

## ZAPTHINK ZAPNOTE™

### THE EXTENSIBLE BUSINESS REPORTING LANGUAGE (XBRL) *ENABLING EXCHANGE OF BUSINESS REPORTING DATA*

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#### Abstract

Sharing financial and business information within and external to a business is often a challenge. Preparing financial statements for filing, printing, or web display often means that this same information would need to be re-entered multiple times. Furthermore, once this information is published, searching and extracting components of the financial information can be a challenge. The Extensible Business Reporting Language (XBRL) is an open, freely licensed specification that uses XML to describe financial statements for both public and private companies. The format provides a standard format in which users can prepare business and financial reports that can be subsequently presented in a variety of ways.

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## Standardizing the Exchange of Financial and Business Reports

Every organization of every size has to deal with financial and business information in its many different forms. However, there are just as many formats for that information to be in as there are types of information. Thus, sharing financial and business information within and external to a business can often be a challenge. Preparing financial statements for filing, printing, or web display often means that this same information needs to be re-entered multiple times. Furthermore, once this information is published, searching and extracting components of the financial information can be a challenge. This is especially the case where individuals may be interested in small subsections of data, such as in regulatory and financial statement reports.

Companies who prepare financial statements need a more efficient means for preparation of financial statements that will be created one time and rendered as printed reports, on Web sites, as Edgar filings, or as other regulatory filings. Analysts, investors, and regulators need enhanced distribution and usability of existing financial statement information, automated analysis, and a significant reduction in the effort needed to transform financial information from one form into another. Financial publishers and data aggregators need a more efficient means to collect data and perform custom queries on this data. Financial tools vendors need a standardized means for exchanging, exporting, and importing financial data.

All this can be realized by the creation of a financial reporting standard that can be adopted by these four different constituent groups: financial report preparers, intermediaries, end-users, and vendors of financial products and services. At the same time, this new format must facilitate current practice and not change or set new accounting standards, while supporting changes to these same standards. Furthermore, since accounting practices are not limited to a single country or language, a financial reporting standard needs to be able to support multiple languages and financial reporting regulations. A financial officer in the US has different accounting policy standards and regulatory requirements than financial officers in Germany or Australia. Even the meaning of "cash" is different in different countries and industries. Finally, business reporting is about more than just financial reports, and the created standard needs to take this into account.

While manufacturing and other vertical industries have had data exchange standards for decades, there has never really been a digitization of financial reporting standards. Basically, there never has been an EDI for financial reporting data. This fact is both good and bad news. The bad news is that there is no existing data and experience with which specifications and standards can be created. The good news is the same – the financial reporting industry has a clean slate. With this clean slate comes the opportunity to get widespread adoption without having to deal with the "baggage" of old standards and business processes.

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## The Extensible Business Reporting Language (XBRL)

Formerly code-named XFRML, the Extensible Business Reporting Language (XBRL) is an open, freely licensed specification that uses XML to describe financial statements for both public and private companies. The format provides a standard format in which users can prepare business and financial reports that can be subsequently presented in a variety of ways. XBRL also specifies how this financial information be exchanged between different applications and how it can be searched, extracted, and automated. Unlike other financial industry-related specifications like fpML, FIX, Fin-XML, and IFX, XBRL is not a transaction-oriented specification. Rather, the specification was created to facilitate exchange of general as well as extremely detailed business reporting information such as financial statements, financial information, non-financial information, general ledger transactions, and regulatory filings such as annual and quarterly financial statements. An XBRL-based financial statement is a digitally enhanced version of paper-based financial statements, which include the balance sheet, income statement, statement of equity, statement of cash flows, and the notes to the financial statements as well as the accountant's report.

XBRL is meant to benefit all users of the financial information supply chain: public and private companies, the accounting profession, regulators, analysts, the investment community, capital markets and lenders, as well as key third parties such as software developers and data aggregators. The format first aims to specify the format of information that would be reasonably expected in an electronic format for securities filings by public entities. Secondly, they hope to facilitate business reporting in the long term, not just limited to financial and accounting reporting. Their application and presentation-neutral format hopes to avoid the use of bold, italics, and other stylistic techniques that distract the end-user from the true and fair presentation of results. XBRL is not about establishing new accounting standards but is about enhancing the usability of the ones that already exist. In particular, XBRL will not require additional disclosure from companies to outside audiences.

Key uses of XBRL include representation of financial statements of all sorts, specification of items filed on tax returns, support for regulatory filings, management and accounting reporting such as all the reports that are created by accounting systems, and descriptions of accounting-related authoritative literature published by the AICPA, FASB, ASB, and others. Some types of users and industries actually benefit twice by use of XBRL. Financial services, governmental, and financial information industry businesses benefit by generating XBRL documents as well as by accepting them. In these cases, ROI for use of XBRL is almost doubled.

In essence, an instance of an XBRL document is the representation of a set of business and financial facts. A valid XBRL document can consist of a single item or a long, complex list of inter-related items. The XBRL format is not a single specification, but rather a suite of many related specifications. Each of these specifications deal with particular problem domain related to financial reporting. The reason for this organization is simple: since XBRL is intended to be used by every company and industry in the world, the specifics for each industry and accounting jurisdiction need to be handled separately. The XBRL specification itself represents a framework and architecture for financial exchange of the individual "taxonomies" contained in the problem domain areas.

The architecture of the specification also has a two-tiered design that states the basic facts of a company and then details the concepts that are used in discussing these facts. However, while XBRL seeks to be as complete as possible, the specification has notable gaps in major, important pieces of functionality such as security. This is primarily because the working group believes that those problems will be solved by others, and those solutions will be adopted by businesses and organizations as they see fit.

XBRL consists of a core language of XML elements and attributes used in document instances and a language used to define new elements, taxonomies of elements, and relationships between taxonomy elements. XBRL makes use of XML Schema, XML Namespaces and XML Linking in support of its specifications. In general, the working group takes a cautious, but aggressive stance towards adoption of new W3C recommendations such as XLink within their specification.

In the XBRL framework, the most fundamental concept is the "item", which is meant to correspond to a numeric or other fact that is being reported with respect to a given period of time about a given business entity. One example of an item is the reported revenue for a given public company for a specific year. Another example could be text describing recent acquisitions. XBRL defines a syntax in which many different kinds of these facts can be represented in understandable contexts. XBRL also includes the notion of "tuples" that provide a grouping of facts into identifiable units. Similarly, the concept of "groups" identify a set of related items that can appear in any order and can be interspersed among other text and elements in any XML document. The XBRL framework defines the concept of "elements" and their relationships to other elements within a "taxonomy". An example of a taxonomy is the set of elements that correspond to the US Generally Accepted Accounting Principles (GAAP) as applied to Commercial and Industrial (C&I) companies. This allows for a standard definition of terms and concepts such as "Accounts Receivable Trade, Gross", "Allowance for Doubtful Accounts", and "Accounts Receivable Trade, Net". Any given item can only refer to a single taxonomy, but multiple items within a single XBRL document can as a group refer to any number of taxonomies. These taxonomies can also be assembled to create larger, more sophisticated taxonomies to support superset definitions.

A sample XBRL document is illustrated below:

```
<group xml ns=" http://www.w3.org/XML/1998/namespace"
xml ns=" http://www.xbrl.org/2001/instance"
xml ns:xsi=" http://www.w3.org/2001/XMLSchema-instance"
xml ns:i as=" http://www.isb.org.uk/xbrl/2001-08-16/"
xsi:schemaLocation=" http://www.isb.org.uk/xbrl/2001-08-16/
i as.xsd" >
  <i as:bs>
    <i as:asset-cce-net numericContext="c1" > 100 </i as:asset-cce-net>
    <i as:asset-rec-net numericContext="c1" > 700 </i as:asset-rec-net>
    <i as:asset-cur-tot numericContext="c1" > 800 </i as:asset-cur-tot>
    <i as:asset-ppe-cost-gross numericContext="c1" > 1200
  </i as:asset-ppe-cost-gross>
    <i as:asset-intan-cost-mastheads numericContext="c1" > 600
  </i as:asset-intan-cost-mastheads>
    <i as:asset-nonCur-total numericContext="c1" > 1800
  </i as:asset-nonCur-total >
    <i as:asset-total numericContext="c1" > 2600 </i as:asset-total >
    <i as:liab-overdraft numericContext="c1" > 500 </i as:liab-overdraft>
    <i as:liab-cur-total numericContext="c1" > 500 </i as:liab-cur-total >
    <i as:liab-pay-bondsPay numericContext="c1" > 1000 </i as:liab-pay-bondsPay>
    <i as:liab-nonCur-total numericContext="c1" > 1000 </i as:liab-nonCur-total >
    <i as:eq-cap-api c numericContext="c1" > 900 </i as:eq-cap-api c>
    <i as:eq-re numericContext="c1" > 200 </i as:eq-re>
    <i as:eq-total numericContext="c1" > 1100 </i as:eq-total >
    <i as:liab-total numericContext="c1" > 1500 </i as:liab-total >
  </i as:bs>
```

```

<numericContext id="c1" precision="18" cwa="true" >
  <entity>
    <i identifier scheme="http://www.un.org/" > Cannon plc
  </i identifier>
    <segment/>
  </entity>
  <period>
    <instant> 2001-08-16 </instant>
  </period>
  <unit>
    <measure> iso4217: eur </measure>
  </unit>
  <scenario name="Actual values" >
    <ias: scenarioType> actual </ias: scenarioType>
  </scenario>
</numericContext>
</group>

```

## Moving Towards Adoption

One of the biggest challenges for any XML specification or standards effort is actual usage and adoption by the community at large. Realizing that this is a potential stumbling block, the XBRL organization sought from an early stage to make adoption a reality. In particular, members of the XBRL working group have a three-part commitment to the organization: payment of a scaling fee, commitment of internal resources and public support of the standard, and a commitment to incorporate XBRL within their products and/or services.

XBRL has also sought to make the format an accepted part of the way business is done by approaching organizations and governmental bodies for regulatory approval and enforcement. The premier national professional association for CPAs in the United States, the AICPA, is playing a major role in promoting XBRL. Other bodies expressing support for XBRL include the Australian Financial Regulatory Association (AFRA), and the Singapore financial regulation authority. Software and services vendors that have announced support include ACCPAC, Caseware, eKeeper, Enumerate, FRx, Hyperion, IB Matrix, Navision, and SAP, among others. Companies expressing support for XBRL include Microsoft, Toshiba Finance, EDGAR, KPMG, PriceWaterhouseCoopers, and Bank of America, among dozens of others.

However, it is not all smooth sailing. Barriers to adoption include the need to educate the market, lack of a wide assortment of tools, and integration with existing system. To address these issues and help insure that XBRL continues to grow, the XBRL Liaison committed is focused on interoperability, adoption, and success factors.

## Competition & Alternatives

XBRL is not alone in attempting to standardize at least parts of the business and financial reporting puzzle. There are no direct "competitors" with XBRL for a generalized business reporting format, however other formats do present choices for users. Many times, individuals confuse transaction-oriented financial industry specifications such as FIX, fpML, Fin-XML, IFX, OFX, and others with XBRL. XBRL is a reporting specification, and not a transaction-oriented specification. This means that there is hardly any, if at all, overlap between these efforts.

However, there are a number of reporting-type specifications out there that overlap in more subtle ways. NewsML, proposed by a number of news industry organizations, is focused on communicating news stories and press industry information. In as much as financial and business information might be transported this way, it has potential for overlap. Other financial research information oriented specifications such as RIXML, IRML, and MDDL provide competitive pressure in this manner as well. To address these areas of overlap, XBRL

is seeking to form liaison with various specifications groups in order to promote usage of XBRL whenever business and financial reporting is the main topic being discussed.

XBRL is also working with related vertical industry efforts such as HR-XML in the area of human resources, payroll, time and billing, and discussions have taken place with other bodies issuing XML specifications in the financial arena, including OAG (Open Applications Group), OMG (Object Management Group), FpML (Financial Products Markup Language), finXML (Financial XML), OFX/IFX (Open Financial Exchange) and ebXML (e-Business XML).

In general, XBRL doesn't see their primary challenge as competition with other XML standards, but competition with the old ways of doing things. The vast majority of the world has never really developed electronic standards for business financial reporting. So, in many ways XBRL is groundbreaking. A lot of financial reporting and communications happens by exchanging spreadsheets back and forth, while other approaches are based on products like Seagate's Crystal Reports. So, the primary challenge is to eliminate use of these inefficient and often unsafe approaches.

## Challenges & Future Trends / Directions

As mentioned above, one of the primary challenges for XBRL is gaining widespread adoption and usage. Other challenges for the organization include the ability for XBRL to be incorporated as part of regulatory guidelines and day-to-day usage. Part of the challenge with obtaining regulatory approval is the speed by which governments and financial authorities work. While standards take a long time to develop, governments typically move even slower. If the format becomes dependent on governmental adoption and regulatory body approval for widespread adoption and usage, the format could possibly be hopelessly stalled.

Another challenge for the format is the current lack of tool support, although that is hopefully soon to change with the stated support by financial industry heavyweights such as SAP, Microsoft, and Peachtree. As these tools add XBRL as a core feature of their product, it is expected that other tools vendors will follow suit soon afterwards.

## Key Conclusions & Recommendations

- XBRL is a compelling format for representation of financial and business reporting information. Its growing support within the financial community and cooperation with other standards and specification organizations bodes well for the long-term viability of this format.
- Companies looking to adopt a financial and business reporting specification should look to join the XBRL community or explore relationships with members of the organization.
- XBRL should stay aware of what other XML specifications efforts are doing, especially the information-related specifications such as NewsML, irML, and RIXML. As these formats gain popularity, there is possibility for overlap and specification confusion among possible users.

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<b>Profile: XBRL</b>	(December 2001)
Date Founded: April 1998	
Specification	
• Extended Business Reporting Language (XBRL)	
International Working Groups Chair:	
Specification: David Vun Kannon - KPMG / Luther Hampton	
Domain: Bob Cuthbertson - Case Ware	
Liaison: Zack Coffin - KPMG	
PR/Comm William Forshey - SAP	
Education: Neal Hannon - Bryant Collage	
Tools/Web: Eric Cohen - PWC	
Strategy: Mike Willis - PWC / Louis Matherne - AICPA	
Supply China Participants:	
Accounting: Mike Willis - PWC	
Intermediaries/Info Providers - Liv A. Watson - EDGAR Online	
Academic: Raj Srivastava - Kansas University	
Software and Services: Rob Blake - Microsoft	
Investors/Analysts: Norbert Flickinger - News Directions	
Regulators: Phil Walenga - FDIC	
URL: <a href="http://www.xbrl.org">www.xbrl.org</a>	
Contacts:	
Mike Willis (PWC) <a href="mailto:mike.willis@us.pwcglobal.com">mike.willis@us.pwcglobal.com</a>	
Zachary Coffin (KPMG) <a href="mailto:zcoffin@kpmg.com">zcoffin@kpmg.com</a>	
David Colgren <a href="mailto:colcomgroup@msn.com">colcomgroup@msn.com</a>	
Liv Watson (EDGAR Online) <a href="mailto:lwatson@edgar-online.com">lwatson@edgar-online.com</a>	

## Related Research

- *XML in Financial Services* Report (ZTR-VI100)
- *IFX* ZapNote (ZTZN-0155)
- *Clareon* ZapNote (ZTZN-0236)
- *Fidesic* ZapNote (ZTZN-0183)
- *MISMO* ZapNote (ZTZN-0133)

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## About ZapThink, LLC

ZapThink is an IT market intelligence firm that provides trusted advice and critical insight into XML, Web Services, and Service Orientation. We provide our target audience of IT vendors, service providers and end-users a clear roadmap for standards-based, loosely coupled distributed computing – a vision of IT meeting the needs of the agile business.

ZapThink's role is to help companies understand these IT products and services in the context of SOAs and the vision of Service Orientation. ZapThink provides market intelligence to IT vendors who offer XML and Web Services-based products to help them understand their competitive landscape and how to communicate their value proposition to their customers within the context of Service Orientation, and lay out their product roadmaps for the coming wave of Service Orientation. ZapThink also provides implementation intelligence to IT users who are seeking guidance and clarity into how to assemble the available products and services into a coherent roadmap to Service Orientation. Finally, ZapThink provides demand intelligence to IT vendors and service providers who must understand the needs of IT users as they follow the roadmap to Service Orientation.

ZapThink's senior analysts are widely regarded as the "go to analysts" for XML, Web Services, and SOAs by vendors, end-users, and the press. They are in great demand as speakers, and have presented at conferences and industry events around the world. They are among the most quoted industry analysts in the IT industry.

ZapThink was founded in October 2000 and is headquartered in Waltham, Massachusetts. Its customers include Global 1000 firms, public sector organizations around the world, and many emerging businesses. ZapThink Analysts have years of experience in IT as well as research and analysis. Its analysts have previously been with such firms as IDC and ChannelWave, and have sat on the working group committees for standards bodies such as RosettaNet, UDDI, CPExchange, ebXML, EIDX, and CompTIA.

Call, email, or visit the ZapThink Web site to learn more about how ZapThink can help you to better understand how XML and Web Services impact your business or organization.

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