

XBRL: Solving Real World Problems

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Overview

- Introduction
- History from Al Gore to Charlie Hoffman
- Research method
- Internal auditor/controller issues
- How XBRL can address those issues
- Conclusion & Questions

A Brief History

- **1969: Al Gore invents the Internet**
- **1994: Commercialization of the Internet**
- **1996: Debreceny & Gray create their first CPA/Internet paper**
- **1999: FASB and IASC each publish reports on financial reporting on the Internet**
 - **Most large companies are including financial reporting information on their Web sites**
 - **No consistency in terms of content, format, and navigation**
 - ***Probably violating reporting regulations! (Still true?)***
 - **Automated searches almost impossible**
- **April 1999: In email to SEC, Gray recommends XML**
- **October 1999: First XBRL meeting with Charlie Hoffman and 12 *steering committee* members**
- **2007: The XBRL consortium has over 450 members**

Push vs. Pull Strategy

■ Push strategy

- Makes use of a sales force and trade promotion activities to create consumer demand for a product

- Top-down: producer promotes the product to wholesalers, the wholesalers promote it to retailers, and the retailers promote it to consumers

- Example: cell phones

Push vs. Pull Strategy

■ Pull Strategy

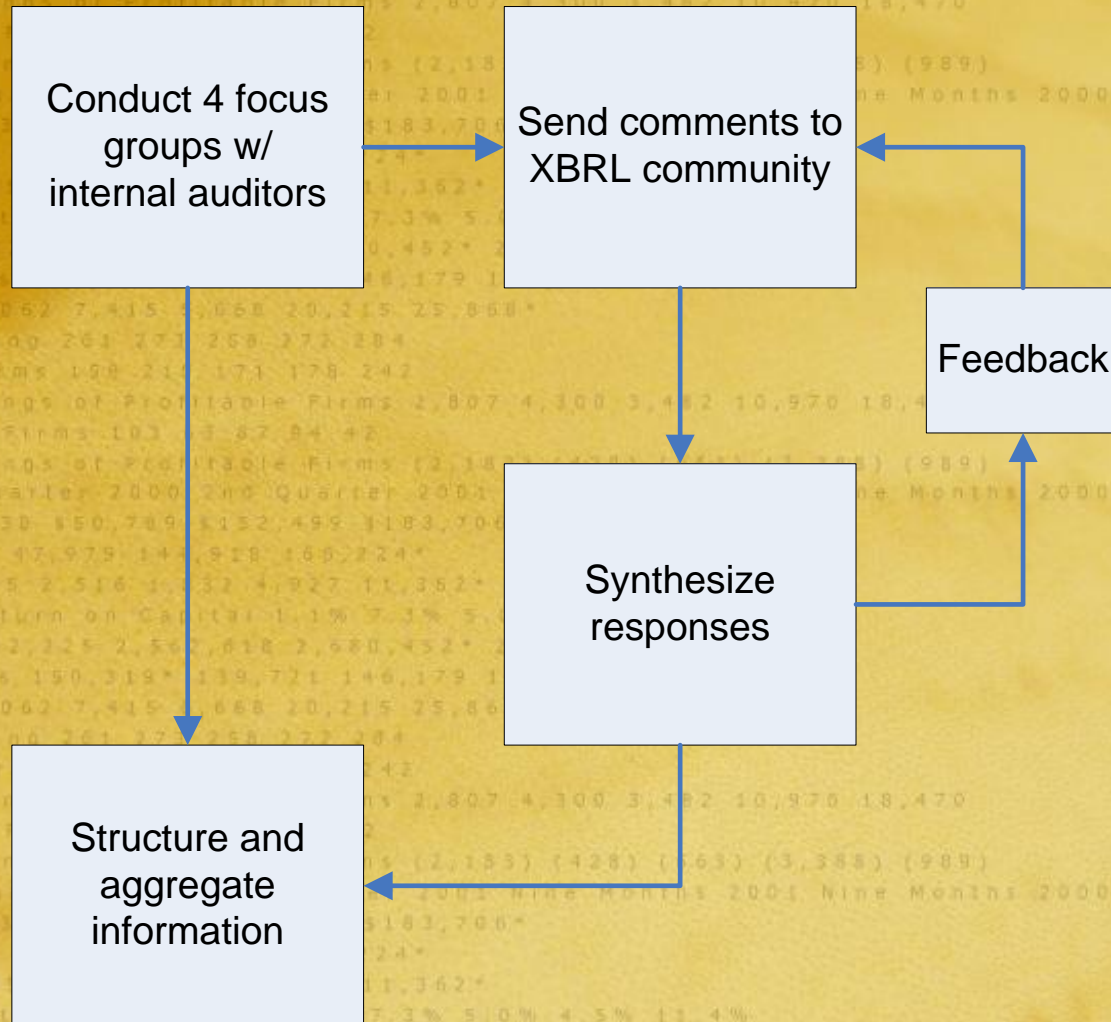
- Big spending on advertising and consumer promotion to build up consumer demand for a product.
- Bottom-Up: consumers will ask retailers for the product, the retailers will ask the wholesalers, and the wholesalers will ask the producers.
- Example: children's toys

Push vs. Pull & XBRL

■ **Push Strategy: SEC, FDIC, Shanghai stock exchange, etc, etc...**

■ **Pull Strategy: Examples? Groundswell? XBRL-GL?**

Research Method



Focus Group Topics

- The free-form discussions fell into the following topic categories:
 - Sarbanes-Oxley and Internal Controls
 - Fear of Proliferation of Spreadsheets
 - Retrieving and Consolidating Accounting Information
 - Audit Tools

Issues: SOX & ICFR

- Non-standardization of controls
- Continuation of the controls after testing
- Segregation of duties
- Management overrides
- Lack of formal training regarding policies and procedures
- Fraud detection is time consuming, as such, materiality set too high, and samples too small
- Lack of transparency of transaction changes
- People who understood legacy systems are retiring
- Keeping up with technology changes
- Dynamic aspects of businesses

XBRL: SOX & ICFR

- **XBRL tools will not generate an XBRL instance document if it is not syntactically and semantically correct**
- **Data Layer Validation: Validation takes place at the data layer instead of at the application layer. (Significant contributor to FFIEC's productivity increases)**
- **XBRL taxonomies include business rules, adding another level of validation**
- **Linkbases can move validation to the earlier stages of information supply chain.**
- **Continuous Auditing (CA).**
 - **XBRL supports CA, particularly, at XBRL GL level**
 - **With XBRL, because interfaces between disparate systems will be standardized, embedded audit modules (EAMs) can also be standardized**

XBRL: SOX & ICFR

- **GIGO still applies; however, since XBRL can result in more finely tuned, standardized controls, it *may* prevent, capture, or at least flag errors.**
- **XBRL promotes standardized data formats for exchanging data, which, in turn, can promote standardized controls, standardized testing, and improved audit processes.**

Issues: Spreadsheets

- Spreadsheets can be very complex and, generally, are not designed to share data, leading to frequent manual data reentry
- External auditors were not improving management's comfort level with spreadsheets
- Spreadsheets are an integral part of the accounting and financial reporting systems, but do not include design or operating documentation
- How to validate spreadsheets and the source data for those spreadsheets?
- False sense of security that the data collection is being performed properly because the transfer process has been automated or built into the application
- What testing is done after changes are implemented into a spreadsheet to ensure that the changes did not create new problems?

More Issues: Spreadsheets

- Frequent cutting-and-pasting and manual data reentry introduce new errors into the information supply chain.
- No live links from the spreadsheets to source data, so it is not clear what the source was and, if the value of the source changes, the applicable spreadsheets are not automatically updated.
- Because different people are extracting the same data, but at different times, there are version control problem.
- Data validation—both on incoming data from the source and outgoing data from the spreadsheet—is probably incomplete, undocumented, and performed manually.
- Business rules and analysis formulas are captured in the spreadsheet cells and macros, but different individuals are creating their own idiosyncratic representations of these rules and formulas without collaboration.

More Issues: Spreadsheets

- Spreadsheets are rarely self-documented.
 - A cell might include “=(C17/C28)” and C17 includes “=SUM(A6:A10),” and so on.
 - A long macro might be full of cell references with no names or comments.
- Is creating and maintaining spreadsheets the best use of a person’s time?
- Redundancies of individuals independently creating essentially the same spreadsheet.
- The sheer number of spreadsheets that exists in organizations means that they are many spreadsheets that never going to be fully audited. Many of those could be part of the SOX Sections 302 and 404 ICFR domain.

XBRL: Spreadsheets

- **Spreadsheets will NOT disappear because of XBRL.**
- **XBRL has superior functionality to act as intermediary between disparate systems or applications, so, some spreadsheets can be removed from functioning as intermediaries by XBRL Web services or local applications.**
- **Business rules and analytics that are currently embedded in spreadsheets and uncontrollable can be incorporated in XBRL taxonomies, thereby, moving business rules from the application layer to the data layer.**
- **Applications, such as spreadsheets, to manipulate the XBRL instance documents will still be needed, but the logic and the rules will be standardized and external to the applications, thereby, greatly reducing version control problems and redundancy.**
- **The tight coupling between XBRL documents and their taxonomies provides strong error checking and persistent connectivity, which can mean an unbroken audit trail**

Issues: Retrieving & Consolidating Accounting Information

- Exchanges between packages under different platforms (Unix, mainframes, and Windows servers) are problematic.
- Proprietary file formats of the third-party packages can also be a problem.
- Some applications are so dissimilar that the data can be exchanged and aggregated only through manual activities.
- Every-changing systems: after data exchanges procedures are in place, one or more of the systems will change.
- Some regulators and taxing authorities have different reporting periods compared to the company's fiscal year and will have different definitions for line items.
- Mis-posting of accounting transactions: how do you know that transactions were posted to the appropriate accounts?
- Disparate systems, dissimilar platforms, and software applications that must share, exchange, and transfer data contribute heavily to data integrity concerns.

Issues: Retrieving & Consolidating Accounting Information

- Different GAAPs in different countries add to the consolidation problem.
- Decentralization of the organization can be a problem.
- Highly competitive global marketplace makes long-range planning very difficult.
- Companies now have more integrated business relationships with trading partners and supply chain participants, which have to interact and exchange data.
- Budget limitations: even though management may want to replace or upgrade old systems, they may not have the budget to do that.

XBRL: Retrieving & Consolidating Accounting Information

- **XBRL supports the map-once-use-many exchange of data between disparate internal systems, third-party systems, and trading partners and banks.**
- **Once a system is mapped to an XBRL instance document that instance document becomes the uniform interface to exchange data with the world outside that system.**
- **Concept is similar to the traditional EDI concept, but XBRL is much more robust.**

Issues: Auditing Tools

- Each audit tool has a learning curve that must be addressed to ensure that there is somebody on staff who is ready to use the tool when needed.
- Extracting data is more of a challenge than using the tool itself: hundreds of data fields distributed amongst hundreds of database tables located on different computers.
- False positives can be an issue with audit tools for very large databases.
- In some organizations, auditors are not allowed to do their own data extractions. Instead, the IT department did the queries because they worried that the auditor would make mistakes that will use excessive computer resources and slow down other processes.
- In large organizations, the sheer volume of data is a problem.

XBRL: Auditing Tools

- **Two important aspects of XBRL are its potential to function as a means to exchange data between applications and its map-once-use-many functionality.**
- **Some auditing tools, such as ACL and IDEA, are capable of working with XBRL data. The data mapping will have to be performed the first time to create the XBRL instance document. Determining the correct fields and tables will still have to be addressed, but once mapped, the XBRL instance document will be the ongoing interface to that data.**
- **As XBRL moves up stream to XBRL GL, XBRL will allow for the finest granularity for analysis.**

XBRL: Auditing Tools

- **In situation where IT prevents auditors from running their own queries, auditors could work with IT to create the mapping between current systems and desired XBRL instance documents. Mapping would have to be performed once, but the mapping could then be automated to create revised XBRL documents on an as-needed basis.**
- **Over time, the XBRL instance documents could become more comprehensive and sophisticated.**

Questions & Comments?

Thanks

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