned. These formats do change as accounting standards are changed or reinterpreted but these are changes that affect all companies in the affected jurisdiction.

As against this, financial reporting has one characteristic that until recently made it highly resistant to automation. The problem is that an annual report is largely text. If one looks at the typical Form 10K filing of a US-listed company, one finds that it consists largely of textual matter with some numerical data scattered here and there.

Moreover unstructured text and structured data are mixed together in complex and highly flexible ways. Traditional databases and transaction processing engines are not geared to handle this at all. These tools are also ill equipped to deal with the fact that text needs to be formatted nicely. On the other hand, this is a task at which word processors and spreadsheets excel. It is no wonder that accountants resort to word processors and spreadsheets to tackle the last mile problem. They simply lacked a better tool to do so.

## XBRL – New Initiative

In recent years, however, advances in computer science have made it possible to attack this problem with a different set of tools and ideas. In 1998, Charles Hoffman, a US CPA, began thinking of how the then-newly-introduced XML (Extensible Mark-up Language) could be used for financial reporting. His work was endorsed by the AICPA (American Institute of Certified Public Accountants) and soon twelve organisations including the AICPA, the big accounting firms and large software companies like Microsoft came together to take the idea forward. This has given rise to the XBRL (Extensible Business Reporting Language) initiative. Today XBRL

International has 450 members from around the world including large companies, government departments, stock exchanges, accounting bodies and software companies.

The key idea of XML on which XBRL is based is to “mark up” or tag text so that it has some structure that computers can understand. Essentially, portions of text are tagged with a description of what it contains. For this reason, XML is often characterised as text (or data) that describes its own content. A word processor file contains information about how the text should be formatted but does not usually contain information about its semantic content. An XML file can contain both kinds of information. The formatting information allows it to be printed (or displayed in a web browser) with appropriate fonts and alignment while the semantic information allows it to be automatically updated when there is a change in the underlying data.

XBRL goes beyond XML in one important respect that allows it to exploit the fact that most of the flexibility of reporting formats and disclosure requirements lies with the accounting standard setter and not with the individual companies. Reporting formats and requirements are relatively inflexible as far as the reporting entity is concerned. XBRL introduced the notion of a taxonomy that encapsulates this idea of a format that is flexible from the regulator’s point of view but rigid from the regulatee’s point of view. Changing the taxonomy to re-

flect changes in accounting standards and disclosure requirements is a task that has to be done only by one entity in each jurisdiction. All reporting entities in that jurisdiction can simply use that taxonomy.

Individual company and software vendors do not have to go back and make changes in their software. Ideally of course, the accounting standard setter should itself internalise the cost of the accounting changes that it introduces. Alternatively, the accounting profession can do this. The IASB’s involvement in building the taxonomy for its standards (IFRS) reflects the first approach while the AICPA’s involvement in building the taxonomy for US GAAP reflects the second approach. In either case, this is a task that has to be done only by one entity in each jurisdiction.

The taxonomy is much more than a list of balance sheet or income statement line items. It also describes the inter-relationships between them. For example, the idea that net worth is the difference between assets and outside liabilities would be embodied in the taxonomy. The fact that a provision is to be shown as a deduction from a specific asset and not as an item on the liabilities side of the balance sheet is also reflected in the taxonomy. In some sense, therefore the taxonomy provides a logical representation of the reporting requirements in that jurisdiction.

Individual companies do not bear any significant cost in modifying systems to reflect changes in reporting requirements or accounting standards. They can simply adopt the revised taxonomy, which takes the changes into account.

The key contribution of XBRL is that the financial reporting software can be split into two parts. One part (the taxonomy) is maintained by the accounting standard setter or the accounting profession and changes with every change in accounting standards or disclosure requirements. The existence of the taxonomy simplifies the design of the second part of the software – the enterprise level XBRL tools that generate XBRL financial statements.

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## THINK TANK

So far, XBRL has been pushed mainly by the users of financial information rather than by their producers. For users, the advantage of an XBRL financial report is that the financial report becomes a database that can be queried and analysed very easily.

### SEC's XBRL-Friendly Policy

In 2005, the SEC introduced a pilot system in which companies volunteer to file information in XBRL form. As of August 2006, two dozen companies representing more than \$1 trillion of market value have signed up (<http://www.sec.gov/spotlight/xbrl/interactivedata.htm>). There is only one Indian company (Infosys Technologies Limited) in this list that includes some of the largest companies in the world.

The SEC which regards itself as the "investor's advocate" naturally looks at XBRL as a tool that could benefit American investors. Therefore, if the pilot programme is successful, the SEC

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could well decide to turn the existing voluntary programme into a mandatory one.

I would argue that CFOs should not view XBRL as another regulatory burden. Rather it is an opportunity to bring to financial reporting the rigorous process control that ERP

brought to internal reporting. This would however require significant changes to how XBRL is integrated into organisational information flows and software systems. The preferred approach today is to use XBRL tools that extend the spreadsheet rather than eliminate it.

Microsoft's own early involvement in XBRL helped ensure the availability of inexpensive and easy to use software tools that can convert a spreadsheet into XBRL reports. This ensures relatively easy adoption of the new technology but does not ensure its optimum use. Thorough integration of XBRL into the ERP system is harder but more rewarding in the long

term. ■



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