



**OASIS TAX XML TC**  
**XML POSITION PAPER FOR TAX ADMINISTRATIONS**

**VERSION 2.01**

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## Revision History

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## Preface

Historically, tax administrations have exchanged information with customers using millions of paper forms and documents each year. They now face the challenge of transforming their services in order to keep up with changes in technology, business and management practices, to improve their capability to exchange information in support of international taxation agreements, and to assist in compliance activities. Realising this, the OECD Tax Administration eServices sub-group established a committee within the framework of OASIS – the Tax XML Technical Committee (“The Committee”) – to provide direction to tax administrations on building services based upon open standards.

This document provides a set of recommendations of The Committee. The document was revised by The Committee to reflect the comments from within and outside the OECD and OASIS community. Furthermore developments move fast, and some of the standards discussed in this paper have matured further since the original document was published. In this respect the need for development of proprietary OECD or tax administration specific “standards” has diminished considerably.

The standards discussed in this paper will play an important role in enabling efficient exchange of tax data, reducing the administrative burden on companies and facilitating more effective compliance.

This paper provides guidance to tax administrations and other “players” in the global tax community to be used in the future development of new services. It is expected that plans for adoption within each administration will be developed and continue to be reported on through The Committee. Only broad adoption of these standards will allow many of the perceived benefits to be realised, particularly the interoperability goals.

In conjunction with these recommendations, this paper also provides a two-year strategic vision demonstrating the possibilities of an open and interoperable environment, and a list of challenges The Committee will face to achieve this vision. On behalf of The Committee, I ask you to take the time to read this paper and seek your support and involvement in our effort to create an interoperable environment.

Harm Jan van Burg  
Chair, OASIS Tax XML Technical Committee

September 2005

*This paper reflects the consensus of The Committee and its members, but does not always and/or necessarily reflect the opinions of the organisations represented on this committee.*

## 1 Executive Summary

This is the second edition of the OASIS Tax XML Technical Committee ("The Committee")'s *XML Position Paper for Tax Administrations*. It confirms the overall directions of the first edition and expresses the learning and experience that have been gained in the past 12 months by the organisations involved on The Committee.

The Position Paper is mainly dealing with positions regarding standards, specifically open standards. Recommendations by the OECD are therefore, strictly speaking, out of the scope of the document and will only be dealt with marginally. The Committee, however, recognises the importance to the tax community of OECD recommendations such as the Standard Audit File for Tax ("SAF-T") and the Standard Transmission Format ("STF"). The Committee would like to see a convergence of these recommendations with open standards in the future and is prepared to provide assistance in that direction.

The development and adoption of open standards, specifically eXtensible Business Reporting Language ("XBRL") Financial Reporting Taxonomies for financial reporting ("XBRL FR") and more recently XBRL – the Journal Taxonomy ("XBRL GL"), are the directionally supported standards for the business community, software developers and the accounting community.

More recently, The Committee has embarked on a task aimed at gaining the support and co-operation of XBRL International to evolve XBRL GL by December 2005 to a level of maturity required to support the requirements of tax auditors as expressed in the SAF-T. This task brings a new level of accountability to The Committee, which is to provide standards development and direction to all OECD Working Groups, ensuring that there is only one group working on standards, at the priority demanded by the service and compliance working groups.

The further evolution of XBRL GL within the required timeframes will galvanise the direction and positions contained in this second *XML Position Paper for Tax Administrations*.

### 1.1 XML

Extensible Markup Language ("XML") is a standard that promises to free business and tax data from application infrastructure. By using the open standards recommended by The Committee, participants in the tax ecosystem will achieve interoperability as a result of the software they use adhering to these standards. Thus, each entity involved in the tax lifecycle is relieved of having to figure this out on its own.

The data-centric approach of XML allows the communication of data regardless of the platform, operating system or underlying technology of existing systems. A large number of XML-based standards now exist, each promoted for certain purposes and scenarios. This paper identifies selected XML-based standards relevant to tax administrations, and recommends the position to be taken on each one of them. To maximise the benefits, The Committee advises positions on relevant, widely-supported and long-lasting standards.

## **1.2 Recommendations and Committee Activities**

The following summarises the recommendations and committee activities discussed in this document. This is not a final list of XML standards that tax administrations may require. Rather, it provides a starting point upon which to base further analysis and decision making for the ultimate aim of achieving interoperability.

### **XBRL (eXtensible Business Reporting Language)**

#### **Recommendations**

*Recommend XBRL as a central standard for exchange of business/financial information for tax purposes.*

*Recommend that XBRL GL be progressed to support the requirements of the OECD Standard Audit File Guidance*

#### **Committee Activities**

- Analyse in The Committee's XBRL Subcommittee the tax-specific extensions to XBRL needed to support the requirements of tax administrations. Advocate these to XBRL International to have them included in the standard.
- Actively participate in the ongoing development of XBRL GL to ensure that it meets the needs of business, the accounting community, tax administrations and other members of the business reporting and audit supply chain.
- Actively work to harmonise the flow of data across Universal Business Language ("UBL") (and potentially other transactional standards), XBRL GL and XBRL FR without loss of context or audit trail.
- Seek adoption by tax administrations of the extended XBRL standard as the standard for business tax reporting.
- Provide support to OECD groups and revenue agencies to further develop opportunities where XBRL (including XBRL GL) can enable improved taxpayer experience and automated audit and compliance activities.

- Create a standard framework for agencies to utilise XBRL, i.e., develop and agree on best practices for tax administrations to use when leveraging existing (base) XBRL taxonomies, e.g., the International Financial Reporting Standards (“IFRS”) taxonomy.
- Report on the practical application of XBRL payloads in a tax environment.

## **UBL (Universal Business Language)**

### **Recommendation**

*Recommend continuing efforts with UBL to provide a coordinated set of XML grammatical components that will allow parties to exchange business documents that are in a standardised way fully compatible with tax requirements.*

### **Committee Activities**

- Work with UBL to provide tax-specific requirements, e.g. audit trail, to be included in the UBL specification and implementation guidance.

## **OAGIS (Open Applications Group Integration Specification)**

### **Recommendation**

*Recommend that OAGIS be monitored, as it could provide a coordinated set of XML grammatical components that will allow parties to exchange business documents that are in a standardised way fully compatible with tax requirements.*

### **Committee Activities**

- Create a common framework including applicable data models containing tax-specific content.
- Monitor the progress of OAGIS’s incorporation of Tax XML requirements into OAGIS.

## **CIQ (Customer Information Quality)**

### **Recommendation**

*Recommend that CIQ be monitored, as it could provide the foundation for party identity information, and could be used in conjunction with other standards under review.*

### **Committee Activities**

- Monitor the progress of CIQ.

- Assess the new release from CIQ to determine if their specifications have matured enough for the efficient and effective development of tax documents.
- Work on proof of concept to determine the additional usefulness of CIQ's specifications within the tax context.
- Identify potential alignment between CIQ, XBRL Global Common Document, and XBRL GL, and initiate and monitor discussions on same to prevent duplication with XBRL and CIQ.

## **STF (Standard Transmission Format)**

### **Recommendation**

*The Committee recognises that STF within its scope fulfils the business need for efficient and effective communications between tax administrations in a controlled environment. However, The Committee recommends that, in order to extend its usefulness, STF migrate to the use of open standards components as soon as these are adequately accepted.*

### **Committee Activities**

- Work with the relevant OECD working groups to engage in the use of open standards in this area.

## **1.3 Conclusions**

This Position Paper outlines the standards that The Committee has determined will have the greatest and longest impact on improving the exchange of information. The Committee's conclusions are:

- XML is applicable to tax administrations already represented on The Committee. It is also likely to be applicable to other tax administrations.
- The Committee does not seek to define a "Tax XML" standard. Rather it will utilise and influence other XML standards and determine how they should be used by tax administrations within a common Tax XML framework designed to facilitate interoperability.
- It is expected that more tax administrations (particularly from OECD member countries) will become involved in The Committee.

## 2 Introduction

### 2.1 Glossary

Term	Definition/explanation
CIQ	Customer Information Quality, an international, XML-based family of specifications for specifying customer details that has been developed under the auspices of OASIS.
Customer	An external person or organisation who deals with tax administrations (party, constituent, tax preparer, etc.).
Framework	The Tax XML message framework is an XML taxation message definition that is divided into content containers that will be using internationally accepted standards.
Interoperability	The ability of two or more systems or components to exchange information and to use the information that has been exchanged [IEEE 90].
OAGIS	Open Applications Group Integration Specification, a effort to provide a canonical business language for information integration.
OASIS	Organization for the Advancement of Structured Information Standards, a thought leader in XML standards.
OASIS Tax XML TC	The OASIS Tax XML Technical Committee, referred to as “The Committee” in this document.
OECD	Organisation for Economic Co-operation and Development
Ontology	Defines the common words and concepts (meanings) used to describe and represent an area of knowledge, and so standardises the meaning.
Open Standard	<p>An open standard has been defined as:</p> <ul style="list-style-type: none"> <li>• A standard that is adopted and will be maintained by a not-for-profit organisation, and its ongoing development occurs on the basis of an open decision-making procedure available to all interested parties (consensus or majority decision, etc.);</li> <li>• The standard has been published and the standard specification document is available either freely or at a nominal charge. It must be permissible for all to copy, distribute and use it for no fee or at a nominal fee;</li> <li>• Intellectual property – i.e. patents possibly present – of (parts of) the standard is irrevocably made available on a royalty-free basis;</li> <li>• There are no constraints on the re-use of the standard.</li> </ul>

Term	Definition/explanation
SAF-T	Standard Audit File for Tax, an OECD development created for tax-auditing purposes.
STF	Standard Transmission Format, an OECD development for the transfer of one or more electronic records between tax jurisdictions.
Taxonomy	A classification scheme – a collection of concepts, definitions, and interrelationships in an area being defined. In XBRL, taxonomies are formally defined collections using XML Schema and XLink.
UBL	Universal Business Language, a template and component framework for business documents. Common document types that the OASIS UBL Technical Committee has implemented include Order, Invoice and Despatch Note.
XBRL	eXtensible Business Reporting Language, an XML-based standard for identifying and communicating business reporting and financial information in standardised reports.
XBRL FR XBRL GL	XBRL can be used on different levels of detail. If there is a need to make the level explicit, we have chosen to refer by “XBRL FR” to the use of XBRL for general financial reporting and by “XBRL GL” to the use of XBRL to represent the detail found in business operational and accounting systems.
XLink	The XML Linking Language, which allows elements to be inserted into XML documents in order to create and describe links between resources. It uses XML syntax to create structures that can describe links similar to the simple unidirectional hyperlinks of today’s HTML, as well as more sophisticated links [from <a href="http://www.w3.org/TR/xlink/">http://www.w3.org/TR/xlink/</a> ]
XML	Extensible Markup Language, a W3C specification for creating common data formats for the web environment (see <a href="http://www.xml.org">www.xml.org</a> ). Has widespread support as a <i>de facto</i> standard for data interchange. In this document, we refer to XML as a “standard”.
XML instance document	A self-contained stream of XML-formatted data such as a message or a company’s financial details.
XML Schema	XML schemas express shared vocabularies and allow machines to carry out rules made by people. They provide a means for defining the structure, content and semantics of XML documents. [from <a href="http://www.w3.org/XML/Schema">http://www.w3.org/XML/Schema</a> ]
XML Standard	Any standard built upon XML.

## 2.2 History of The Committee

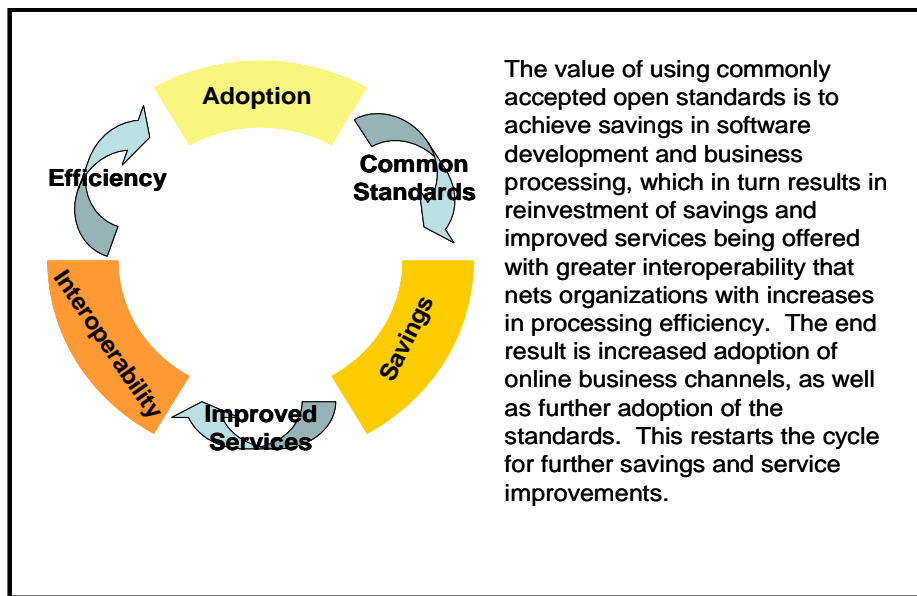
The OASIS Tax XML Technical Committee (“The Committee”) was established to analyse, research and create a framework for XML standards to be used by tax administrations. The key to achieving a free flow of information between organisations is to standardise the form and definition of the information to be exchanged. Without such agreed and open standards, history shows that multiple definitions of information will be developed – greatly increasing the development and maintenance costs, not to mention the impact of non-standardisation on the ability to share information across jurisdictions in a meaningful and interoperable manner.

In line with international practice, the OECD regarded XML as the central standard for the exchange and mark-up of tax related data. The OECD Forum on Tax Administration requested that OASIS establish a Tax XML Technical Committee to define the XML framework within which tax administrations, the accounting profession, and software developers, each in their area of responsibility, would work in regards to the exchange of tax-related information.

OASIS established The Committee in December 2002. The purpose of The Committee is to define and agree on a framework for tax administrations that will facilitate interoperability in a way that is open, flexible and international in scope. The Committee is composed of tax administrations from Australia, Europe and North America, worldwide premier software solution providers, and international consulting and accountancy firms. The original statement of purpose when The Committee was formed can be found at Attachment 4.

Tax related information spans many business interests and is mostly either an extension of common business documents or a repackaging of business information for tax compliance purposes. Existing or in-progress standards for business information are being examined, influenced and incorporated as appropriate.

The benefits sought by The Committee include reductions in development of jurisdictionally specific interchange standards for software developers and tax administrations, as well as increased on-line interactions including the use of web services. Taxpayers will benefit from a greater range of on-line services that use of tax-related standards that are incorporated into software used for their business purposes. For example, as well as record keeping/accounting software that is capable of automatically preparing tax reports such as income tax returns. Software developers will see reduced development costs and schedules when integrating their systems with tax reporting and compliance systems across jurisdictions. Virtually all software developers involved in e-commerce support XML and are keen to have an agreed standard upon which they can focus for ongoing development.



The Tax XML value proposition is to reduce the tax compliance burden for taxpayers, enable seamless interoperability in financial and accounting systems with tax administration processing systems, and generate investment in software innovations using widely adopted open standards for tax purposes on an international basis.

## 2.3 Document purpose

This document is in response to the request of the OECD Forum on Tax Administration, E-services subgroup<sup>1</sup> to The Committee to provide a high level view of XML standards that are relevant to tax administrations and the proposed positioning for use of those standards. The paper addresses the key role of XML and XML-based standards in achieving standardised and re-useable interfaces. This will facilitate widespread uptake and avoid the high costs inherent in developing interfaces for specific purposes. Such positioning will improve tax administrations' electronic interaction with their customers and between tax administrations.

The Committee recognises the benefit of using open standards, and recommends their use to facilitate interoperability.

An open standard has been defined as:

- A standard that is adopted and will be maintained by a not-for-profit organisation, and its ongoing development occurs on the basis of an open decision-making procedure available to all interested parties (consensus or majority decision etc.);

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<sup>1</sup> In September 2004 changed to Taxpayer Services Group. Current chair Terence Lutes, IRS

- The standard has been published and the standard specification document is available either freely or at a nominal charge. It must be permissible for all to copy, distribute and use it for no fee or at a nominal fee;
- Intellectual property – i.e. patents possibly present – of (parts of) the standard is irrevocably made available on a royalty-free basis;
- There are no constraints on the re-use of the standard.

This paper aims to be readable rather than exhaustive. While this paper represents The Committee's agreements for future direction, this paper does not necessarily represent, in all aspects, the current position of all tax administrations from The Committee.

## **2.4 Background**

Tax administrations around the world face the challenge of transforming services to keep up with changes in technology, business, and management practices. Member organisations of The Committee have been consistently at the forefront of these efforts.

The Committee was formed within OASIS in late 2002. The mandate of The Committee is to research and analyse personal and business tax reporting and compliance information, and to define a framework that will facilitate interoperability in a way that is open, flexible and international in scope.

All government members of The Committee participate actively in international organisations like OECD.

## **2.5 Business Drivers**

Historically, tax administrations have exchanged information with customers using millions of paper forms and documents each year. There are strong business drivers to replace this with electronic methods as can be seen in the different tax administrations' eService results. Customers are looking for government services that are secure, reliable, and easy to access at times that are convenient for them. To meet these needs, governments around the world have committed to have their most commonly used programs and services online.

Many tax administrations already offer electronic options for their taxes and are continuing to expand these services. The key benefits to these tax administrations are reduced handling costs and improved compliance rates. Customers also benefit from simplified processes and certainty of outcome (through real-time responses).

**Without improved information exchange, cost reductions will not be fully achieved and customers will remain with manual processes.**

Standard XML interfaces have a key role for systems development within tax administrations. The task of linking major software applications has much in common with linking different organisations. The current state is typical of many large organisations; there are a wide range of special-purpose interfaces. Apart from high costs, these impose constraints on any substantial change. Standardised and re-usable interfaces and exchange formats will reduce costs and allow tax administrations to make changes while supporting business needs. Simplified tax reporting will drive increased use of electronic filing, which will result in better compliance through the availability of standardised data formats and exchange mechanisms.

**Standardisation of data that enables electronic communication without ambiguity will change the processes of tax preparation.**

Data can be provided electronically in a format that will be readable by customers, software developers, and the tax administration. The information can be automatically exchanged between systems to eliminate the errors that can occur during manual entry.

## 3 XML

Extensible Markup Language (“XML”) is a standard for creating common data formats for the web environment.

### 3.1 Why is XML important to my organisation?

One of the major problems in the world of computers is that so many systems are incompatible with each other. This incompatibility extends to both hardware and software. If one computer system does not work with another system, they cannot communicate. Just considering personal computers, there are Windows PCs, Macs, and even Linux machines. Each uses a separate type of operating system. The version of Microsoft Word that you install on a Mac will not work on a PC using a Microsoft Windows operating system! Taking into consideration the many corporate and government computer systems confuses the situation even more. How can individuals, companies, and governments use the same Internet?

A while ago, some bright people (in particular, a very bright person named Tim Berners-Lee) developed the HyperText Markup Language (“HTML”) to be a “universal” method of marking-up web pages so that all compatible web browsers could read those pages. As it turns out, all web browsers adopted HTML – and the rest, as they say, is history. These incompatible systems can suddenly use the Internet.

There is a wide variety of computer data formats geared toward storing, sorting, and exchanging data. Many of these work only with a limited set of hardware or software – and many are proprietary. In order to use a particular system for exchanging data, you often need to buy a specific brand of software or purchase a license. Even if you do, the individual or organisation to which you send data may only be able to read that data if they have a system that is compatible. Converting data from one format to another, when you need to exchange that data, is expensive and time-consuming. Without a universally accepted standard for data markup and organisation that could be used by a wide variety of organisations, it was impossible to share data across all platforms.

XML was developed to be a universal markup and organisation format for data exchange. XML is extremely effective in this role and has been widely adopted. XML is, in many ways, similar to HTML. This is a rough comparison since XML and HTML are designed for different purposes. The key distinction is that HTML describes how data looks and XML actually describes the data. However, the two are derived from the same source, Standard Generalized Markup Language (“SGML”). Like HTML, XML is open-source – everyone is free to use it. Both XML and HTML can be used by almost any computer system, regardless of the hardware or software technology employed.

XML is rapidly being adopted as the international data exchange markup standard for data exchange. Most new software packages that involve data exchange are written to be XML compatible – just as web-browsers are written to be HTML compatible. In fact, the ability of XML to operate with such a wide variety of existing hardware and software is what sets it apart from other schemes and formats for data exchange.

### **3.2 XML Overview**

XML is a standard way of expressing any data as a self-describing, structured string of characters known as an “XML instance document”. XML instance documents are composed of content “marked up” by tags describing that content; the tags are “metadata”, or data that describes other data. Applications designed to share and interpret data based on agreed-upon tags can do so independently of their operating systems, platforms, languages, and structures.

XML provides content and context without the constraints of a single presentation format. Because it frees data from presentation formats, applications, and systems, XML allows for repurposing of data – one XML instance document can be reused for many purposes.

XML instance documents can be transmitted by many methods including electronic messages, files on disk, or even on paper. Due to its flexibility and wide applicability, XML has become the preferred standard for data exchange worldwide, and it underpins many current interoperability initiatives.

XML 1.0 was developed in 1998, and most recent versions of applications, including popular desktop applications, have incorporated XML as import/export formats or in some other way. However, older applications still in service today do not include XML capabilities, and will have to be replaced or upgraded over time to achieve the benefits that XML promises.

### **3.3 Why further XML standards?**

XML is an agreement on how to build metadata tags and files with marked up content, but the agreement on the terms inside those tags must come from groups that come together to agree on how to exchange information. XML provides many options in how to express data items. That flexibility can be a negative factor when sharing data: in order for a message to be interpreted correctly, further standards are required to define how the message is carried and how its content is structured. In XML, and in the tax reporting context, a layered “stack” of standards is actually needed.

All the standards discussed in this paper are based on XML. The OASIS Tax XML Technical Committee (“The Committee”) recognises that these standards are in various stages of adoption and are still evolving; tax administrations will need to be prepared to evolve their usage accordingly. Of course, this situation is little different than that of adoption of other technology, systems and language standards by tax administrations over the last 30 years. One major difference with XML standards is that many more groups and jurisdictions are jointly involved in defining them, with the result being that a much larger community will be able to share and reuse information electronically. The Committee will take into consideration the risks of rapid change and recommend well defined and internationally accepted standards as potentially more stable and well-supported.

The stack of standards as delineated by the XML community in general is large, with a number of areas such as core XML technologies, security, transport and handling that we will leave for future position papers. The standards we discuss in this document are primarily for message content, what a message contains. These standards can be categorised in many ways, among them:

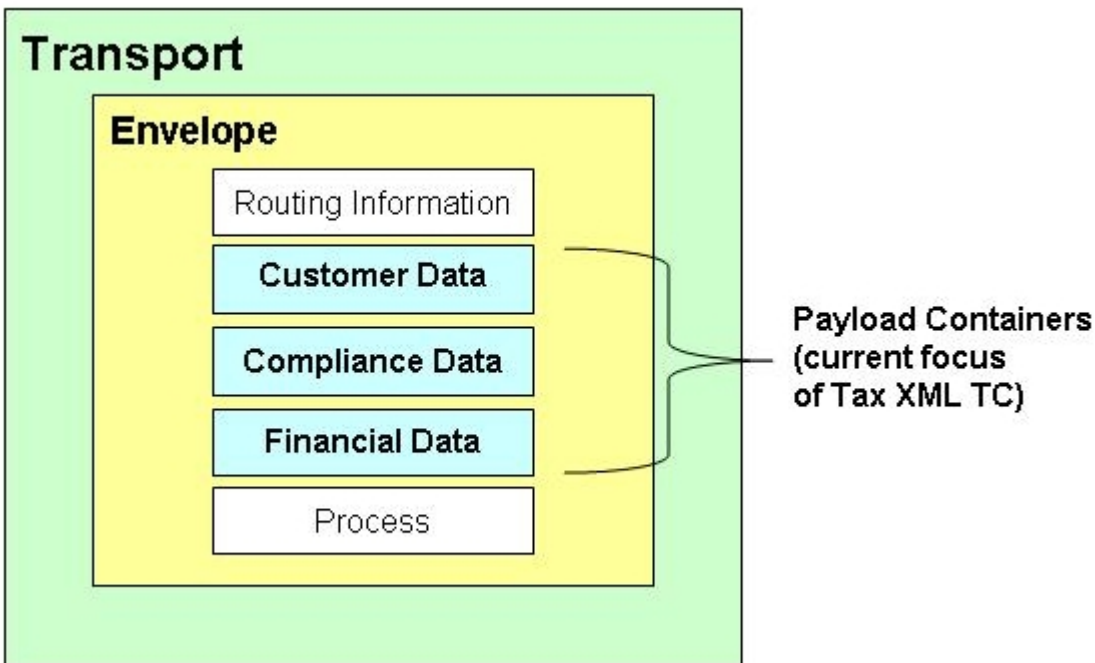
1. Direct or indirect applicability to taxation requirements
2. Complete messages in themselves or being reusable representations of tax or tax-related information to be incorporated into other messages
3. Specifications or implementations based on XML or generic information that can be represented using different file formats or agreements on specification

### 3.4 Current Focus of Tax XML TC Within an XML Message Framework

The Committee has chosen to focus first on the XML standards for the data content that will be transmitted in Tax XML messages within a given XML Message Framework. XML Message Frameworks provide:

- a process model (the rules for processing an XML message);
- an extensibility framework (enabling developers to use extensions inside and outside the XML envelope);
- the message construct (the guidelines for constructing XML messages); and
- the protocol binding patterns (the rules for specifying the exchange of XML messages over underlying protocols such as HTTP).

Currently there are a number of internationally accepted standards for XML Message Frameworks that would meet the needs of the tax community, such as SOAP, ebXML, and MIME, to name a few. The Committee's strategy is to enable software developers to easily incorporate Tax XML standards into their products so they can produce Tax XML content for messages to be exchanged within any of the internationally accepted XML Message Frameworks.



The above diagram illustrates The Committee's view on a possible structure for an XML taxation message. The message envelope is structured with Tax XML content containers that will be using internationally accepted XML standards as far as possible, and supplementing them where necessary with XML standards-consistent extensions. The XML standards under review in this paper are pertinent to the taxation information within message payload containers. The chart below presents a mapping of these standards to likely payload containers.

Current Tax XML TC Focus	Message Component	Component Description	Examples of XML Standards in Tax XML TC Focus
	Transport	Communication medium by which the message is carried, e.g. TCP/IP, HTTP	
	Envelope	The structure that describes the message detail in prescribed sections, e.g. sender information, destination information, business/tax content	
	Routing Information	Message section that contains information about who the message is from and where it is going	
	Payload Containers	Message sections that are XML containers enclosing business/tax content, e.g. UN/CEFACT, ISO TC154	UBL
X	Customer Data	Customer name, address, etc.	CIQ
X	Compliance Data	Self assessment and other information	XBRL
X	Financial Data	Accounting data, tax amounts, due dates, etc.	XBRL GL
	Process	Business process being called with necessary parameters	

## 4 XML Standards Under Review

### 4.1 XBRL (eXtensible Business Reporting Language)

XBRL is a formal specification (now at version 2.1) of how to create standardised taxonomies for business reporting using Extensible Markup Language (“XML”) and related technologies. XBRL has been developed by an international consortium driven by the accountancy professional associations in many of its established jurisdictions – currently USA, Canada, UK, Japan, Germany, Ireland, Netherlands, Australia, New Zealand and the International Accounting Standards Committee Foundation – and supported by the world’s leading software companies, stock exchanges, accountancy firms and regulators in those countries, and beyond.

Current implementations include the tax administrations of Japan, UK and the Netherlands with formal endorsement of the standard by Australia and New Zealand.

XBRL is designed for reporting business data at either the transaction level or at the aggregate level. It is not limited to financial data and can be used for reporting any business “fact”. It is a content standard designed for *reporting* information, in contrast to other XML standards designed for *processing* transactions. As such it has been built with the requirements of accountants, investors, auditors and regulators in mind.

#### 4.1.1 XBRL Financial Reporting Taxonomies

These taxonomies are created using the XBRL standard to report aggregate business facts within and outside of an organisation. Those created to date include International Financial Reporting Standards (“IFRS”), US Generally Accepted Accounting Principles (“GAAP”), German GAAP and others. Many countries are now creating extension taxonomies to the IFRS taxonomy for local reporting requirements.

Tax filings which use accounting data as a base for computing tax obligations can extend the accounting taxonomies for their specific requirements. Where there is little overlap between the data required for tax filing and published accounts, the tax administration should create its own taxonomy for its particular purpose.

In the Netherlands recently, such a taxation-specific taxonomy was created within the framework of a set of whole-of-government taxonomies, thus creating a considerable reduction in administrative burden for Dutch companies.

#### 4.1.2 XBRL GL – the Journal Taxonomy

This set of XBRL taxonomies has been created to report transactions from accounting and business operational systems in a standard way. It is an agreement on the names for the structural elements (metalanguage) used in accounting systems so that transactional information can be shared seamlessly between different applications that recognise this standard.

Whereas XBRL Financial Reporting Taxonomies (“XBRL FR”) provides a standardised format for aggregated or summarised information, XBRL GL provides a standardised mechanism to report the details of the transactions which can subsequently be summarised into XBRL FR reports. This has particular application for consolidating data across different platforms and auditing transaction level data.

#### Recommendations

*Recommend XBRL as a central standard for exchange of business/financial information for tax purposes.*

*Recommend that XBRL GL be progressed to support the requirements of the OECD Standard Audit File Guidance*

#### Committee Activities

- Analyse in The Committee’s XBRL Subcommittee the tax-specific extensions to XBRL needed to support the requirements of tax administrations. Advocate these to XBRL International to have them included in the standard.
- Actively participate in the ongoing development of XBRL GL to ensure that it meets the needs of business, the accounting community, tax administrations and other members of the business reporting and audit supply chain.
- Actively work to harmonise the flow of data across Universal Business Language (“UBL”) (and potentially other transactional standards), XBRL GL and XBRL FR without loss of context or audit trail.
- Seek adoption by tax administrations of the extended XBRL standard as the standard for business tax reporting.
- Provide support to OECD groups and revenue agencies to further develop opportunities where XBRL (including XBRL GL) can enable improved taxpayer experience and automated audit and compliance activities.
- Create a standard framework for agencies to utilise XBRL, i.e., develop and agree on best practices for tax administrations to use when leveraging existing (base) XBRL taxonomies, e.g., the IFRS taxonomy.
- Report on the practical application of XBRL payloads in a tax environment.

## 4.2 UBL (Universal Business Language)

UBL is a content standard for describing generic data models and business documents such as Orders, Despatch Notes and Invoices. UBL v1.0 provides a framework in which document templates can be defined and combined with reusable components to produce structured documents that follow a well-defined set of composition rules. Individual components may be built with other standards such as CIQ or XBRL, as appropriate. Although the UBL standard is intended, ultimately, to cover all common business documents, v1.0 only covers supply chain documents, including standard components for indirect taxation. Based on the review of UBL 1.0, and recommendations of The Committee, it is anticipated that UBL 2.0 will include a complete set of standard components for indirect taxation.

Subsequent versions of UBL will provide a context mechanism that allows generic components to be extended in specific and context-sensitive ways.

### Recommendation

*Recommend continuing efforts with UBL to provide a coordinated set of XML grammatical components that will allow parties to exchange business documents that are in a standardised way fully compatible with tax requirements.*

### Committee Activities

- Work with UBL to provide tax-specific requirements, e.g. audit trail, to be included in the UBL specification and implementation guidance.

## 4.3 OAGIS (Open Applications Group Interface Specification)

The Open Applications Group (“OAGi”) is an industry consortium that periodically publishes an Interface Specification (“OAGIS”) that supports interoperability between disparate systems.

The specifications define a set of terms and definitions, which in turn are assembled into Overlays for use in Business Object Documents (“BODs”), which include such transactions as Invoices, Purchase Orders, and Shipments. Overlays allow these specifications to incorporate information specific to vertical industries. These specifications are used to map “local” information about a document to a single common taxonomy that represents typical information about the same type of document. Thus, BODs facilitate exchange of data between disparate systems and business models.

The chief benefit of OAGIS is in acting as a common model, thus reducing the cost of programmatically mapping each “local” representation of a document separately (a many to many relationship).

As with UBL, some components for indirect taxation have already been incorporated into existing BODs. OAGIS also provides, in the same context as UBL, a specification methodology for the development and publication of new BODs.

## **Recommendation**

*Recommend that OAGIS be monitored, as it could provide a coordinated set of XML grammatical components that will allow parties to exchange business documents that are in a standardised way fully compatible with tax requirements.*

## **Committee Activities**

- Create a common framework including applicable data models containing tax-specific content.
- Monitor the progress of OAGIS's incorporation of Tax XML requirements into OAGIS.

## **4.4 CIQ (Customer Information Quality)**

CIQ was developed within OASIS to designate customer (Party) profile information. The CIQ family of specifications includes name and address information, supplementary information (such as telephone, email, ID card and account) and customer relationship information. CIQ is designed to handle customer/party data of any country at an abstract or detailed level.

The objective is to achieve interoperability of customer information within and throughout an organisation. The approach is to use a "single base customer information standard" throughout the organisation to define and represent customer data that can support different application requirements.

We anticipate that the new version, which is about to be released, will better meet the business needs of tax-specific party information.

## **Recommendation**

*Recommend that CIQ be monitored, as it could provide the foundation for party identity information, and could be used in conjunction with other standards under review.*

## **Committee Activities**

- Monitor the progress of CIQ.
- Assess the new release from CIQ to determine if their standards have matured enough for the efficient and effective development of tax documents.
- Work on proof of concept to determine the additional usefulness of CIQ's specifications within the tax context.

- Identify potential alignment between CIQ, XBRL Global Common Document, and XBRL GL, and initiate and monitor discussions on same to prevent duplication with XBRL and CIQ.

#### **4.5 STF (Standard Transmission Format)**

STF is part of the SEIT framework of Standardised formats and procedures for Exchange of Information in Taxation (tax administration to tax administration). It is the successor to the 1997 revised Standard Magnetic Format (“SMF”), an OECD recommendation by C(97)30/FINAL. The latter is still applicable for existing exchanges, but not recommended for exchange procedures that are to be newly developed.

STF is an extensible collection of XML schemas. It does not (nor does it intend to) describe the means of transporting the data formatted according to its rules.

#### **Recommendation**

*The Committee recognises that STF within its scope fulfils the business need for efficient and effective communications between tax administrations in a controlled environment. However, The Committee recommends that, in order to extend its usefulness, STF migrate to the use of open standards components as soon as these are adequately accepted.*

#### **Committee Activities**

- Work with the relevant OECD working groups to engage in the use of open standards in this area.

## 5 Conclusions

This Position Paper outlines the standards that the OASIS Tax XML Technical Committee (“The Committee”) has determined will have the greatest and longest impact on improving the exchange of information. The Committee’s conclusions are:

- Extensible Markup Language (“XML”) is applicable to tax administrations already represented on The Committee. It is also likely to be applicable to other tax administrations.
- The Committee does not seek to define a “Tax XML” standard. Rather it will utilise and influence other XML standards and determine how they should be used by tax administrations within a common Tax XML framework designed to facilitate interoperability.
- It is expected that more tax administrations (particularly from OECD member countries) will become involved in The Committee.

### 5.1 Strategic View

In 2007 ...

- The directional standards of The Committee, such as eXtensible Business Reporting Language (“XBRL”), Universal Business Language (“UBL”) and Customer Information Quality (“CIQ”), will have been substantially adopted.
- Countries that have adopted open interoperability standards such as XBRL will be able to exchange data simply and at a reduced cost, with a more effective audit program as a result.
- Tax accounting software for businesses will be largely XBRL compatible.
- Ongoing schemas developed by software developers, tax intermediaries and tax administrations will be developed in close collaboration.
- Advanced accounting software will have the ability to derive tax reporting data from business/financial reporting information.
- The cost for businesses to meet their tax reporting obligations will be reduced due to the software capability.
- The cost of development and redevelopment of accounting/tax software will be reduced due to the reusability that will exist within the software.

- There will be large shared repositories for schemas for tax purposes, and as they are referenced and continually populated, internationally common schemas can be identified.
- International businesses and accounting firms will be able to develop a more accurate overall picture of the business accounts and local and international tax obligations.
- When new standards come along, they will likely build upon the open standards that are available now – not the agency-specific standards.

#### **5.1.1 Implications of not adopting these standards**

- Countries which have not adopted open interoperability standards will continue to have costly data exchanges with other countries, coupled with a less effective compliance result from those exchanges.
- The cost of developing and redeveloping tax accounting and reporting software will continue to rise with the increasing complexity of the tax systems.
- The ongoing demand to share data across jurisdictions will continue to get supported by costly, slow and ineffective closed standards.
- Countries that have defined all forms labels in country-specific XML schemas will face rising costs to keep these up to date annually, and eventually the year-specific schemas will become useless.

#### **5.1.2 What are the Challenges? – Why wouldn't this happen?**

- Major countries do not adopt these standards because they:
  - cannot see the benefits and therefore cannot turn the benefits into business terms, and business leaders do not understand the proposal and cannot agree.
  - are unable to get agreement on the directional standards.
- Expertise in this field is limited and the knowledge and understanding is shallow in some countries.
- Some software developers will claim that this will simply cost them, and they will pass this on to the business community.

These conditions and challenges highlight the importance of the work being done by The Committee. It is essential that there be a forum where business and technical experts in taxation and compliance come together to share information and work for the common good. Only through the concerted efforts of dedicated people can major countries be informed and educated about the benefits of open standards and foster support for their adoption within their jurisdictions. When that occurs, the burden of tax reporting and compliance will be reduced as the

standards recommended by The Committee are incorporated into financial and accounting software packages now in use. At that time, The Committee's vision of interoperability will be an international reality.

## 5.2 Summary of Recommendations

1. Recommend XBRL as a central standard for exchange of business/financial information for tax purposes.
2. Recommend that XBRL GL be progressed to support the requirements of the OECD Standard Audit File Guidance
3. Recommend continuing efforts with UBL to provide a coordinated set of XML grammatical components that will allow parties to exchange business documents that are in a standardised way fully compatible with tax requirements.
4. Recommend that OAGIS be monitored, as it could provide a coordinated set of XML grammatical components that will allow parties to exchange business documents that are in a standardised way fully compatible with tax requirements.
5. Recommend that CIQ be monitored, as it could provide the foundation for party identity information, and could be used in conjunction with other standards under review.
6. The Committee recognises that Standard Transmission Format ("STF") within its scope fulfils the business need for efficient and effective communications between tax administrations in a controlled environment. However, The Committee recommends that, in order to extend its usefulness, STF migrate to the use of open standards components as soon as these are adequately accepted.

## Attachment 1: XBRL<sup>2</sup>

“XBRL 2.1 Specification” is an XML-based standard that is designed for exchanging, analysing and reporting business and financial reporting information. It is formulated by XBRL International, Inc., a worldwide consortium of major accounting firms, regulators and technology suppliers. XBRL stands for eXtensible Business Reporting Language; although the Specification can be used to represent almost any area of interest, it is specifically designed for business reporting.

XBRL focuses on content and is completely neutral with respect to the technical means by which e-reporting is accomplished. Major accounting firms have invested effort in XBRL’s development and have lobbied strongly to adopt the standard. The international community has also shown strong support. There are no competing standards that have widespread support of accounting professional societies.

The XBRL Specification has been used by various organisations and accounting groups to create jurisdictional taxonomies representing various areas of business reporting including US financial reporting, IFRS financial reporting, bank and friendly-association reports, and other capital market and regulatory reports. In addition, XBRL GL is a framework of interlocking taxonomies that enables an extensible representation of the information found in operational and accounting databases.

An example of the concepts that would be covered by an XBRL taxonomy in the financial reporting space might include:

- Total Sales and Income
- Exports
- Capital Acquisitions
- Business Number (“BN”)
- Accounting Policy Note to the Financial Statements

A taxonomy designed specifically for financial reporting could be extended using the extensibility of XBRL to meet additional information requirements of tax administrations, such as:

- Statement Due Date
- Payment Due Date
- Tax File Number (“TFN”)

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<sup>2</sup> XBRL and XBRL GL are non-OASIS standards

The United Kingdom H. M. Revenue & Customs and many other organisations are already in the process of implementing applications using XBRL. Some of the software developers that The Committee works with (such as Blast Radius) are developing reports in XBRL. Gartner believes that XBRL will take between two and five years to be fully adopted<sup>3</sup>.

XBRL has a sophisticated implementation which carries hints for applications to aid presentation for human readability, and the calculation relationship between elements (e.g., line items aggregating to a sub-total) within the taxonomy. This sophistication is not apparent when the instance document is considered in the context of the taxonomy's schema alone, but requires proper interpretation of the taxonomy's linkbases, which hold that additional information.

### **XBRL GL, the Journal Taxonomy**

There are many evolving standards for representing the business documents that trigger or otherwise represent the formalisation of business events, primarily in the area of trade transactions. There is likewise an emerging standard being established for representing business reports and forms and the proprietary formats being published by regulators and governmental agencies. However, the bridge between these two areas – a generic representation of documents, transactions and events with the ability to tie to reports and forms – is more elusive. This is the space that XBRL GL, the Journal Taxonomy, is meant to fill.

### **XBRL GL in the world of XBRL**

XBRL is best known for its ability to standardise financial and business reports such as public financial statements and tax returns. Through the use of XML, XBRL allows companies to document a specific concept (e.g. "Revenues") through a common tag readable by software applications. XBRL is optimised for the summarised, aggregated, and consolidated information commonly found in regulatory forms and company public documents. XBRL also provides many additional tools for the developers of XBRL taxonomies to finely define the concepts through the publishing of human readable labels, human readable definitions, and descriptions of presentation and calculation relationships between items.

XBRL can represent more than standardised reports, which represent summarised information. XBRL represents the detail found in business and accounting systems with XBRL GL. XBRL GL extends the XBRL standard from the common concept level to the level of the underlying data that supports those concepts. Because the ultimate report may relate to different types of reporting for stockholders, tax agencies, management, and other proposed uses, XBRL GL provides tools to collect all of the details and adjustments needed for summarisation to each potential end user.

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<sup>3</sup> Hype Cycle for XML Technologies, 2003, Gartner Corp. 30/05/2003

## Holistic design

XBRL GL is chart-of-accounts independent and reporting independent, while allowing for all of the sets of accounts and report identifiers necessary to get the job done. It can track multiple accounts or business reporting needs at the detailed line level. XBRL GL is also accounting system and accounting model independent. The information stored in the “General Ledger” in different regions varies; XBRL GL can represent a superset of what is contained in the “General Ledger” to facilitate the movement of data between US-style, continental-Europe-style, and Japan-style accounting systems.

Because it has been designed holistically, XBRL GL can be used for many different purposes and shared by all necessary audiences. It is not limited to the needs of the financial auditor or the tax agency. It can be used by the primary user for data migration, consolidation, analysis and archival purposes; it can be used to integrate special software products, such as depreciation systems, with the primary accounting systems. It can be shared with the internal or external auditor; it can be transferred to an external bookkeeper, tax preparer or tax agency. It is also meant to be a format for an external financial statement auditor or tax preparer to use to exchange this information within their organisation. Finally, it can be used to share appropriate detail with banks (asset-based lending) or other close third parties.

## It all flows down to/up from information at the ledger level

The model for XBRL GL is the General Ledger system of a very sophisticated ERP system. The Journal History files can potentially capture a wide variety of details related to:

- Originating documents and triggers of events (document number, document type, document date and similar data fields)
- Parties associated with the entry (party ID, party name, party address)
- Resources and measures (inventory, supplies, services, metrics, fixed assets)
- Accounting information (account, amount, dates)
- Desired end reporting (ties to business reporting schemas, such as XBRL taxonomies and concepts)

The financial and business reporting tools then access the Journal History for both financial and non-financial facts.

Based on this metaphor, XBRL GL provides one common but extensible schema as a standards-based framework. Subsets of the data fields can be used for lists of documents, lists of customers, lists of inventory with balances, list of physical assets, accounting journal entries or other specific purposes, while broader use of the data fields can represent the detailed recording of business transactions for data mining or other data migration purposes.



By providing a global single schema across accounting frameworks, XBRL GL allows a generic representation of the building blocks of business transactions and documents without relying – as is commonly the case today – on a single set of semantics.

XBRL GL is designed to be extensible – to provide a base upon which developers can design – while allowing supply chains or internal users to customise XBRL GL for their specific needs. The modular design of XBRL GL encourages groups developing extensions to make those extensions public; as there is need, additional modules will “bolt on” to the XBRL GL framework to add the additional functionality necessary for industry, jurisdiction and operational needs.

Holistic design, quality control and public vetting processes, an extensible framework around a single global schema – these are some of the attributes that set XBRL GL apart from single purpose, proprietary design models schemas developed by other standards groups or content/process specific applications. By encouraging one standard from initial transaction (creating a generic audit trail) through eventual reporting, the costs of compliance can be minimised; integration from beginning to end is facilitated as the burden on software developers to support many import/export formats is minimised; the same audit tools can read data anywhere in the process; and a seamless process can be developed from beginning to end.

Standardising on technology is not the answer; standardising on standards is clearly a better answer; bringing together the business reporting supply chain participants to collaborate, work on improving processes through collaboration, communication and compromise.

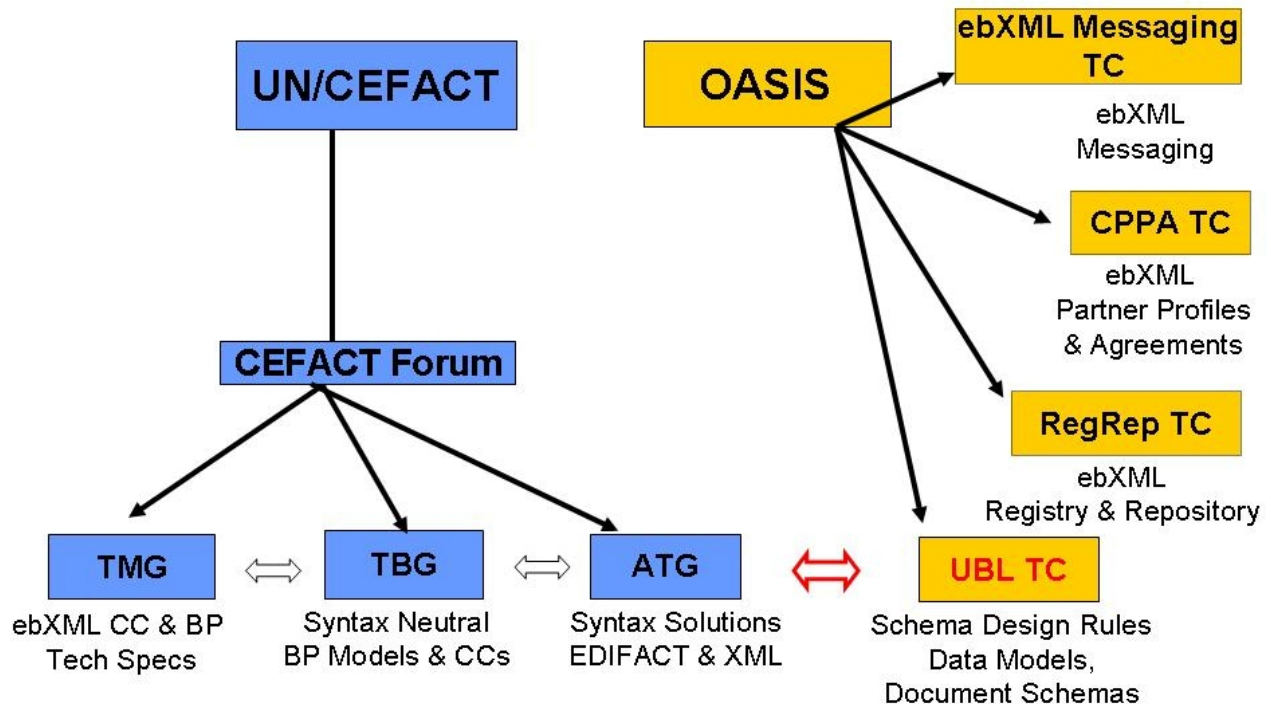
## Attachment 2: ebXML and UBL

### ebXML

Electronic Business using eXtensible Markup Language (“ebXML”) is a modular suite of specifications that enables enterprises of any size and in any geographical location to conduct business over the Internet. Using ebXML, companies now have a standard method to exchange business messages, conduct trading relationships, communicate data in common terms, define, and register business processes.

- ebXML Value
  - Provides the only globally developed open XML-based standard built on a rich heritage of electronic business experience.
  - Creates a single global electronic market: enables all parties, irrespective of size, to engage in Internet-based electronic business. Provides for plug and play shrink-wrapped solutions.
  - Enables parties to complement and extend current EC/EDI investment, expanding electronic business to new and existing trading partners.
  - Facilitates convergence of current and emerging XML efforts.
- ebXML delivers the value by
  - Developing technical specifications for the open ebXML infrastructure.
  - Creating the technical specifications with the world’s best experts.
  - Collaborating with other initiatives and standards development organisations.
  - Building on the experience and strengths of existing EDI knowledge.
  - Enlisting industry leaders to participate and adopt ebXML infrastructure.
  - Realising the commitment by ebXML participants to implement the ebXML technical specifications (see figure below).

## UN/CEFACT and OASIS Working Relationships



### UBL

The Universal Business Language (“UBL”) is an international standard vocabulary for e-Business that is freely available to everyone without cost or licensing. An e-Business vocabulary defines the ways in which electronic documents describe things like “Items”, “Addresses”, “Purchase Orders”, “Taxes”, etc. UBL's development grew from the realisation that without such a standard, the true potential of XML for e-Business would not be achieved.

### Documents, Components, and Context

The primary deliverable of UBL is a set of standard formats for common business documents such as invoices, purchases orders, and advance shipment notices. These formats are designed to be sufficient for the needs of many ordinary business transactions and, more importantly, to serve as the starting point for further customisation. To enable this customisation, the standard document formats will be made up of standard “business information entities,” which are the common building blocks (addresses, prices, and so on) that make up the bulk of most business documents. Basing all UBL document schemas on the same core information entities maximises the amount of information that can be shared and reused among companies and applications.

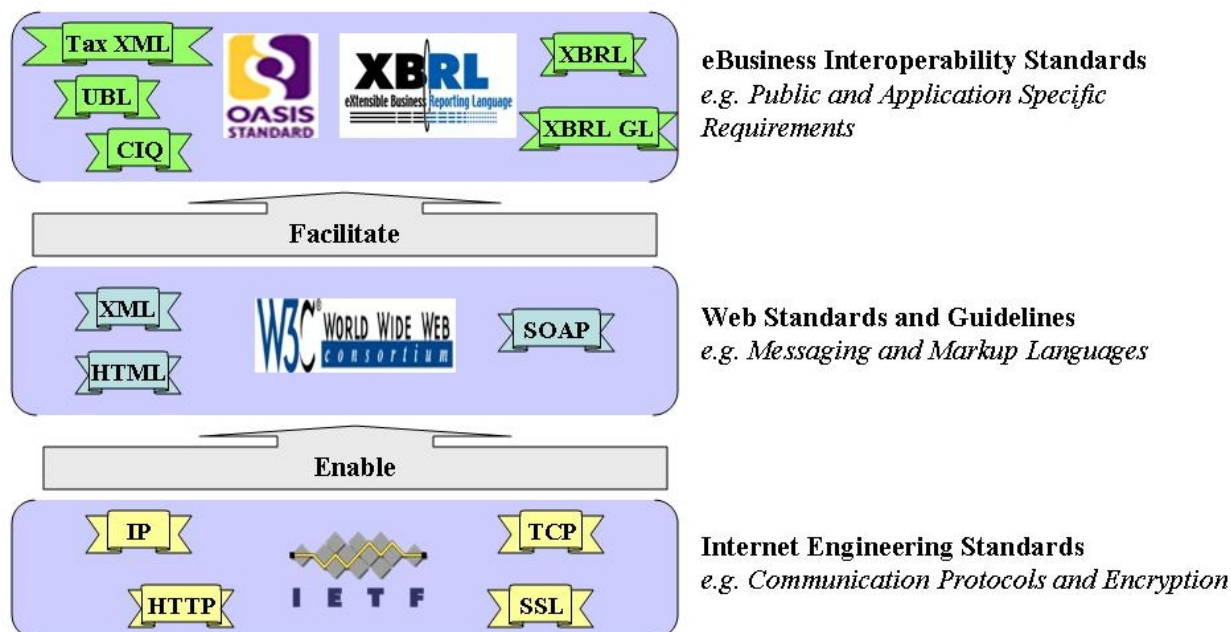


In a UBL-enabled world, companies publish profiles of their requirements for the business documents involved in specific interactions. These profiles specify the business context of each transaction, that is, specific parameters such as the industries and geographic regions of the trading partners. The context parameters are applied to the standard formats to create new formats specific to a given transactional setting. Since these context-specific formats are based on the standard components, interoperability is guaranteed while taking into account the requirements of each party to a particular transaction.

### Attachment 3: Standards Organisations and Context

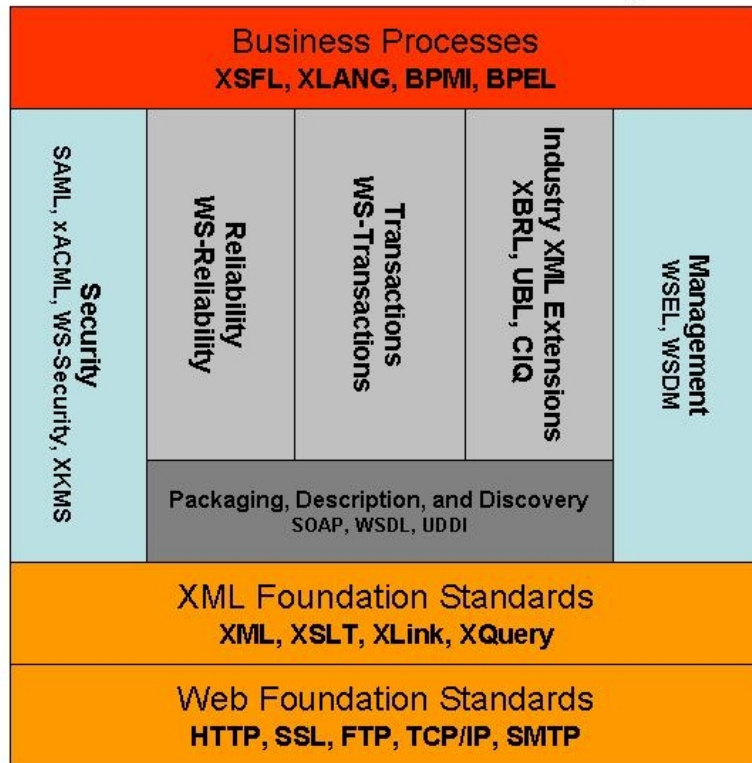
The following diagram illustrates the relationships among XML standards organisations and the standards for which they are responsible.

## Organisations and Standards



The following diagram puts into context the XML standards on which The Committee is presently focussed.

## Standards Context Diagram



## **Attachment 4: Tax XML Technical Committee Statement of Purpose**

The following statement of purpose was the original statement of purpose when The Committee was formed.

### **Statement of Purpose**

Tax XML is an initiative to research and analyse personal and business tax reporting & compliance information, represented in XML, to facilitate interoperability in a way that is open, flexible and international in scope. The products of Tax XML will include a vocabulary of terms, a repository of artefacts including XML templates, documents exchanged for tax compliance, best practices, guidelines and recommendations for practical implementation. It will focus on developing a common vocabulary that will allow participants to unambiguously identify the tax related information exchanged within a particular business context.

The benefits envisioned will include dramatic reductions in development of jurisdictionally specific applications and interchange standards for software vendors and tax agencies alike. Also, tax paying constituents will benefit from increased services from tax agencies and service providers due to more flexible interchange formats and reduced development efforts. Lastly, CRM, payroll, financial and other system developers will enjoy reduced development costs and schedules when integrating their systems with tax reporting and compliance systems.

Tax XML will rely heavily on incorporating the XML standards that are defined for the common business vocabulary. Since tax related information spans many business interests and is mostly either an extension of common business documents or a repackaging of business information for tax compliance documents, any existing or in progress standards for business information will be examined and incorporated as appropriate. It is expected that this coordination and collaboration will be conducted with XBRL (The Extensible Business Reporting Language), and other leading initiatives as needed.

The interchange of information for tax compliance involves many participants including businesses, governments, financial institutions, legal services, solution providers, etc. that are involved in one or more of the many aspects that make up the tax compliance domain. This domain can be organised into several categories of activity:

- Tax Legislation - Enacting tax laws that create or alter tax liability requirements
- Tax Planning - Analysis and planning for the minimisation of tax liability.
- Tax Registration - Registration with a tax authority for certification or rights to collect taxes within the authority's jurisdiction.

- Tax Calculation - Calculation of the tax liability of events and circumstances that are defined as taxable under the law.
- Tax Filing - Submitting reports of events and circumstances based on tax collected within a period of time to a tax authority.
- Tax Remittance - Submitting payment for outstanding tax collected and tax liability.
- Tax Distribution - Distributing tax funds collected to tax jurisdictions
- Tax Audit - Examining taxpayer compliance with tax liability requirements.

Each of these categories of tax compliance may be addressed as a separate sub-committee within Tax XML.

## Attachment 5: OASIS Tax XML TC Membership

The Committee's roster can be seen on the OASIS website at [www.oasis-open.org](http://www.oasis-open.org).

The following individuals have contributed to the development of this second edition of the *XML Position Paper for Tax Administrations*.

Person	Organisation
Christine Beasley	Australian Taxation Office
Dave Chambers	United Kingdom H. M. Revenue & Customs
Eric E. Cohen	PricewaterhouseCoopers LLP
Max Cummock	New Zealand Inland Revenue
Peter DeCastro	MITRE Corporation
George Farkas	XBI Software Inc.
John Glaubitz	Vertex Inc.
Andy Greener	United Kingdom H. M. Revenue & Customs
Walter Hamscher	Consultant to PricewaterhouseCoopers LLP
Arndt Liesen	Federal Finance Administration, Germany
Paul Madden	Australian Taxation Office
Robert Mikula	MITRE Corporation
Michael Pongracz	PricewaterhouseCoopers LLP
Doraiswamy ('Raj') Rajagopal	MITRE Corporation
Michael Roytman	Vertex Inc.
Sol Safran	US IRS, Internet Development Electronic Tax Administration
Leslie-Ann Scott	Canada Revenue Agency
Susan Smoter	US IRS, Internet Development Electronic Tax Administration
John Triplett	US IRS, Internet Development Electronic Tax Administration
Harm-Jan van Burg	Netherlands Tax and Customs Administration
Sylvia Webb	Individual
Andrew Webber	Canada Revenue Agency
Ko Zonruiter	Netherlands Tax and Customs Administration

Individuals representing the following OASIS-member organisations are registered as members, potential members, or observers of The Committee:

Organisation
Adobe Systems
Australian Taxation Office
Booz Allen Hamilton
Canada Revenue Agency
Denmark Ministry of Science, Technology & Innovation
Federal Finance Administration, Germany
Hewlett-Packard

<b>Organisation</b>
Hitachi Systems & Services, Ltd.
Hungarian Tax and Financial Control Administration
IBM
International Bureau of Fiscal Documentation
LA County Information Systems Advisory Body
MITRE Corporation
Netherlands Tax and Customs Administration
New Zealand Inland Revenue
OASIS
Oracle Corporation
PricewaterhouseCoopers LLP
SAP AG
Sun Microsystems
United Kingdom H. M. Revenue & Customs
Unisys Corporation
US IRS, Internet Development Electronic Tax Administration
Vertex Inc.
XBI Software Inc.

There are also fourteen individual members of OASIS on The Committee’s roster.