EIGHTH EDITION
THE GUIDE & WORKBOOK for UNDERSTANDING XBRL

CLINTON WHITE, JR.
SkipWhite.com

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Eighth Edition

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By Clinton White, Jr.

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"Start where you are. Use what you have. Do what you can."
Arthur Ashe (American World No.1 tennis pro) (1943 - 1993)

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Preface

Beginning with a pilot program in 2005, publically-traded companies filing with the SEC under U.S. GAAP began furnishing their financial statements in XBRL format. Today, all companies reporting to the SEC under U.S. GAAP are required to file financial statements in XBRL format with their quarterly 10-Qs and annual 10-K reports. In addition, a handful of companies are including them with their SEC 8-K filings; 8-K's are required to be filed within 4-days of a "material current event," such as, a bankruptcy filing, an acquisition, a security sale, a change in accountant, or a change in top management, and others. After a 3-year phase in period starting in 2009, all publically-traded companies reporting under U.S. GAAP now file XBRL-formatted financial statements with detailed tagged footnote disclosures. Foreign private issuers reporting under IFRS will do the same if and when the SEC approves the IFRS XBRL taxonomy. In addition, all accelerated filers (companies with over $50 million in common equity) are expected to have in place a formalized XBRL reporting process, including quality controls, and all other filers are expected to be creating them.

The current version of the U.S. GAAP XBRL taxonomy was released January 31, 2014. It contains over 16,000 elements each representing an accounting or financial reporting concept. The FASB is responsible for maintaining and updating the U.S. GAAP XBRL taxonomy and they work closely with the SEC to monitor XBRL filings with the goal of improving the robustness of the U.S. GAAP taxonomy and the effectiveness of corporate financial reporting. In addition, Inline XBRL (i.e., XBRL embedded in HTML documents) is now mandated for corporate tax filings in the UK, Finland, and elsewhere, and is being evaluated for potential SEC reporting.

XBRL is the standard for financial and business operations reporting around the world because it standardizes the meanings and terminology that companies use in their financial reporting and facilitates transparency and analysis of the data being reported. In addition, ERP packages, including, SAP and Oracle, are implementing disclosure management modules to facilitate XBRL tagging earlier in the financial statement preparation process and the management of XBRL tagged financial information. As a result, accountants need to become more knowledgeable about XBRL and digital financial reporting processes.

From a broader perspective, XML, the "parent" language of XBRL, is one of the enabling technologies behind what is being referred to as "the semantic Web." The semantic Web is a phrase that captures the basic principle that data in digital form can now be captured, transmitted on networks (including the Internet), and stored in databases, with meaning and context; making it "information" as opposed to simply data. Thus, when financial data is reported in XBRL format it becomes financial "information" and it is processed and stored with a standard meaning and in a standard format which improves its transparency and makes it more understandable, usable for its intended purpose (e.g., financial statements), and reusable for other purposes (e.g., tax reporting).

We have reached the point where every well-educated accountant and financial professional should understand XBRL, how to navigate and use the XBRL taxonomies, and how to create XBRL instance documents. I have received invaluable input and feedback from a number of professors at Universities around the U.S. I want to especially thank Professor Brad Tuttle, University of South Carolina, Professor Uday Murthy, University of South Florida, Professor Andy Luzi, California State University at Fullerton, Professor Graham Gal, University of Massachusetts, Professor Steven Hornik, University of Central Florida, Professor Lois Mahoney, Eastern Michigan University, Professor Terry Glandon, University of Texas, El Paso, Professors Rick Elam and Mitch Wenger, University of Mississippi, Professor Andreas Nicolaou, Bowling Green State University, Professor Nancy Coster, Loyola Marymount University, and Professor Rebecca Rosner, Long Island University Post.

Who Should Read This Book

This book is for accounting academics and their students, practicing accountants, and anyone else involved with computerized financial and business operations reporting. If you fit into one of these categories, you will get the following from this book:

- A basic understanding of XBRL
- A basic understanding of how to build XBRL instance documents
- An understanding of the structure and use of the U.S. GAAP and IFRS 2014 XBRL taxonomies
- A basic understanding of mapping line items and footnotes in traditional financial statements to elements that represent accounting and financial reporting concepts in the XBRL U.S. GAAP and IFRS taxonomies
- An introduction to the SEC's EDGAR database and its interactive data tools
- An introduction to Inline XBRL (iXBRL).

Organization of This Book

This *Guide and Workbook* is organized so that an accounting student or a financial professional can learn the basics of XBRL and create instance documents using the XBRL U.S. GAAP and IFRS taxonomies. The Chapters are designed to be read sequentially while the reader is actively participating by using a Web browser to access materials being discussed and by making entries on paper or in a text editor in response to the *Test Yourself* questions. The project section, Chapter 4, requires the reader to create XBRL instance documents and access and use SEC "interactive data" tools.

Chapter 1: Introduction

This chapter briefly introduces XBRL and why we need it.

Chapter 2: XML Elements and XBRL Element Names

XBRL is built on the XML foundation. In this chapter, you are introduced to the basic rules for creating well-formed XML documents, the importance of elements and element names, and the role of XBRL taxonomies; essentially dictionaries of standard element names for accounting and financial reporting concepts.

Chapter 3: Creating XBRL Instance Documents

XBRL has its own set of rules. In this chapter, you are introduced to the rules that XBRL instance documents must follow, the importance of namespaces, and the role of context and business facts.

Chapter 4: XBRL Instance Document Projects

In this chapter, you will find six projects/exercises, five of which require you to create an XBRL instance document (financial statement) for Bicycles OnLine, Inc., and one exercise introducing the SEC's EDGAR database and its interactive data tools.

Conventions Used in This Book

Glossary: At the end of the book, you will find a Glossary of New Terms which were introduced in *The Guide & Workbook*. When they are introduced they appear as ***bold, italic, and underlined***. Refer to the glossary for further definitions and explanations.
Mouse *clicks*: Throughout the book you will find mouse *clicks* and instructions which appear in *underlined italics*.

Summary page: The last page in *The Guide & Workbook* contains a summary of the basic rules for XML and XBRL instance documents. It is designed to be used as a reference sheet while you are working at your computer to complete the projects.

New in the Eighth Edition

- New coverage of the XBRL U.S. GAAP 2014 and IFRS 2014 taxonomies
- New coverage of SEC Level 1 through 4 footnote and disclosure tagging
- New test yourself exercises designed to facilitate "discovery learning"
- New mapping and instance document exercises
- New coverage of the SEC's EDGAR database and its interactive data tools
- An introduction to iXBRL and an instance document exercise.

Table of Contents

The Guide & Workbook for Understanding XBRL

Eighth Edition

Chapter 1: Introduction

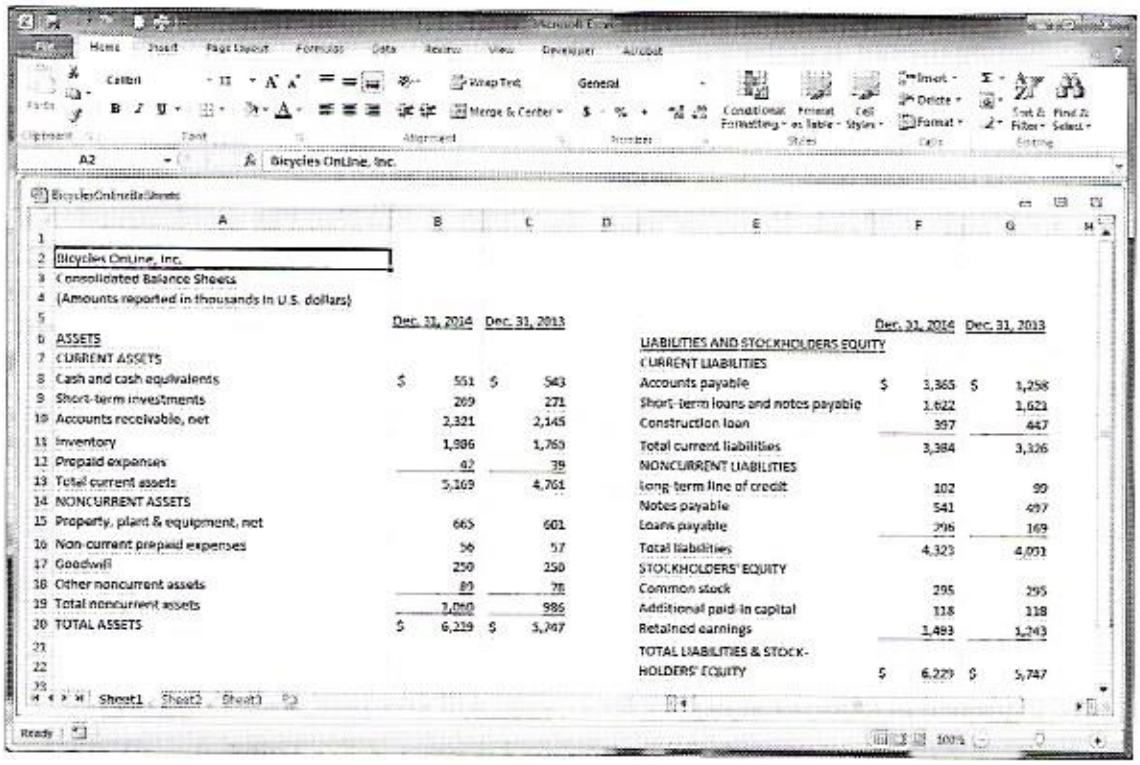
The objective of *The Guide & Workbook for Understanding XBRL* is to help you understand the eXtensible Business Reporting Language and to help you create XBRL instance documents for U.S. GAAP and IFRS reporting. It is intended to be used by accounting students, practicing accountants, and others involved in the financial reporting process. It is designed to be used as part of an accounting class or as an independent study guide and workbook. If you are using *The Guide & Workbook* as supplemental material in an accounting course, your instructor may have specific guidance and assignment information. In any case, the following instructions will help you get the most out of your experience:

- *The Guide & Workbook* is designed to be used while you are in front of a computer connected to the Internet. You should also have a current Web browser and a text editor. In all examples, the author uses *Mozilla Firefox*, the *Internet Explorer*, and *MS Notepad*; the author recommends *TextWrangler* (Bare Bones Software) for Macs. Note that while any current browser should work, as explained in more detail in Chapter 2, some will give poor error messages and unexpected processing results. As you read the material and work through the examples, point your Web browser to the indicated URLs, download the example files, and use a text editor to build XBRL documents.
- In Chapters 2 and 3, you will find "***Test yourself exercises***" designed to reinforce your learning. Space is provided to accommodate your answers.
- In Chapter 4, you will find exercises which require you to create XBRL documents for Bicycles OnLine, Inc. The exercises pull together the concepts covered in *The Guide & Workbook* and are designed to be completed as assignments or self-directed exercises.

XBRL is a set of rules and syntax for computerized financial reporting

XBRL (the eXtensible Business Reporting Language) is a set of rules and syntax for creating computer-readable documents to report financial and business operations information. Consider the consolidated balance sheet information in the *MS Excel* spreadsheet for Bicycles OnLine, Inc. in Figure 1.

Figure 1: Bicycles OnLine, Inc. Consolidated Balance Sheet Information



Bicycles OnLine, Inc.
Consolidated Balance Sheets
(Amounts reported in thousands in U.S. dollars)

	Dec. 31, 2014	Dec. 31, 2013
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	$ 551	$ 543
Short-term investments	269	271
Accounts receivable, net	2,321	2,145
Inventory	1,986	1,769
Prepaid expenses	42	39
Total current assets	5,169	4,761
NONCURRENT ASSETS		
Property, plant & equipment, net	665	601
Non-current prepaid expenses	56	57
Goodwill	250	250
Other noncurrent assets	89	78
Total noncurrent assets	1,060	986
TOTAL ASSETS	$ 6,229	$ 5,747

	Dec. 31, 2014	Dec. 31, 2013
LIABILITIES AND STOCKHOLDERS EQUITY		
CURRENT LIABILITIES		
Accounts payable	$ 1,365	$ 1,258
Short-term loans and notes payable	1,622	1,621
Construction loan	397	447
Total current liabilities	3,384	3,326
NONCURRENT LIABILITIES		
long-term line of credit	102	99
Notes payable	541	497
Loans payable	296	169
Total liabilities	4,323	4,091
STOCKHOLDERS' EQUITY		
Common stock	295	295
Additional paid-in capital	118	118
Retained earnings	1,493	1,243
TOTAL LIABILITIES & STOCK-HOLDERS' EQUITY	$ 6,229	$ 5,747

(http://www.skipwhite.com/XBRLWorkbook2014/BicyclesOnlineBalSheets.xlsx)

Any computer with the same version of *MS Office* can process this file and we as humans can read and interpret the information. For example, if you were asked "what is the balance of Accounts payable for December 31, 2014, for Bicycles OnLine, Inc." you would answer "$1,365,000." We can do this because we can understand the context surrounding the number located in cell F8 by reading the contents of other cells. However, the *Excel* spreadsheet software simply "knows" that cell F8 contains a piece of data (1365) formatted as currency. In an *Excel* spreadsheet, as in most software applications, data is simply "data" – it has no meaning associated with it. We as humans ascribe meaning to it by reading and understanding the context surrounding the data.

XBRL is an XML (Extensible Markup Language) vocabulary for adding meaning and context to pieces of data associated with financial and business operations reporting so that it becomes "information" – it is *marked-up* so that it has meaning associated with it and can be interpreted in context by software applications, as well as, by humans. This is done by surrounding each individual piece of data with a *predefined tag* representing a standard financial reporting concept. To report a balance in "current accounts payable," we would tag the piece of data (simplified for illustration purposes) as follows: **<AccountsPayableCurrent>***1365000*</**AccountsPayableCurrent>**.

This is a simplified example and there is much more to XBRL than tags. However, when data is tagged with a standard term, a human or a computer application "knows" more about the data and can process it with meaning and in context. As you will understand, XBRL consists of a dictionary of predefined tags for various types of financial and business reporting, a specific syntax for documents, a host of files defining relationships, and rules for extending it.

XBRL is not a programming language. It is a technical specification of an XML vocabulary for facilitating financial and business operations reporting through an open standard for the creation and processing of computer-readable documents. *The Guide & Workbook* will help you to understand what XBRL is, how it works, and how to create and validate XBRL financial statements and SEC filings.

Why do we need it?

Everyone involved in financial and business operations reporting needs to understand the power of XBRL. The U.S. Securities and Exchange Commission (SEC) issued a rule titled "Interactive Data to Improve Financial Reporting" (SEC, January 2009) requiring all publicly traded companies to provide financial statements in XBRL format. Today, all publically traded companies in the U.S., except foreign private issuers reporting using IFRS, are required to file their financial statements including footnote disclosures in XBRL format.

The SEC's Interactive Data rule requires all publicly-traded companies reporting under U.S. GAAP to file their quarterly 10-Q and annual 10-K documents in HTML format and their financial statements with detailed footnote disclosures in XBRL format. For companies reporting under IFRS, the SEC is still reviewing the 2014 IFRS XBRL taxonomy, but the rumor is that they are close to approving it. The SEC interactive data rule also requires all companies to provide their XBRL tagged financials on their corporate Web sites. Currently, the SEC does not require the XBRL tagged financials to be audited, but they do have to meet accuracy guidelines and the AICPA has developed guidelines for providing assurance on their completeness and accuracy. In addition, the SEC has for now excluded other reports, such as the Management's Discussion and Analysis, executive compensation, and other financial, statistical or narrative disclosures, from this rule but they continue to evaluate its feasibility. In addition, the U.S. FDIC (Federal Deposit Insurance Corporation) requires all member banks to file quarterly "call reports" in XBRL format and in other parts of the world, including the UK, Belgium, Ireland, Japan, Spain, South Korea, Australia, the Netherlands, and Singapore, XBRL tagged financial statements are being required by banks, stock exchanges, and other regulatory agencies.

XBRL is gaining momentum for several reasons.

- Reporting financial and business operations information using standard XBRL tags and a standard reporting format helps regulators and users of all types better understand what is being reported, which leads to more transparency, less ambiguity, and easier comparability.
- Tagging data items using standard terms improves the efficiency and effectiveness of computerized processing for both report preparers and receivers. From a report preparer's perspective, data items tagged with standard XBRL tags makes the reported data items more readily understandable and usable for many different purposes because they can be unambiguously interpreted, transmitted over networks, used by software applications, stored in databases, and more easily reused in both internal and external reports. In addition, standardized reports can be "validated" by software applications to make sure they follow the rules for

specific reporting purposes; like applying for a loan, reporting to a business partner, or reporting to the SEC. From a receiver's perspective, data tagged using standard XBRL tags and standard report formats can be automatically validated, more efficiently processed, more effectively analyzed, and more easily compared to other data items from the same or other reporting entities.

- When XBRL tagging is built into business reporting processes, report users, including management, analysts, investors, regulators, and business partners, will benefit from more timely, complete, and understandable reports. A new category of software known as "disclosure management" is becoming popular.

Starting with the XML foundation, *The Guide & Workbook* is designed to help you understand XBRL and how it works. In addition, by working through the ***Test yourself exercises*** and completing one or more of the projects/exercises in Chapter 4, you will gain experience in creating XBRL-formatted financial reports.

Projects/exercises include the following:

1. A balance sheet in XBRL format
2. An income statement in XBRL format
3. Financials with footnote disclosures in XBRL format
4. An introduction to the IFRS XBRL taxonomy and a balance sheet exercise.
5. An introduction to the SEC EDGAR database and its interactive data tools.
6. An introduction to "inline" XBRL and a current assets exercise.

By reading *The Guide & Workbook*, accessing the URLs, and working through the examples and exercises, you will understand the basics of XBRL and how to create simple XBRL financial statements. To become expert with XBRL will require more study and experience with its complexities.

The Guide & Workbook for Understanding XBRL

Eighth Edition

Chapter 2: XML Elements and XBRL Element Names

The basic rules for creating well-formed XML documents

XBRL is a set of rules and syntax for creating computer-processable documents and taxonomies for financial and business operations reporting. It is built on a more general set of rules and syntax known as ***XML*** (Extensible Markup Language). When new terms are introduced they appear in ***italicized, bold, underlined text*** and you can find more information on each in the Glossary. XML is known as a *meta-language* – a language for the creation of other languages (e.g., XBRL). XML has become the de-facto standard for tagging data, creating documents that are independent of specific software applications, and transmitting them over computer networks, including the Internet. XML documents must follow a basic set of rules and those that do are referred to as being "***well-formed***." All well-formed XML documents can be processed by XML-enabled software applications; which is to say, all current generation software applications.

The basic unit in an XML document is the ***element***. An XML element is a tag set consisting of a beginning element name, content, and a matching ending element name. XML is case sensitive. In the introduction to *The Guide & Workbook*, you have already seen an XML element:
<AccountsPayableCurrent>*1365000***</AccountsPayableCurrent>**. In this book, element names will appear in **bold** and their content will be in lower case and *italicized*. This element's name is **AccountsPayableCurrent**. By convention, XML element names start with a capital letter and, when additional words are used, the first letter is capitalized; referred to as "camel characters." All element names appear within < > (brackets) and the ending element name is preceded by a / (slash). This element's content is *1365000* – a piece of data with no formatting; actually, all data in XML documents is simply unformatted text.

The four basic rules that all *well-formed* XML documents must adhere to are the following:

1. An XML document must have one and only one ***root element***
2. Beginning and ending element names must match exactly
3. All elements in an XML document must be properly nested
4. All elements can contain one or more properly formatted ***attributes***.

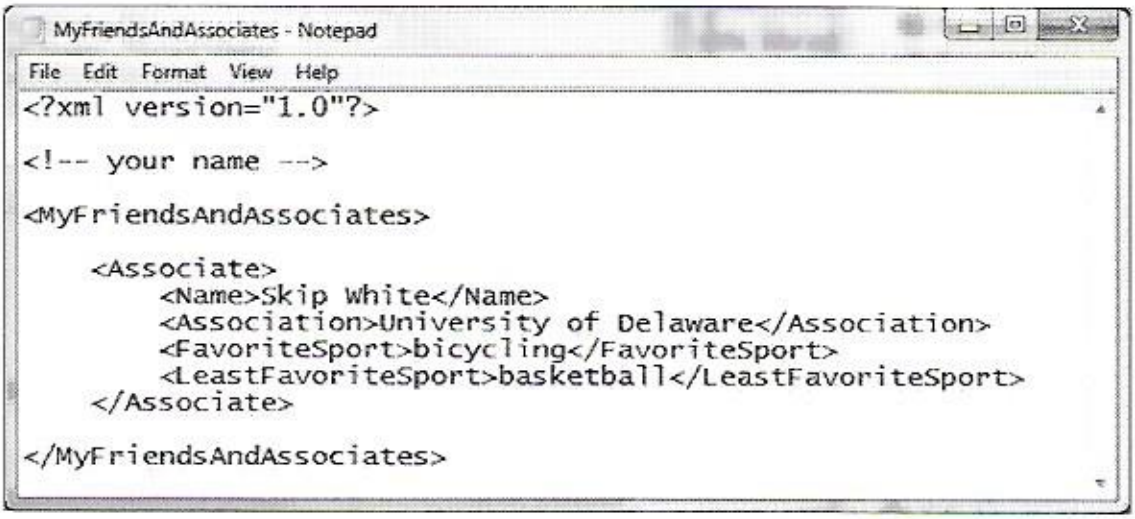
Remember, all XBRL documents must also be *well-formed* XML documents.

XML Rule 1: An XML document can have one and only one **root** element. The root element name in a general purpose XML document can be chosen by the document creator. However, the root element name in all XBRL documents is **xbrl**. The beginning root element name marks the beginning of an XML document and the ending root element name marks the end of an XML document. The one caveat here is that XML documents start with a prolog containing instructions, which always appear as **<?** *instruction* **?>**, and documentation, which always appear as **<!--** *documentation* **-->**. The root element then starts the actual XML document content. The overall structure of a typical XML document is the following:

<?xml version="1.0"?>
<!-- *documentation / information about the document* **-->**
<root-element-name>
All other elements properly nested and in their proper format
</root-element-name>

The first line, **<?xml version="1.0"?>**, is an instruction indicating to an XML processor that this XML document follows XML version 1.0 and the second line, **<!--** *documentation / information about the document* **-->**, is documentation. Both are part of the prolog of an XML document. The third line contains the beginning root element name. A root element is referred to as an XML document's "overall *container* element" (i.e., the root element "contains" all other elements properly nested and properly formatted within it).

Test yourself 1: *Using a text editor to create a personal XML document*: This *Guide & Workbook* is about creating XML documents using the standardized XBRL vocabulary. However, anyone can make up their own element names and use them to create XML documents. What if you wanted to create a computer-readable document to help you remember details about your friends and associates; such as, their hometown, what they are affiliated with, sports in which they like to participate, and those they hate. Rather than simply making a list, we can make up an XML "vocabulary" and use it to tag the data items in an XML document. To create your first XML document, open *Notepad* on a Windows PC or *TextWrangler* (Bare Bones Software) on a Mac, (do **NOT** use a word processor) and type in the following (before saving, see helpful hints below):



Helpful hints: If you are using *Notepad* or *TextWrangler*, simply type in this text exactly as shown. If using *Notepad, click* **File/Save As**, then in the Save As dialog box *change* **"Save as type"** to All Files (see Figure 2) and *type* in your file name with a **.xml** extension (e.g., *MyFriendsAndAssociates.xml*). If using *TextWrangler*, simply add a **.xml** extension to your file name and save it. Next, *open* your file in *Firefox*. If you have not made a typing error, your document is *well-formed* (i.e., it follows the rules of XML) and your browser will process it and it should appear as in Figure 3.

Figure 2: Saving *MyFriendsAndAssociates.xml* in Notepad

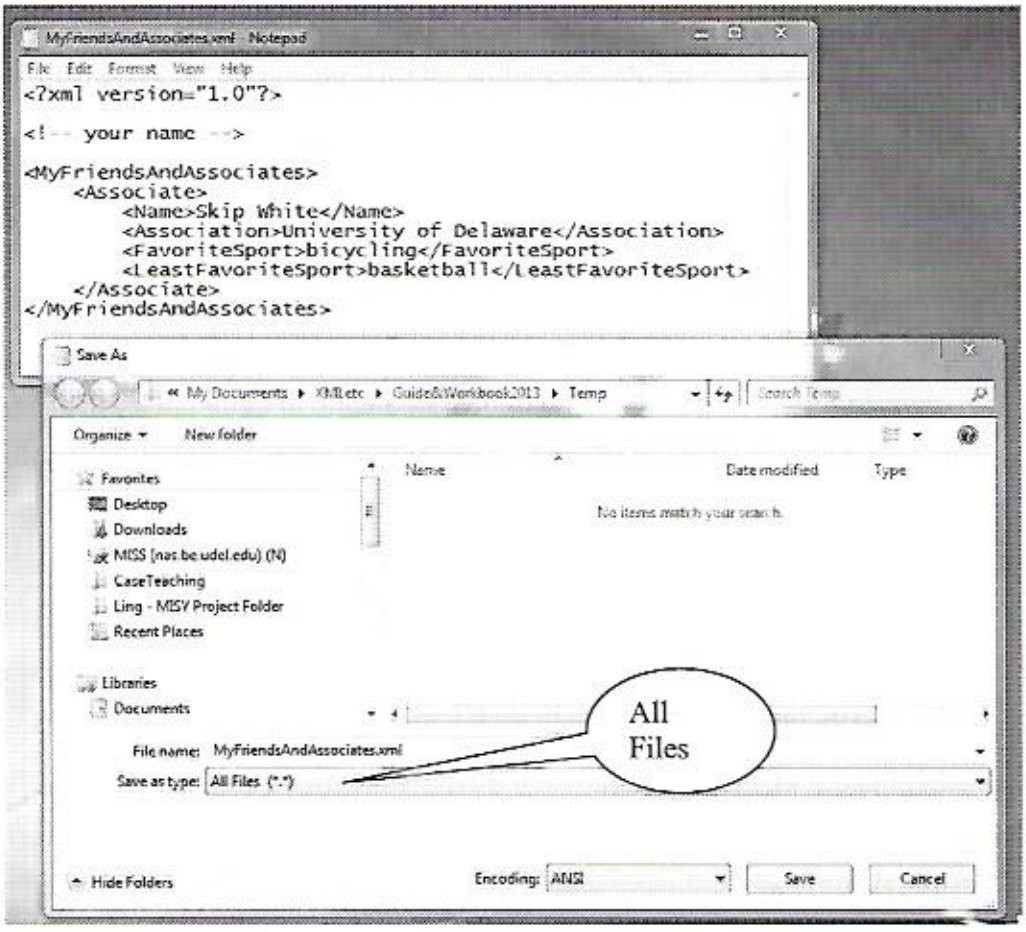
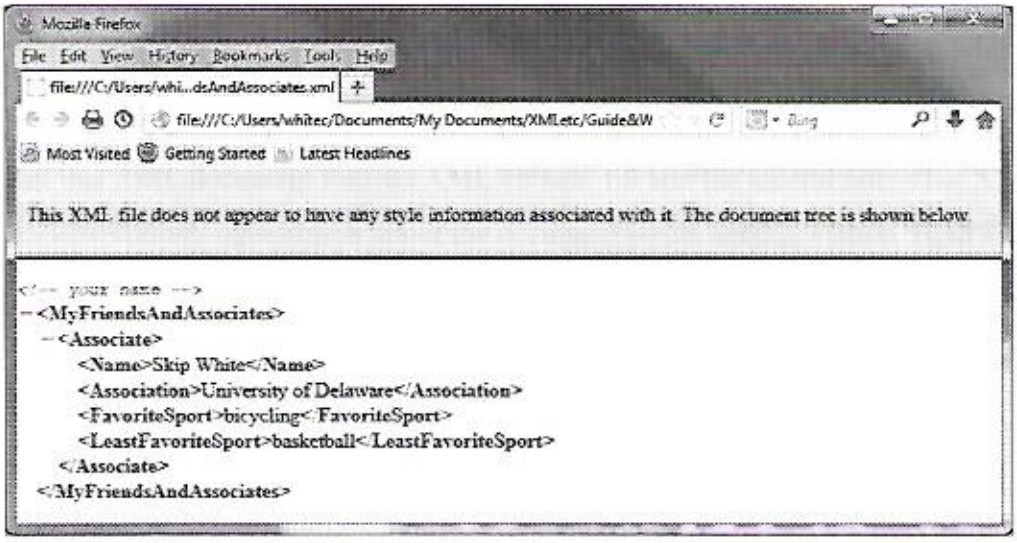
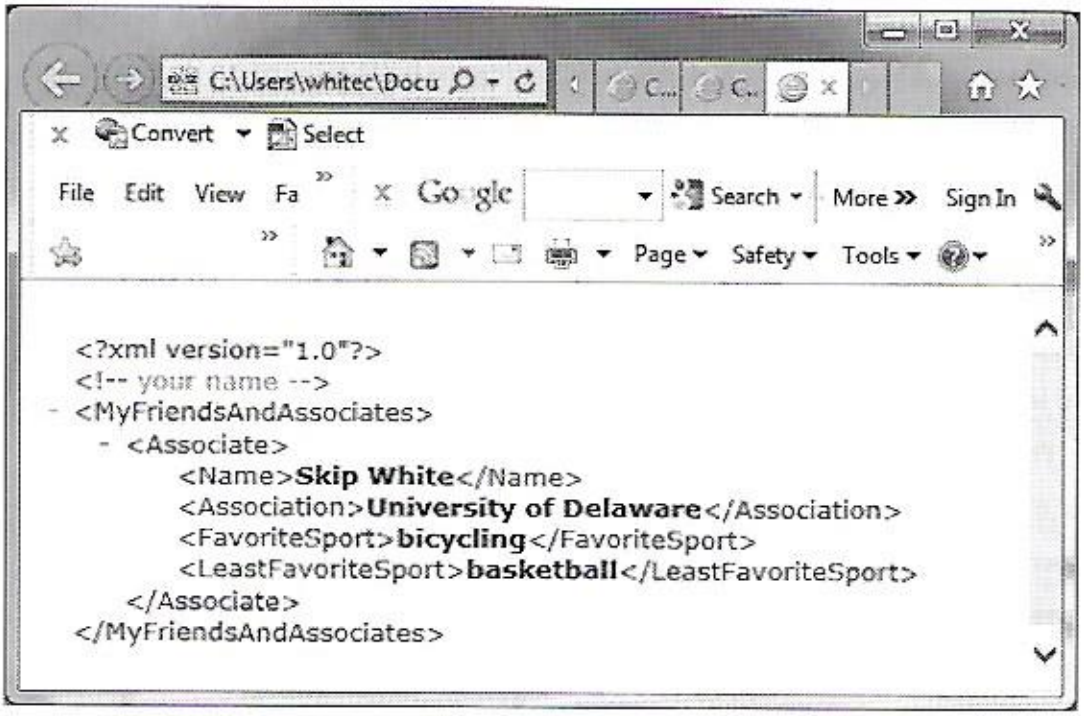


Figure 3: *MyFriendsAndAssociates.xml* opened in Firefox



If you have an error, Firefox should provide an indication of where it is. Correct it and *open* it again to see if it is now well-formed. If it is, *open* it in Internet Explorer, or your favorite browser, and it should appear as in Figure 4.

Figure 4: *MyFriendsAndAssociates.xml* opened in IE



Notice that these two browsers, Firefox and IE, process XML documents differently. A basic difference is that Firefox does not show the XML version instruction while IE does. Another is that Firefox has better error messages than IE, which will be quite important as we create complex XBRL instance documents. Try adding a friend to your XML document using an element named **Friend**; as in the following:

<Friend>
<Name> *friend's name* **</Name>**
<HomeTown> ... </HomeTown>
<FavoriteSport> ... </FavoriteSport>
<LeastFavoriteSport> ... </LeastFavoriteSport>
</Friend>

Save it and *open* it in a browser to make sure it is well-formed (see *MyFriendsAnd Associates.xml* at http://www.skipwhite.com/XBRLWorkbook2014/).

This simple XML document example is meant to illustrate several things. First, anyone can create their own XML vocabulary and use it to create a well-formed XML document to store data. Second, each piece of data is contained within an XML element that gives it meaning (i.e., each element name provides "meta data" - data about the data it contains). And third, when *well-formed*, the XML document can be processed by a Web browser that understands XML; *well-formed* means following the basic rules of XML. In addition, this simple example provided an introduction to using a text editor to create an XML document and a browser to open it.

XML Rule 2: Beginning and ending element names must match exactly. XML element names are case sensitive. By convention, XBRL element names always start with a capital letter, and, when two or more words are used each new word starts with a capital letter. Thus, the element name **AccountsPayableCurrent** from the XBRL vocabulary is a legal element name but **AccountspayableCurrent** is not; if you were to try to process a document containing the XBRL element **<AccountsPayableCurrent>***1365000* **</AccountspayableCurrent>**, you would get an XML error message that the beginning and ending element names do not match. It would not be a *well-formed* element.

XML Rule 3: Starting with the root element, all elements must be properly nested. The following is an illustration of a root element that contains a single, properly nested element:

<xbrl>
  <AccountsPayableCurrent>*1365000***</AccountsPayableCurrent>**
</xbrl>

(Note that the indentation is for human readability only.)

The following is an illustration of a root element and an improperly nested element:

<xbrl>
  <AccountsPayableCurrent>*1365000* **</xbrl>**
</AccountsPayableCurrent>

Here the **xbrl** root element contains only a part of the **AccountsPayableCurrent** element (i.e., they are not properly nested and therefore not *well-formed*). If this file was read by an XML processor, it would generate an error message about non-matching tags and an improper root element.

XML Rule 4: All elements can contain one or more attributes. An attribute adds information to a specific element and always appears within the brackets containing the beginning element name. For example, to add an attribute named **unitRef** to designate the currency in which the data value in the **AccountsPayableCurrent** element is measured, we would do the following:

<AccountsPayableCurrent unitRef="*USD***">***1365000***</AccountsPayableCurrent>**

Attributes always appear as a *name-value pair* in the format **attributeName="***attribute-value"* and always appear in the brackets with a beginning element name. In this example, **unitRef** is the *attribute name* and *USD* is the *attribute value*. Notice that the element name is not changed – it is still **AccountsPayableCurrent**. Attributes are very important in XBRL documents, and a **unitRef** attribute, covered in detail later, is required for all "monetary" items to designate the currency in which the reported value is measured. *USD* is the standard international abbreviation for U.S. dollars. Notice that by convention, XBRL *attribute names* (e.g., **unitRef**) start with a small letter.

These four simple rules form the foundation for creating well-formed XML documents. Well-formed XML documents can be processed by all XML-enabled software applications, including current Web browsers. Anyone can create their own XML vocabulary, but the *Guide & Workbook* will introduce you to the pre-defined XBRL vocabulary for standardized financial and business operations reporting.

XBRL element names are defined in XBRL taxonomies

XBRL taxonomies are dictionaries of pre-defined element names that represent standard financial reporting concepts (e.g., "accounts payable", "cash and cash equivalents", "cost of goods sold", "net income"). The element names are used to tag data items in XBRL ***instance documents***. XBRL documents are referred to as "instance documents" because each is an instance of a document that follows the rules defined in the XBRL Specification. There are about 16,000 standard element names defined in the 2014 U.S. GAAP XBRL taxonomy and 4,000 in the IFRS XBRL core taxonomy. The U.S. GAAP taxonomy is subdivided into a number of industry taxonomies, including, Commercial and Industrial (most companies), Banking and Savings, Brokers and Dealers, Insurance, and Real Estate. In addition, there are a Schedule of Investment Holdings taxonomy for reporting investment holdings, a Risk and Return taxonomy for mutual funds, a Record of Credit Ratings taxonomy for statistical rating organizations, a Corporate Actions taxonomy, and a Document and Entity Information taxonomy for use with all SEC filings. The U.S. FASB is responsible for the development and maintenance of the U.S. GAAP taxonomies as is the IASB for the IFRS core taxonomy.

In *The Guide & Workbook,* we will use the 2014 U.S. GAAP XBRL taxonomy to illustrate U.S. GAAP financial reporting and the 2014 IFRS taxonomy to illustrate IFRS financial reporting; as of this writing, the 2014 IFRS taxonomy is under final review by the U.S. SEC for use by "foreign private entities" for SEC reporting.

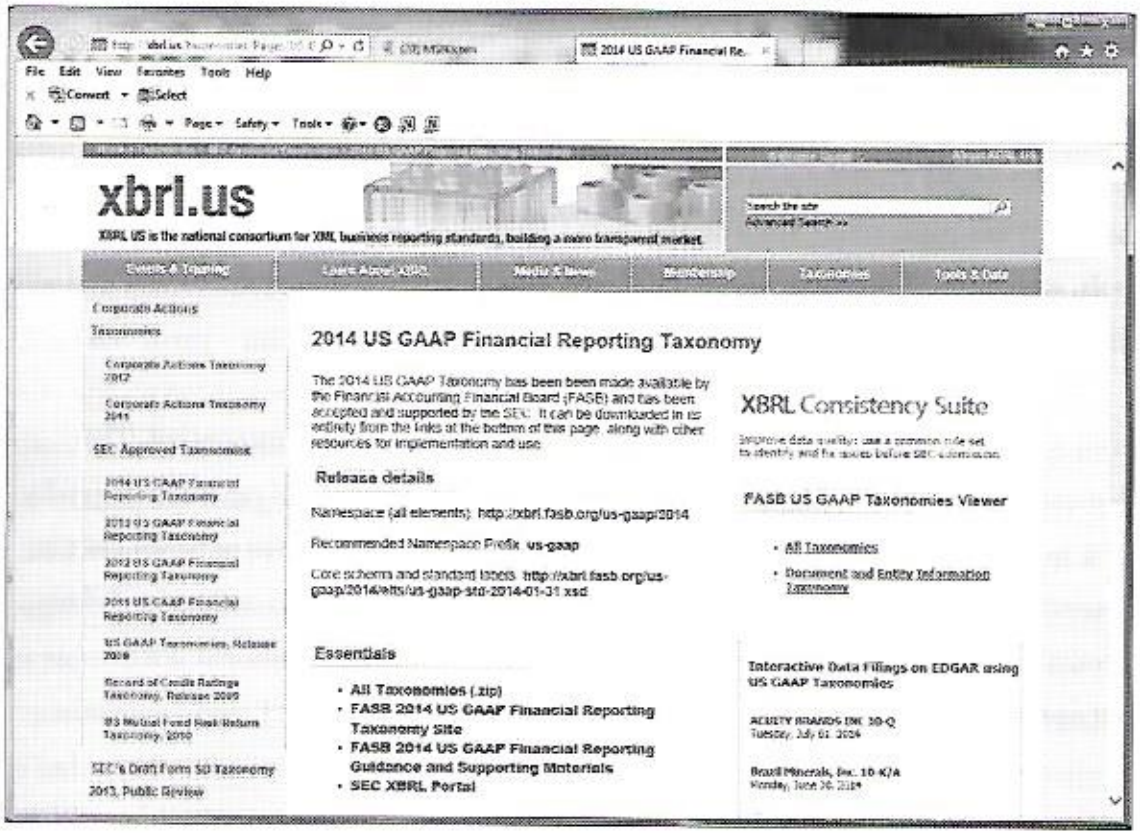
Each XBRL taxonomy has a ***Namespace*** and a recommended namespace prefix. A namespace is a unique identifier, referred to as a URI – Universal Resource Identifier, that uniquely identifies a resource (e.g., taxonomy) and differentiates it from any other. The namespace for the 2014 XBRL U.S. GAAP taxonomy is **http://fasb.org/us-gaap/2014-01-31**; and the 2014 XBRL IFRS full taxonomy is **http://xbrl.ifrs.org/taxonomy/2014-03-05/ifrs-full**. Note that there occasionally are interim releases of these XBRL taxonomies, so namespaces can change. A namespace can be a URL or a local identifier; in which case it does not have to be a URL. In addition, each taxonomy has its own recommended namespace prefix - **us-gaap** and **ifrs-full** respectively. Namespaces

are a technical XML concept that you will see again when we build XBRL instance documents; think of them as *unique identifiers* for the origin of a group of elements (e.g., U.S. GAAP XBRL reporting).

Finding and using pre-defined XBRL element names in taxonomies

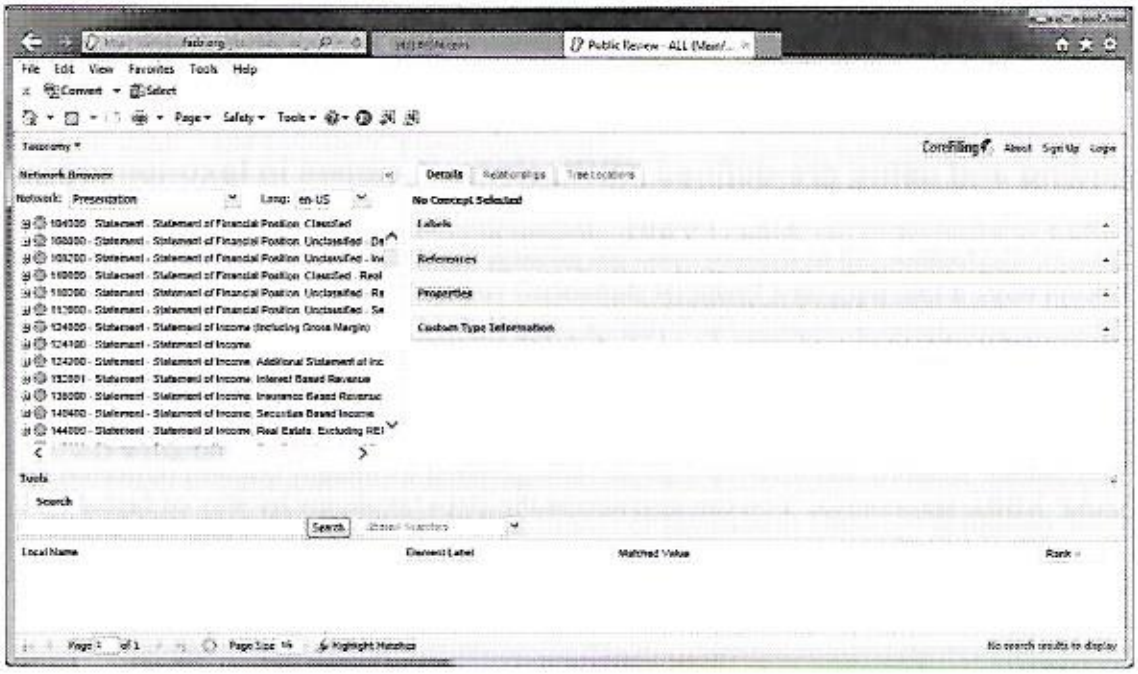
To find an appropriate pre-defined XBRL element name for a specific financial reporting concept (e.g., a line item on a financial statement) you must open the appropriate taxonomy in a taxonomy viewer. For U.S. GAAP, you can go to **xbrl.us** (the home page of the U.S. XBRL domain) and *click Taxonomies/ SEC Approved Taxonomies/ 2014 US GAAP Financial Reporting Taxonomy* (see Figure 5 – the home page of the 2014 US GAAP XBRL taxonomy). You can also access the 2014 taxonomy by way of **fasb.org**.

Figure 5: 2014 US GAAP Financial Reporting Taxonomy home page



Bookmark this page, as we will use it often. To get to the US GAAP taxonomy viewer, *click All Taxonomies* (see Figure 6).

Figure 6: 2014 U.S. GAAP XBRL Taxonomy (in Yeti viewer)



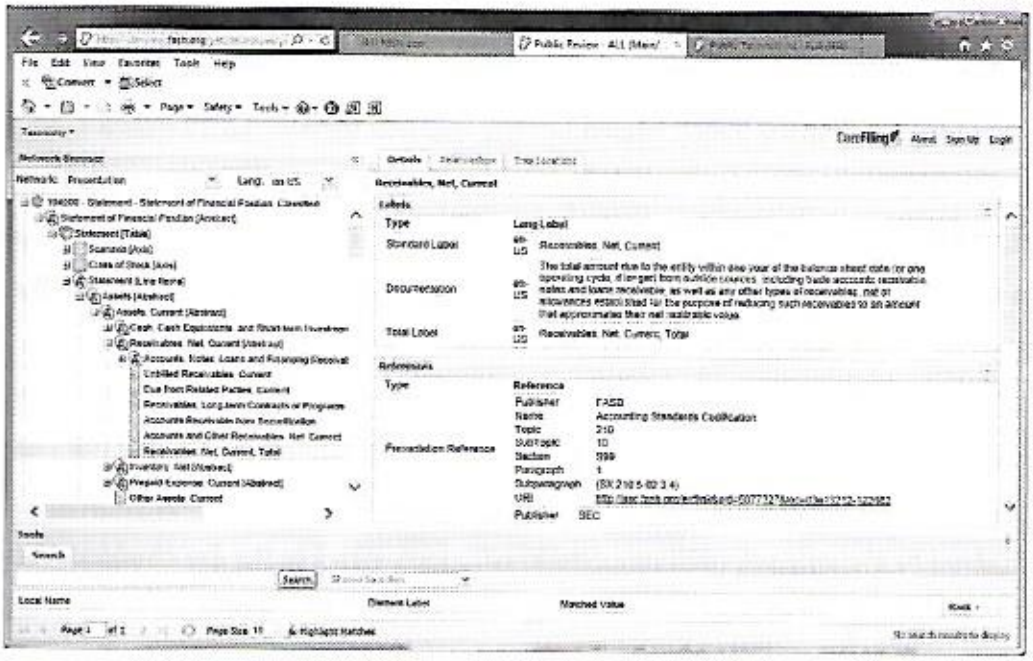
Similarly, to open the 2014 IFRS XBRL taxonomy, *point* your browser to www.ifrs.org, *click* *IFRS / IFRS Taxonomy (XBRL) / IFRS Taxonomy / IFRS Taxonomy 2014*. In the middle of this page, *scroll down* and *click* on *Click here to view* **Taxonomy viewing tools**, and *choose* *CoreFiling – Yeti 2.8.0*. We will cover the IFRS taxonomy and its elements in Chapter 4.

In all XBRL taxonomies, each element represents a financial reporting concept. The elements are nested within Statements defining the standard financial reporting hierarchy for a specific type of reporting (e.g., U.S. GAAP or IFRS), Disclosures or Notes defining elements that typically appear in footnote disclosures, and documents and tables defining elements for such things as SEC specific document filing requirements and IFRS management commentary.

To find a specific element representing a line item on a financial report, a user begins by opening the Statement on which it "should" appear; as you will see, elements are often found in unexpected locations. To find the element representing the U.S. GAAP concept "current net receivables," *open* the U.S. GAAP 2014 XBRL taxonomy in the Yeti viewer,

then *open* the first statement, *104000 – Statement - Statement of Financial Position, Classified*, then by *clicking* the + sign to the left of each line and proceeding down the hierarchy, you will eventually be able to *click* the line item *Receivables, Net, Current, Total* (see Figure 7).

Figure 7: *Receivables, Net, Current, Total* - U.S. GAAP XBRL 2014 taxonomy



The line items in a taxonomy marked with (red A in a green circle) are known as "abstract" items – meaning that they are in the taxonomy for organizational purposes only and do not represent element names. I recommend always starting to look for a specific element name by opening the statement or disclosure where you think it should be located. By doing so, you learn how the statements are structured in the taxonomy and you are not fooled by the line item names; "labels" in XBRL taxonomy terminology. It is important to remember that users of financial statements are accustomed to viewing them as paper documents in which we tend to focus on *line item labels* to identify financial reporting concepts. The problem is that each company uses its own line item labels and it is unlikely that they will match the standard labels in an XBRL taxonomy. For example, 3M Company reports a line item on their income statement with the label "Research development and related expenses" and creates its own extension element as opposed to using one from the U.S. GAAP taxonomy. IBM, on the other hand, reports a line item

with the label "Research, development and engineering" and uses a standard element from the U.S. GAAP XBRL taxonomy. More on this and "extension" elements and the use of the *Search* button later.

Getting back to the U.S. GAAP concept "current net receivables," using the taxonomy viewer, we found the line item "Receivables, Net, Current, Total" (as in Figure 7). When *highlighted* in the *left-hand panel*, you see the details for that specific XBRL element in the *right-hand panels*. The top panel, named *Labels*, contains the *Standard Label* for the element, its *Documentation*, and a *Total Label* if it applies. The question that must be asked and answered is: **"How do you determine if this is the right element to use to represent the concept that is being reported on a U.S. GAAP financial statement?"** According to the *XBRL U.S. GAAP Taxonomy Preparer's Guide* (http://xbrl.us/Documents/PreparersGuide.pdf) *"when deciding whether an element is the most appropriate for the particular concept in the financial statements, the documentation (definition) is the single most important piece of information preparers should consider, but it should not be the only information considered"* (page 21). For the *Receivables, Net, Current, Total* element, its documentation reads: *"The total amount due to the entity within one year of the balance sheet date (or one operating cycle, if longer) from outside sources, including trade accounts receivable, notes and loans receivable ..."* You should consider an element's documentation to be the first piece of evidence to consider. Notice that an element also has *References* that identify relevant official pronouncements which can provide additional evidence that you have found the appropriate financial reporting concept.

If you *scroll down* in the *right-hand window* of the taxonomy viewer, you will see that an element also has *Properties* which provide specific information on how the concept is defined as a U.S. GAAP XBRL element. The first property is the concept's element *Name*, **ReceivablesNetCurrent,** followed by the *Namespace* in which it is defined, *http://fasb.org/us-gaap/2014-01-31*. The *Name* is the element name you will use to ***tag*** a specific data item/reported value in an XBRL instance document; note that its namespace matches that of the taxonomy with which we are working. Its other *Properties* also

provide evidence that you have located the appropriate element; including its *Data Type - monetary* (meaning it is numeric and measured in a currency), its *Period Type - instant* (meaning it is reported as of an "instant of time," as opposed to over a "duration of time"), *Abstract - false* (meaning that it is not an "abstract" element and can therefore be used to tag data in an instance document), and its *Balance - debit*. In the right-hand panel, notice that *"Receivables, Net, Current, Total"* is nested within the abstract item *"Accounts, Notes, Loans and Financing Receivable, Net, Current [Abstract]"*, which is nested within *"Receivables, Net, Current [Abstract]"*, and so on. Remember, *abstract* elements help us to read and understand XBRL taxonomies and also provide context for individual XBRL elements but cannot be used to tag items in an XBRL financial statement.

In summary, when looking up an element name in the U.S. GAAP XBRL taxonomy, if the *Documentation*, *Namespace*, *Data Type*, *Period Type*, *Balance*, and *Abstract (false)* are correct, you will have a relatively high level of assurance that the element *Name* is the correct one to use to tag a data item in an XBRL financial statement. As you will see, using the IFRS XBRL taxonomy is more problematic because, being principle-based, as opposed to rule-based, it does not include an element's *Documentation*.

Test yourself 2: In the U.S. GAAP 2014 XBRL taxonomy, find the element name for the financial reporting concept "Cash and cash equivalents".

Element name: CashAndCashEquivalentsAtCarryingValue

Standard label: Cash and Cash Equivalents, at Carrying Value

Data type: xbrli:monetaryItemType

Period type: instant

Balance: debit

Abstract element in which it is nested: Cash and Cash Equivalents, at Carrying Value [Abstract]

Use this element name to tag the value $551,000:

<CashAndCashEquivalentsAtCarryingvalue>551,000</CashAndCashEquivalentsAtCarryingvalue>

Test yourself 3: In the U.S. GAAP 2014 XBRL taxonomy, find the element name for the financial reporting concept "Short-term investments".

Element name: ShortTermInvestments

Standard label: Short-term Investments

Data type: xbrli:monetaryItemType

Period type: instant

Balance: debit

Abstract element in which it is nested: Marketable Securities, Equity Securities, Current, Alternative [Abstract]

Use this element name to tag the value $269,000:

<ShortTermInvestments>269000</ShortTermInvestments>

Test yourself 4: Open Notepad or your favorite text editor and enter the elements you have just created in **Test yourself 2 and 3** in an XML document.

Start:

```
<?xml version="1.0"?>
<!-- your name -->
<xbrl>

</xbrl>
```

In these Test yourself examples, notice that the *Element name* is always a concatenated version of the *Standard Label*. Also, Element names always start with a capital letter and use camel characters. This is a convention followed in all XBRL taxonomies.

With this background, you are ready to start creating XBRL instance documents.

The Guide & Workbook for Understanding XBRL

Eighth Edition

Chapter 3: Creating XBRL Instance Documents

The basic rules for creating XBRL instance documents

In the previous Chapter, you were introduced to the basic rules for all XML documents and were exposed to the U.S. GAAP 2014 XBRL taxonomies and the elements defined therein. All XBRL instance documents must follow the basic rules for XML documents. In addition, they must also follow five rules specific to XBRL instance documents. As defined in the XBRL Specification v2.1, they include special elements, a standard syntax, and a specific format, as follows:

1. All XBRL instance documents must use **xbrl** as their root element name and it must include ***namespace declaration attributes***.
2. The first child element of the **xbrl** root element must be a ***schemaRef*** element and it must contain two ***xLink*** attributes.
3. All XBRL instance documents must contain at least one ***context*** element and it must contain an ***entity*** identifier element and a ***period*** element.
4. All XBRL instance documents reporting numeric items must contain at least one ***unit*** element and it must contain a ***measure*** element.
5. All XBRL instance documents must contain at least one *"item"* (i.e., a generic reference to a reported *item* of information) in the proper format; also referred to as a *"reported fact"*.

XBRL Rule 1: The root element for an XBRL instance document is **xbrl**. And, it must contain attributes declaring the namespaces necessary to "support" the XBRL instance document. In the previous Chapter, you learned that a namespace is used to uniquely identify a taxonomy and thus differentiate it from any other taxonomy. Since we will be using elements from the U.S. GAAP 2014 XBRL taxonomy in many XBRL instance document exercises, we must "declare" its namespace as an attribute of the root element.

The root element and the *namespace declaration* for the 2014 **us-gaap** taxonomy is coded as: **<xbrl xmlns:us-gaap=**"http://xbrl.fasb.org/us-gaap/2014-01-31"> .

Without getting into technical details about namespace declarations, **xmlns** is the reserved key word in the XML language for declaring a namespace in an XML document. **xmlns** is always followed by a colon, a namespace prefix, and a unique identifier that looks like, but does not have to be, a URL. As you did in the previous Chapter, *point your browser* to the U.S. GAAP 2014 XBRL Financial Reporting Taxonomy and open any element's *Properties*. For all elements, the recommended namespace prefix for all U.S. GAAP XBRL elements is **us-gaap** and the namespace for all current elements is *http://fasb.org/us-gaap/2014-01-31*. If you find an element with a 2013 namespace, it means that that element has been *deprecated* (i.e., it has been eliminated from the 2014 taxonomy and should not be used for tagging); deprecated elements are included for 2 years for comparison and historic purposes.

Namespace declarations in XBRL instance documents are necessary to specifically identify the source where elements are defined. Every XBRL instance document will use element names from at least one XBRL taxonomy (e.g., U.S. GAAP or IFRS) and the one used must be declared as a namespace attribute in the **xbrl** root element. As you will see, the *namespace prefix* associated with a specific taxonomy will be used in the body of your XBRL instance document as a prefix on individual element names to identify their source. So, **AccountsPayableCurrent** becomes **us-gaap:AccountsPayableCurrent**.

XBRL Rule 2: The first element following the **xbrl** root element must be a **schemaRef** element; in XML terminology, the **xbrl** root element is the "parent" element and the **schemaRef** element is the first "child" element in an XBRL instance document. Each **schemaRef** element must contain two attributes: one declaring a "simple" link and another pointing to the URL of an XBRL taxonomy's ***schema*** (i.e., where elements are defined in a computer-readable XML document known as a schema). The appropriate **schemaRef** element for a 2014 corporate filer is coded as follows: **<schemaRef xlink:type=**"simple" **xlink:href=**"http://xbrl.fasb.org/us-gaap/2014/elts/us-gaap-std-

2014-01-31.xsd"/> (see Figure 5 – the XBRL.US 2014 taxonomy home page). The **.xsd** extension on this reference indicates that it identifies an XML schema.

Notice that the **schemaRef** element has two attributes each with an **xlink** prefix. **xlink** is the preferred namespace prefix designating the XML linking language, **XLink**; it also must be declared as a namespace in the root element. XLink is important in XBRL and will be explained in more detail later. **schemaRef** is a special element used to "link" an XBRL instance document to an XBRL taxonomy schema. Notice that the **schemaRef** element has a / (slash) before its ending > (bracket) which means it is an "***empty element***" (i.e., it contains attributes but does not contain a data value or other elements nested within it). **schemaRef** is an abbreviation for "schema reference." As defined in the XML ***XLink language*** specification (http://www.w3.org/TR/xlink/), **xlink:type**="simple" means a simple one-way link, similar to a hyperlink on a Web page, and **xlink:href=**" http://xbrl.fasb.org/us-gaap/2014/elts/us-gaap-std-2014-01-31.xsd" is a hypertext reference identifying the URL of the U.S. GAAP 2014 XBRL taxonomy schema. If you point your browser to this URL, you will find an XML schema file which defines all elements in the core U.S. GAAP 2014 XBRL taxonomy.

The following XBRL instance document segment illustrates both Rules 1 and 2:

```
<xbrl  xmlns:us-gaap="http://fasb.org/us-gaap/2014-01-31"
       xmlns:xlink="http://www.w3c.org/1999/xlink">
   <schemaRef   xlink:type="simple"
       xlink:href=" http://xbrl.fasb.org/us-gaap/2014/elts/us-gaap-std-2014-01-31.xsd"/>
</xbrl>
```

The **xbrl** root element in this example now has two namespace declarations, one for the 2014 **us-gaap** XBRL namespace and another for the **xlink** language namespace. Both of these are necessary because XML requires that all namespace prefixes to be used in a document must be declared before they can be used in the document. The **schemaRef** element has the two attributes required by the XLink language and both of them use the **xlink** namespace prefix to identify the namespace in which they are defined. We will use the **us-gaap** namespace prefix later in the XBRL instance document. You will soon

discover that XBRL instance documents use many different namespaces and each must be declared as an attribute in the **xbrl** root element. Notice that namespace declarations do not change the **xbrl** root element name and they only appear in the brackets with the beginning element name.

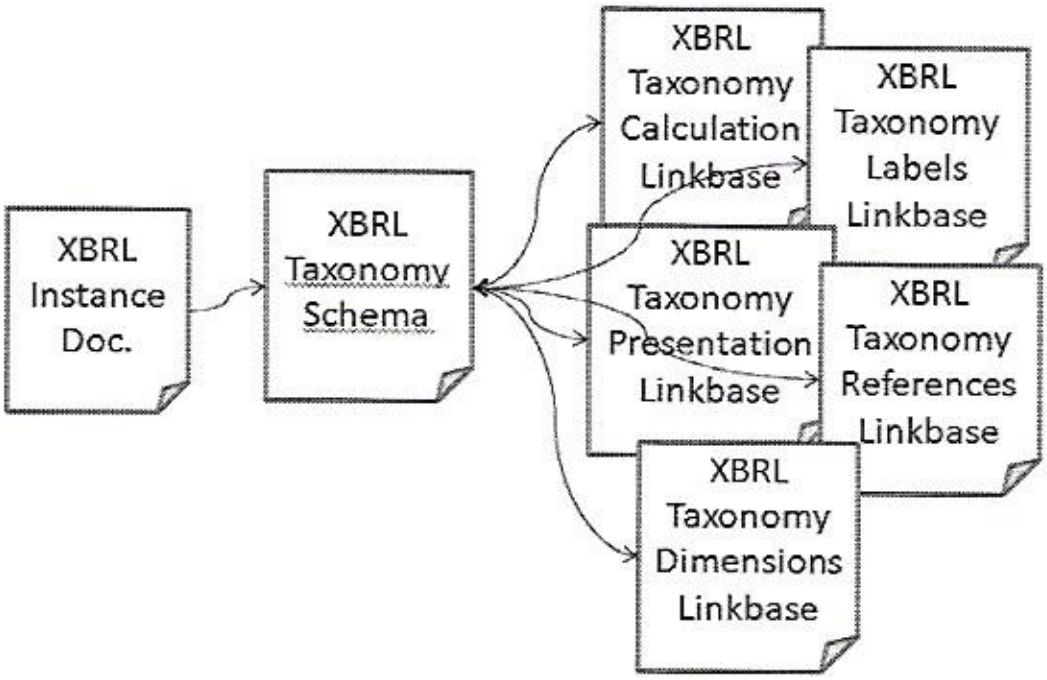
The effect of the **schemaRef** element is to "link" an XBRL instance document to an XBRL taxonomy schema that defines the elements that appear in the instance document. In XBRL terminology, *XBRL instance documents report business facts tagged with pre-defined element names that represent reporting concepts defined in XBRL taxonomy schemas*. Said another way, XBRL taxonomy schemas define individual elements, each representing a reporting concept that can be used in XBRL instance documents. Each XBRL instance document must have at least one **schemaRef** element pointing to an XBRL taxonomy schema. As illustrated in Figure 8, each XBRL instance document is linked to an XBRL taxonomy schema, which in turn is linked to several additional documents collectively referred to as a ***Discoverable Taxonomy Set*** (DTS). As mentioned previously, an XBRL taxonomy schema is like a large computer-readable *dictionary* that defines each financial reporting concept that can appear in XBRL instance documents. The DTS extends the dictionary to include other important aspects of financial reporting; such as, the relationship between reporting concepts.

The U.S. GAAP taxonomy viewer that you used to look up element names in Chapter 2 is the user-friendly shell for viewing the taxonomy schema. An XBRL taxonomy schema is linked to a number of XBRL documents known as "***linkbases***." Linkbases are XML documents, written in the XML **Xlink** language, which define the following important characteristics of financial reports:

- How line items are totaled in an instance document (the "calculation linkbase")
- The standard labels to be used for line items when an instance document is rendered in human-readable form (the "labels linkbase")
- How line items are presented when an instance document is rendered in human-readable form (e.g., *current assets* appear before *non-current assets* in US GAAP classified balance sheets) (the "presentation linkbase")

- Official references for financial reporting concepts (the "references linkbase")
- Predefined dimensions commonly found in financial reports (e.g., reporting financial information by business segment or geographical location) (the "dimensions linkbase").

Figure 8: An instance document and its DTS – the XBRL taxonomy schema & linkbases



Linkbases are necessary to describe in computer-readable form things that we as accountants take for granted; such as, the standard line item label and the way to present and calculate current assets, current liabilities, stockholder's equity, or other complex financial reporting concepts. The taxonomy schema(s) and their associated linkbases are collectively referred to as a discoverable taxonomy set (DTS) because a software application can follow the links, starting with the **schemaRef** element(s) in an instance document, and discover this additional information necessary to understand, validate, and render the information in an instance document in human-readable form.

XBRL Rule 3: All XBRL instance documents must have at least one **context** element. The purpose of a **context** element is to identify the business entity that is reporting information in an XBRL instance document, specify the period of time that applies, and provide other information necessary to fully understand the data items being reported (i.e., it sets the "context" of the instance document). The following example **context** element identifies Bicycles Online, Inc., known as BIKES on NASDAQ, as the company reporting items in an XBRL instance document as of December 31, 2014:

```
<context id="December31-2014">
    <entity>
        <identifier scheme="http://www.nasdaq.com">BIKES</identifier>
    </entity>
    <period>
        <instant>2014-12-31</instant>
    </period>
</context>
```

Each **context** element must have a unique **id** attribute, starting with a letter, and must contain an **entity** element and a **period** element. The **id** attribute value is used as a reference when reporting data items. As such, the **id** value (e.g., *December31-2014*) should be descriptive but is chosen at the discretion of the instance document creator; it cannot contain spaces. As you will see, every data item reported in an XBRL instance document must reference a **context** element through its **id** attribute value.

The **entity** element must contain an **identifier** element which must have a **scheme** attribute which identifies a namespace and must contain a value from that namespace. The above **identifier** element uses a **scheme** namespace for NASDAQ and Bicycles Online, Inc's identifier within that namespace; in this case, its ticker symbol, BIKES. Bicycles Online, Inc. would always use this scheme identifier when filing XBRL reports with NASDAQ. Likewise, when filing XBRL documents with the SEC, they would use their 10-digit SEC CIK (Central Index Key) number (i.e., 0000012345). A company's ticker symbol and its SEC CIK number are the most commonly used *entity identifiers* in XBRL instance documents.

An **entity** element can also contain a ***segment*** element to identify a portion or segment of a business entity reporting items in an XBRL instance document.

The **period** element must contain either an **instant** element or a **startDate** and an **endDate** element combination. An **instant** element is appropriate for identifying a specific date in time, as in the above example, and is used for reporting balance sheet items. A **startDate/endDate** element combination is appropriate for identifying a duration of time and is used for reporting income statement and cash flow items. XBRL also requires that dates appear in the standard international date format: *yyyy-mm-dd.*

In addition to the required **entity** and **period** elements, the **context** element can also have a **scenario** element. The **scenario** element is used to provide additional information about items being reported in an instance document, such as, the item being reported is a "forecast". **scenario** elements cannot appear in XBRL documents filed with the SEC.

Test yourself 5: Using Notepad or the form below, create a complete **context** element for an XBRL instance document using the following information:
Company: Bicycles Online, Inc. (NASDAQ BIKES)
For reporting: Balance sheet items as of December 31, 2013
Answer: **<context id= >**

_____
_____
_____
_____
_____
_____

</context>

Test yourself 6: Using Notepad or the form below, create a complete **context** element for an XBRL instance document using the following information:

Company: Bicycles Online, Inc. (SEC CIK 0000012345)

For reporting: Income statement items to the SEC (the SEC's scheme identifier is *www.sec.gov/CIK*) for the year ended December 31, 2014.

Hint: Use **<startDate>** … **</startDate>** and **<endDate>** … **</endDate>** elements

Answer: **<context id=** **>**

_____

_____

_____

_____

_____

_____

</context>

XBRL Rule 4: All XBRL instance documents that report numeric data items must have at least one **unit** element. The purpose of a **unit** element is to identify the *unit of measure* used for the value being reported in a numeric data item. The following example **unit** element identifies the currency "U.S. dollars":

```
<unit id="USD">
  <measure>iso4217:USD</measure>
</unit>
```

Each **unit** element must have a unique **id** attribute and must contain a **measure** element. The **id** attribute is used as a reference when reporting numeric data items. As you will see, every numeric data item reported in an XBRL instance document must reference a **unit** element through its **id** attribute value. The **measure** element is required to contain a value starting with a namespace prefix. For currency, the **measure** element always contains the namespace prefix "iso4217", which identifies the International Standards Organization report number 4217 that designates an abbreviation for each currency in the world (e.g., USD for U.S. dollars, EUR for Euros, etc.). For other measures, such as "shares of stock," the proper **measure** element is: **<measure>**xbrli:shares**</measure>**.

Here the namespace prefix **xbrli** stands for the "XBRL instance documents" namespace and "shares" is defined in this namespace to represent "shares of stock."

Test yourself 7: Using Notepad or the form below, create a **unit** element for an XBRL instance document using the following information:

For reporting: A monetary item measured in British Pounds (GBP).

Answer: **<unit id= >**

_____

</unit>

XBRL Rule 5: All XBRL instance documents must have at least one *"item"* reported in the proper format. An *item* in an XBRL instance document is where all of the previous rules come together to report a numeric or non-numeric *"fact"* that can be unambiguously understood and interpreted by a software application. An *item* has the following parts:

- An *element name* representing a financial concept defined in an XBRL taxonomy
- A *namespace prefix* identifying the taxonomy in which the *element name* is defined (e.g., **us-gaap** or **ifrs-full**)
- A **contextRef** attribute identifying an applicable **context** element's **id**
- A **unitRef** attribute (for a numeric item) identifying an applicable **unit** element's **id**
- A **decimals** attribute (for a numeric item unless it is a fraction) identifying the arithmetic precision or number of decimals to which the *item* is accurate.

Putting it all together, Bicycles Online, Inc. would report its "current accounts payable" under U.S. GAAP in an XBRL instance document as follows:

<us-gaap:AccountsPayableCurrent contextRef= "December31-2014" **unitRef=**"USD" **decimals=**"-3">*1365000*</**us-gaap:AccountsPayableCurrent**>

Both a human and a software application would interpret this XBRL data item as follows:

- The *element name* is **AccountsPayableCurrent**
- It is a financial reporting concept defined in the taxonomy with the *namespace prefix* **us-gaap** (which was declared as a namespace in the **xbrl** root element as **xmlns:us-gaap**="http://xbrl.fasb.org/us-gaap/2014-01-31")
- The attribute **contextRef**="December31-2014" references the appropriate **context** element (i.e., the one with the **id**="December31-2014")
- The **unitRef**="USD" attribute references the appropriate **unit** element (i.e., the one with the **id**="USD")
- The **decimals**="-3" attribute indicates that the number being reported, *1366000*, is *accurate* (can be *trusted*) to the nearest thousand (i.e., -3 means "move 3 spaces to the left").

Test yourself 8: Look up element names in the U.S. GAAP 2014 XBRL taxonomy and using Notepad or the form below, create XBRL *"items,"* with the appropriate **context** references and other attributes, to report the following information:

Company: Bicycles Online, Inc.

Item: *Current net accounts receivable*, as of Dececember 31, 2013 of $2,145,000 accurate to the nearest thousand; you may want to use the **context id** you created in ***Test yourself 5***.

Answer: _____

_____

_____

Company: Bicycles Online, Inc.

Item: *Net sales revenue*, for the year ended December 31, 2014 of $21,333,000 accurate to the nearest thousand; you may want to use the **context id** you created in ***Test yourself 6***.

Answer: _____

_____

_____

XBRL instance documents and namespaces

As covered in this Chapter, XBRL instance documents are reports that follow the rules and syntax specified in the XBRL Specification 2.1. As covered in Chapter 2, XBRL instance documents also follow the rules of XML documents. An additional rule for XML documents is that all elements defined in XML vocabularies, like XBRL, must also be identified by their namespaces. Therefore, in XBRL instance documents, in addition to the **us-gaap** and **xlink** namespaces (see Rule 2), we must also *declare* the namespaces for *XBRL instance documents* (the preferred prefix is **xbrli**), *XBRL linkbases* (the preferred prefix is **link**), and *ISO 4217* (the preferred prefix is **iso4217**) as follows:

xmlns:xbrli="http://www.xbrl.org/2003/instance"

xmlns:link="http://www.xbrl.org/2003/linkbase"

xmlns:iso4217="http://www.xbrl.org/2003/iso4217"

Notice that all of these namespaces are defined by *XBRL.org* for use in XBRL instance documents.

After declaring these namespaces as attributes in the root element, we use the prefixes on appropriate elements in the instance document. Since the **xbrl** root element and the **context** and **unit** elements are defined in the **xbrli** namespace, they appear as follows in an XBRL instance document: **xbrli:xbrl**, **xbrli:context**, and **xbrli:unit**. The **context** and the **unit** element's child elements are also defined in the **xbrli** namespace and the **schemaRef** element is defined in the **link** namespace.

Test yourself 9: In ***Test yourself 6***, you wrote a **context** element for an XBRL instance document using the following information:

Company: Bicycles Online, Inc. (CIK 0000012345)

For reporting: Income statement items to the SEC (the SEC's scheme identifier is *www.sec.gov/CIK*) for the year ended December 31, 2014.

Using Notepad or the form below, rewrite this **context** element using the appropriate **namespace prefixes**.

Answer: _____

_____

_____

_____

_____

Test yourself 10: In XBRL Rules 1 and 2, you were introduced to the **xbrl** root element and its *namespace declarations* and to the **schemaRef** element. Using Notepad or the form below, write a complete **xbrl** root element with namespace declaration attributes and a complete **schemaRef** element with its required attributes and prefixes using the following information:

U.S. GAAP 2014 XBRL schema:
http://xbrl.fasb.org/us-gaap/2014/elts/us-gaap-std-2014-01-31.xsd

Namespaces:

Prefix:	Namespace identifier:
us-gaap	http://xbrl.fasb.org/us-gaap/2014
xbrli	http://www.xbrl.org/2003/instance
link	http://www.xbrl.org/2003/linkbase
iso4217	http://www.xbrl.org/2003/iso4217
xlink	http://www.w3.org/1999/xlink

Answer: **<xbrli:xbrl** _____

_____

_____

_____

<link:schemaRef _____

_____

XBRL instance document and *items/business facts*

XBRL instance documents can be thought of as having two distinct but interacting parts: *the document context part* and *the item/business facts part*. As you have seen in this Chapter, the *document context part* establishes the *"reporting context"* of the XBRL instance document by including report-specific information in the following elements:

- The **xbrl** *root element* and all necessary/supporting *namespace declarations*
- A **schemaRef** element pointing to an appropriate XBRL *taxonomy schema*
- A **context** element identifying the reporting entity and the applicable period of time
- A **unit** element identifying the applicable unit of measure.

The *item/business fact part* uses pre-defined element names representing reporting concepts found in XBRL taxonomies to report values as business *facts*. Each *item/ business fact* must reference information in *the document context part*, including the following:

- A *namespace prefix* identifying the taxonomy in which the element name representing the financial reporting concept is found (e.g., **us-gaap** or **ifrs-full**)
- A **contextRef** that ties to a **context id** in *the document context part*
- And for numeric items, a **unitRef** that ties to a **unit id** in *the document context part*

As you can see, *the document context part* and *the item/business facts part* interact to report the values associated with *items/business facts* of an entity. The result is financial information in an XBRL instance document that can be precisely interpreted by both humans and software applications.

Test yourself 11: Using IE, *open* the XBRL instance document shell (http://www.skipwhite.com/XBRLWorkbook2014/XBRLShell2014.xml) (see Figure 9), *click View/Source*, and then *click File/Save* and *change* "Save as type" to *All Files* and be sure that the file extension is **.xml** - the file name should be ***XBRLShell2014.xml***, and *click Save*. Then, *open* it in Notepad or your favorite text editor and use it to create a

complete XBRL instance document to report *Current accounts payable* for Bicycles Online as of December 31, 2014. Refer back to the elements you have created in the previous ***Test yourself*** exercises. Using the shell, you will need to *add* the appropriate namespaces (i.e., **us-gaap**, **xlink**, and **iso4217**), *complete* the **schemaRef** element, the **context** element, and the **unit** element, and *add* the *line item* to report *Current accounts payable*. When finished, be sure to *save* it with a **.xml** extension and *open* it in *Firefox* to make sure it is well-formed. If it is not well-formed, *Firefox* will likely give you an error message that will lead you to a mistake.

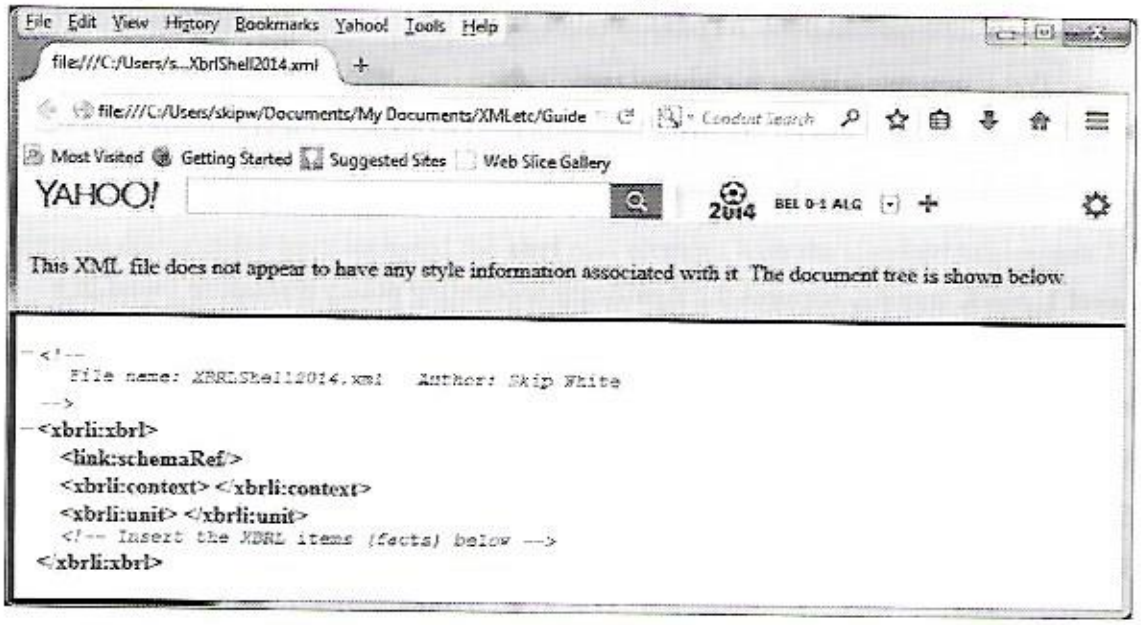
Note: In the shell, I have added the standard version and encoding instruction at the top of the file (i.e., **<?xml version**="1.0" **encoding**="utf-8"**?>**). The XML version instruction you have seen before. The *utf-8* stands for "Unicode character set Transformation Format," which is the standard character encoding used on the Web.

Figure 9: XBRL instance document shell in IE

(File: http://www.skipwhite.com/XBRLWorkbook2014/XBRLShell2014.xml)

Note: As you have seen before, browsers process XML documents differently. Here, *IE* shows the complete instance document including instructions and namespaces, but *Firefox* does not show either instructions or namespaces (see Figure 10). However, I recommend always opening a newly created instance document in *Firefox* because it has better error messages.

Figure 10: XBRL *instance document shell* in *Firefox*



Footnote disclosure items/facts in XBRL instance documents

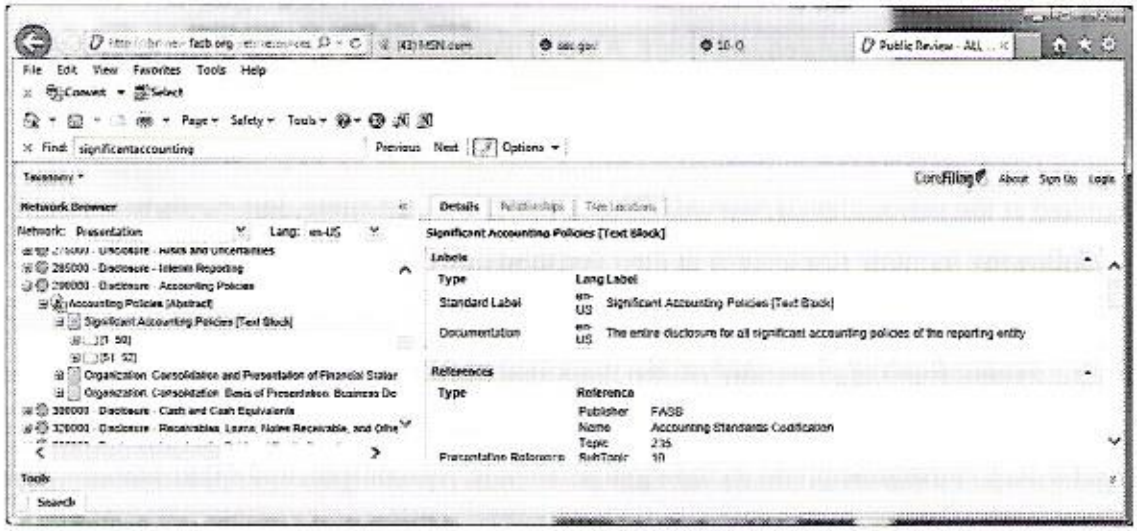
In its "Interactive Data to Improve Financial Reporting" mandate (2009), the SEC requires companies in their first year of compliance to tag their financial statement footnote disclosures as blocks of text, referred to as Level 1, and in detail, referred to as Levels 2 through 4, in subsequent years. All companies reporting under U.S. GAAP, in business more than one year, including Bicycles Online, Inc., are filing their financials in XBRL format with disclosures tagged at Levels 1 through 4. To help explain what is required at the various levels, we will assume that Bicycles Online, Inc. needs to include the following footnote disclosures in their consolidated financial statements:

1. Significant accounting policies:
    a. *Basis of presentation*: Bicycles Online designs and sells its own line of bicycles and is a retailer and service provider for major bicycle manufacturers, including, Cannondale, Specialized, and Trek. The company sells its products worldwide online and through retail outlets directly to consumers.
    b. *Consolidation*: Bicycles Online, Inc. is an online retail innovator and marketer of a variety of bicycling products. All subsidiaries are consolidated and all significant intercompany transactions are eliminated.

2. *Accounts receivable*: The company's net trade receivables includes $22,000 allowance for bad debt. As of December 31, 2014, the company has one customer that represented 10% of total trade receivables.
3. *Inventory* as of December 31, 2014 includes: $1,200,000 (FIFO) Finished goods and $786,000 (FIFO) components and parts.

Level 1, block tagging, requires the significant accounting policy disclosure found in a corresponding official filing document to be tagged as a single block of text formatted as it appears in the official filing. The U.S. GAAP 2014 XBRL taxonomy includes over 70 disclosure sub-taxonomies each devoted to defining elements for often reported footnote disclosure information. As with line items, the first step in tagging a disclosure is to find the appropriate element representing the financial reporting concept in an XBRL taxonomy. Using your browser, *open* the U.S. GAAP 2014 XBRL taxonomy in the taxonomy viewer, *scroll down* to the *290000 – Disclosure – Accounting Policies* sub-taxonomy, and *click* the *Significant Accounting Policies [Text Block]* (see Figure 11).

Figure 11: Significant Accounting Policies [Text Block]

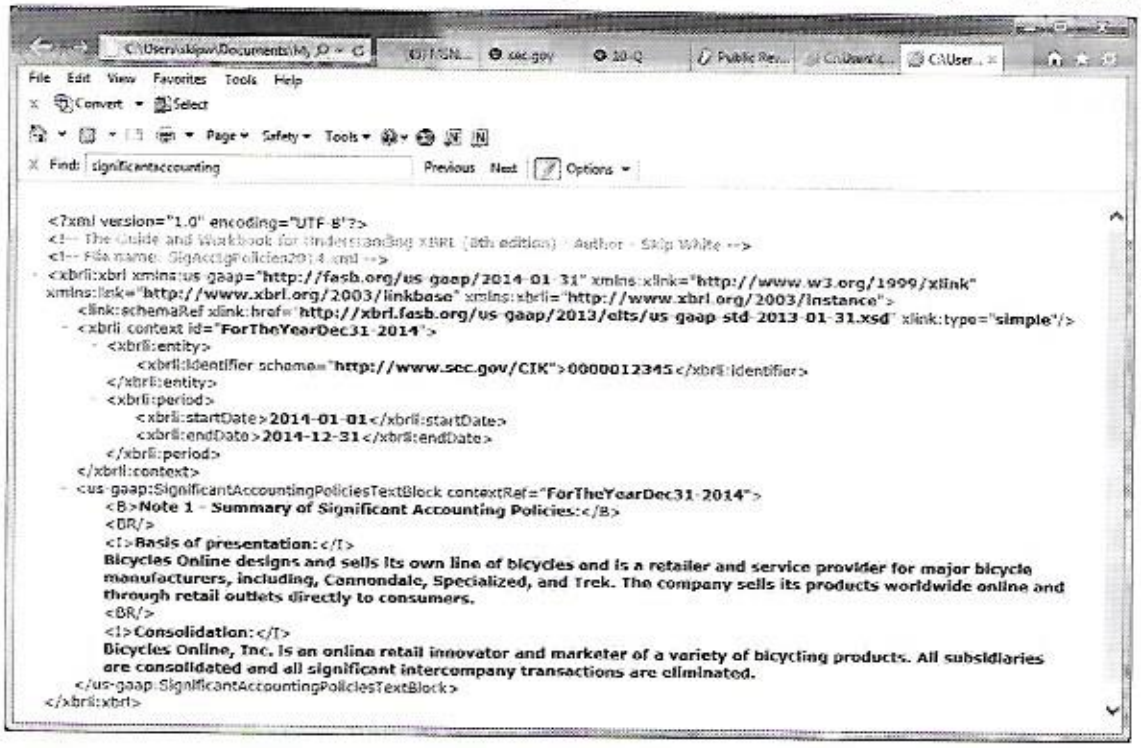


Notice that the documentation/definition reads *"The entire disclosure for all significant policies of the reporting entity."* Scroll down to the Properties window to find the element name **SignificantAccountingPoliciesTextBlock.** In its properties, notice that its

Data Type is *nonnum:textBlockItemType* (meaning it is a block of text - "not a number") and its *Period Type* is *duration* (meaning it is reported as being applicable for a period of time); like income statement and cash flow items, all footnote/disclosures are reported for a duration/period of time. Figure 11 shows the XHTML tagging (i.e., XHTML is HTML that follows the rules of XML and it must be *well-formed*) as it would appear in an instance document; I have included the **xbrl** root element with the standard namespace declarations and saved it with a **.xml** extension so that it would be recognized as an XBRL instance document when opened in a browser.

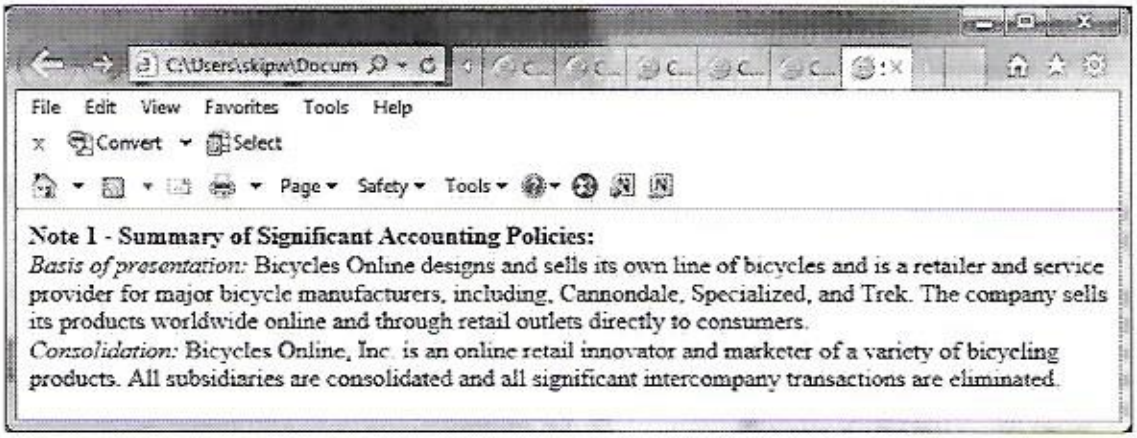
.

Figure 12: us-gaap:SignificantAccountingPoliciesTextBlock – Level 1 (block) tagging



Notice the HTML tags, in caps, surrounding the text of the footnotes within the **SignificantAccountingPoliciesTextBlock** element; **B** means *bold*, **I** means *italic*, and **BR** means *line break*. This preserves the company's desired formatting for the disclosure and is required for SEC Level 1, 2, and 3 disclosures (as in Figure 13).

Figure 13: *Rendered Note 1 – Significant accounting policies (Firefox or IE)*



Level 2 footnote disclosure tagging is a duplication of Level 1 in that it requires that each separate accounting policy included in the *Significant Accounting Policies [Text Block]* be broken out and tagged with its own specific *[Policy Text Block]* element; also preserving the disclosure's HTML formatting. In this example disclosure, there are two: "Basis of presentation" and "Consolidations."

Test yourself 12: Look up the appropriate element names in the 2014 U.S. GAAP taxonomy to use to report Bicycle Online's *Basis of presentation* and *Consolidations* accounting policies; for each, look for the appropriate *[Policy Text Block]* element (e.g., an element with **PolicyTextBlock** in its name). *Open* Notepad or your favorite text editor and use it to create a complete Level 2 footnote disclosure including both line items, with the XHTML code; refer back to Figure 12 for the XHTML. When finished, *save* the file with a **.xml** extension and *open* it with *Firefox* to make sure it is *well-formed.*

Level 3 footnote disclosure tagging is for tables and other schedules appearing in footnotes. In the 2014 XBRL U.S. GAAP taxonomy there are a number of elements with **TableTextBlock** in their name which would be used to surround an entire XHTML formatted table; similar to Level 1 and 2 tagging. For example, using the 2014 U.S. GAAP taxonomy, *open* the *750000 – Disclosure – Other Income and Expenses* sub-taxonomy and *open* items until you can *click* the *Interest and Other Income [Table Text Block]* (see Figure 14). This is the element that was used by *Apple, Inc.* to contain a

complete table formatted with HTML. When rendered, it appeared in Apple's financial statement disclosure as in Figure 15. Because of the complexity of the XHTML coding, we will not actually create such a table.

Figure 14: us-gaap:InterestAndOtherIncomeTableTextBlock element

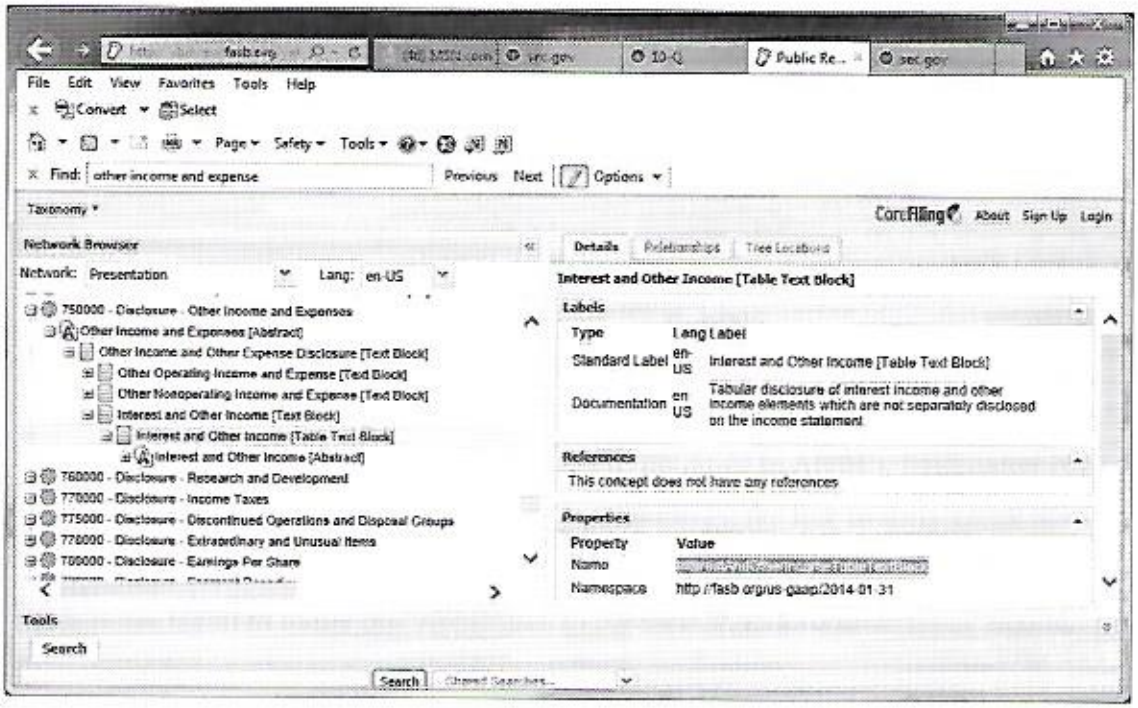
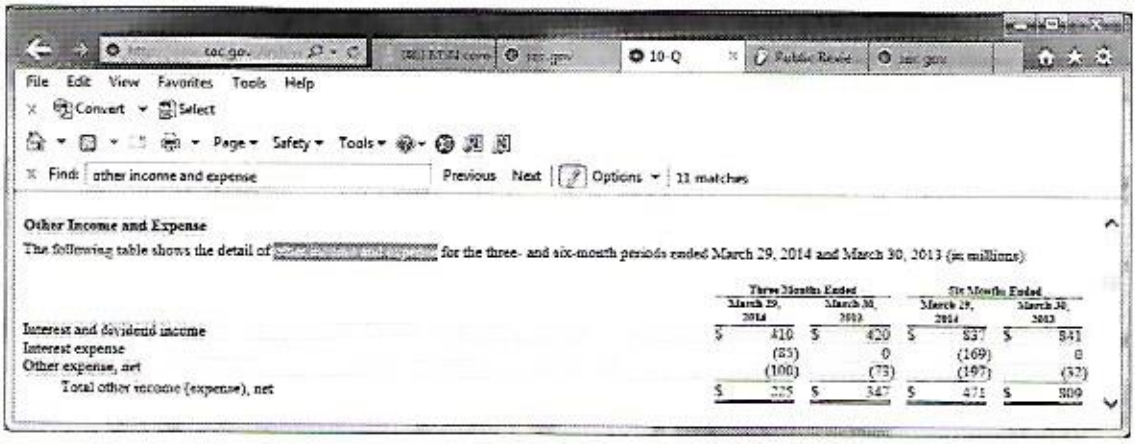


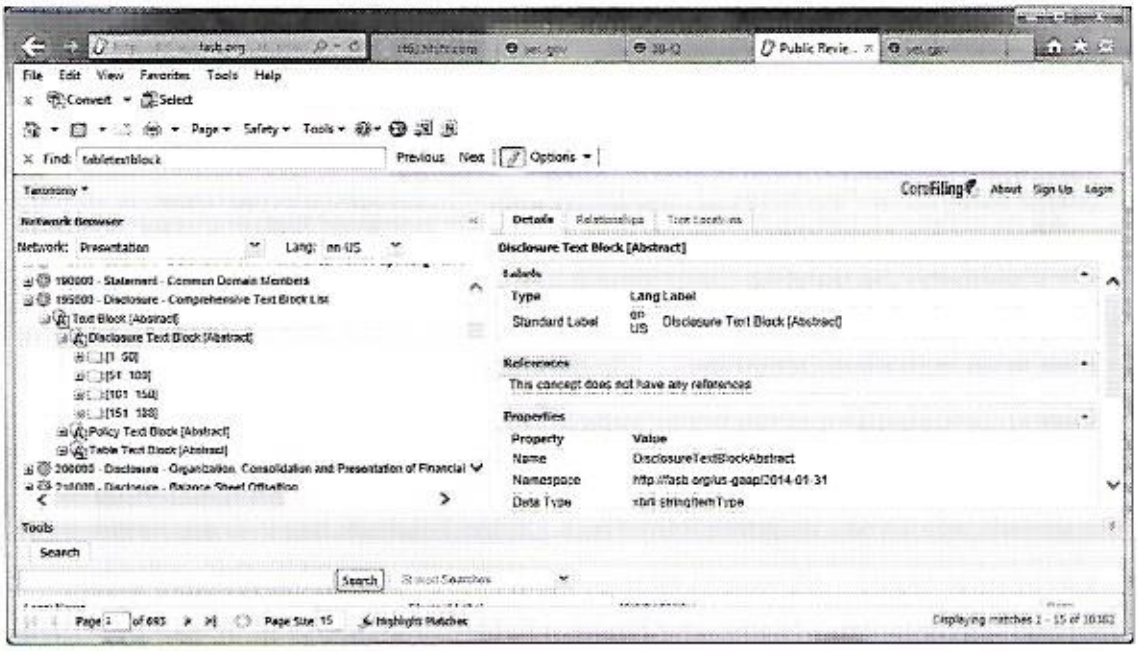
Figure 15: Apple's *Other Income and Expense Table Disclosure* (SEC 10-Q - 3/29/2014)



In addition to specific Disclosure sub-taxonomies, the U.S. GAAP 2014 XBRL taxonomy contains a summary/list of all disclosures, *195000 – Disclosure - Comprehensive Text*

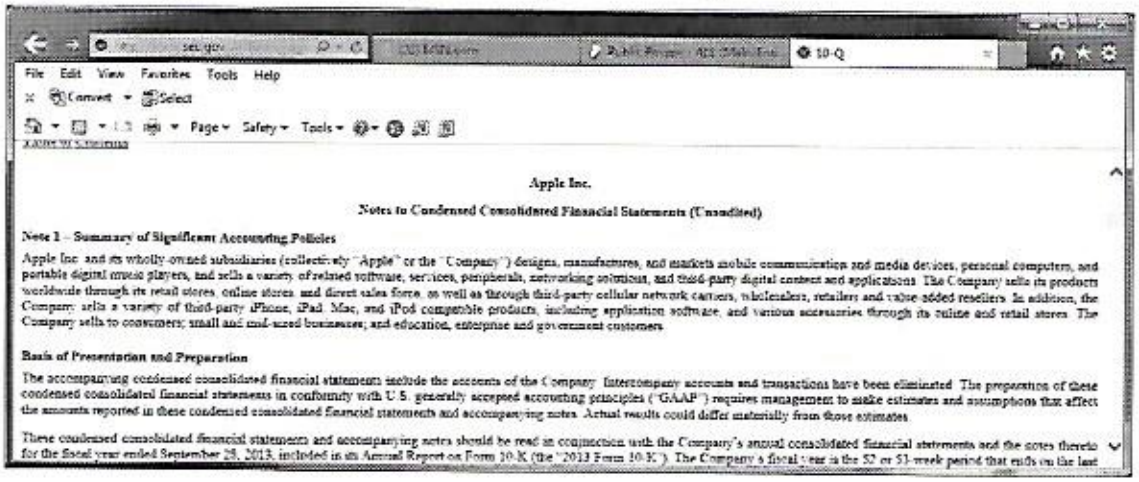
Block List (see Figure 16). Within this sub-taxonomy, the *Disclosure Text Block* lists all U.S. GAAP **[Text Block]** disclosures in alphabetical order, the *Policy Text Block* lists **[Policy Text Block]** disclosures for Level 2 tagging (e.g., *Advertising Costs, Policy [Policy Text Block]*), and the *Table Text Block* lists **[Table Text Block]** disclosures for Level 3 tagging (e.g., *Available-for-sale Securities [Table Text Block]*). It is often quicker to find disclosures here as opposed to looking through individual sub-taxonomies.

Figure 16: *195000 – Disclosure - Comprehensive Text Block List*



When it comes to disclosure/footnote tagging, there is a lot of discretion and variation in the way that companies tag their disclosures. For example, *Apple, Inc.* in their 10-Q for the quarter ended 3/29/2014, includes the following as their *Note 1* to their financial statements (see Figure 17). Instead of tagging this disclosure with the **us-gaap: SignificantAccountingPoliciesTextBlock** (see Figure 12), as discussed above, they use a tag that combines two financial reporting concepts – *Significant Accounting Policies* and *Basis of Presentation*.

Figure 17: *Apple, Inc.'s* Note 1 (SEC 10-Q – 3/29/2014)



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10-Q

Apple Inc.

Notes to Condensed Consolidated Financial Statements (Unaudited)

Note 1 – Summary of Significant Accounting Policies

Apple Inc. and its wholly-owned subsidiaries (collectively "Apple" or the "Company") designs, manufactures, and markets mobile communication and media devices, personal computers, and portable digital music players, and sells a variety of related software, services, peripherals, networking solutions, and third-party digital content and applications. The Company sells its products worldwide through its retail stores, online stores, and direct sales force, as well as through third-party cellular network carriers, wholesalers, retailers and value-added resellers. In addition, the Company sells a variety of third-party iPhone, iPad, Mac, and iPod compatible products, including application software, and various accessories through its online and retail stores. The Company sells to consumers, small and mid-sized businesses, and education, enterprise and government customers.

Basis of Presentation and Preparation

The accompanying condensed consolidated financial statements include the accounts of the Company. Intercompany accounts and transactions have been eliminated. The preparation of these condensed consolidated financial statements in conformity with U.S. generally accepted accounting principles ("GAAP") requires management to make estimates and assumptions that affect the amounts reported in these condensed consolidated financial statements and accompanying notes. Actual results could differ materially from those estimates.

These condensed consolidated financial statements and accompanying notes should be read in connection with the Company's annual consolidated financial statements and the notes thereto for the fiscal year ended September 28, 2013, included in its Annual Report on Form 10-K (the "2013 Form 10-K"). The Company's fiscal year is the 52 or 53-week period that ends on the last

Test yourself 13: What element does Apple, Inc. use? Point your browser to the SEC website (www.sec.gov), then *select Filings / Company Filings Search* and *enter AAPL* in the *Fast Search text box* and *click Search*; then *scroll down* to Apple's 10-Q dated 2014-04-24 (their Filing Date) and *click Documents*. Next, *click* the link to their XBRL Instance Document (aapl-20140329.xml) and *search* for *significantaccountingpolicies*. **What is the element name** that Apple uses to tag their Note 1 – Summary of Significant Accounting Policies? _____

As discussed and illustrated, Level 1, 2, and 3 tagging requires the use of XHTML to preserve the formatting so that the footnote disclosure, when rendered in a browser, appears exactly the same as in the SEC filing document in Word and HTML. **Level 4** footnote disclosure tagging, on the other hand, requires that each important monetary value and number in each footnote be tagged as a reported fact; similar to line item tagging. In their financial statements instance document, Bicycles Online is required to tag their second and third footnote disclosures (shown on Page 36) using Level 2 and Level 4 tagging. Level 2 would be similar to the earlier illustration (Figures 12 and 13) and Level 4 would require finding the appropriate elements to use to tag the numeric facts reported in each disclosure. Bicycles Online's footnote disclosure number 2, *Accounts Receivable*, is an unusual disclosure since its second sentence states that *a*

single customer represents 10% of trade receivables. Your challenge in the next *Test yourself* exercise, is to discover how to tag such a fact.

Test yourself 14: What is the appropriate element name to use to report the second sentence of Bicycle Online's *Accounts Receivable* disclosure – "*As of December 31, 2014, the company has one customer that represented 10% of total trade receivables.*" **Hint**: look for disclosures for *Risks and Uncertainties*. For an example of how it is done, point your browser to SEC.gov and *open* Apple (AAPL) 10-Q filing Documents for 2014-04-24. Then, *open* their 10-Q document (HTML) and *scroll down* to their Accounts Receivable disclosure. Next, *open* their XBRL Instance Document and *search* for *us-gaap:concentration*.

Element: _____

Instance documents and validation

Although reporting business facts in an XBRL instance document requires significant overhead, the result is worth it for improving the efficiency and effectiveness of computerized financial and business operations reporting. The major benefit is that an XML-enabled software application can process, search, and precisely interpret each item/ business fact being reported. In other words, in this XBRL instance document, the number, 1365000, is not just a piece of data. It is reported as a "business fact" (i.e., it is the value of Bicycles Online, Inc.'s "Accounts Payable, Current," as defined in the U.S. GAAP 2014 XBRL taxonomy by a *standard* element name, in U.S. dollars, as of December 31, 2014, and is accurate to the nearest thousand). Also, this business fact will be processed in this context in a document that can be transferred over a computer network, stored in a database, and analyzed with software applications. In other words, it is processed, transferred, stored, and analyzed as *information* including its XBRL semantics.

In addition to the XBRL instance document itself, context is also found in the XBRL taxonomy that is identified in the **xlink:href** attribute of the **link:schemaRef** element of an instance document. As we have seen, the **xlink:href** attribute points to the URL of an

XBRL taxonomy schema in which elements used in the instance document are pre-defined. By following this link, a software application can verify that the elements are being used properly in the instance document and can "discover" other information; including, the "standard label" used in a printed report, how the item is calculated in relation to other items, and in what order it should be presented in a report. This additional semantic information is collected by following links in the taxonomy schema to the XBRL linkbases. As mentioned earlier, the taxonomy schema and all associated linkbases are referred to as the *discoverable taxonomy set* (DTS) (see Figure 8) of an XBRL instance document. The DTS provides a *standardized context* for items reported in an XBRL instance document.

All XBRL instance documents can be validated to see if they adhere to the rules, standard syntax, and overall format defined in the XBRL Specification. Validation is accomplished by reading an XBRL instance document into an XBRL validation software application. The XBRL validation process involves the following steps:

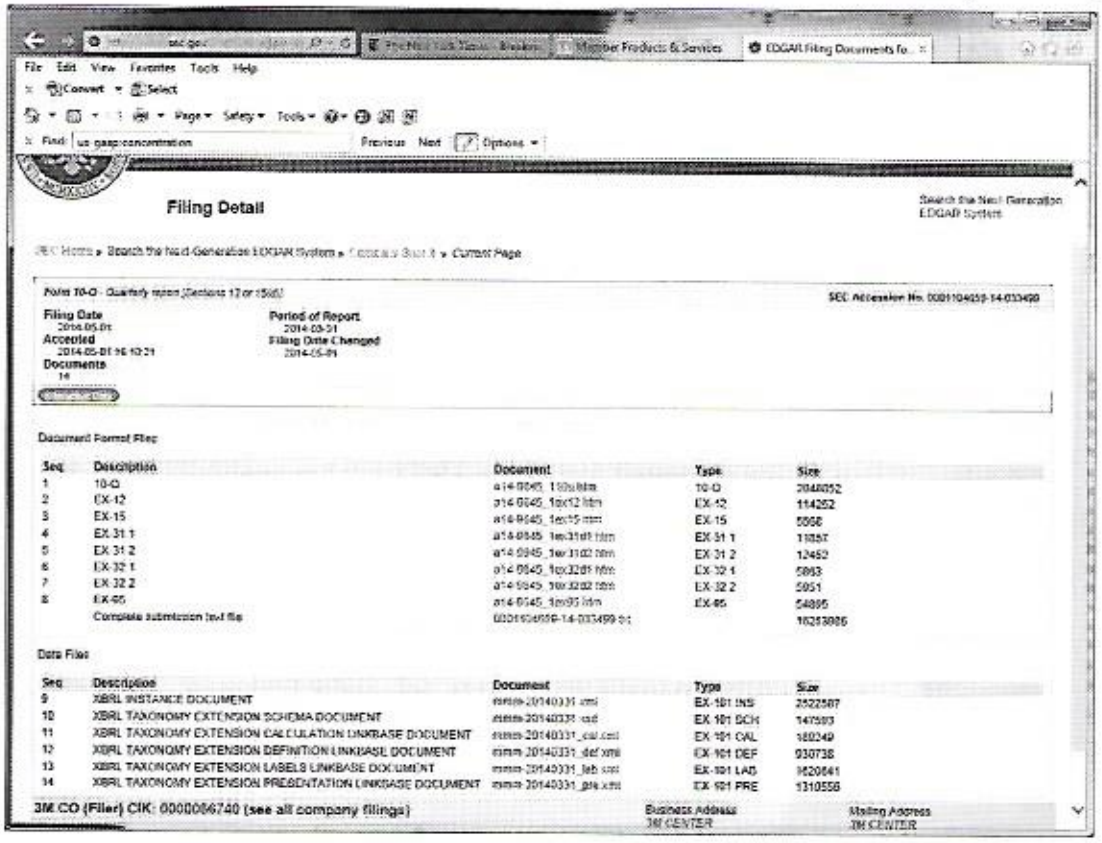
- Checking the instance document to make sure it is a well-formed XML document
- Checking the overall structure of the instance document to make sure all required XBRL elements are included and the proper syntax is used
- Following the link in each **link:schemaRef** element to make sure a valid XBRL taxonomy schema is being referenced and checking each reported item to make sure it is defined in the referenced taxonomy schema and used properly in the instance document
- Following other links in the **DTS** to make sure that valid linkbases are referenced and that items are presented and totaled properly.

Validation of XBRL instance documents is quite technical and requires the appropriate software. It is, however, a very important step in the XBRL business reporting process. A "valid" XBRL instance document is one that follows the rules for all XBRL instance documents and can be reliably processed by other XBRL-enabled software applications. The SEC requires entities to validate their XBRL instance documents prior to filing using proprietary SEC validation software. The SEC then re-validates the XBRL documents

when they are submitted. The SEC validation software package does the standard XBRL validation and, in addition, performs tests to determine if hundreds of SEC rules have or have not been followed. In addition, it checks for an appropriate *extension taxonomy* and proper document and entity information. For a listing of available XBRL validation packages, see Member Products and Services on the XBRL.US Web site (http://xbrl.us/Learn/Pages/catalog.aspx); be aware that XBRL is emerging technology and not all validators give the same results.

The SEC expects every company to create an *extension taxonomy* (i.e., one that "extends" the U.S. GAAP core taxonomy). Extension taxonomies include the entry point appropriate for the reporting company (e.g., *Commercial and Industrial, Banking and Savings*, etc.), an *extension schema* including new elements necessary to define reporting concepts specific to the company (e.g., to define a company's unique divisions), and *extended linkbases* containing a company's preferred line item labels and reporting hierarchy. The extension taxonomy is sent to the SEC and is filed in the EDGAR (Electronic Data Gathering And Reporting) database along with a company's financial statements in XBRL format. The EDGAR database includes the standard "Document Format Files," in HTML format, and a complete set of "Data Files," referred to as the XBRL filing package (see Figure 18); covered in detail in Exercise 5 in the next Chapter.

Figure 18: 3M Company's SEC 10-Q filing detail in the EDGAR database (3/31/2014)



In addition to the financial statements and footnote disclosures, the XBRL instance document also includes SEC specific document and entity information. Such information includes the name of the document(s) being filed, the company's legal name, its required filing date, and other company-specific SEC filing information. Elements to tag this additional information come from the SEC's *Document and Entity Information Taxonomy*; accessible by way of the XBRL.US Financial Reporting Taxonomy page.

This completes Chapters 1, 2, and 3 in which we have covered the rules for *well-formed* XML documents, finding element names in XBRL taxonomies, the rules for valid XBRL instance documents, creating XBRL instance documents, SEC Level 1 through 4 footnote disclosure tagging, and validation of XBRL instance documents. In Chapter 4, you will use all of this information to create XBRL financial statements.

The Guide & Workbook for Understanding XBRL

Eighth Edition

Chapter 4: XBRL Instance Document Projects

Projects scenario

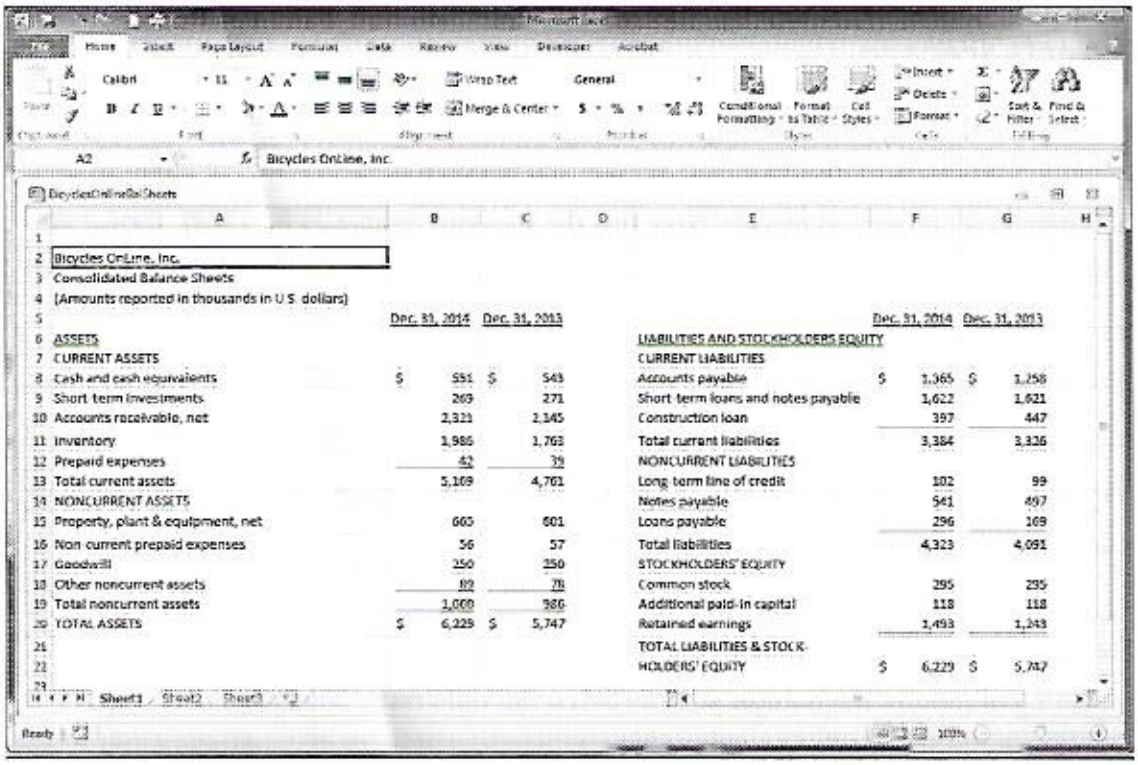
Your client, *Bicycles Online, Inc.*, is now required to file their financial statements, including footnote disclosures to the SEC tagged in detail in XBRL format along with their quarterly and annual reports. Note that the standard financials in HTML format are still the *official filings* and the XBRL-formatted financials are additional and required but are not audited. Since you are familiar with their financials and have some background with XBRL, you have been assigned the job of assisting them. Your client does business as *BicyclesOnline.com* (NASDAQ: BIKES) and their CIK number for SEC filings is *0000012345*. Bicycles Online, Inc. is based on a real company and the exercises/projects require you to create their financials in XBRL format.

The projects in this chapter get progressively more complex. There are hints at the beginning of most of them to get you started on the right track. The exercises in this section are as follows:

1. Exercise 1: A balance sheet in XBRL format
2. Exercise 2: An income statement in XBRL format
3. Exercise 3: Financials with footnote disclosures in XBRL format
4. Exercise 4: Intro to IFRS and a balance sheet in XBRL format
5. Exercise 5-1 & 5-2: Intro to the SEC Interactive Data tools using an SEC filing
6. Exercise 6: Intro to Inline XBRL (iXBRL) and a current assets iXBRL document

Exercise 1: A balance sheet in XBRL format

Using the following information, prepare a balance sheet in XBRL format for Bicycles Online, Inc. as of December 31, 2014. As covered, they report to the SEC under U.S. GAAP for Commercial & Industrial companies and their CIK number is 0000012345.



Bicycles OnLine, Inc.
Consolidated Balance Sheets
(Amounts reported in thousands in U.S. dollars)

	Dec. 31, 2014	Dec. 31, 2013
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	$ 551	$ 543
Short term investments	269	271
Accounts receivable, net	2,321	2,145
Inventory	1,986	1,761
Prepaid expenses	42	39
Total current assets	5,169	4,761
NONCURRENT ASSETS		
Property, plant & equipment, net	665	601
Non current prepaid expenses	56	57
Goodwill	250	250
Other noncurrent assets	89	78
Total noncurrent assets	1,060	986
TOTAL ASSETS	$ 6,229	$ 5,747

	Dec. 31, 2014	Dec. 31, 2013
LIABILITIES AND STOCKHOLDERS EQUITY		
CURRENT LIABILITIES		
Accounts payable	$ 1,365	$ 1,258
Short term loans and notes payable	1,622	1,621
Construction loan	397	447
Total current liabilities	3,384	3,326
NONCURRENT LIABILITIES		
Long term line of credit	102	99
Notes payable	541	497
Loans payable	296	169
Total liabilities	4,323	4,091
STOCKHOLDERS' EQUITY		
Common stock	295	295
Additional paid-in capital	118	118
Retained earnings	1,493	1,243
TOTAL LIABILITIES & STOCK-HOLDERS' EQUITY	$ 6,229	$ 5,747

(http://www.skipwhite.com/XBRLWorkbook2014/BicyclesOnlineBalSheets.xlsx)

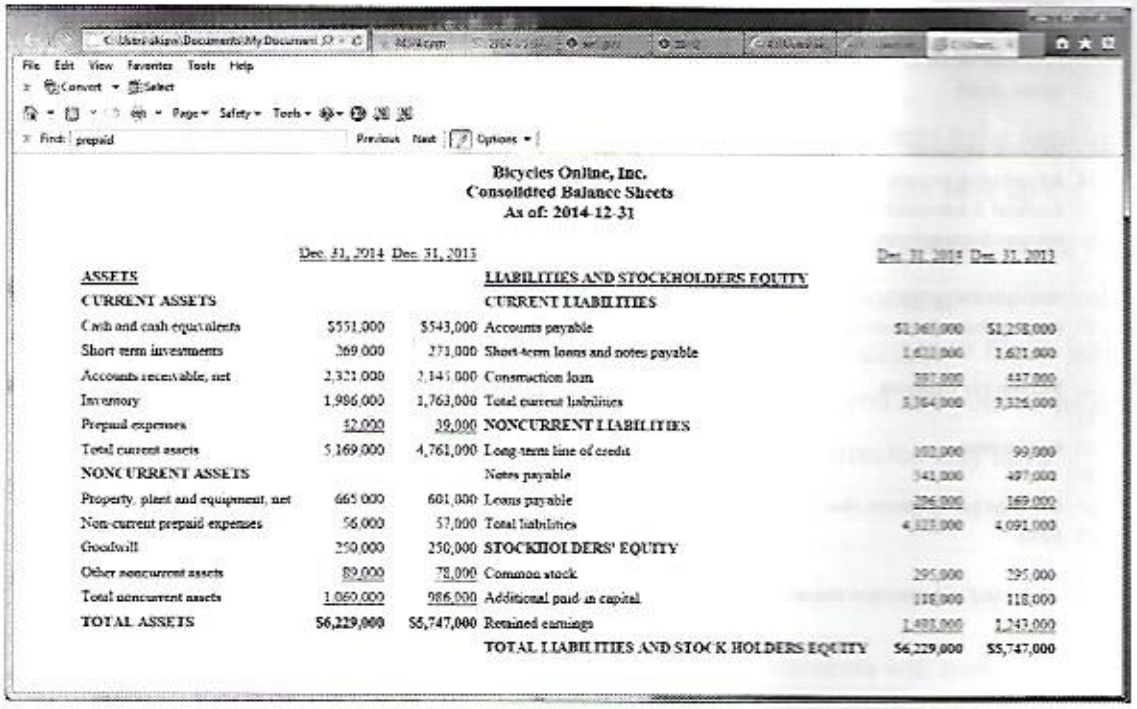
Hint: Start with your solution for ***Test Yourself 11***. Your instance document will have to have two **context** elements: one for 2014-12-31 and another for 2013-12-31. Remember: *"when deciding whether an element is the most appropriate for the particular concept in the financial statements, the documentation (definition) is the single most important piece of information preparers should consider ...".*

Complete your instance document by looking up all of the element names to be used to report the balance sheet items for your client. For each reported item, look up the appropriate concept name in the U.S. GAAP 2014 XBRL taxonomy and use it to tag the corresponding balance being reported by your client. When finished, *save* your file with a **.xml** extension (as in *BicyclesOnLineBalanceSheets.xml*). Then *open* your file in your

favorite Web browser to make sure it is well-formed. Be sure that you add your name on a comment line in the prolog of your instance document. Your instructor may have additional requirements.

Rendering for human consumption

Companies are always concerned with how their financial statements will look when they are rendered for human consumption. It is important to remember that XBRL instance documents are meant to be processed by software applications (i.e., they contain data in a standard computer-readable format). When XBRL financial statements are rendered for human consumption, they are transformed by a computer language or a software application. The transformation involves obtaining the company's preferred line item labels from the XBRL Labels Linkbase and balances and context information from the XBRL instance document. If executed correctly, your XBRL instance document reporting Bicycles Online, Inc. balance sheet as of December 31, 2014 would render in a browser as follows:



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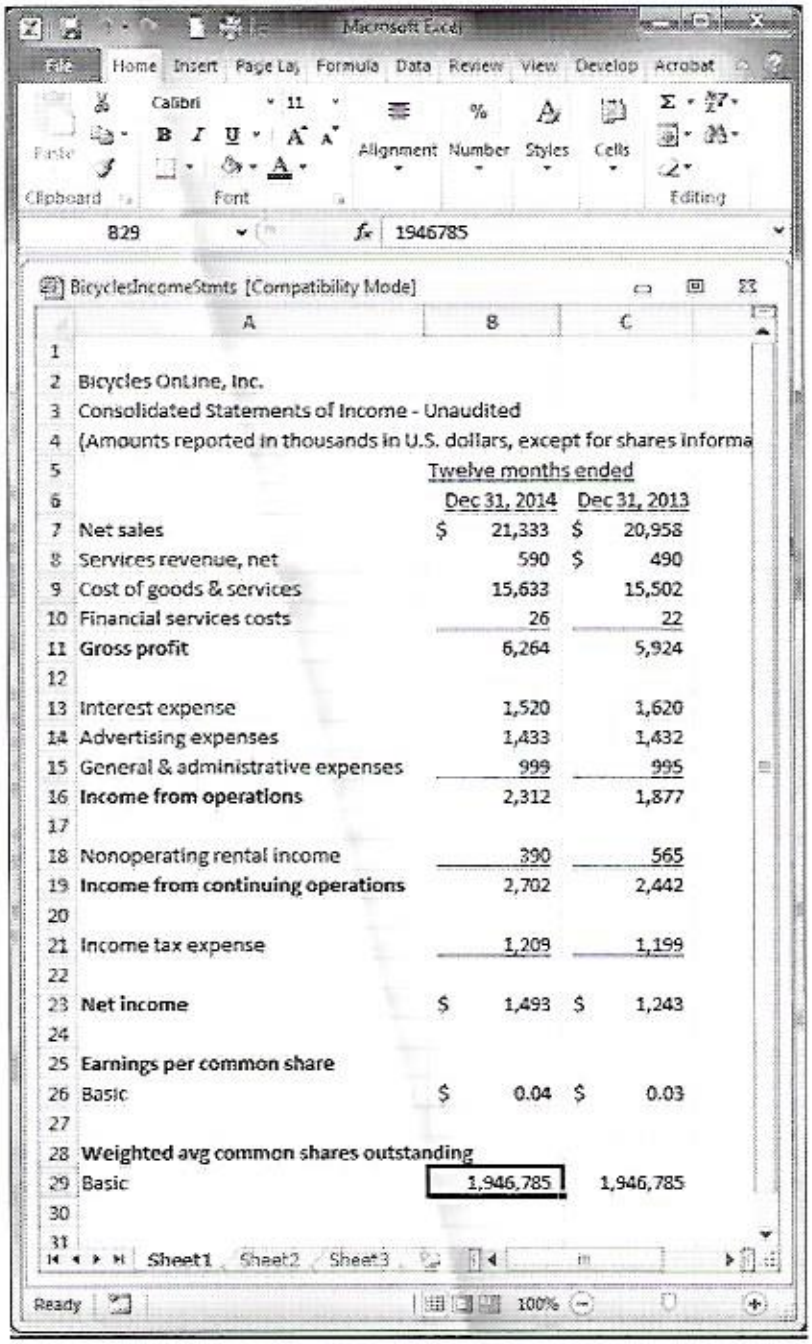
Bicycles Online, Inc.
Consolidated Balance Sheets
As of: 2014-12-31

	Dec. 31, 2014	Dec. 31, 2013		Dec. 31, 2014	Dec. 31, 2013
ASSETS			**LIABILITIES AND STOCKHOLDERS EQUITY**		
CURRENT ASSETS			**CURRENT LIABILITIES**		
Cash and cash equivalents	$551,000	$543,000	Accounts payable	$1,360,000	$1,258,000
Short-term investments	269,000	271,000	Short-term loans and notes payable	1,433,000	1,621,000
Accounts receivable, net	2,321,000	2,141,000	Construction loan	207,000	447,000
Inventory	1,986,000	1,763,000	Total current liabilities	3,364,000	3,326,000
Prepaid expenses	42,000	39,000	**NONCURRENT LIABILITIES**		
Total current assets	5,169,000	4,761,000	Long-term line of credit	102,000	99,000
NONCURRENT ASSETS			Notes payable	141,000	497,000
Property, plant and equipment, net	665,000	601,000	Loans payable	206,000	169,000
Non-current prepaid expenses	56,000	57,000	Total liabilities	4,323,000	4,091,000
Goodwill	250,000	250,000	**STOCKHOLDERS' EQUITY**		
Other noncurrent assets	89,000	78,000	Common stock	295,000	295,000
Total noncurrent assets	1,060,000	986,000	Additional paid-in capital	118,000	118,000
TOTAL ASSETS	**$6,229,000**	**$5,747,000**	Retained earnings	1,493,000	1,243,000
			TOTAL LIABILITIES AND STOCKHOLDERS EQUITY	**$6,229,000**	**$5,747,000**

Exercise 2: An income statement in XBRL format

Using the following information, prepare an income statement in XBRL format for Bicycles Online, Inc. for the year ended December 31, 2014. As covered, they report to the SEC under U.S. GAAP for Commercial & Industrial companies - their CIK number is 0000012345.



BicyclesIncomeStmts [Compatibility Mode]

	A	B	C
1			
2	Bicycles Online, Inc.		
3	Consolidated Statements of Income - Unaudited		
4	(Amounts reported in thousands in U.S. dollars, except for shares informa		
5		Twelve months ended	
6		Dec 31, 2014	Dec 31, 2013
7	Net sales	$ 21,333	$ 20,958
8	Services revenue, net	590	$ 490
9	Cost of goods & services	15,633	15,502
10	Financial services costs	26	22
11	**Gross profit**	6,264	5,924
12			
13	Interest expense	1,520	1,620
14	Advertising expenses	1,433	1,432
15	General & administrative expenses	999	995
16	**Income from operations**	2,312	1,877
17			
18	Nonoperating rental income	390	565
19	**Income from continuing operations**	2,702	2,442
20			
21	Income tax expense	1,209	1,199
22			
23	**Net income**	$ 1,493	$ 1,243
24			
25	**Earnings per common share**		
26	Basic	$ 0.04	$ 0.03
27			
28	**Weighted avg common shares outstanding**		
29	Basic	1,946,785	1,946,785
30			
31			

(http://www.skipwhite.com/XBRLWorkbook2014/BicyclesIcomeStmts.xlsx)

Hint: Start with the XBRL document shell provided for ***Test yourself 11***. You will need two **context** elements: one for the period 2014-01-01 to 2014-12-31 and another for the period 2013-01-01 to 2013-12-31.

It is important to note that reporting "Earnings per share" and "Shares outstanding" in an XBRL instance document requires special consideration. First, notice that EPS is reported as an actual amount as opposed to in thousands. For this reason, you should use **decimals**="INF" (i.e., infinite) for the decimals attribute on each reported EPS amount. Second, shares of stock are not monetary items (i.e., they are not measured in a currency) as are all of the other items being reported. Since they are measured as "shares of stock," you must set up in your instance document the following additional **unit** element called "shares" – it is defined in the **xbrli** namespace:

```
<unit id="Shares">
  <measure>xbrli:shares</measure>
</unit>
```

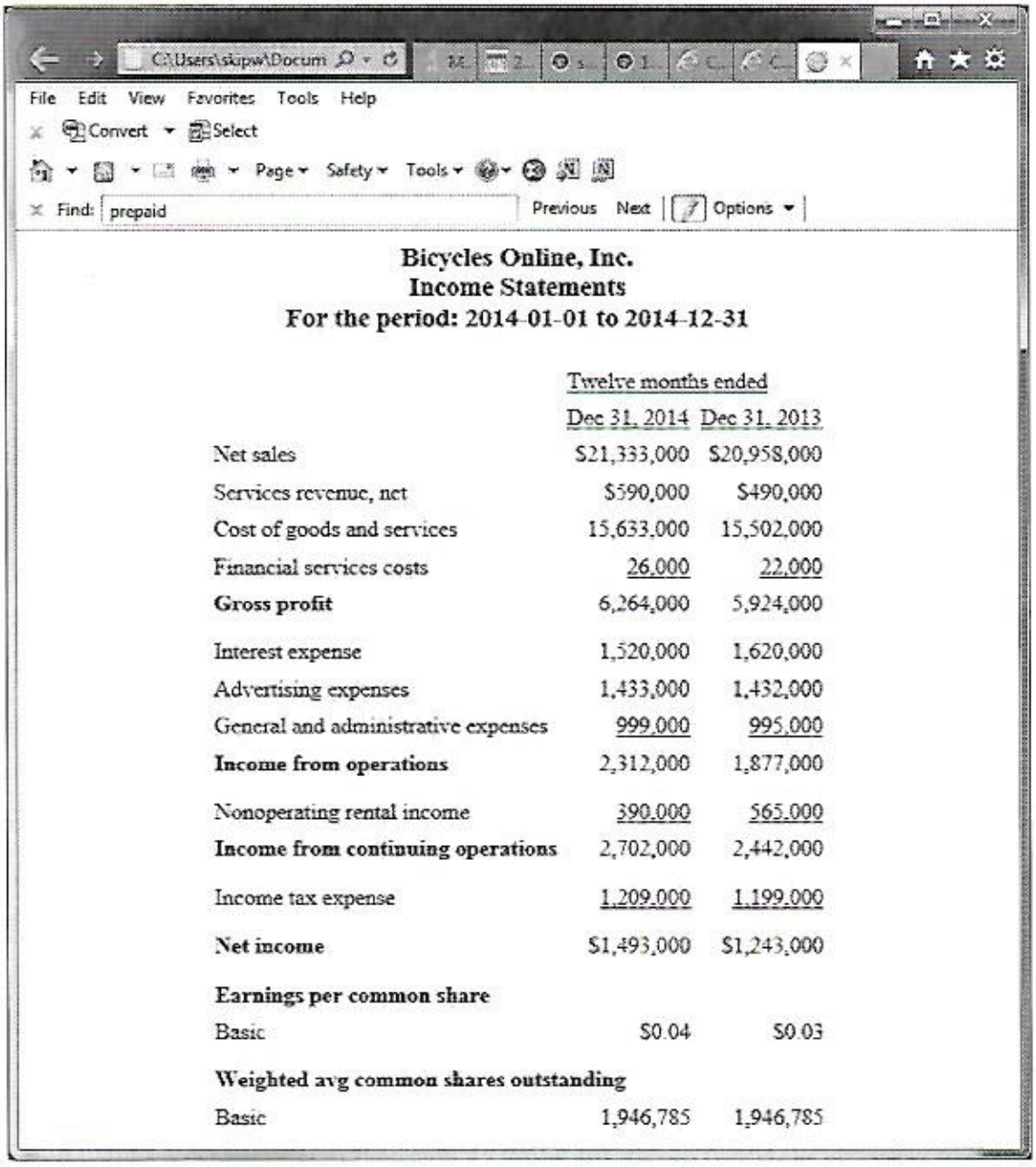
Then, you should use "Shares" as your **unitRef** attribute on the *weighted average shares outstanding* items reported in the instance document.

Complete your instance document by looking up all of the element names to be used to report the income statement items for your client. For each reported item, look up the appropriate concept name in the 2014 U.S. GAAP XBRL taxonomy and use it to tag the corresponding balance being reported by your client. When finished, *save* your file with a **.xml** extension (as in *BicyclesOnLineIncomeStatement.xml*). Then *open* your file in your favorite Web browser to make sure it is well-formed. Be sure that you add your name on a comment line in the prolog of your instance document. Your instructor may have additional requirements.

Rendering for human consumption

Companies are always concerned with how their financial statements will look when they are rendered for human consumption. It is important to remember that XBRL instance documents are meant to be processed by software applications (i.e., they contain data in a standard computer-readable format). When XBRL financial statements are rendered for

human consumption, they are transformed by a computer language or a software application. The transformation involves obtaining a company's preferred line item names from an XBRL Labels Linkbase and balances and context information from an XBRL instance document. If executed correctly, your XBRL instance document reporting Bicycles Online, Inc. income statements for the year ended December 31, 2014 would render in a browser as follows:



Bicycles Online, Inc.
Income Statements
For the period: 2014-01-01 to 2014-12-31

	Twelve months ended	
	Dec 31, 2014	Dec 31, 2013
Net sales	$21,333,000	$20,958,000
Services revenue, net	$590,000	$490,000
Cost of goods and services	15,633,000	15,502,000
Financial services costs	26,000	22,000
Gross profit	6,264,000	5,924,000
Interest expense	1,520,000	1,620,000
Advertising expenses	1,433,000	1,432,000
General and administrative expenses	999,000	995,000
Income from operations	2,312,000	1,877,000
Nonoperating rental income	390,000	565,000
Income from continuing operations	2,702,000	2,442,000
Income tax expense	1,209,000	1,199,000
Net income	$1,493,000	$1,243,000
Earnings per common share		
Basic	$0.04	$0.03
Weighted avg common shares outstanding		
Basic	1,946,785	1,946,785

Exercise 3: Financials with footnote disclosures in XBRL format

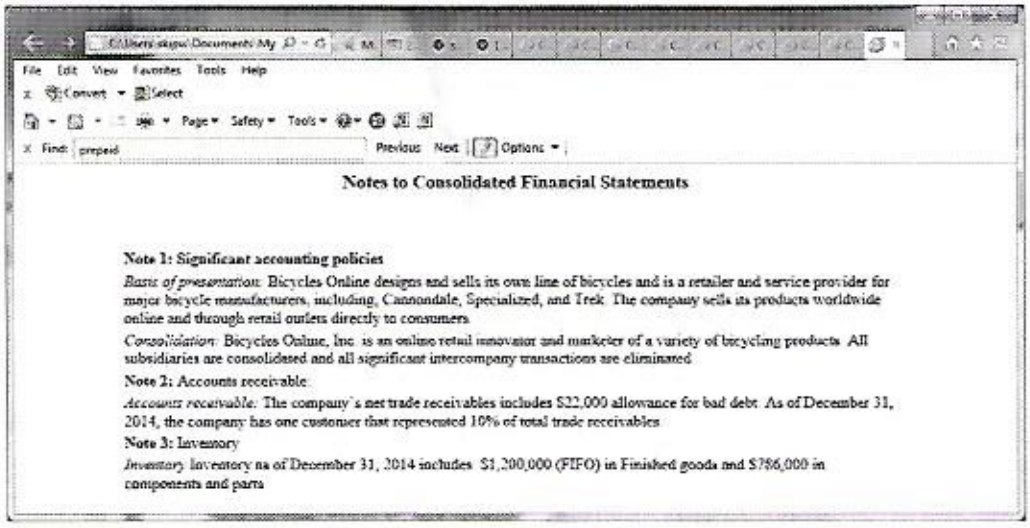
As discussed in Chapter 3, the SEC requires companies in their second year of filing in XBRL format to include footnote disclosures tagged using Levels 1 through 4 in their XBRL instance documents. As you are aware, the U.S. GAAP 2014 XBRL taxonomy includes many disclosure sub-taxonomies which define elements to use for tagging disclosures as blocks of text, as well as, elements for much more detailed tagging. In this exercise, you will need to create a more complex XBRL instance document including both the balance sheet and income statement from Exercises 1 and 2 and several related footnote disclosures. If you have not already completed the balance sheet in Exercise 1 and the income statement in Exercise 2, you will need to do so now before continuing with this exercise. After completing Exercises 1 and 2, *open* your text editor and *combine* the **context** elements, **unit** elements, and reported *items* from both documents into one XBRL instance document; in your combined instance document, you should have one **xbrl** root element with its namespaces, one **schemaRef** element with attributes, four **context** elements, two **unit** elements, and of course numerous reported *items*. The following footnote disclosures need to be tagged using Levels 1, 2, and 4 and added to your combined financial statements instance document:

1. Significant accounting policies:
    a. *Basis of presentation*: Bicycles Online designs and sells its own line of bicycles and is a retailer and service provider for major bicycle manufacturers, including, Cannondale, Specialized, and Trek. The company sells its products worldwide online and through retail outlets directly to consumers.
    b. *Consolidation*: Bicycles Online, Inc. is an online retail innovator and marketer of a variety of bicycling products. All subsidiaries are consolidated and all significant intercompany transactions are eliminated.
2. *Accounts receivable*: The company's net trade receivables includes $22,000 allowance for bad debt. As of December 31, 2014, the company has one customer that represented 10% of total trade receivables.
3. *Inventory* as of December 31, 2014 includes: $1,200,000 (FIFO) in Finished goods and $786,000 (FIFO) in components and parts.

Complete your instance document by finding the appropriate element names in the U.S. GAAP 2014 XBRL taxonomy to use to tag these footnote disclosures. Remember, when looking up element names for footnote disclosures, it is particularly important to read and pay close attention to the description/definition of each concept. This exercise will require tagging at Levels 1, 2, and 4. When finished, *save* your file with a **.xml** extension (as in *BicyclesOnLineFinancialsWithNotes.xml*). Then *open* your file in your favorite browser to make sure it is well-formed. Be sure that you add your name on a comment line in the prolog of your instance document. Your instructor may have additional requirements.

Rendering for human consumption

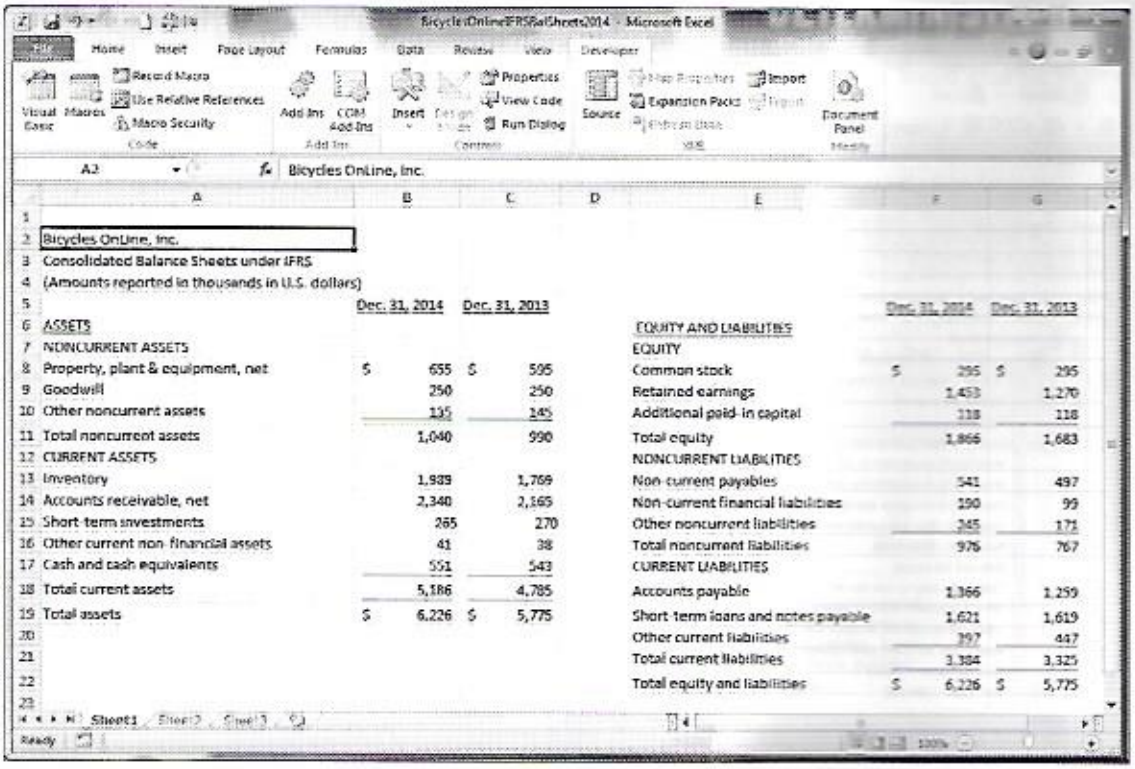
Companies are always concerned with how their financial statements will look when they are rendered for human consumption. It is important to remember that XBRL instance documents are meant to be processed by software applications (i.e., they contain data in a standard computer-readable format). When XBRL financial statements are rendered for human consumption, they are transformed by a computer language or a software application. The transformation involves obtaining the company's preferred line item names from an XBRL Labels Linkbase and balances and context information from their XBRL instance document. If executed correctly, the disclosure/footnote section of your XBRL instance document reporting Bicycles Online, Inc. balance sheet and income statement for the year ended December 31, 2014 would render in a browser as follows:



Exercise 4: An XBRL instance document using the IFRS taxonomy

Foreign private issuers now report to the SEC using IFRS. They were scheduled to begin providing their financial statements in XBRL format in June 2011 but, as of this writing, the SEC has yet to approve the IFRS XBRL taxonomies; it is expected to do so in the near future. In this exercise, you will use the IFRS 2014 XBRL taxonomy to find elements and create an IFRS balance sheet in XBRL format.

If we assume that Bicycles Online is a British company, they would present their balance sheets under the rules of IFRS as shown below:



Bicycles OnLine, Inc.
Consolidated Balance Sheets under IFRS
(Amounts reported in thousands in U.S. dollars)

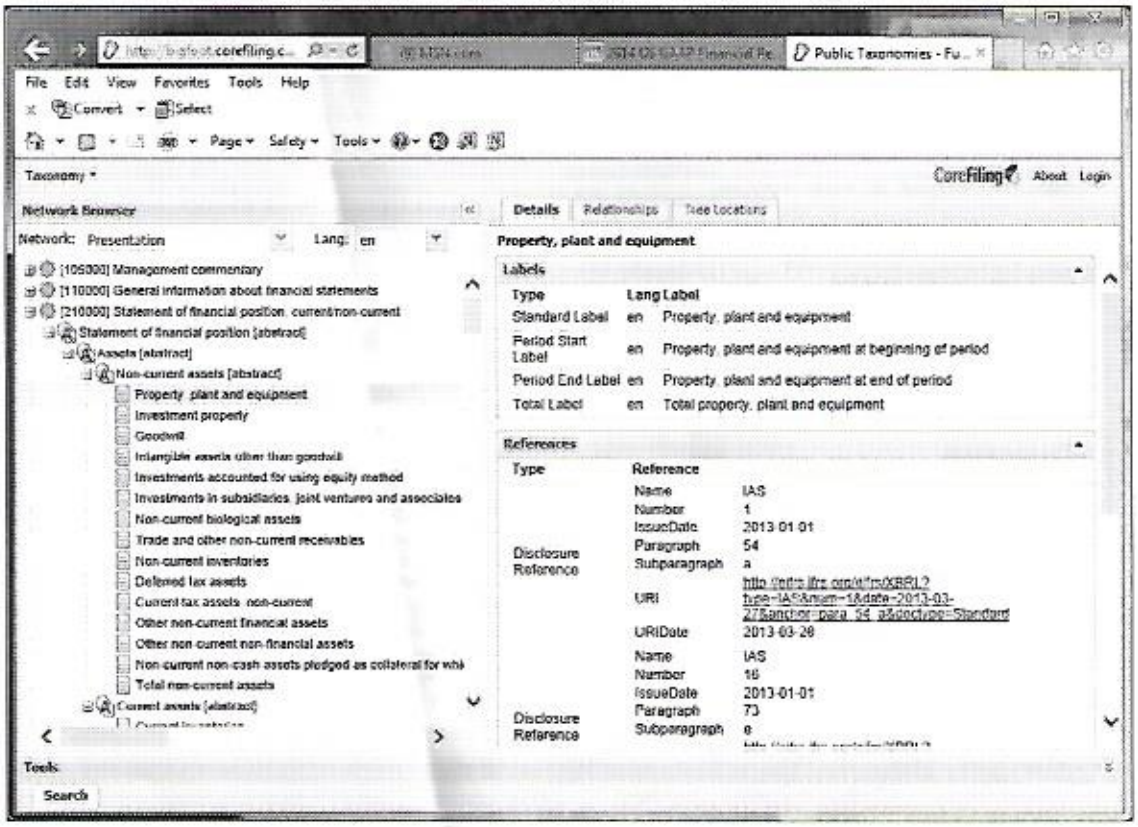
	Dec. 31, 2014	Dec. 31, 2013
ASSETS		
NONCURRENT ASSETS		
Property, plant & equipment, net	$ 655	$ 595
Goodwill	250	250
Other noncurrent assets	135	145
Total noncurrent assets	1,040	990
CURRENT ASSETS		
Inventory	1,939	1,769
Accounts receivable, net	2,340	2,165
Short-term investments	265	270
Other current non-financial assets	41	38
Cash and cash equivalents	551	543
Total current assets	5,186	4,785
Total assets	$ 6,226	$ 5,775

	Dec. 31, 2014	Dec. 31, 2013
EQUITY AND LIABILITIES		
EQUITY		
Common stock	$ 295	$ 295
Retained earnings	1,453	1,270
Additional paid-in capital	118	118
Total equity	1,866	1,683
NONCURRENT LIABILITIES		
Non-current payables	541	497
Non-current financial liabilities	190	99
Other noncurrent liabilities	245	171
Total noncurrent liabilities	976	767
CURRENT LIABILITIES		
Accounts payable	1,366	1,259
Short-term loans and notes payable	1,621	1,619
Other current liabilities	397	447
Total current liabilities	3,384	3,325
Total equity and liabilities	$ 6,226	$ 5,775

(http://www.skipwhite.com/XBRLWorkbook2014/BicyclesOnlineIFRSBalSheets.xlsx)

Note: These balance sheets do not correspond directly to those under U.S. GAAP. Notice that under IFRS, companies report *noncurrent assets* before *current* and *equity* before *liabilities*. Also, within these major categories, they report line items in the reverse order of liquidity. This is reflected in the IFRS XBRL taxonomies. To access the 2014 IFRS XBRL taxonomy, *point* your browser to www.ifrs.org and follow the links for

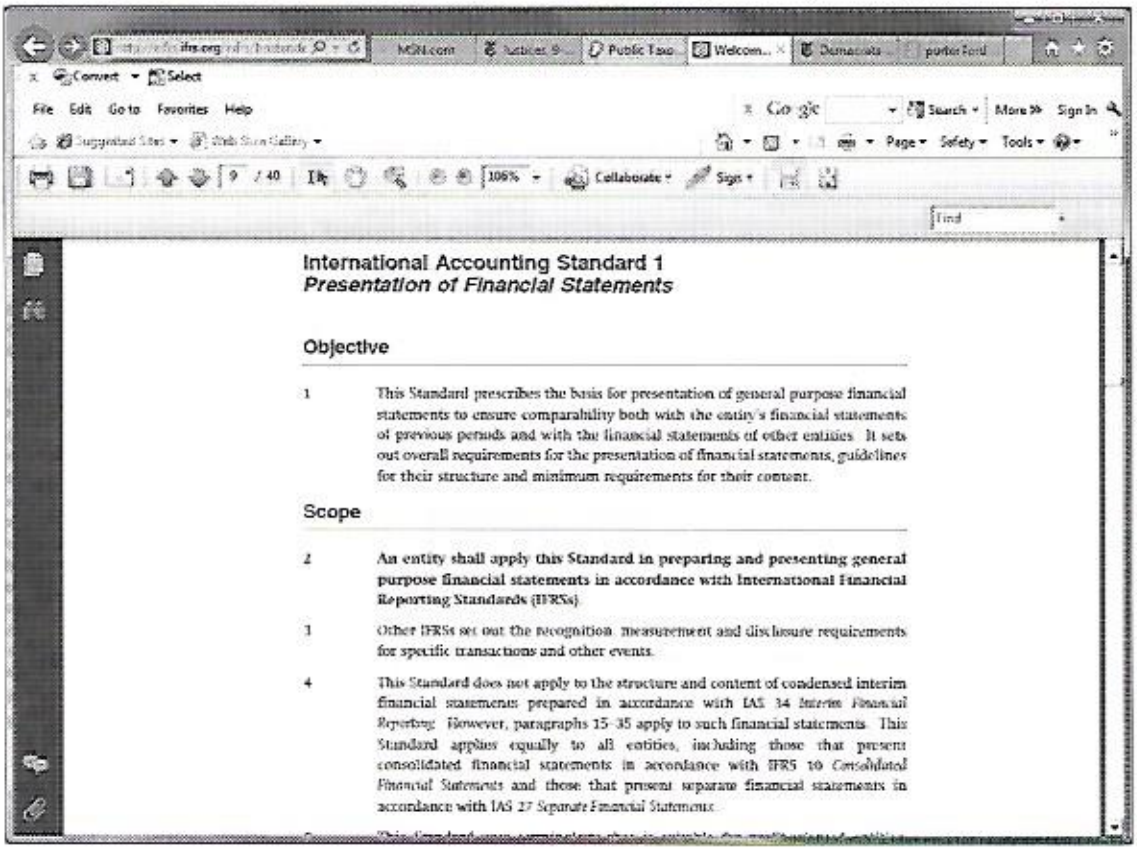
IFRS/ Taxonomy (XBRL)/ IFRS Taxonomy/ IFRS Taxonomy 2014 and then *scroll down* and *click* the link to *Taxonomy viewing tools* and *choose* the *CoreFiling* viewer. This will open the "Full Entry Point" to the 2014 "core" IFRS taxonomy in the viewer; which should look familiar to you. It turns out that IFRS has a "core" XBRL taxonomy, referred to as the *full taxonomy* and a *small enterprise* and a *management commentary* taxonomy. In addition, each country that is implementing IFRS has their own version. In the full taxonomy, *open* the *[210000] Statement of financial position, current/non-current*, *open* the *Assets [abstract]* until you can see the non-current asset line items, and *click* *Property, plant and equipment* (see below).



One of the first things you will notice is how few elements there are under each major category (e.g., noncurrent and current assets). However, there are more balance sheet elements available in the *[800100] Notes – Subclassifications of assets, liabilities and equities* sub-taxonomy; be aware that sub-taxonomy identification numbers (e.g., 800100) may change as they transition to new releases. With *Property, plant and*

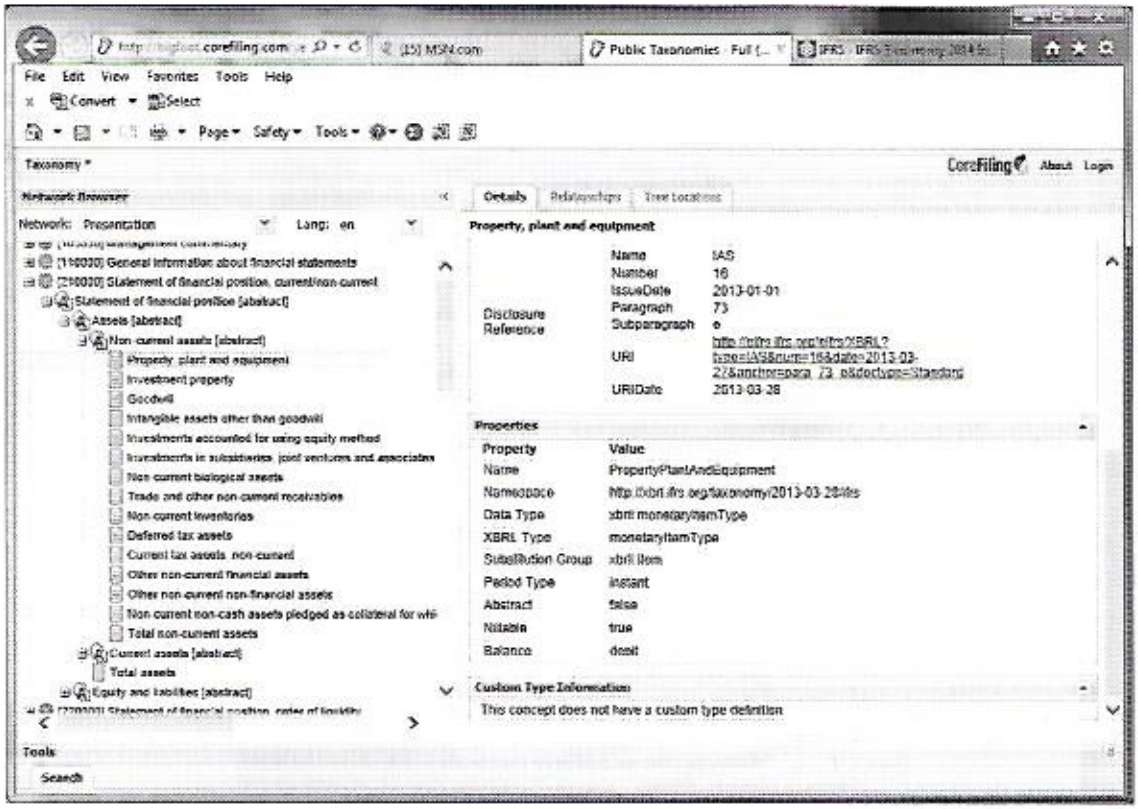
equipment in the *Statement of financial position* highlighted you will notice another thing different about the IFRS XBRL taxonomy – there are no *descriptions/definitions* in the *Labels* window for the individual elements in the taxonomy. Fortunately you can find information about the *principle* that the element represents by following the links in the *References* window.

However, to gain access to the IFRS reference material, you have to register for access to PDF files; alternatively, you can purchase a subscription to their eIFRS library. To register, *click* the link for the first reference for the *Property, plant and equipment* element (IAS 1, P 54) and then *click Register for free non-subscription content* (in the middle of the page – under the Login button). *Fill out* the registration form and be sure to agree to the terms and conditions. After registering, *click Unaccompanied IFRSs / Unaccompanied IASs*, then *click IAS1*, and *scroll down* to its Objective (see below).



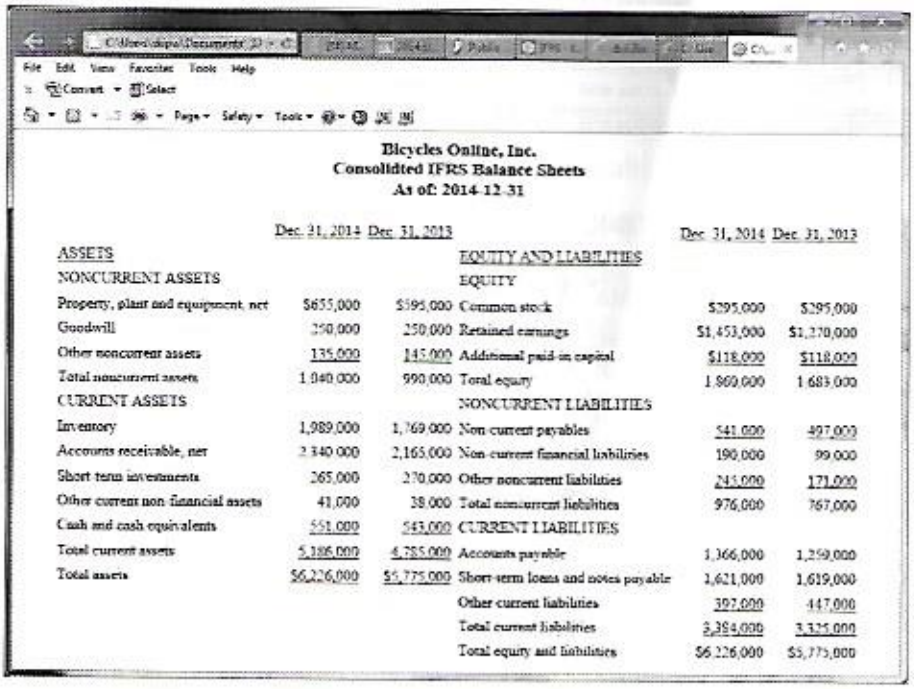
You will notice that IAS 1 is frequently referenced because it applies to the Presentation of Financial Statements. For ease of access, I suggest copying this IAS to your hard drive. You will also notice that the IFRS reference materials contain relatively high level requirements for items on financial statements as opposed to the relatively detailed descriptions/definitions found in the U.S. GAAP materials. This reflects the basic difference between the two reporting standards – IFRS is "principles-based" whereas U.S. GAAP is "rules-based."

Using the viewer, with *Property, plant and equipment* highlighted, *scroll down* to the *Properties* window and you will see the same information about the **PropertyPlantAnd Equipment** element that you did in the U.S. GAAP taxonomy (i.e., the element's *Name*, *Namespace*, and *Data* and *Period Type* (see below).



To complete this exercise, *open* the XBRL shell in Notepad or your favorite text editor (www.skipwhite.com/XBRLWorkbook2014/) (the same shell you used in *Test Yourself 11*). You will notice that the IFRS namespace for the **PropertyPlantAndEquipment** element is *http://xbrl.ifrs.org/taxonomy/2013-03-28/ifrs* and its recommended namespace

prefix is **ifrs**. Even though all of the elements I have looked at in the IFRS 2014 XBRL taxonomy have this namespace, in this exercise, we will use the 2014 namespace: *http://xbrl.ifrs.org/taxonomy/2014-03-05/ifrs-full* and its recommended prefix **ifrs-full**. The appropriate URL for the **href** attribute in the **schemaRef** element is *http://xbrl.ifrs.org/taxonomy/2014-03-05/full_ifrs_entry_point_2014-03-05.xsd*. Note that you can find this and other taxonomy entry points by going to the IFRS 2014 XBRL *Technical Information and Files* on the *IFRS.org* web site. The **context** and **unit** elements are similar to the ones you used in the U.S. GAAP exercises. The only real difference in looking up element names in the IFRS taxonomy is the lack of detailed rules defining each element. With so few elements in the IFRS taxonomy and the fact that IFRS reporting is *principles-based*, as opposed to the *rules-based* U.S. GAAP reporting, you will find it difficult in some cases to find an applicable element. It turns out that professional judgment plays a large role in IFRS XBRL tagging. In this exercise, choose the element that seems the best fit for the item being reported. When finished, *save* your file with a **.xml** extension (as in *BicyclesOnLineIFRSBalSheets.xml*). Then *open* your file in your favorite browser to make sure it is well-formed. Be sure that you add your name on a comment line in the prolog of your instance document. Your instructor may have additional requirements. Rendered it would look like this:



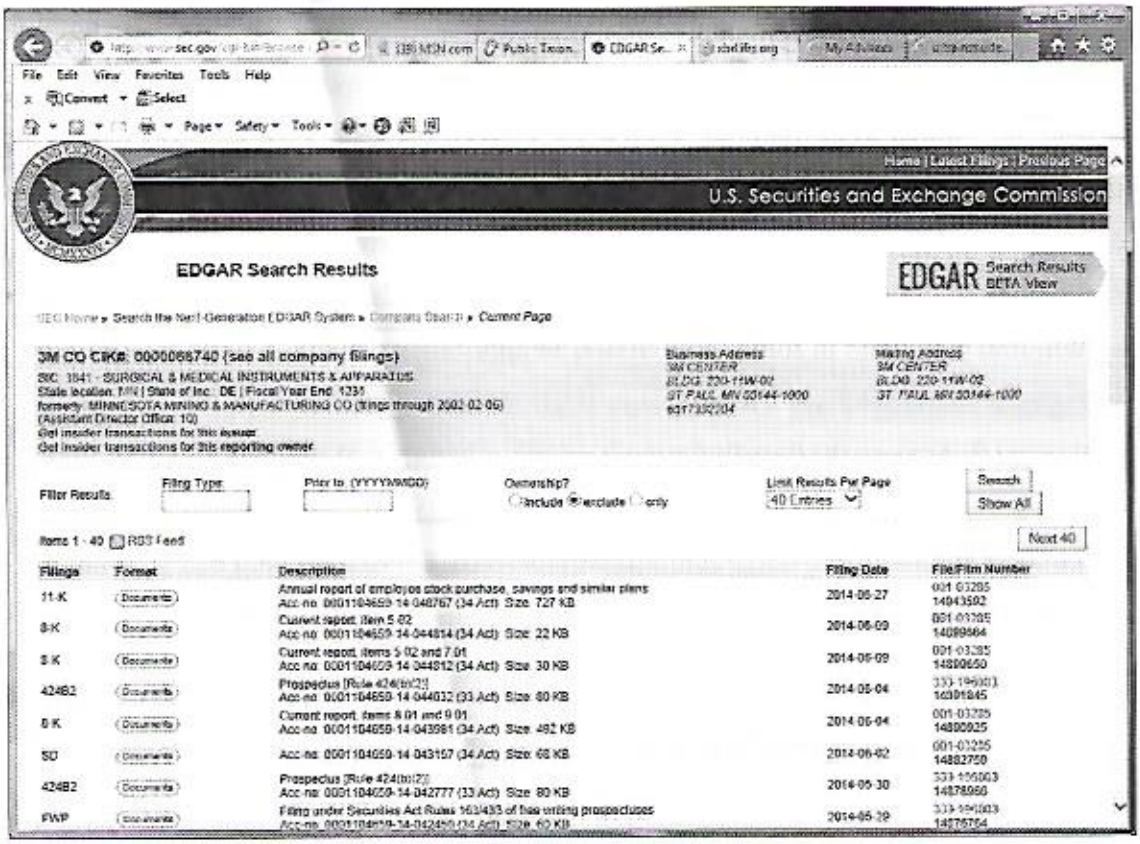
Bicycles Online, Inc.
Consolidated IFRS Balance Sheets
As of: 2014-12-31

	Dec. 31, 2014	Dec. 31, 2013
ASSETS		
NONCURRENT ASSETS		
Property, plant and equipment, net	$655,000	$595,000
Goodwill	250,000	250,000
Other noncurrent assets	135,000	145,000
Total noncurrent assets	1,040,000	990,000
CURRENT ASSETS		
Inventory	1,989,000	1,769,000
Accounts receivable, net	2,340,000	2,165,000
Short term investments	265,000	270,000
Other current non-financial assets	41,000	38,000
Cash and cash equivalents	551,000	543,000
Total current assets	5,186,000	4,785,000
Total assets	$6,226,000	$5,775,000

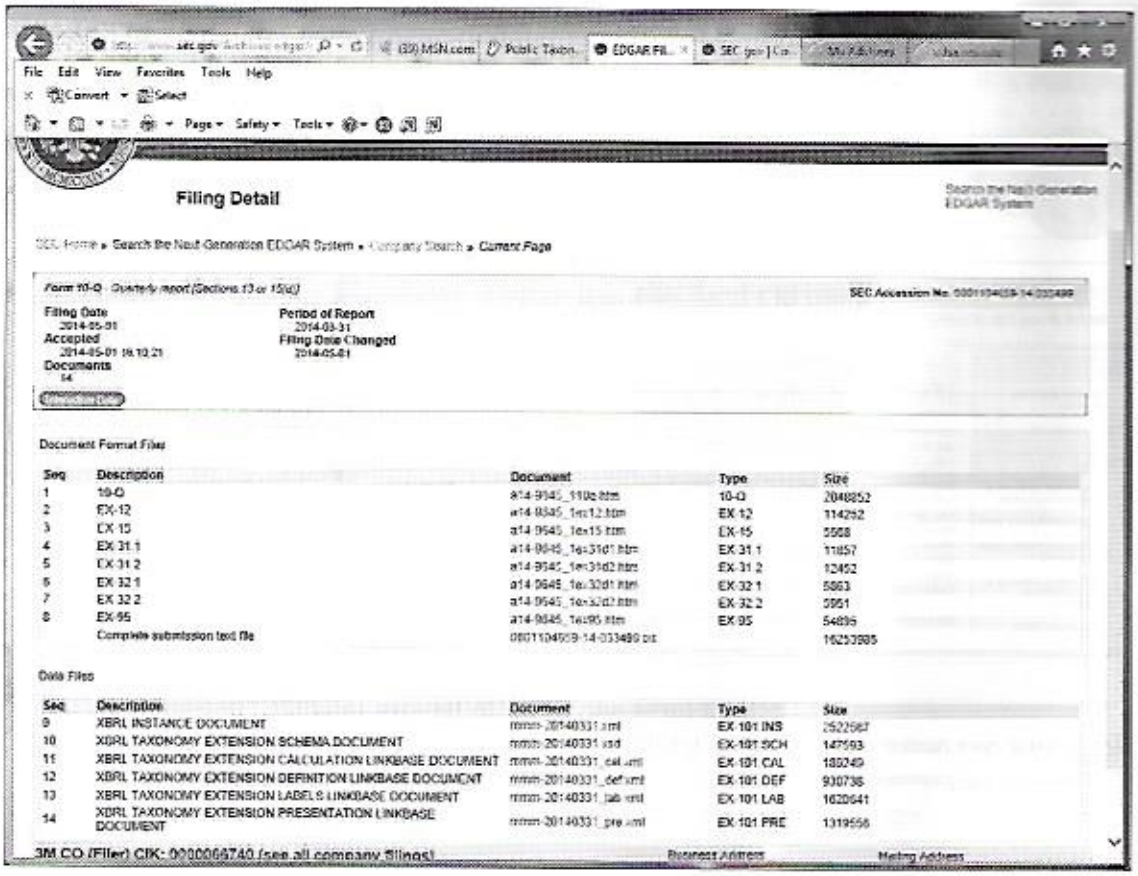
	Dec. 31, 2014	Dec. 31, 2013
EQUITY AND LIABILITIES		
EQUITY		
Common stock	$295,000	$295,000
Retained earnings	$1,453,000	$1,270,000
Additional paid-in capital	$118,000	$118,000
Total equity	1,869,000	1,683,000
NONCURRENT LIABILITIES		
Non-current payables	541,000	497,000
Non-current financial liabilities	190,000	99,000
Other noncurrent liabilities	245,000	171,000
Total noncurrent liabilities	976,000	767,000
CURRENT LIABILITIES		
Accounts payable	1,366,000	1,259,000
Short-term loans and notes payable	1,621,000	1,619,000
Other current liabilities	397,000	447,000
Total current liabilities	3,384,000	3,325,000
Total equity and liabilities	$6,226,000	$5,775,000

Exercise 5: Introduction to the SEC Edgar database & interactive data

This exercise will introduce you to the SEC Edgar database and its interactive data tools. First, *point* your browser to http://sec.gov and *click FILINGS/ Company Filings Search*, then in the *Fast Search box type* **mmm** and *click Search*. You should see an EDGAR Search Results page similar to below.



Scroll down until you locate a 10-Q or 10-K filing - it will have a "Documents" (Documents) button and an "Interactive Data" (Interactive Data) button next to it. *Click* the *Documents* button and you should see a Filing Detail page similar to below. Note: for this example, I am using 3M Company's 10-Q filing dated 2014-05-01.



Filing Detail

Document Format Files

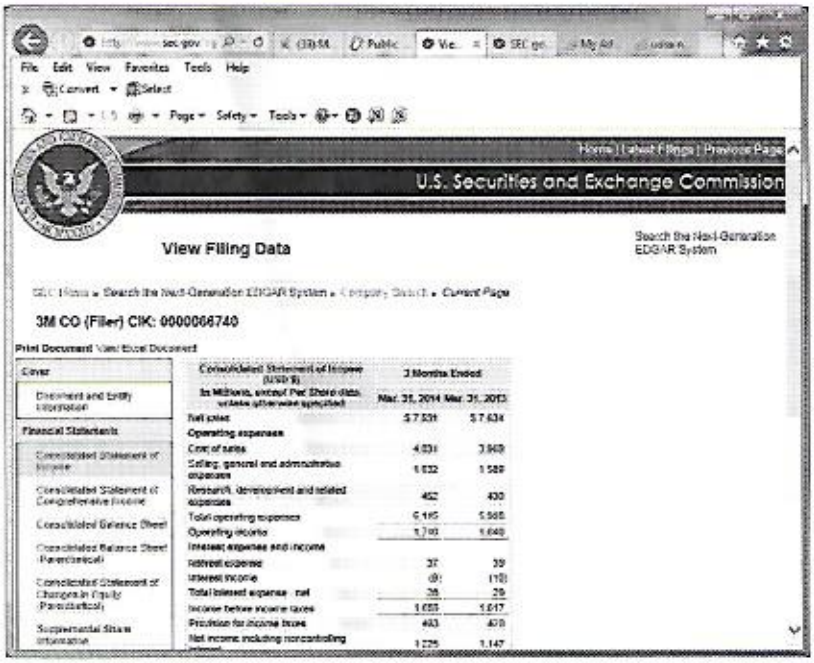
Seq	Description	Document	Type	Size
1	10-Q	a14-9545_110q.htm	10-Q	2048852
2	EX-12	a14-9545_1ex12.htm	EX-12	114292
3	EX-15	a14-9545_1ex15.htm	EX-15	5568
4	EX-31.1	a14-9545_1ex31d1.htm	EX-31.1	11857
5	EX-31.2	a14-9545_1ex31d2.htm	EX-31.2	12452
6	EX-32.1	a14-9545_1ex32d1.htm	EX-32.1	5863
7	EX-32.2	a14-9545_1ex32d2.htm	EX-32.2	5951
8	EX-95	a14-9545_1ex95.htm	EX-95	54836
	Complete submission text file	0001104659-14-033489.txt		16253985

Data Files

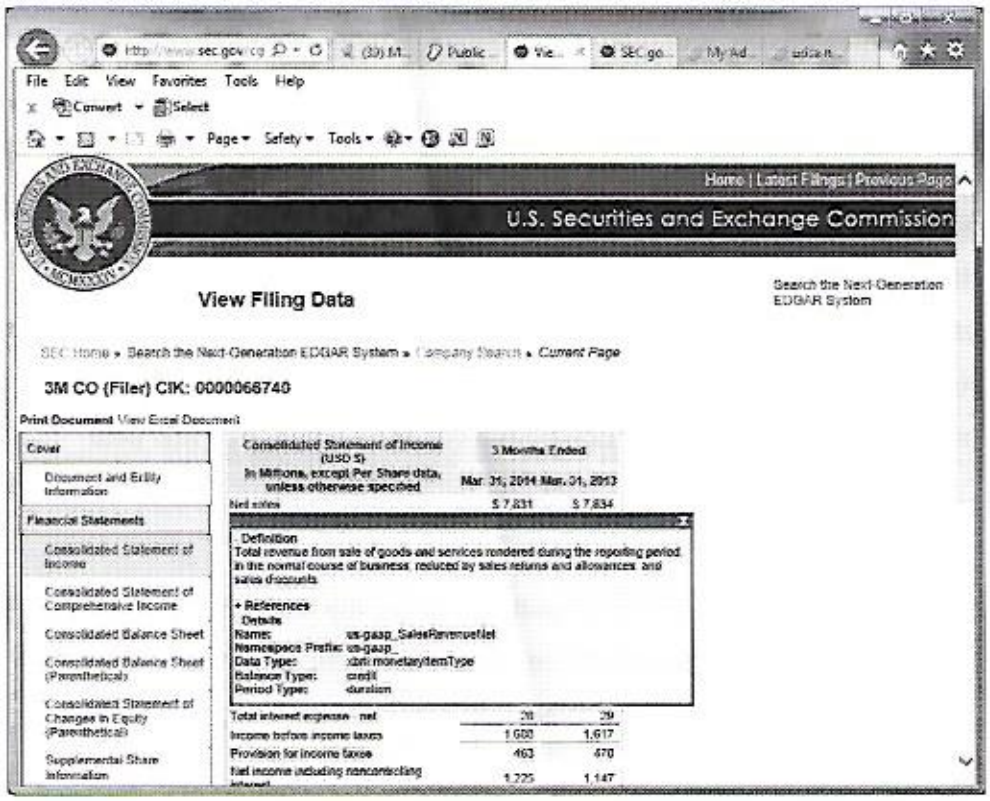
Seq	Description	Document	Type	Size
9	XBRL INSTANCE DOCUMENT	mmm-20140331.xml	EX-101.INS	2522567
10	XBRL TAXONOMY EXTENSION SCHEMA DOCUMENT	mmm-20140331.xsd	EX-101.SCH	147593
11	XBRL TAXONOMY EXTENSION CALCULATION LINKBASE DOCUMENT	mmm-20140331_cal.xml	EX-101.CAL	180249
12	XBRL TAXONOMY EXTENSION DEFINITION LINKBASE DOCUMENT	mmm-20140331_def.xml	EX-101.DEF	930736
13	XBRL TAXONOMY EXTENSION LABELS LINKBASE DOCUMENT	mmm-20140331_lab.xml	EX-101.LAB	1620641
14	XBRL TAXONOMY EXTENSION PRESENTATION LINKBASE DOCUMENT	mmm-20140331_pre.xml	EX-101.PRE	1319556

As shown above, for every 10-Q or 10-K filed with the SEC, the Edgar database contains a set of **Document Format Files**, which are the *official filings* in HTML and text format, and a set of **Data Files**, which are the XBRL instance document containing the financials including footnote disclosures, and its "discoverable taxonomy set" (illustrated in Figure 8); including, the extension taxonomy schema, and the calculation, definition, labels, and presentation linkbases. Without getting into technical details, the DTS makes validation possible, defines extension elements, and describes a company's preferred line item labels.

Next, *click* the Interactive Data button near the top of the Filing Detail page and then *click Financial Statements/ Consolidated Statement of Income* and you should see a View Filing Data page similar to below.



Next *click Net Sales* and then the *Details* item and you will see the Definition and Details from the XBRL instance document and DTS (similar to below).



The SEC's Interactive Data tool provides a view of a company's financial statements rendered for human consumption with the company's preferred line item labels and the ability to drill down to the underlying XBRL; including the XBRL element *name*, its *definition*, *namespace prefix*, *data type*, *balance*, and reporting *period type*. I use the SEC Interactive Data tool to illustrate the combination of the rendered financial statements we are familiar with and the underlying XBRL. It is also handy to use to discover how each line item on a financial statement has been tagged.

Exercise 5-1: Find the one line item in this income statement that is tagged with *an extension element* created by 3M Company (i.e., an element from the **mmm** namespace as opposed to the **us-gaap** namespace).

- What is this element's name? _____
- Read this element's Definition. Why do you think 3M Company had to create this "extension" element instead of using one from the US GAAP taxonomy?

  _____

  _____

  _____

Exercise 5-2: Using the information from 3M Company's 10-Q filing, create an XBRL instance document containing their Consolidated Statement of Income. When finished, save your file with a **.xml** extension and be sure to include your name on a comment line in the prolog. Your instructor may have additional requirements.

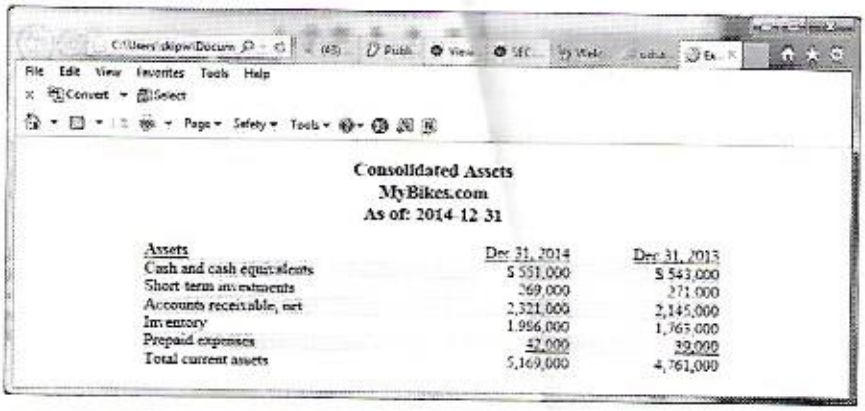
Exercise 6: Introduction to iXBRL

iXBRL (Inline XBRL) is a relatively new XBRL vocabulary "for embedding XBRL fragments into an HTML document" (XBRL International, 2013). A major advantage of a document in iXBRL format over one in XBRL format is that when it is processed by an XML processor, including XHTML-capable browsers (i.e., browsers that can process HTML that follows the rules of XML; including, IE, Firefox, and Safari), it is rendered as a Web page instead of as an XBRL document. An iXBRL document is, therefore, humanly-readable and the XBRL it contains is extractable for analysis, validation, or any other purpose.

iXBRL documents are different than standard XBRL documents in several ways; including the following:

- The root element is **html**
- There are two new namespace declarations: **ix** (for iXBRL documents) and **ixt** (for the *transformation* of reported values to standard XBRL format)
- There are the following new **ix** elements and one new **ixt** attribute:
    - The **ix:header** element (a *container* for the **ix:references** and **ix:resources** elements)
        - **ix:references** (a *container* for the **schemaRef** element)
        - **ix:resources** (a *container* for the **context** and **unit** elements)
    - The **ixt** attribute to define how to *transform* a reported value to a standard XBRL format

Putting it all together, a nicely formatted iXBRL document containing Bicycles Online's current assets would render in a browser as shown below.

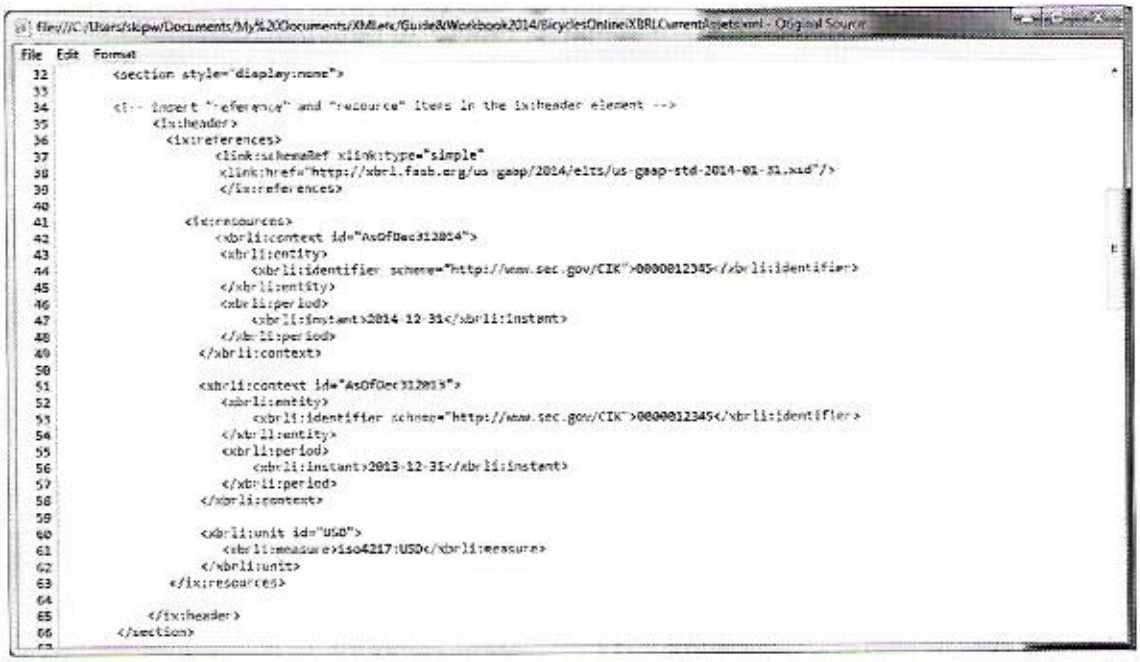


For this exercise, *download* the Bicycles Online iXBRL file (http://www.skipwhite.com/XBRLWorkbook2014/BicyclesOnlineiXBRLCurrentAssets.xml), *open* it in IE, and *click View/ Source*. The top part should appear as follows:

iXBRL *root, head, body,* and opening *section* tag

Notice that it is an XML document with the root element **html**, the standard XBRL namespaces, and the **ix** and **ixt** namespaces. Since the objective of this exercise is to introduce you to iXBRL, I will not cover the HTML coding in detail; only enough to explain the effects. The **HTML** *head* tag includes a *style* tag that defines a *class* (**.tableRowBlue**) with a blue background to be used on table rows. The **HTML** *body* tag includes a *section* tag with a *style*="display:none" attribute; this *section* of the document will contain the **ix** elements that should not be displayed (i.e., **ix:header**, **ix:references**, and **ix:resources**) in the rendered instance document. Note that the contents of these elements are required in XBRL instance documents but are not displayed when a financial statement is rendered for human consumption.

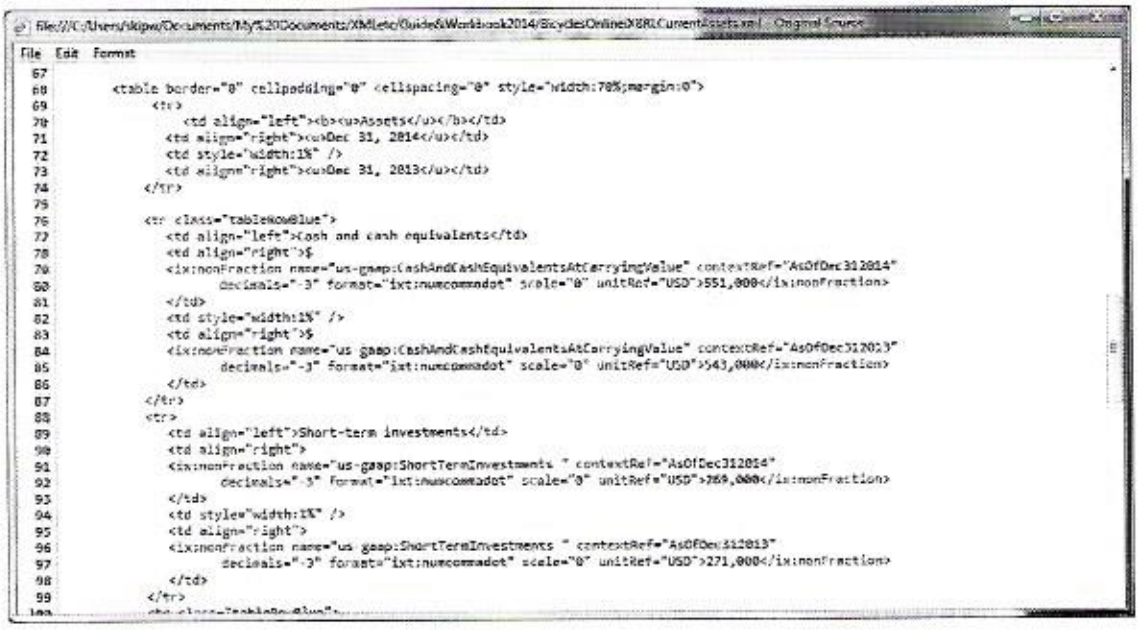
The complete *section style*="display:none" tag, with the complete **ix:header, ix:references,** and **ix:resources** elements are shown below



```
File  Edit  Format
32        <section style="display:none">
33
34        <!-- Insert "reference" and "resource" items in the ix:header element -->
35            <ix:header>
36              <ix:references>
37                    <link:schemaRef xlink:type="simple"
38                    xlink:href="http://xbrl.fasb.org/us-gaap/2014/elts/us-gaap-std-2014-01-31.xsd"/>
39                    </ix:references>
40
41                <ix:resources>
42                    <xbrli:context id="AsOfDec312014">
43                    <xbrli:entity>
44                        <xbrli:identifier scheme="http://www.sec.gov/CIK">0000012345</xbrli:identifier>
45                    </xbrli:entity>
46                    <xbrli:period>
47                        <xbrli:instant>2014-12-31</xbrli:instant>
48                    </xbrli:period>
49                  </xbrli:context>
50
51                  <xbrli:context id="AsOfDec312013">
52                    <xbrli:entity>
53                        <xbrli:identifier scheme="http://www.sec.gov/CIK">00000012345</xbrli:identifier>
54                    </xbrli:entity>
55                    <xbrli:period>
56                        <xbrli:instant>2013-12-31</xbrli:instant>
57                    </xbrli:period>
58                  </xbrli:context>
59
60                  <xbrli:unit id="USD">
61                    <xbrli:measure>iso4217:USD</xbrli:measure>
62                  </xbrli:unit>
63                </ix:resources>
64
65            </ix:header>
66        </section>
```

Note that the **HTML** *section* element contains the **ix:header** element, which contains the **ix:resources** element, which contains the standard **schemaRef** element, and the **ix:references** element, which contains the standard **context** and **unit** elements.

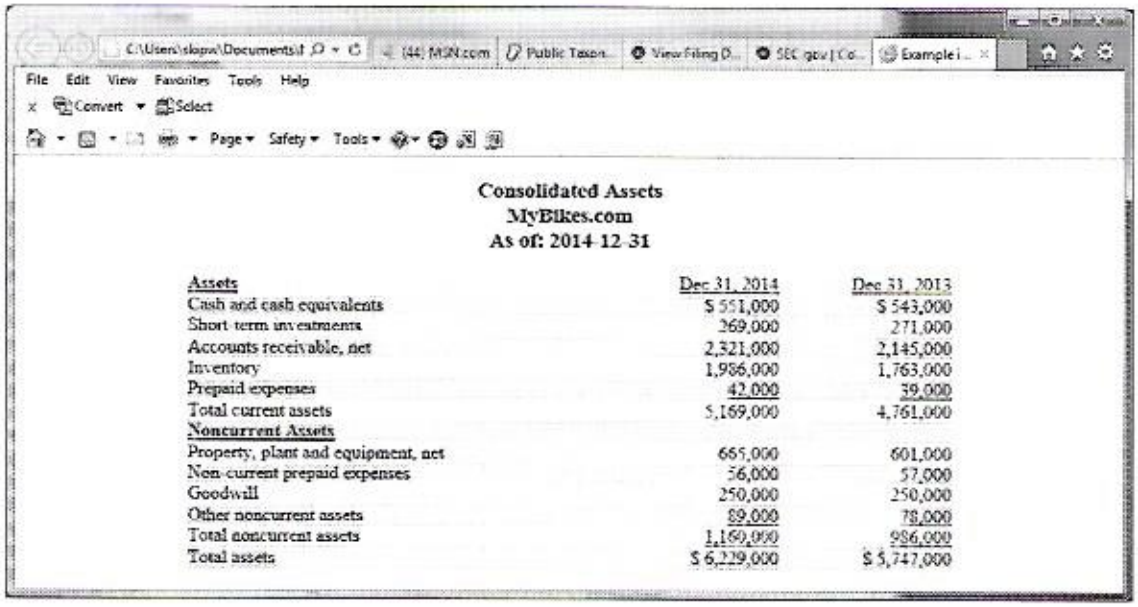
The first two *current asset* line items are shown below formatted to appear within an **HTML** *table* element. The important parts are the **ix:nonFraction** elements because they contain the individual XBRL *items* and the **format** and **scale** attributes.



```
File  Edit  Format
67
68        <table border="0" cellpadding="0" cellspacing="0" style="width:70%;margin:0">
69            <tr>
70                <td align="left"><b><u>Assets</u></b></td>
71              <td align="right"><u>Dec 31, 2014</u></td>
72              <td style="width:1%" />
73              <td align="right"><u>Dec 31, 2013</u></td>
74            </tr>
75
76            <tr class="tableRowBlue">
77              <td align="left">Cash and cash equivalents</td>
78              <td align="right">$
79              <ix:nonFraction name="us-gaap:CashAndCashEquivalentsAtCarryingValue" contextRef="AsOfDec312014"
80                    decimals="-3" format="ixt:numcommadot" scale="0" unitRef="USD">551,000</ix:nonFraction>
81              </td>
82              <td style="width:1%" />
83              <td align="right">$
84              <ix:nonFraction name="us-gaap:CashAndCashEquivalentsAtCarryingValue" contextRef="AsOfDec312013"
85                    decimals="-3" format="ixt:numcommadot" scale="0" unitRef="USD">543,000</ix:nonFraction>
86              </td>
87            </tr>
88            <tr>
89              <td align="left">Short-term investments</td>
90              <td align="right">
91              <ix:nonFraction name="us-gaap:ShortTermInvestments " contextRef="AsOfDec312014"
92                    decimals="-3" format="ixt:numcommadot" scale="0" unitRef="USD">269,000</ix:nonFraction>
93              </td>
94              <td style="width:1%" />
95              <td align="right">
96              <ix:nonFraction name="us-gaap:ShortTermInvestments " contextRef="AsOfDec312013"
97                    decimals="-3" format="ixt:numcommadot" scale="0" unitRef="USD">271,000</ix:nonFraction>
98              </td>
99            </tr>
```

Each XBRL *line item* is contained within an **ix:nonFraction** element along with its attributes. The **name** attribute contains the element's standard XBRL name (e.g., **name= "us-gaap:CashAndCash EquivalentsAtCarryingValue"**). The **contextRef, unitRef,** and **decimals** attributes are the same as in a standard XBRL instance document. The **format** attribute contains the **ixt:numcommadot** value which is a code to be used by an iXBRL processor to extract the reported value (e.g., *551,000*) and remove the formatting so that it would appear in an XBRL instance document as *551000*. And, the **scale** attribute is necessary if the *line item* values are reported in a scaled format (e.g., in thousands or millions).

To complete this exercise, finish entering the asset line items for Bicycles Online. *Save* your file with a **.xml** extension (as in *BicyclesOnlineiXBRLAssets.xml*) and *open* it in your favorite XHTML browser (e.g., IE or Firefox). It should appear as similar to below. Be sure to add your name on a comment line in the prolog of your instance document. Your instructor may have additional requirements.



Consolidated Assets
MyBikes.com
As of: 2014-12-31

Assets	Dec 31, 2014	Dec 31, 2013
Cash and cash equivalents	$ 551,000	$ 543,000
Short-term investments	269,000	271,000
Accounts receivable, net	2,321,000	2,145,000
Inventory	1,936,000	1,763,000
Prepaid expenses	42,000	39,000
Total current assets	5,169,000	4,761,000
Noncurrent Assets		
Property, plant and equipment, net	665,000	601,000
Non-current prepaid expenses	56,000	57,000
Goodwill	250,000	250,000
Other noncurrent assets	89,000	78,000
Total noncurrent assets	1,169,000	986,000
Total assets	$ 6,229,000	$ 5,747,000

Glossary

Attributes: Add information to a specific XML element. XML attributes always have a name-value pair in the format: *attributeName="attributeValue"*. Attributes are always found in the beginning element name tag and can appear in any XML element.

context element: The required XBRL element that identifies the entity reporting items in an XBRL instance document and the period of time that applies. There can be multiple **context** elements in an XBRL instance document but each must contain a unique **id** attribute, an **entity** element, and a **period** element. A **context** element can also contain a **segment** element.

contextRef attribute: A required XBRL attribute on every item reported in an XBRL instance document. Every item reported in an XBRL instance document must have one and only one **contextRef** attribute and it must have a value which identifies a **context** element's **id** attribute. If there is a **context** element in an XBRL instance document, **<xbrli:context id="FY2007">**, an appropriate **contextRef** attribute would appear on a reported item as **contextRef= "FY2007"**.

Data type: Indicates the type of data an XML/XBRL element can contain. All XML/XBRL elements must be defined with a data type. The most common XBRL data types are String for elements that will only contain strings of text and Monetary for elements that will contain numeric data measured in a currency.

Discoverable taxonomy set (DTS): The taxonomy schema referenced in a **schemaRef** element and all of its associated linkbases. A DTS includes the referenced taxonomy schema and all linkbases or other taxonomy schemas that a software application can "discover" by following the link (URL) in an instance document's **schemaRef** element.

Element: The basic unit in an XML document usually consisting of a matching beginning and ending element name and its contents (also see "empty element"). An XML element can contain a data item or other elements nested within it. It is the basic unit of content in an XML document.

Empty element: An XML element that has no content. The XBRL **schemaRef** element is a good example – it contains two attributes but does not have any other content: **<schemaRef xlink:type**="simple" **xlink:href**="URL of an XBRL taxonomy schema"/> An empty element is designated by the / in front of its closing >.

entity element: The required XBRL element, nested within a **context** element, that identifies an entity reporting items in an XBRL instance document. Each **entity** element must contain an **identifier** element, which must contain a **scheme** attribute and a unique identifier. The following **entity** element could be used to identify Dell as the reporting entity in an XBRL instance document:

<xbrli:entity>
<xbrli:identifier scheme="www.nasdaq.com">DELL**</xbrli:identifier>**
</xbrli:entity>

Entry point: The point at which a company starts to use the XBRL US GAAP taxonomy. Typically this would be one of the five "industry-level taxonomies" appropriate for the company reporting items under US GAAP in an XBRL instance document.

Instance documents: An XBRL document. It is referred to as an "instance" document because it is an instance of the class of documents described in the XBRL Specification 2.1.

Linkbases: Define relationships between XBRL elements. Linkbases are written in the XLink language. There are 5 types of XBRL linkbases: Calculation linkbases, which define which items are included and how to calculate specific financial reporting concepts (e.g. Assets, Liabilities, and Net income, etc.); Presentation linkbases, which define the standard order of presentation of items in financial statements; Label linkbases, which define standard labels for items in financial statements; Reference linkbases, which define references between XBRL items and accounting standards; and Dimension linkbases, which define multidimensional tables and line item relationships. An example of a multidimensional table would be revenue broken down by individual segments of a business.

Namespace: A URI (Universal Resource Identifier) designating where additional information, such as a schema or a taxonomy, can be found. Each namespace in an XML document must be unique. They are used to designate specifically where elements and attributes are defined in order to avoid naming collisions.

Namespace declaration: Is used to identify a URI (Universal Resource Identifier) where elements are defined for a specific purpose. In XBRL instance documents, namespace declarations are always attributes in the **xbrl** root element and always appear in the following format: **xmlns:*namespace-prefix***="*namespaceURL*" (e.g. **xmlns:us-gaap**="http://xbrl.us/us-gaap/2008-03-31").

period element: The required XBRL element, nested within a **context** element, that identifies the period of time that applies to the items being reported in an XBRL instance document. Each **period** element must contain an **instant** element with a single date representing an instant in time or a **startDate/endDate** combination with dates representing a duration of time. The following **period** element would identify the duration of time for the calendar year 2007 (Note: in XBRL instance documents dates must be reported in international date format: yyyy-mm-dd)

<xbrli:period>
<xbrli:startDate>2007-01-01**</xbrli:startDate>**
<xbrli:endDate>2007-12-31**</xbrli:endDate>**
</xbrli:period>

Root element: The first element in an XML document. It is the parent element for the entire XML document – often referred to as the "document" element. All other elements in an XML document are nested within it.

schema: A computer-readable document written in the XML Schema language. XBRL elements are defined in schemas. Each XBRL taxonomy, such as the U.S. GAAP C&I taxonomy, has its own schema which defines all of the elements that can be used in compatible instance documents.

schemaRef element: The required XBRL element that links an XBRL instance document to an XBRL taxonomy schema. The **schemaRef** element must appear as the first child element on the **xbrl** root element in an XBRL instance document and it must have two XLink attributes (e.g. **<link:schemaRef xlink:type=**"simple" **xlink:href=** "URL of an XBRL taxonomy schema" />).

segment element: An optional element to designate an identifiable segment/division of a business as the reporting entity. The **segment** element must appear in an **entity** element, which is nested within a **context** element.

unit element: The element required when reporting numerical items in an XBRL instance document. The **unit** element defines the unit of measure for a numerical item. There can be multiple **unit** elements in an XBRL instance document but each must contain a unique **id** attribute and a **measure** element. The following **unit** element could be used to report items as measured in Russian rubles (Note: the iso4217 namespace identifies an International Standards Organization document that defines international currencies):

<xbrli:unit id="RUB">
<xbrli:measure>iso42417:RUB**</xbrli:measure>**
</xbrli:unit>

unitRef attribute: A required XBRL attribute on every numeric item reported in an XBRL instance document. Every numeric item reported in an XBRL instance document must have one and only one **unitRef** attribute and it must have a value which identifies a **unit** element's **id** attribute. If there is a **unit** element in an XBRL instance document, **<xbrli:unit id="EUR">**, an appropriate **unitRef** attribute would appear on a reported numeric item as **unitRef= "EUR"**.

Well-formed: XML documents: Documents that follow the basic rules for all XML documents and can therefore be processed by an XML processor.

XBRL 2.1 Specification: The current XBRL specification. It is a formal specification of the rules and syntax that XBRL instance documents and taxonomies must follow to be valid. Files can be found at: http://www.xbrl.org/SpecRecommendations/.

XBRL taxonomies: Dictionaries of pre-defined elements and their relationship to other elements for specific reporting purposes, such as reporting financial information under U.S. GAAP. Each element name represents a financial reporting concept and can be used to tag data in an XBRL instance document.

XLink language: An XML language for defining special links between documents and other identifiable resources on the Internet. In XBRL, the XLink language is used to link an instance document to an XBRL taxonomy and to create XBRL Linkbases which define relationships between XBRL elements.

XML (Extensible Markup Language): A toolbox, including a meta-language, a language for creating other languages, that forms the foundation for all XML vocabularies, such as XBRL. Following the rules of the XML language, data is surrounded with tags which add meaning and allow it to be processed as information.

Additional reading material

Dreyer, Christian and Mike Willis, "Cheaper, smarter, faster: benefits to analysts from XBRL," Professional Investor, September 2006.

EDGAROnLine, "Introducing Interactive Data: The eXtensible Business Reporting Language for Today," www.edgar-online.com, White paper, 2007.

Farewell, Stephanie, "An Introduction to XBRL through the Use of Research and Technical Assignments," Journal of Information Systems, Volume 20, Number 1, Spring 2006.

Phillips, Mary E., Tammy E. Bahmanziari, and Robert G. Colvard, "Six Steps to XBRL: Learn how to translate your income statement into tagged format," Journal of Accountancy, February 2008.

Stantial, John, "ROI on XBRL," Journal of Accountancy, June 30, 2007 (www.journalofaccountancy.com).

White, Clinton E. Jr., The Accountant's Guide to XBRL (7th edition), *www.skipwhite.com*, 2013.

XBRL US, The US GAAP Taxonomy Preparer's Guide (*http://xbrl.us/Documents/PreparersGuide.pdf*).

XBRL US, XBRL and Public Company Business Information Case Studies (*http://xbrl.us/Documents/XBRL_all_case_studies.pdf*).

XBRL US, Sample XBRL Documents (zip) (*http://xbrl.us/Documents/XBRLUSGAAPSamples-2008-03-31.zip*)

Summary Page:

The basic rules for all XML documents:

One and only one root element – the root element is the overall "container" element. **<xbrl>** is the root element name in an XBRL instance document. Since it is defined in the **xbrli** namespace, it appears as **xbrli:xbrl** in instance documents.

All elements can contain one or more attributes in the following format: **attributeName**="attribute value". Attributes always appear in the brackets with the beginning element name. All XBRL instance document have namespace attributes:
<xbrli:xbrl xmlns:*prefix*="*Url of namespace*" **xmlns:***prefix*="*Url of namespace*">

Beginning and ending element names must match exactly – they are **case sensitive.**

Empty elements contain attributes but do not have any content. The **schemaRef** element in an XBRL instance document is an empty element and is defined in the **link** namespace.
<link:schemaRef xlink:type="simple" **xlink:href**="URL of XBRL taxonmy schema"/>

The basic rules for all XBRL instance documents:

xbrl is the root element and it contains **all necessary namespace declarations:**
<xbrli:xbrl xmlns:*prefix*="*Url of namespace*" **xmlns:***prefix*="*Url of namespace*">

Most current XBRL instance documents will have the following namespace declarations:
xmlns:xbrli="http://www.xbrl.org/2003/instance"
xmlns:link="http://www.xbrl.org/2003/linkbase"
xmlns:iso4217="http://www.xbrl.org/2003/iso4217"
xmlns:xlink="http://www.w3.org/1999/xlink"
xmlns:us-gaap=" http://xbrl.fasb.org/us-gaap/2014-01-31" (for 2014 U.S. GAAP reporting)

The schemaRef element is the first child element in an XBRL instance document.
<link:schemaRef xlink:type="simple" **xlink:href**="URL of XBRL taxonmy schema"/>

There must be at least one context element and it must have a unique **id** attribute and an **entity** and a **period** element. All are defined in the **xbrli** namespace.

<**xbrli:context id**="*unique-id*"> (must begin with a letter)
  <**xbrli:entity**>
    <**xbrli:identifier scheme**="*id-namespace*">*unique identifier*</**xbrli:identifier**>
  </**xbrli:entity**>
  <**xbrli:period**>
    <**xbrli:instant**>yyyy-mm-dd</**xbrli:instant**> (for an instant in time)
      OR
    <**xbrli:startDate**>yyyy-mm-dd</**xbrli:startDate**> (for a duration of time)
    <**xbrli:endDate**>yyyy-mm-dd</**xbrli:endDate**>
  </**xbrli:period**>
</**xbrli:context**>

There must be at least one unit element for reporting numeric items and it is defined in the **xbrli** namespace:

<**xbrli:unit id**="*unique-id*">
    <**xbrli:measure**>*prefix:unit-of-measure*</**xbrli:measure**>
</**xbrli:unit**>

There must be at least one XBRL item and it must be properly formatted and it must have a namespace prefix identifying the XBRL taxonomy in which it is defined:

A numeric item:

<*taxonomy-prefix:**XBRL-element-name*** **contextRef**="*context-id*" **unitRef**="*unit-id*" **decimals**=" ..." >*business-fact* </*taxonomy-prefix:**XBRL-element-name***>

A non-numeric item:

<*taxonomy-prefix:**XBRL-element-name*** **contextRef**="*context-id*" >*business-fact* </*taxonomy-prefix:**XBRL-element-name***>

About the Author

Clinton E. White, Jr. (Skip) is a Professor of Accounting & MIS and the Area Head of MIS in the Department of Accounting & MIS at the University of Delaware; where he has been on the faculty since 1987. He has a DBA from Indiana University (1981) in Accounting, MIS, and Numerical Methods, an MBA from the University of Louisville (1975) in Finance and Economics, and a BA from Western Kentucky University (1969) in History and Government. His first academic position was on the faculty of the Department of Accounting & MIS at the Pennsylvania State University from 1981 to 1987. He has published numerous articles in a variety of academic and practitioner journals including the Journal of Information Systems, MIS Quarterly, the Journal of MIS, Information & Management, Computers & Security, the Journal of Accountancy, and the Accounting Information Systems Educator Journal. For a summary of his recent academic activities see: http://www.lerner.udel.edu/faculty-staff/faculty/clinton-white.

Professor White is probably most widely known for his seminars, lectures, and workshops to academics and practitioners on emerging information technologies. His academic career has been devoted to the study of emerging information technologies and their application in business and teaching about it. He has been conducting seminars and workshops since the mid-1980's on the emerging technologies of the time; including, DOS, Hypertext, multimedia, HTML, The Web, Java Script, XML, XBRL, and Web Services. Most recently he has been devoting research, writing, and lecturing efforts to emerging XML-based vocabularies such as XBRL.

The Guide & Workbook For Understanding XBRL

Eighth Edition

Clinton E White, Jr
Professor of Accounting & MIS
University of Delaware

The Guide & Workbook for understanding XBRL is an introduction to the eXtensible Business Reporting Markup Language. It is a non-technical introduction to a technical topic. XBRL is an emerging technology designed to standardize computerized business and financial reporting by specifying a set of rules, standard tags representing financial reporting concepts, and a standard format for XBRL documents. By reading this book and completing the exercises, you will learn the following:

1) The rules for all XML (eXtensible Markup Language) documents (the foundation)
2) The rules for all XBRL documents (the basis for staandardized financial reporting)
3) Using the U.S. GAAP & IFRS 2013 taxonomies (dictionaries of financial reporting terms)
4) Accessing the SEC EDGAR database & using the SEC "interactive data" tools
5) Creating standard and Inline XBRL instance documents

SkipWhite.

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