



The Incomplete History of Integration

By George McMann

The link between accounting and technology is a deep one. The word “computer” stems from the Latin *computare*, which means “to count or sum up.” In 1890, a former U.S. Census Bureau employee developed the first automated information processing equipment. In 1911, that invention helped form the Computing-Tabulating-Recording Company (C-T-R), which has generated impressive results by automating the way businesspeople compute figures.

Etymology and history are illuminating subjects right now in light of the challenge most public companies face in complying with the Sarbanes-Oxley Act and, more specifically, in determining if their internal controls ensure the accuracy of financial information and the ocean of accounting data from which it derives. Etymologists trace the development of a word back to its earliest recorded occurrence in a language by following its transmission from one language to another and by analyzing it into its component parts. Corporate accountants conduct similar detective work, but with numbers. They trace the history of a financial figure back to its earliest recorded occurrence by following its transmission from one financial system to another and by analyzing it into the raw accounting data from which it originated.

When accountants at mid to large-sized companies need to confirm the accuracy of a revenue account figure, for example, they trace that figure backwards: from revenue by company, to revenue by region or product line, to revenue by department, to revenue for a given quarter, to revenue by month, and, finally, to the original journal entry. Shining a light all the way back to where the accounting data originates is murky work. The lack of visibility stems from the fact that accounting – specifically, its discipline and controls -- has not kept pace with technology.

The more recent history of accounting reached a milestone in the 1980s when new technology improved the speed and ease of transmitting information among different computers and systems. CFOs and other executives no longer had to buy a single software package that provided merely adequate automation capabilities for a range of finance and accounting processes. Instead, they could choose from a growing number of applications that provided excellent automation capabilities within a single process but that could still send and receive information from other applications and systems. Since then, companies have invested heavily in individual general ledger, accounts payable, accounts receivable, payroll, forecasting, budgeting and reporting applications, and more recently, in inventory management and customer relationship management packages.

The good news is that these applications have delivered tremendous efficiency gains. The bad news is the fact that pockets of critical accounting data now exist within hundreds of different databases across the enterprise. When a company installs a time-tracking application, for example, it saves significant time and money compared to keeping track of employee hours via a set of manual processes. At the same time, however, accountants – who under new accounting rules have a growing need to use non-traditional financial data, like hours, in their calculations – now have a more difficult time accessing the hours-worked data. When was the last time the accounting impact was weighed during the evaluation process for new software?

It doesn't happen. Companies and vendors focus on the hard returns, bells and whistles, and technical integration issues of new software investments. They do not focus on how those investments can complicate the accounting process. Given the current regulatory environment, they should.

The oversight is not surprising in light of the efficiencies companies have gained by leveraging one side of the integration equation, as customers of C-T-R, known as International Business Machines since 1924, can attest to. However, the integration-related advancements that Big Blue and other companies have developed (first ASCII, and more recently XML, XBRL and Web Services) focus exclusively on the technical aspects of integration. In most cases, the information being transmitted is tested only for validity – not



accuracy. So, one finance system pulling accounting data from another finance application typically confirms whether the data being imported is the correct type of data. Is the date a date? Is the dollar amount a dollar amount? That's a problem because inaccuracies – namely, duplicates, omissions or timing mistakes – can and frequently do occur. If the person entering the dollar amount into the feeder application, or one of the two applications conducting an automated hand-off, adds an extra zero to a dollar amount or mistakes "June" for "July," no red flags are raised. And the inaccurate, but technically valid, data continues to flow through the tributaries of accounting applications.

Larger, thornier problems can arise when integrated financial systems do not possess the accounting discipline and business controls typically built into individual general ledger applications. Today, most mid to large-sized companies have dozens to hundreds of ancillary systems that feed into their general ledger and consolidation systems. The Hackett Group reports that average-performing Global 2000 companies possess an average of 400 finance applications – a collection that ranges from highly sophisticated, industry-specific applications to the armies of spreadsheets that occupy most companies. That's 400 or more integration points. Under Section 404 of Sarbanes-Oxley, the essential question CFOs and their finance teams must answer, document and address is: How effective are the controls that ensure the accuracy of my financial information, including each of those 400-plus transmissions of accounting data?

To date, few companies have dug that deeply into their internal controls frameworks. Instead, the treatment of the numbers has received greater scrutiny. In a recent analysis of the financial reporting practices among Fortune 500 companies, the U.S. Securities and Exchange Commission (SEC) identified revenue recognition as one of the areas needing the greatest degree of improvement. Yet, no amount of financial reporting improvements will bring about accurate numbers if the raw data that forms those numbers are incorrect.

When systems integration lacks accounting discipline, it can add days to the closing process – a complication companies can ill-afford in light of the shrinking deadlines for filing quarterly and annual reports. Without a clear audit trail, conducting "etymology" on a questionable figure becomes a time-consuming process that requires numerous telephone calls, e-mails and faxes. It can also lead to the reporting of estimates, which happens to be number three on a list of "Top Ten Litigation Red Flags" assembled by Haynes and Boone, LLP, a leading corporate law firm.

The top two red flags on that list – "new accounting system" and "financial restatements" – further illustrate how important it is to address the other half of financial systems integration processes. As the SEC enlarges the scope of its Sarbanes-Oxley enforcement activities, corporate executives can count on the notion of integration as an exclusively technical process being relegated to the dustbin of history.



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