

Creating XBRL Instance Documents with Rivet's Dragon Tag® Software

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Abstract

This fictitious case study provides students with an opportunity to create XBRL (eXtensible Business Reporting Language) formatted financial statements, known as instance documents. Using Rivet's Dragon Tag's® software, students complete two guided exercises. The first exercise converts an income statement to an instance document while the second exercise relates to a balance sheet. XBRL is a language developed to tag (mark-up) financial statement data using a common taxonomy, or dictionary of tags, to make data interactive. The resulting instance documents are both human and computer readable. The benefits of XBRL include faster and more accurate closing processes, faster distribution of interactive financial information to external users, and enhanced auditing tools that support data mining. The Securities and Exchange Commission (SEC) has mandated that all publicly traded companies must submit financial statement data using XBRL for fiscal years ending after June 15, 2011 (SEC 2009).

Introduction

XBRL, eXtensible Business Reporting Language, is an XML-based language used to mark-up, or tag, financial statement data. XBRL tags add meta-data (data about data) to elements of the financial statements. The process creates XBRL instance documents (XBRL tagged financial statements) that are human and machine readable. The U.S. Securities and Exchange Commission (SEC) mandated a three year phase-in period that requires all companies registered with the SEC to file financial statements and schedules using XBRL beginning no later than June 2011 (SEC 2009).

The purpose of these exercises is to help students understand the concepts and mechanics of XBRL by creating two instance documents using Rivet's Dragon-Tag® software. Students will: (1) create an Entity Profile, (2) create a Hopper (3) mark-up (or tag) financial data (4) review the mark-ups (5) validate the XBRL instance documents and (6) export the XBRL instance documents to view and print.

Dragon Tag® is an add-on to Microsoft (MS) Excel and Word that enables preparers to create instance documents by tagging financial statements using an XBRL taxonomy. The SEC chose Rivet Software to build and support the Interactive Data Viewers on the SEC's web site. Rivet provided software and assistance to more than 50% of companies that participated in the SEC's Voluntary Filing Program, a pilot program for XBRL filers (Rivet 2009).

Materials Needed To Complete These Exercises

- Rivet’s Dragon Tag® software installed on your computer. If the software is not available through your college, you can download a free trial version from <http://www.rivetsoftware.com>. Choose “Partners & Programs” from the Menu across the top of the page and click on “Education Program.” Scroll to the bottom of the page and click on “Download a trial version of Dragon Tag for Education.”
- The XBRL taxonomies used in these exercises. You can download the latest XBRL taxonomies in a zipped file from <http://xbrl.us/taxonomies/Pages/US-GAAP2009.aspx>. The file “All Taxonomies” can be found in the lower left hand corner of the page under “Essentials.” Remember to unzip the file after it is downloaded and save the taxonomy file on your Desktop.

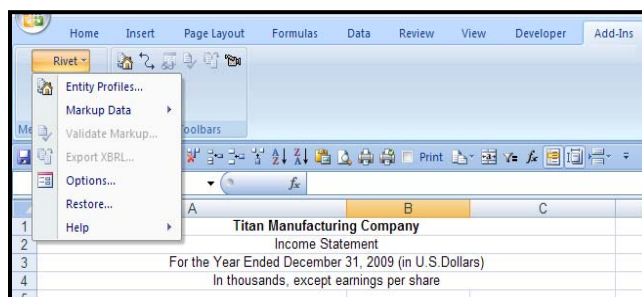
In Class Assignment Requirements

Begin this assignment in class by creating the Titan Manufacturing Company Income Statement in an Excel spreadsheet. Since calculations are a part of the XBRL taxonomy and require real numbers, you should **not** use formulas in the spreadsheet; instead, **type the values for each cell as shown below**.

Titan Manufacturing Company				
	A	B	C	D
1	Titan Manufacturing Company			
2	Income Statement			
3	For the Year Ended December 31, 2009 (in U.S.Dollars)			
4	In thousands, except earnings per share			
5				
6	Revenue			
7	Sales Revenue, Goods, Net, Total	\$	4,867	
8	Cost of Goods Sold, Total	\$	1,652	
9	Gross Profit, Total		\$	3,215
10				
11	Operating Expenses			
12	Selling, General and Administrative Expenses - Total	\$	1,245	
13	Other General Expenses	\$	356	
14	Operating Expenses, Total		\$	1,601
15				
16	Net Income (Loss), Available to Common Stockholders, Basic, Total		\$	1,614
17				
18				

Click on the Add-ins Tab to open the Dragon Tag® Menu. The Dragon Tag® ribbon consists of two parts: 1) A drop down menu with command options and 2) a custom tool bar providing icons for most of the command options as shown below.

Rivet's Dragon Tag® Ribbon



If the Add-ins tab does not appear, go to Programs and click on Rivet Software -> Dragon Tag®. (In MS Vista you must select “Run as Administrator”). Once the program is open, choose “Start Excel with Dragon Tag® Add-in.” Then open the “Titan Manufacturing Company” file.

Create A Company Profile for Titan Manufacturing Company

Before you begin tagging your financial data you need to enter comprehensive information about your company, such as the company name, reporting agency (e.g. NYSE.com), default currency, fiscal year-end, and the taxonomy associated with your entity.

1. Click on the drop down arrow on the Rivet Menu Commands Ribbon and select “Entity Profiles.” A pop up window will appear.
2. Create a new entity by right-clicking on Entities in the left pop-up window and selecting Add Entity. **Do not save your new entity’s information until step 6 below.**
3. Enter the following information about the new entity, on the right side of the pop-up window:
 - a. Name: Titan Manufacturing Company
 - b. ID: Use your name as the unique identifier for your company. (Normally you would use your company’s Ticker symbol or a unique identifier appropriate for the reporting agency selected.)
 - c. Reporting Agency: select <http://www.nyse.com> from the drop down menu
 - d. Default Currency: USD (US Dollars)
 - e. Default Precision: Thousands (3)
4. Default Reporting Taxonomy. Taxonomies are dictionaries of XBRL tags. Taxonomies include the description of the line item, the format, any calculations related to other tags, and reference to U.S. GAAP and/or SEC rules.

To import the taxonomy into your spreadsheet:

- Use the Browse option to search the unzipped folder *XBRLUS-GAAP-Taxonomies-2009-01-31*. The entry point to the taxonomies is in the *ind* folder (industry folder). This folder contains several taxonomies that relate to specific industries with unique reporting needs, such as insurance, banking, and real estate. Your company is a traditional manufacturing company, thus the *ci* folder, commercial and industry, is the entry point to the taxonomies you need. Note that four files are available. Files that include “stm” in the filename include element labels for the face of the financial statements. Files that include “dis” in the filename include element labels for financial disclosures. The term “all” indicates that element definitions and authoritative references are included. Since you will only tag financial data on the face of the financial statements, the reduced content in the file *us-gaap-ci-stm-all-2009-03-31* is appropriate for these exercises.
- Drill down to find the file *us-gaap-ci-stm-all-2009-01-31.xsd*. Follow the path: ind -> ci -> *us-gaap-ci-stm-all-2009-01-31.xsd*.
- Double click on the file to import the taxonomy into Excel. Notice that the taxonomy name description, language, and other information is imported with the taxonomy.

- Calendar and Fiscal Year End. Two options are available in the entity profile related to calendars. You can elect to have Dragon Tag® create your calendar automatically or you can choose to manually create your calendar later in the exercise. Dragon Tag's® default calendars are for a period of time. Since you are creating an Instance Document for an Income Statement (over a period of time) choose to create calendars automatically and select December 2009 as the fiscal year end.

Note: The second exercise in this case is identified as a homework assignment, Surfside Beach Supplies, Inc. Since a Balance Sheet (Statement of Financial Position) is prepared for a specific date, not a period of time, you should choose the manual option to create your calendar for Surfside Beach Supplies.

- Save your new entity by clicking on the Entity Profile save icon. If the entity name does not automatically change, right mouse click on “New Entity 1” and rename your entity Titan Manufacturing Company. Close the pop-up window.

Create a Hopper

A Hopper allows you to consolidate markups. For example, if you are creating financial statements for the same calendar period, using the same numeric units and precision, you can combine these elements into one Hopper for dragging and tagging.

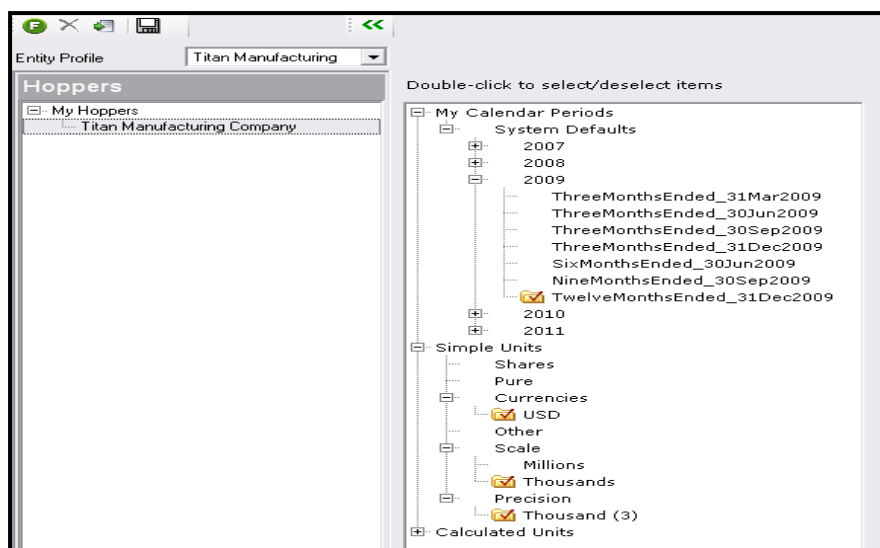
- From the drop down arrow on the Rivet Menu Commands select Mark Up Data -> Markup.
- At the bottom of the pop-up window click Hoppers.
- In the top pane of the pop-up window, right-click My Hoppers -> Add Hopper.
- Expand the My Calendar Periods-> System Defaults tree to 2009 and double click to select TwelveMonthsEnded_31Dec2009. If this option is not available, it is possible that you did not select the correct fiscal year end when you set up your entity profile.

If you selected the option to create your calendar manually when you created your entity profile, take the following steps to add a calendar for your company.

 - Click on the Calendar button at the bottom of the pop-up-window.
 - Right click on System Defaults to “add time period.” Then select the appropriate dates on the right hand side of the expander arrows (>>). Right mouse click on the default calendar name (usually Calendar 1) and rename your new calendar. When naming a new calendar period, the name must begin with an alphabetic character and contain no spaces (e.g. TitanManufacturing)
- Under Simple Units double click to select:
 - Currencies – USD
 - Scale –Thousands
 - Precision – Thousands (3)

- You will not be calculating any values in the exercise, so ignore the Calculated Units selection.
- Save your Hopper. Right click on Hopper 1 and rename it Titan Manufacturing Company.

Titan Manufacturing Company Hopper



The Markup Process

- Click on the Reporting Element box in the bottom panel. The taxonomy will appear in the upper portion of the window.
- The taxonomy tree is extensive. Expand the taxonomy tree to find elements for the Income Statement. Keep expanding the tree until you find the appropriate tag for each data element in the financial statements. Drag and drop the element from the taxonomy to the correct cell on your Excel workbook (the cell with the dollar amount). The cell will be shaded gray when the tag is applied. Continue to expand and search the taxonomy and mark-up all cells containing dollar amounts. Alternatively, you may extend Dragon Tag's® pop-up window, by clicking the green Expander (>>) on the upper right corner of the pop-up-window. Before expanding, you need to highlight us-gAAP-ci-stm-all-2009-01-31 within My Taxonomies. A Tagging Assistant –Quick Find tool at the bottom right panel of the pop-up-window will enable you to locate “reporting elements” conveniently. You may copy (Ctrl + C) the title of the account listed on your worksheet and paste (Ctrl + V) it into the “Search for which words?” field. Dragon Tag® will search for the reporting element matching this account title. After locating the desired reporting element, drag and drop the element from the taxonomy to the correct cell on your workbook (the cell with the dollar amount).

NOTE: Only taxonomy elements designated with a green Dragon Tag® icon can be used for Mark-up. Other elements are Titles for categories of accounts. When you have marked up the reporting data element, the cell background color will change and a green star “in-use” icon will appear in the taxonomy by the element you have chosen. If you make an error, simply right mouse click on the cell and select “remove markup.”

Titan Manufacturing Company					
Income Statement					
For the Year Ended December 31, 2009 (in U.S. Dollars)					
In thousands, except earnings per share					
6	Revenue				
7	Sales Revenue, Goods, Net, Total	\$	4,867		
8	Cost of Goods Sold, Total	\$	1,652		
9	Gross Profit, Total	\$		3,215	
10					
11	Operating Expenses				
12	Selling, General and Administrative Expenses - Total	\$	1,245		
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15					
16	Net Income (Loss), Available to Common Stockholders, Basic, Total	\$		1,614	

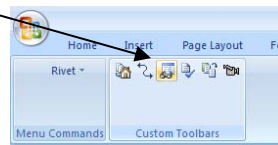
Add the Hopper Meta-data to your Tagged Elements

When you have finished marking-up all the financial data elements in your income statement, add the Hopper elements to your tagged items.

1. Select Hoppers from the bottom section of the Dragon-Tag Window.
2. Select all the marked-up cells in your workbook. (Use “CTRL Click” to select all the marked-up cells at one time.)
3. Drag the Titan Manufacturing Company hopper you created to any one of your marked-up data cells to add the calendar, units, and scale tags to the financial elements. The cells should be shaded blue to indicate the elements in the Hopper have been added. Close the pop-up window.

Review

You can review all the mark-ups for your elements by selecting the tagged reporting element cell and clicking the Review command icon on the menu bar.



Validate Your Tagged Instance Document

1. From the drop down arrow on the Rivet Menu Commands select Validate Markup.
2. In the pop up window select Validate.
3. If any errors are displayed, correct the errors and repeat the Validation process until no errors are found. Errors in summation normally mean you have chosen a tag for a data element that is not in the appropriate calculation hierarchy in the linkbase taxonomy. Check to make sure the tag you select for a “child” element is part of the hierarchy element you chose for the Total.
4. Export the XBRL instance document, view and print.
 - From the drop down arrow on the Rivet Menu select Export XBRL ->Save File. Include your name in the file name and save your instance document. You may need to go to the advanced tab

folder and click on the box “Taxonomy is in the same location as the Instance Document” in order to save your Instance Document.

- Right mouse click on your instance document and open it in Internet Explorer.
- Print your document to turn in.

Homework Assignment

Continue your assignment by tagging the reporting elements on the Balance Sheet (Statement of Financial Position) for Surfside Beach Supplies, Inc (shown below). The process is similar to the steps above, except you will need to create a unique calendar for Surfside Beach for the fiscal year ending June 30, 2009. Remember to select the “Create Calendars Manually” option when creating your new entity profile. Choose “Calendar” in the Dragon Tag® Window; right mouse click to create a new time period. The beginning and ending date will be the same since a balance sheet represents an “Instance” of time rather than a “Duration” of time. Rename your calendar and use it when creating your hopper rather than the default calendar you used in the prior exercise. Turn in a hard copy of the instance document you created. Note – Dragon Tag keeps track of entity profiles and your profile for Titan Manufacturing may still be available. Make sure you use the correct entity profile for Surfside Beach Supplies.

Surfside Beach Supplies, Inc.

	A	B	C	D	E
1	Surfside Beach Supplies, Inc.				
2	Statement of Financial Position				
3	As of June 30, 2009				
4	(dollars in thousands)				
5					
6	Assets				
7	Current Assets				
8	Cash, Cash Equivalent, and Short-term Investments, Total	\$	6,524		
9	Receivables, Net Current, Total	\$	5,306		
10	Inventory, Net, Total	\$	2,050		
11	Assets, Current, Total			\$	13,880
12	Noncurrent Assets				
13	Property, Plant and Equipment, Net, Total	\$	8,908		
14	Long Term Investments and Receivables, Net, Total	\$	6,924		
15	Assets, Noncurrent, Total			\$	15,832
16	Assets, Total			\$	29,712
17					
18	Liabilities and Stockholders' Equity				
19	Current liabilities				
20	Accounts Payable	\$	7,298		
21	Taxes Payable, Current, Total	\$	357		
22	Liabilities, Current, Total			\$	7,655
23	Liabilities, Noncurrent, Total			\$	9,236
24	Liabilities, Total			\$	16,891
25	Stockholders' Equity				
26	Common Stock, Value, Issued	\$	7,804		
27	Additional Paid in Capital, Total	\$	652		
28	Retained Earnings (Accumulated Deficit)	\$	4,365		
29	Stockholders' Equity, Including Portion Attributable to Noncontrolling Interest, Total			\$	12,821
30	Liabilities and Stockholders' Equity, Total			\$	29,712
31					

References

Securities and Exchange Commission (SEC) (2009). SEC's Final Rule, *Interactive Data to Improve Financial Reporting*. Retrieved December 8, 2009, from <http://www.sec.gov/rules/final/2009/33-9002.pdf>

Rivet Software Home Page (2009). Retrieved December 8, 2009, from <http://www.rivetsoftware.com/Company/Default.aspx>

Teaching Notes

Creating XBRL Instance Documents With Rivet's Dragon Tag® Software

Overview

The purpose of this assignment is to help students understand the concepts and mechanics of XBRL by creating two instance documents – one for an income statement and one for a statement of financial position (balance sheet). This is a “guided learning” assignment designed for students with no prior experience in XBRL. This assignment is best suited for an Accounting Information Systems (AIS) course, but could also be appropriate for Intermediate Accounting or any other accounting course where XBRL is part of the course learning objectives.

Instructors have considerable latitude regarding the depth of classroom coverage of XBRL. Our observations and interactions with colleagues at professional meetings indicate that the coverage of XBRL ranges from one week to the entire semester. We believe that many instructors will gradually increase XBRL coverage from merely tagging the elements to more sophisticated levels of reporting and continuous auditing of transactions. As XBRL reporting becomes mandatory, migration of XBRL tagging exercises to other courses such as Intermediate Accounting, Advanced Accounting, and Auditing may be appropriate. AIS courses could then focus on more advanced XBRL topics.

After students receive the prepared PowerPoint lecture (Exhibit 1, Teaching Notes) and complete the following exercise activities, they should master the associated learning objectives:

- **Understand the concept of meta-data:**
 - Reviewing an instance document
 - Creating an entity profile
 - Creating a company calendar
 - Creating a hopper
 - Marking-up financial statement elements
- **Understand the concept and process of tagging financial data:**
 - Marking-up financial statement elements using a taxonomy
 - Marking-up financial statement elements using a hopper
- **Create a valid XBRL instance document for an income statement and balance sheet:**
 - Validating a marked-up financial statement
 - Exporting and printing a valid instance document
- **Identify the parts of an XBRL instance document and the contents of each part:**
 - Reviewing a completed instance document
- **Understand the concept and structure of taxonomies:**
 - Importing a taxonomy into an entity profile
 - Selecting appropriate taxonomy tags for financial statement elements

Rivet's Dragon Tag® Software

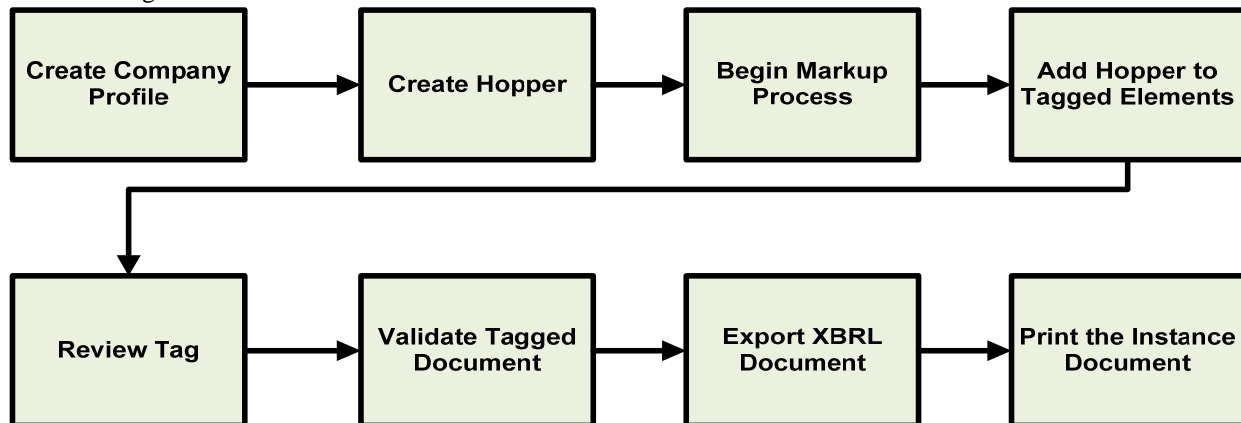
Dragon Tag® is an add-on to Microsoft Excel and Microsoft Word that enables preparers to tag financial documents using an XBRL taxonomy. If the software is not available through your school, you and your students can download a free 30-day trial version from <http://www.rivetsoftware.com>. The software installation is fast and simple and does not require rebooting the computer. Thus, students and instructors can normally install the software in a classroom lab for use during a specific class period. Students can download and install the software on their home computer to complete their homework assignment. The most recent version of the software offers an enhanced search option for quickly locating the reporting elements. This saves a substantial amount of time the students must spend searching for the correct XBRL tag.

Getting Started

The assignment begins with an instructional PowerPoint presentation that introduces the students to XBRL and explains the assignment. Exhibit 1 is the suggested PowerPoint presentation in hand-out form. Then, students complete two exercises using Dragon Tag® to create two XBRL instance documents. We provide data for the financial statements to ensure consistency of both assignments. The first exercise, an income statement, provides hands-on instructions with screen shots. We recommend completion of the first exercise in a classroom lab setting to help students gain confidence using the Dragon Tag® software. Students should be able to complete the second exercise, a statement of financial position (balance sheet), as an independent homework project. The financial statements purposely used account titles in the financial statements that exactly match the terminology of the elements in the taxonomy. This helps eliminate frustrations students may encounter when searching through the taxonomy.

These two exercises help students create XBRL instance documents using Rivet's Dragon Tag® software by: (1) Creating an Entity Profile, (2) Creating a Hopper, (3) Marking-up (or Tagging) data, (4) Reviewing the Mark-ups, (5) Validating the XBRL Instance Document, and (6) Exporting the XBRL Instance Document to view and print.

The following flowchart summarizes the exercise tasks:



Instructors can streamline the assignment if time is a constraint. Students can gain a good understanding and appreciation of XBRL concepts by completing only the first exercise. The balance sheet exercise would reinforce the learning experience as students independently create an instance document.

A text version of the solution to the final instance documents is shown in Exhibits 2 and 3. We recommend distributing hard copies of the Titan Manufacturing Company instance document for students to review prior to the lecture and exercise. This gives students an idea of what is expected of them and allows them to review the sections of the instance document during the PowerPoint presentation. It also illustrates the concept of meta-data and the advantage of using a prepackaged software application, rather than writing the code, to create an instance document.

Problems Students may Encounter

- The tree structure is extensive and sometimes difficult for students to navigate. The financial statements provided for the students purposely use exact matches of the financial elements and taxonomy tags to minimize errors and frustrations students could encounter in the tagging process.
- Most errors displayed during the validation process are summation errors. This is confusing to students since they do not actually perform any calculations. The error message usually arises because of a violation in the relationship rule prescribed in the calculation linkbase. Following the XBRL taxonomy tree, the total dollar value of each parent item must equal the dollar value sum of its children. Generally, if a calculation error appears, the student has selected the wrong tag for the element.

- The taxonomy is extensive and students often have difficulty finding the correct XBRL tag. The most recent version of Dragon Tag® includes an updated and much improved search feature that greatly reduces the number of tagging errors.
- Some students may inadvertently change values or add formulas to the spreadsheet cells. In these cases, validation errors may occur.

Student Feedback

We tested preliminary versions of these exercises over three semesters in four undergraduate AIS sections. Approximately 140 students participated in the study using Microsoft Office 2003, older versions of Dragon Tag®, and the US GAAP CI Taxonomy 2003. The pilot study of the current version of the XBRL exercises was conducted in three AIS sections taught by two instructors using Microsoft Office 2007, Dragon Tag® version 2.0, and XBRL US GAAP Taxonomy 2008-03-31. Approximately 125 students participated in this pilot study.

We anonymously surveyed students participating in the pilot study utilizing Survey Monkey®, an easy to use online survey tool with automatic tabulation features. We asked students to complete the survey after submitting both assignments to their instructor by following the URL to the survey. Students could complete the survey in class or with web access at another time and place. The student survey questions are presented in Exhibit 4 at the end of these Teaching Notes.

The intent of the survey was to capture data that we could use to improve the assignment. After responding to a few demographic questions, students rated their perceptions about the effectiveness of the XBRL lecture and discussion, as well as the exercises. Some questions targeted the difficulty of completing the exercises and the ease of use of the Dragon Tag® software. Three open-ended questions allowed students to describe the most positive aspect of their experience, what they least liked, and offer suggestions for improvement.

Summary of Student Surveys

Ninety-nine students completed the XBRL on-line survey after working the XBRL exercises. Basic demographic information indicates that 59% of the participants were female, 85% were 30 years old or younger, 79% had some prior business related work experience, 16% were juniors, 77% seniors, and 7% were graduate students.

The survey questions asked students to evaluate the effectiveness of the XBRL lecture and discussions as well as the effectiveness of the XBRL exercises. On a scale from 1 (least effective), to 5 (most effective), students generally reported positive XBRL experiences. Below are some key average responses.

Question	Average Response
XBRL Lecture Related Questions	
XBRL is useful for accounting majors	3.70
XBRL is useful for my chosen career path	3.55
XBRL makes AIS more interesting	3.61
XBRL Exercise Related Questions	
Exercises illustrate why the SEC requires XBRL reporting	3.58
Exercises helped students learn a lot about XBRL	3.52
The XBRL exercise instructions were easy to follow	3.79

Students also assessed the difficulty level of the XBRL exercises. On a scale from 1 (not difficult at all), to 5 (very difficult), students generally indicated the difficulty level was only somewhat difficult, with the validation and error resolving phase noted as the most difficult aspect of the exercises. Key average responses are summarized below.

Question	Average Response
XBRL Lecture Related Questions	
Difficulty of downloading & installing Dragon Tag® software	2.03

Difficulty of downloading student files and taxonomies	1.95
Difficulty of finding the appropriate XBRL tag	2.13
Difficulty of validating and resolving errors	2.32
Difficulty of viewing and printing the instance document	1.90

A significant number of students accepted the opportunity to make open-ended comments. Forty-two students made comments about the most positive aspect of their XBRL experience. The most common comment, twenty students, stated that what they learned about XBRL should be useful information in the workplace. Five students commented on the ease of use of the Dragon Tag® software. Thirty students made comments about what they least liked. Six commented that downloading and installation of Dragon Tag® takes too long. Five students expressed some difficulty in assigning the proper XBRL tag. Suggestions for improvement rendered 31 total comments. Eleven students suggested that student instructions should contain additional details. Four students suggested that it would be helpful if instructors would pre-install the latest version of Dragon Tag® on the laboratory computers.

The following improvements were made as a result of the survey feedback:

- Dragon Tag® software was updated to the latest version in all relevant teaching and open computer labs offering students the superior search feature.
- Instructions were clarified for setting up a manual calendar and using the default calendars in Dragon Tag®.
- The filenames for the students' files were shortened to eliminate some problems students experienced downloading the files.
- The exercise was updated to include the most current version of the US GAAP Taxonomy.

Other Resources and Teaching Aids

The number of print publications on XBRL is increasing as regulators mandate XBRL reporting requirements. The authors used the following websites and resources to complete this exercise:

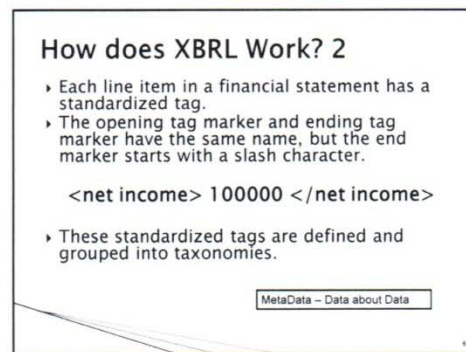
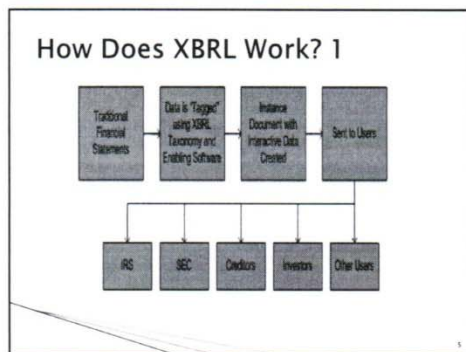
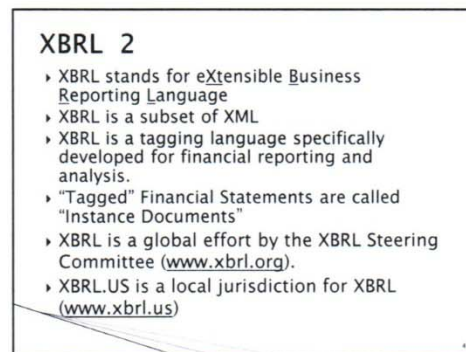
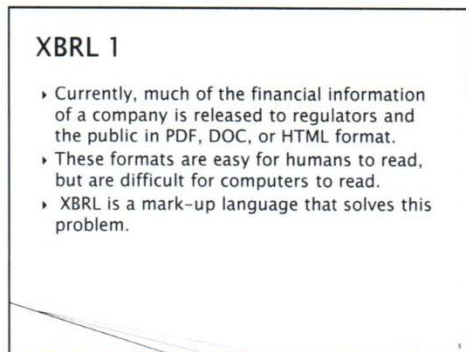
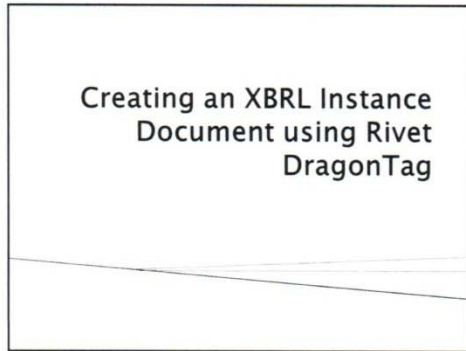
- *XBRL International*, available at <http://xbrl.org>
- *XBRL United States*, available at <http://xbrl.us>
- SEC portal for information about XBRL, available at <http://xbrl.sec.gov>
- *The Guide & Workbook for Understanding XBRL*, by Clinton White Jr., available at <http://www.skipwhite.com>
- *XBRL: Potential Issues and Opportunities for Internal Auditors*, Glen L. Gray, The Institute of Internal Auditors, 2005.
- *Interactive Data to Improve Financial Reporting*. SEC's Final Rule, available at <http://www.sec.gov/rules/final/2009/33-9002.pdf>
- Rivet Software Home Page <http://www.rivetsoftware.com/Company/Default.aspx>

Suggested Readings

- *The US GAAP Taxonomy and Preparers Guide*, available at <http://xbrl.us/Documents/PreparersGuide.pdf>
- *XBRL Fundamentals and the SEC's New Rule*. KPMG, available at http://www.kpmg.com/aci/docs/DI/IssuesInDepth_09_1XBRLFundamentalsSECRule.pdf
- "Idea" will Make Company and Fund Information Interactive. SEC Press Release, available at <http://www.sec.gov/news/press/2008/2008-179.htm>
- Phillips, M.E., Bahmanziari, T.E., and Colvard, R.G. (2008). "Six Steps to XBRL." *Journal of Accountancy*, Oct., Vol. 205, Issue 2, pp 34-37.
- Kernan, K. (2008). "XBRL Around the World." *Journal of Accountancy*, Feb., Vol 206, Issue 4, pp – 63-69.

Exhibit 1

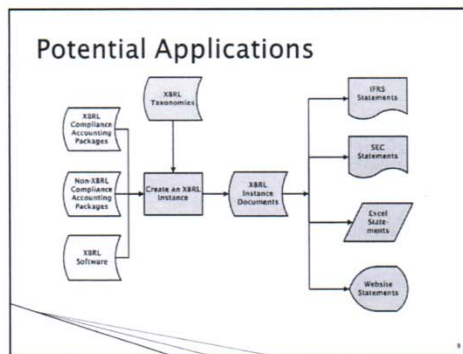
XBRL PowerPoint Presentation (Digital file available on request from authors)



Taxonomies

- ▶ Taxonomies are dictionaries of XBRL tags.
- ▶ Taxonomies contain the description of the line item, the format, any calculated relationship to other tags.
- ▶ Several US GAAP taxonomies have been developed for various industries.
- ▶ Taxonomies are available for IFRS and other accounting standards.
<http://www.xbrl.org>

US GAAP CI Taxonomy



XBRL Instance Document

- ▶ When financial information is mapped to tags and exported into XBRL format, that document is called an instance document.
- ▶ Attributes are assigned to an item or groups of items:
 - Unit of measure (USD)
 - Period of time (BS as of 12/31/09)
 - Group and Type (currentAssets.Cash)

XBRL Instance Documents Header

- ▶ All XBRL Documents are XML documents and begin with:
`<?xml version="1.0" encoding="utf-8"?>`
- ▶ Comments are not read by the computers and begin with `<!--`
- `<!--XBRL document created with Dragon Tag (R) XBRL Enabler by Rivet Software version 3.1.0.68-->`
- `<!--Based on XBRL 2.1-->`
- `<!--Created on: 11/12/2009 12:55:01 PM-->`

XBRL Instance Document Root Element 1

- ▶ XBRL is the root element and contains all namespace and x-links.
- ▶ Namespaces – A collection of elements and attributes for a particular purpose.
 - Each XML namespace has a unique URL
 - Each namespace is declared using "xmlns"
- ▶ SchemaRef Element– must contain links to at least:
 - one schema reference type
 - one taxonomy schema

XBRL Instance Document Root Element 2

```
<xbrl
xmlns="http://www.xbrl.org/2003/instance"
xmlns:link="http://www.xbrl.org/2003/linkbase"
xmlns:xlink="http://www.w3.org/1999/xlink"
xmlns:us-gaap="http://xbrl.us/us-gaap/2009-01-31"
xmlns:iso4217="http://www.xbrl.org/2003/iso4217">
<link:schemaRef xlink:type="simple"
xlink:href="us-gaap-ci-stm-dis-all-2009-01-31.xsd" />
```

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XBRL Instance Document Context and Unit Section

- ▶ The Context Section contains data about the entity and financial information:
 - Fiscal Year
 - Unique entity identifier
 - Reporting Period
 - Currency and Measure
 - Taxonomy

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XBRL Instance Document Context Section

```
<!--Context Section-->
<context id="TwelveMonthsEnded_31Dec2009">
<entity>
<identifier scheme="http://www.nyse.com">Mary
Smith</identifier>
</entity>
<period>
<startDate>2009-01-01</startDate>
<endDate>2009-12-31</endDate>
</period>
</context>

<!--Unit Section-->
<unit id="USD">
<measure>iso4217:USD</measure>
</unit>
```

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XBRL Instance Documents Tuple and Footnote Section

- ▶ An XBRL Instance document contains a tuple section representing numerical and non-numerical facts about accounting concepts.
- ▶ A section is created for the footnotes to the financial statements.
- ▶ The Closing Tag for the Root Element `</xbrl>` closes the Instance Document.

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XBRL Instance Document Tuple Section

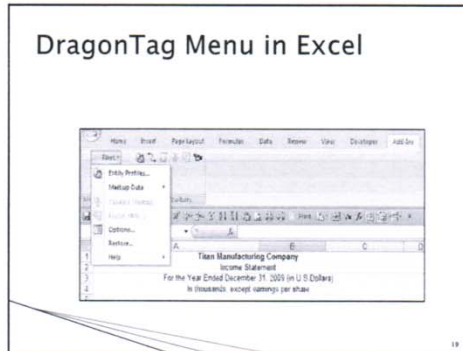
```
<!--Tuple Section-->
<!--Element Section-->
<us-gaap:CostOfGoodsSold
contextRef="TwelveMonthsEnded_31Dec2009" unitRef="USD"
decimals="-3">1652000</us-gaap:CostOfGoodsSold>
<us-gaap:GrossProfit
contextRef="TwelveMonthsEnded_31Dec2009" unitRef="USD"
decimals="-3">3215000</us-gaap:GrossProfit>
<us-gaap:NetIncomeLoss
contextRef="TwelveMonthsEnded_31Dec2009" unitRef="USD"
decimals="-3">1614000</us-gaap:NetIncomeLoss>
<us-gaap:OperatingExpenses
contextRef="TwelveMonthsEnded_31Dec2009" unitRef="USD"
decimals="-3">1601000</us-gaap:OperatingExpenses>
<!--Footnote Section-->
</xbrl>
```

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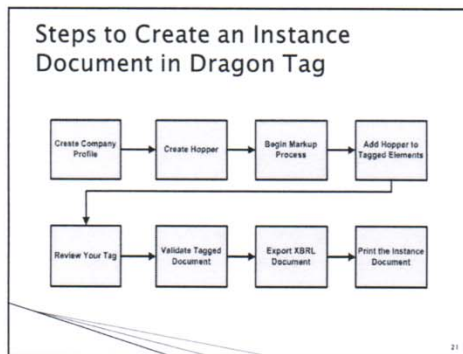
Rivet DragonTag

- ▶ DragonTag is an Add-In to Microsoft Excel and Word
- ▶ The SEC chose Rivet Software to build and support the Interactive Data Viewers on the SEC web site.
- ▶ You can download a free trial version from <http://www.rivetsoftware.com/> Products->Downloads (you will have to register)

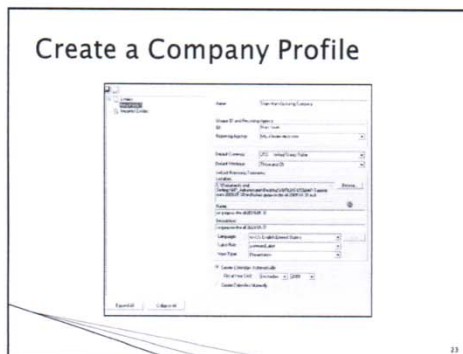
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- ### Steps to Create an Instance Document in DragonTag
- › Create a Company Profile
 - › Create Hoppers to combine attributes
 - › Mark-up financial Data with Element tags and Hopper data
 - › Review your Tags
 - › Validate your Document
 - › Export your Document to create an Instance Document
 - › Print the Instance Document

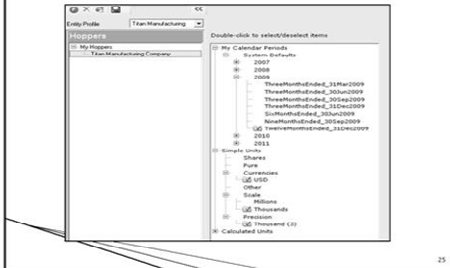


- ### Create a Company Profile
- › Default information about the entity (found in the context and unit section of the instance Document)
 - Company Name
 - Unique Identifier
 - Reporting Agency
 - Currency
 - Fiscal Year End
 - XBRL Taxonomy



- ### Hoppers
- › Hoppers allow you to consolidate identical mark-up items. After the Hopper is created, all reporting elements can be tagged at once.
 - › Items in a Hopper include
 - Calendar Period
 - Currency
 - Precision

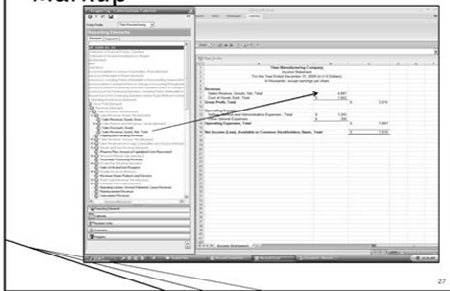
Hoppers



Markup Financial Data

- › Drag and Drop the individual tags from the default taxonomy to the data reporting elements in the spreadsheet.
- › DragonTag highlights the cells that are tagged
- › Tag the same data porting elements reusing the Hopper you created. (Select all the items to tag at the one time.)

Markup



To Complete the Process

- › Review the Reporting Data Element you tagged
- › Validate the XBRL Instance Document
- › Correct any errors that are displayed
- › Export the XBRL Instance Document, view, and print.
- › Homework
 - Complete the assignment for Titian Manufacturing Corporation's Income Statement.
 - Create an XBRL instance document for Surfside Beach Supplies, Inc.'s Statement of Financial Position (Balance Sheet).

XBRL Advantages 1

- › The XBRL format allows regulators to analyze, compare and extract information digitally.
- › Investors and analysts are able to search for financial information of the companies more accurately due to the standardized taxonomies.
- › If an analyst wanted to look at "cash at 12/31/2009" for all oil and gas companies, a search for the appropriate tag would return the information.

XBRL Advantages 2

- › Companies that used different names for financial statement line items; "accounts receivable, trade receivables, etc." will all use the same XBRL tag.
- › Using XBRL will stream-line internal financial reporting and less effort will be needed to prepare consolidations and financial statements.
- › financial information will reach the markets in a timely manner.

Conclusion

- ▶ XBRL, when fully implemented, will change:
 - How we distribute financial information to outsiders
 - faster, more accurate
 - How we aggregate and consolidate information inside the company - faster closing, more accurate
 - How we audit large companies - data mining capabilities

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Exhibit 2

Instance Document Titan Manufacturing Company Solution

```

<?xml version="1.0" encoding="utf-8" ?>
- <!-- XBRL document created with Dragon Tag (R) XBRL Enabler by Rivet Software version 3.0.0.68 -->
- <!-- Based on XBRL 2.1 -->
- <!-- Created on: 11/23/2009 12:55:01 PM -->
<xbrl xmlns="http://www.xbrl.org/2003/instance" xmlns:link="http://www.xbrl.org/2003/linkbase"
  xmlns:xlink="http://www.w3.org/1999/xlink" xmlns:us-gaap="http://xbrl.us/us-gaap/2009-01-31"
  xmlns:iso4217="http://www.xbrl.org/2003/iso4217">
  <link:schemaRef xlink:type="simple" xlink:href="us-gaap-ci-stm-all-2009-01-31.xsd" />
  - <!-- Context Section -->
  <context id="TwelveMonthsEnded_31Dec2009">
  <entity>
  <identifier scheme="http://www.nyse.com">Mary Smith</identifier>
  </entity>
  <period>
  <startDate>2009-01-01</startDate>
  <endDate>2009-12-31</endDate>
  </period>
  </context>
  - <!-- Unit Section -->
  <unit id="USD">
  <measure>iso4217:USD</measure>
  </unit>
  - <!-- Tuple Section -->
  - <!-- Element Section -->
  <us-gaap:CostOfGoodsSold contextRef="TwelveMonthsEnded_31Dec2009" unitRef="USD" decimals="-
    3">1652000</us-gaap:CostOfGoodsSold>
  <us-gaap:GrossProfit contextRef="TwelveMonthsEnded_31Dec2009" unitRef="USD" decimals="-3">3215000</us-
    gaap:GrossProfit>
  <us-gaap:NetIncomeLossAvailableToCommonStockholdersBasic contextRef="TwelveMonthsEnded_31Dec2009"
    unitRef="USD" decimals="-3">1614000</us-gaap:NetIncomeLossAvailableToCommonStockholdersBasic>
  <us-gaap:OperatingExpenses contextRef="TwelveMonthsEnded_31Dec2009" unitRef="USD" decimals="-
    3">1601000</us-gaap:OperatingExpenses>
  <us-gaap:OtherGeneralExpense contextRef="TwelveMonthsEnded_31Dec2009" unitRef="USD" decimals="-
    3">356000</us-gaap:OtherGeneralExpense>
  <us-gaap:SalesRevenueGoodsNet contextRef="TwelveMonthsEnded_31Dec2009" unitRef="USD" decimals="-
    3">4867000</us-gaap:SalesRevenueGoodsNet>
  <us-gaap:SellingGeneralAndAdministrativeExpense contextRef="TwelveMonthsEnded_31Dec2009" unitRef="USD"
    decimals="-3">1245000</us-gaap:SellingGeneralAndAdministrativeExpense>
  - <!-- Footnote Section -->
  </xbrl>

```

Exhibit 3

Instance Document Surfside Beach Supplies, Inc. Solution

```

<?xml version="1.0" encoding="utf-8" ?>
- <!-- XBRL document created with Dragon Tag (R) XBRL Enabler by Rivet Software version 3.0.0.68 -->
- <!-- Based on XBRL 2.1 -->
- <!-- Created on: 11/23/2009 1:55:25 PM -->
<xbrl xmlns="http://www.xbrl.org/2003/instance" xmlns:link="http://www.xbrl.org/2003/linkbase"
  xmlns:xlink="http://www.w3.org/1999/xlink" xmlns:us-gaap="http://xbrl.us/us-gaap/2009-01-31"
  xmlns:iso4217="http://www.xbrl.org/2003/iso4217">
<link:schemaRef xlink:type="simple" xlink:href="us-gaap-ci-stm-all-2009-01-31.xsd" />
- <!-- Context Section -->
<context id="Surfside">
<entity>
<identifier scheme="http://www.nyse.com">Mary Smith</identifier>
</entity>
<period>
<instant>2009-06-30</instant>
</period>
</context>
- <!-- Unit Section -->
<unit id="USD">
<measure>iso4217:USD</measure>
</unit>
- <!-- Tuple Section -->
- <!-- Element Section -->
<us-gaap:AccountsPayableCurrent contextRef="Surfside" unitRef="USD" decimals="-3">7298000</us-
  gaap:AccountsPayableCurrent>
<us-gaap:AdditionalPaidInCapital contextRef="Surfside" unitRef="USD" decimals="-3">652000</us-
  gaap:AdditionalPaidInCapital>
<us-gaap:Assets contextRef="Surfside" unitRef="USD" decimals="-3">29712000</us-gaap:Assets>
<us-gaap:AssetsCurrent contextRef="Surfside" unitRef="USD" decimals="-3">13880000</us-gaap:AssetsCurrent>
<us-gaap:AssetsNoncurrent contextRef="Surfside" unitRef="USD" decimals="-3">15832000</us-
  gaap:AssetsNoncurrent>
<us-gaap:CashCashEquivalentsAndShortTermInvestments contextRef="Surfside" unitRef="USD" decimals="-
  3">6524000</us-gaap:CashCashEquivalentsAndShortTermInvestments>
<us-gaap:CommonStockValue contextRef="Surfside" unitRef="USD" decimals="-3">7804000</us-
  gaap:CommonStockValue>
<us-gaap:InventoryNet contextRef="Surfside" unitRef="USD" decimals="-3">2050000</us-gaap:InventoryNet>
<us-gaap:Liabilities contextRef="Surfside" unitRef="USD" decimals="-3">16891000</us-gaap:Liabilities>
<us-gaap:LiabilitiesAndStockholdersEquity contextRef="Surfside" unitRef="USD" decimals="-3">29712000</us-
  gaap:LiabilitiesAndStockholdersEquity>
<us-gaap:LiabilitiesCurrent contextRef="Surfside" unitRef="USD" decimals="-3">7655000</us-
  gaap:LiabilitiesCurrent>
<us-gaap:LiabilitiesNoncurrent contextRef="Surfside" unitRef="USD" decimals="-3">9236000</us-
  gaap:LiabilitiesNoncurrent>
<us-gaap:LongTermInvestmentsAndReceivablesNet contextRef="Surfside" unitRef="USD" decimals="-
  3">6924000</us-gaap:LongTermInvestmentsAndReceivablesNet>
<us-gaap:PropertyPlantAndEquipmentNet contextRef="Surfside" unitRef="USD" decimals="-3">8908000</us-
  gaap:PropertyPlantAndEquipmentNet>
<us-gaap:ReceivablesNetCurrent contextRef="Surfside" unitRef="USD" decimals="-3">5306000</us-
  gaap:ReceivablesNetCurrent>

```

```
<us-gaap:RetainedEarningsAccumulatedDeficit contextRef="Surfside" unitRef="USD" decimals="-3">4365000</us-gaap:RetainedEarningsAccumulatedDeficit>
<us-gaap:StockholdersEquityIncludingPortionAttributableToNoncontrollingInterest contextRef="Surfside"
  unitRef="USD" decimals="-3">12821000</us-gaap:StockholdersEquityIncludingPortionAttributableToNoncontrollingInterest>
<us-gaap:TaxesPayableCurrent contextRef="Surfside" unitRef="USD" decimals="-3">357000</us-gaap:TaxesPayableCurrent>
- <!-- Footnote Section -->
</xbrl>
```

Exhibit 4 XBRL STUDENT SURVEY

Please respond to the following questions after completing The two XBRL assignments (Titan Manufacturing Company and Surfside Beach supplies).

1. I am a male ___ a female ___ student.
2. My age: 18 – 22 ___ 23 – 30 ___ 30 – 40 ___ 40 - 50 ___ over 50 ___
3. I have had prior or current business work experience? Yes ___ No ___
4. I am a junior ___ a senior ___ a graduate ___ Student, majoring in _____ (Please specify)
5. My expected grade in this course? A ___ B ___ C ___ D ___ E ___
6. I have taken ___ courses at CSUF that required completion of microcomputer tasks at home.

Using a 5 point scale (1 lowest to 5 highest) please rate your overall experience with the XBRL assignment.

XBRL Classroom lecture and discussion

- 7) I believe coverage of XBRL is useful to accounting majors (1 not at all to 5 a lot).
- 8) I believe knowledge of XBRL will be useful in my chosen career path (1 not at all to 5 a lot).
- 9) I believe topics such as XBRL makes AIS an interesting class (1 not at all to 5 a lot).
- 10) The lecture and discussion of XBRL in class were interesting (1 not at all to 5 a lot).
- 11) The lecture and discussion of XBRL in class were easy to follow (1 not at all to 5 a lot).
- 12) The XBRL coverage in class was adequate in depth (1 not at all to 5 a lot).

XBRL Exercise

- 13) After completing this exercise, I now understand why the SEC's requires XBRL reporting. (1 not at all to 5 a lot).
- 14) I learned a lot about XBRL as a result of completing this assignment (1 not at all to 5 a lot).
- 15) The XBRL instruction handout was easy to follow (1 not at all to 5 a lot).
- 16) I would suggest more XBRL assignments in this class (1 not at all to 5 a lot).
- 17) I would suggest more XBRL assignments in other accounting courses (1 not at all to 5 a lot).

Rate the difficulty of the following steps in the exercise from 1 (not difficult at all) to 5 (very difficult)

- 18) Downloading and installing the Dragon Tag® software
- 19) Downloading and using student files and taxonomies files from Black Board
- 20) Finding the appropriate XBRL tag
- 21) Validating and resolving error
- 22) Viewing and printing the instance document
- 23) What were the most positive aspects of the assignment?

- 24) What did you like the least about the assignment?

- 25) How could the assignment be improved? (Please be as specific as possible.)

- 26) Other comments?

- 27) Name: (Optional) _____