XBRL - A Conceptual Framework

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XBRL is a language for electronic communication of accounting, financial and business information for multiple uses and multiple users. It is powerful replacement to current information system based on repetitive data entry manually for accounting, audit, company law, SEBI, Bankers, internal management purposes. XBRL operates through software or mapping on computer. It is a revolutionary business reporting system made mandatory by several nations and others including India will do so in near future. It has been developed by a voluntary consortium XBRL International. It is an open standard available free of cost. Now its user friendly version has been made available in 2008. Its capability of global comparison will drastically improve when IFRS and Basel II are put into practice. XBRL will have standard general, industry specific and MIS company specific versions. It is time, cost, comparability, accuracy and extendibility efficient and effective electronic information technique.

Introduction

Accounting and financial reporting is an essential part of Business Reporting and MIS. After the advent of computer and I.T. a new subject was developed in accounting curriculum called as Accounting Information system. AIS was a hybrid mix of accounting, I.T., management and external business environment. It provides integration of all branches of accounting like financial accounting, tax accounting, auditing, managerial accounting, cost accounting, auditing etc. The subject of AIS was introduced in 1980's in the USA but in India hardly 2-3 Universities could introduce this subject till the end of twentieth century. Need for speedy communication - internal and external became more and more intense after globalization and liberalization. Accounting information for management, for Shareholders, for tax authorities, for Registrar of companies, for Bankers, for Stock Exchange, for SEBI was consuming lot of time and money in corporate world. On an average, a company was using more than 800 spreadsheets to produce accounting information for regulatory and filing purposes1. After globalization, MNC's required globally comparative accounting and business information also. Urgent need to save time and money in producing accounting and business information to serve multipurpose uses with speed and accuracy led to the development of XBRL.

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Concept

Conceptually XBRL is a way of adding additional information to blocks or components of text giving it meaning for computer software. It is a language for the electronic communication of business and accounting and financial data. It is revolutionalising business reporting around the world2 Pinsker has called it ground breaking3. Burnett et al have called it a critical technology4.

Historical Background

An international non profit consortium of about 450 major companies, organizations and government agencies was constituted to develop XBRL. It has been developed as an open standard made available free of cost . Its use has been made mandotary in USA, Japan, Korea, Israel, Netherland, Spain and Singapore. This is going to be mandated in India, Australia, Canada, Belgium, Denmark, France, Sweden, Norway, U.K. and Thialand.This was its status of mandation in 20085

XBRL began initially with the efforts of an individual, Charles Hoffman, a CPA from Tacoma, Washington. The AICPA played leading role in constituting the consortium named XBRL International6. XBRL has passed through various versions which are still available. These are listed below :

1.0 - This was based in DTD's expressing the difference between data exchange in instance documents and metadata exchange in taxonomy documents. Taxonomies were expressed as XML schemas files . However, these were not used for instance validation.

2.0 - This version introduced use of XML schema validation of instances. Concept relations were broken into separate link based link bases. Context data in the instance were collected into a separate element.

2.1.-Definition terms were made more precise. Conformance suite was introduced.

SBR - In 2003, the Netherlands Taxonomy project (NTP) was started by the Dutch government. Its purpose was to create a multi agency taxonomy and communication infrastructure. It has collaboration with Australia, New Zealand and Singapore for developing Standard Business Reporting (SBR) programmes.This will reduce time in preparing reports for e- filing to govt. and regulatory agencies. SBR may be considered an application of XBRL.

XBRL - In 2008, C.Hoffman and R.V. Egmond proposed a simplified and user friendly XBRL application profile. It provided easy use by most business users, interopertability and comparability required for companies, financial analyst, regulators and tax authorities and independent software vendors. XBRL takes away lot of inefficiencies due to wastage of time and money, error, lack of comparability out of business information system.

The Process

The process involves the following steps :

(a) Tagging -

An identifying tag is provided to each individual item of data.This is computer readable. For example, sales, Net Profit, Operating cost will be given unique tags for identification. Tagging will enable automated data processing by computer software. Cost and time wasted in manual data re-entery will be saved. Computers can treat XBRL data intelligently. Information in a XBRL document can be identified, selected, analysed, stored, retrieved, exchanged, and presented in a variety of ways for multiple uses/ users. Speed of handling data will be very high with high level

of accuracy. XBRL belongs to languages based on XML and is a very powerful and flexible version of it . It allows tagging of a range of information ---- monetary item, percentage, ratio, fraction etc. in any language and references or other subsidiary information. XBRL is extendable to other organizations for variety of special requirements. Information can be converted into XBRL through mapping process or by software. It can be viewed.

Taxonomies: - Different nations have different business environment accounting standards and regulations. Each country may have its own XBRL taxonomy for financial and regulatory reporting.

As far as accounting and financial reporting is concerned, the global acceptance of IFRS will resolve the problem of different accounting taxonomies and will enhance the effectiveness of XBRL to a great extent. However, tax and regulatory filing taxonomy variations will still remain. The same is true about specialized tagging and taxonomy for Banking, Insurance, Electricity Companies and Public Utilities. For example, Banks are going to introduce Basel II & III norms. The special ratios used for them will be Gross spread, Net Spread, Capital Adequacy Ratio (CAR), Non-Performing Assets Ratio. General or Non-life Insurance Companies will use the special ratios listed below:

1. Gross Premium Growth rate
2. Gross premium to net worth Ratio
3. Growth Rate of Net worth
4. Net Retention Ratio
5. Net Commission to Premium Ratio
6. Management Expenses to Gross Direct Premium Ratio
7. Technical Reserve to Net Premium Ratio
8. Underwriting Balance Ratio
9. NPA Ratio

Thus XBRL Taxonomies will be general or standardized as well as industry specific and company specific. Company specific taxonomy will be used for internal MIS. This is called GL Taxonomy. Accounting and financial reporting software providers must take note of XBRL and its features while producing their products.

An XBRL taxonomy is a collection of taxonomy schemas and linkbases. XML schema document (file)is called taxonomy schema. Linkbases may be defined as XML documents (file) which follow the X link specification. The schema must finally extend the XBRL instance schema document and other published XBRL schemas on the www. xbrl.org. site. Taxonomy schemas define item and Tuple "Concept" using <xsd: element> elements. It names the facts and indicate whether or not it is an item or tuple, type of data - numeric, monetary , fractional, or textual or potentially more metadata. Items and Tuples are implantations of concepts or specific instances of a concept. Concepts are defined as classes and items and tuples are object instances of those classes. This serves as a source of the application of the XBRL instance terminology. Taxonomy schemas perform two functions-
(1) Defining Concepts which we have described earlier.
(2) Referring to linkbases.

Linkbases are collection of links. These consist of a collection of locators, arcs and potentially resources. There are five types of Linkbases which are described in XBRL 2.1 specification.

These are briefly stated hereunder :
1. Label Linkbase:
This provides human readable strings for concepts

to support multiple languages and also multiple strings in each language.

2. Reference Linkbase:

This associates concepts with citations from authoritative literature.

3. Calculation Linkbase :

This associates concepts with other concepts in order to verify consistency of values appearing in an instance document.

4. Definition Linkbase :

This associates concepts with other concepts using various arc roles to express relations.

5. Presentation Linkbase :

This associates concepts with other concepts to guide creation of a user interface, rendering or visual display.

XBRL Modules

XBRL International has assured stability of the core XBRL 2.1 specification. If further continues the work on development of several new XBRL modules to define new compatible functionality. It has come out with the following modules:-

1. XBRL Dimension 1.0:

This supports the use of XBRL Taxonomies to define additional, structured contextual information of Business Facts. Each piece of such information is called a "Dimension".

2. XBRLFormula:

It supports the creation of expressions using X Path that can be applied to XBRL instances to validate its information or to compute new XBRL facts in a new instance.

3. XBRL Rendering :

The rendering Linkbase is intended to add the metadata that the Balance Sheet runs with the labels in order of presentation with comparative data of current and preceding period. It is rendered in defined and structured order T form or statement form.

4. XBRLVersioning :

This module will support the creation of a standard versioning report with differences between two versions of the same taxonomy. This takes care of revised law, regulation and standards of reporting.

Extensibility

XBRL International supports several methods of continued expansion of shared XBRL functionality. These are as follows:-

1. Link Role Registry :

This is hosted at www.xbr.org. It provides link roles and are roles registration to facilitate reuse across taxonomies.

2. Functions Registry :

This collects X path functions for reuse in formula link bases.

3. Format Registry :

This collects common numeric formats for reuse in Inline XBRL application.

4. Best Practice RFCs :

This will help XBRL users to improve interopratibility of design through sharing of common best practices.

Since XBRL is an I.T. product, its technical side can be understood by tech. savvy users who have expertise in I. T. However, now its user friendly version has been made available for non-tech savvy users. In

this article, an attempt has been made to compare XBRL with existing business reporting system with its technical side described in an easy to understand manner. Those who are interested in more technical details, they can use electronic and print resources listed in references 7 to 10.

It is gratifying to note that the Ministry of Corporate Affairs, Govt. of India has already notified introduction of XBRL for the purpose of regulatory filing under the Company Law. Other regulatory bodies like SEBI, RBI, IRDA and Stock exchange are likely to follow the suit. Thus, practical usage of XBRL for corporate or business information system has become a reality in India. This brings a revolutionary change in business information system in terms of speed, integrity, access and application. Now the introduction of IFRS must be expected to make it more cost effective. Reforms in corporate law and tax laws must also be speedily carried out.

The Academic and Professional educators and trainer are also required to act fast on the following agenda:-

- To integrate XBRL in their curriculum on accounting and business information system. (David E. Magolis).
- To carry research in Awareness about XBRL amongst faculty or U.G. and P.G. levels and amongst professional accountants, managers executives working in regulatory bodies.
- To prepare standard reading material and case studies.
- To conduct short terms training programmes for faculty, managers and professionals.

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Abbreviations

XBRL	eXtensible Business Reporting Language
HTML	Hypertext Markup Language
XML	eXtensible Markup Language
AIS	Accounting Information System
MIS	Management Information System
I.T.	Information Technology
MNC	Multinational Corporation
AICPA	American Institute of Certified Public Accounting

Appendix
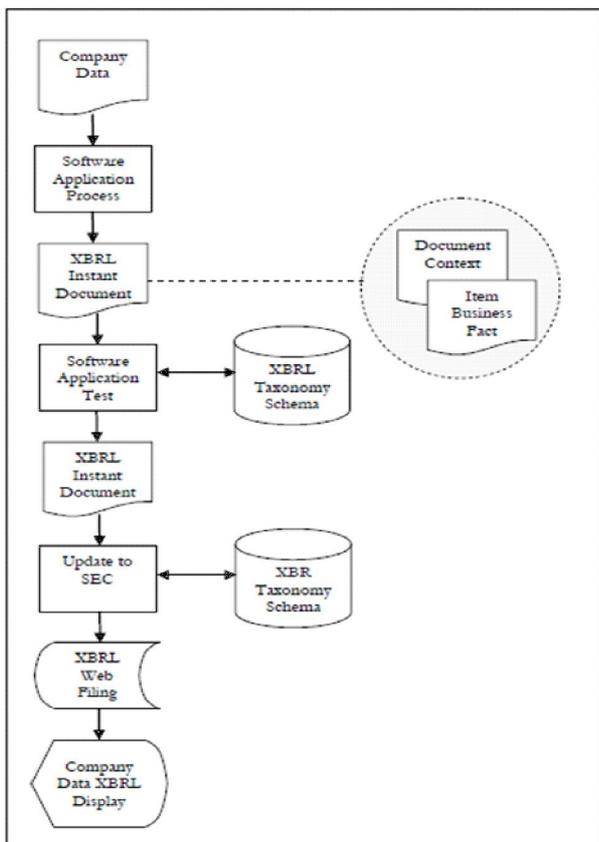
Figure: 1 Processes of Generating Balance Sheet
of Fedex Corp.

<?xml version="1.0" encoding="UTF-8" ?>
- <!-- EDGARizerX: Instance document generated by EDGARizerX, version 3.1.0.0 -->
<xbrl
xmlns=http://www.xbrl.org/2003/instance
xmlns:link=http://www.xbrl.org/2003/linkbase
xmlns:xlink="http://www.w3.org/1999/xlink"
xmlns:xsi="http://www.w3.org/2001/XML Schema-instance"
xmlns:xbrli="http://www.xbrl.org/2003/instance"
xmlns:asi=http://fedex.com/20090917

Figure: 2 Instance Document of Fedex Corp.

source : http://www.sec.gov/Archives/edgar/data/1048911/000095012309044076/fdx-20090831.xml).
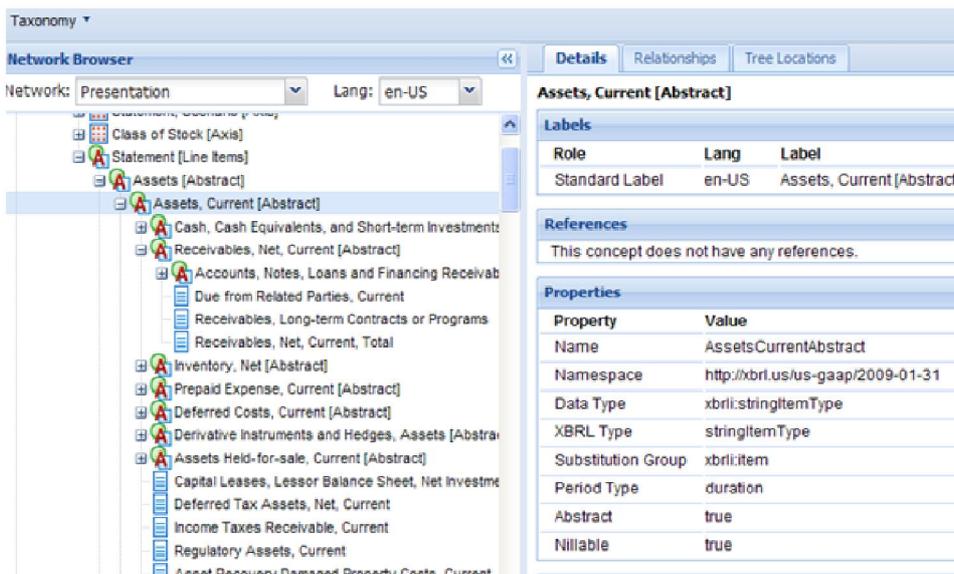
Figure: 3 Taxanomy of Fedex Corporation