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Integrating XBRL Into Your Financial Reporting Process
Executive Overview

Creating a successful SEC filing under the new interactive data guidelines can be a daunting task. The key is to break down the process into smaller achievable steps, and make sure the right resources, procedures and tools are allocated. This document offers a set of guidelines to help filers plan ahead for the SEC XBRL filing requirement and set expectations correctly.

Introduction

Integrating XBRL into your financial reporting process consists of three basic tasks. The first step is to understand what the SEC requires for an “interactive data” submission. Because the SEC has instituted a phase-in process, these requirements differ depending on the size of the company, the type of accounting standard used, and how many years the company has been already been filing in XBRL.

The next step is to develop a plan. Filing entities already have well-established processes for generating non-XBRL regulatory reports. Every plan incorporates a filing team responsible for producing the reports, a set of tools to help make the process as seamless and efficient as possible, and a proven methodology to ensure deadlines are met successfully. To integrate XBRL successfully, you need to consider these 3 items (team, tools, and methodology) within the context of the new XBRL filing requirements.

Lastly, the final step is to evaluate maintenance and rollover procedures, to ensure a repeatable process with the highest possible accuracy and efficiency. The SEC mandate

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requires certain transition points in reporting interactive data, triggering the need for more in-depth preparation during certain filing periods. In addition, filing content and processes naturally evolve over time, and established guidelines will help transition XBRL processes alongside with greater ease.

By studying requirements early, determining the proper tools and resources, and creating a repeatable process using proven methodologies, filers can become confident in their ability to file in XBRL successfully with the SEC.
SEC XBRL Filing Requirements

The SEC has instituted a “phase-in” process for interactive data submissions. This process identifies three categories of filers that have different submission requirements depending on company size, filing year, and accounting standard used. Therefore, to understand which SEC requirements apply to your company, you first need to determine which filing category is pertinent.

What Kind of Filer Are You?

As illustrated in Figure 1, the largest companies reporting in US-GAAP kicked off this process with all financial statements filed after June 2009. Medium-sized US-GAAP companies followed suit in June 2010 and all remaining public filers started with their June 2011 filings. Currently, only those companies filing under the US-GAAP accounting standard are held to this schedule. Filers under IFRS were initially required to begin alongside US-GAAP filers in 2011. However this has been delayed since the SEC has not yet designated an IFRS taxonomy.

Figure 1 also demonstrates that the filing requirements evolve from year to year. You may be familiar with the terms “1st year” and “2nd year” filers. A 1st year filer is a company in its first year of filing interactive data, meaning that the filer is expected to provide detailed tagged statements and block tagged notes. Similarly, a 2nd year filer is a company in its second filing year and is expected to provide detail tagged statements and both block and detail tagged notes. These categories, as illustrated in Figure 2, help us determine exactly what information each company needs to file as part of its interactive data package.

Notice that the 3rd year filing requirement and beyond are exactly the same as the 2nd year, with the key difference being that liability increases from as-furnished to as-filed. During the as-furnished period,
the filer’s interactive data files are “deemed not filed for purposes of specified liability provisions” and “protected from liability for failure to comply with the tagging requirements if the interactive data file failed to meet those requirements but the failure occurred despite the filer’s good faith effort”. Once a filing moves to as-filed, the interactive data files are then held accountable to standard liability practices defined in the federal securities laws.

Figure 2. SEC Filing Requirement Changes through Years 1, 2 and 3

The XBRL Filing Package

The SEC mandate states that interactive data must be provided using a specific global standard format called **XBRL** (**X**tensible **B**usiness **R**eporting **L**anguage). This requirement applies to all corporate filers and consists of 2 components which together make up the XBRL filing package.

1) **An XBRL taxonomy** built as an extension of an SEC-approved taxonomy. A taxonomy defines the model of a company’s financial report, including the structure of its statements and notes. Whenever possible, the taxonomy should utilize existing accounting concepts defined in the corresponding public accounting standard’s taxonomy, such as the US-GAAP 2011 taxonomy. In this manner, a company’s filed taxonomy defines a custom layer on top of

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2 Quoted from pages 26-27 of the SEC Rule Release No. 33-9002 “Interactive Data to Improve Financial Reporting”

3 All SEC-approved taxonomies are listed at [http://www.sec.gov/info/edgar/edgartaxonomies.shtml](http://www.sec.gov/info/edgar/edgartaxonomies.shtml)
the US-GAAP taxonomy, called an extension. This extension taxonomy is essentially a collection of US-GAAP and company-specific concepts, organized as the best possible representation of their reported data. This extension taxonomy is often referred to as a company taxonomy.

2) An XBRL instance document referencing the XBRL taxonomy defined in #1. This document includes the specific data points and details associated with a single report, such as the values of “Total Assets” and “Total Revenue” for the 2010 fiscal year end filing. The act of associating these data points with XBRL is called tagging or mapping. These terms are generally interchangeable.

Block Tagging vs. Detailed Tagging

The content of each filing differs depending on whether this is a filer’s first or second year filing in XBRL format. In all cases, every financial statement needs to be detail tagged. This means that every reported number in your Balance Sheet, Statement of Income, Statement of Equity, Statement of Cash Flows, etc must be represented in your XBRL filing. For example, let’s look at a snippet of Oracle’s 2011 filing in Figure 3. Each number in the 2011 and 2010 data columns must be tagged, as well as the parenthetical data appearing in the “Trade receivables” line item. For illustration purposes, all required tags are highlighted in yellow.

Figure 3. Oracle’s 10K financial report with detail tagged statements

Requirements differ when we focus on the financial notes associated with each report. The SEC describes 4 different levels of tagging for notes, shown in Figure 4. First year filers are required to implement Level 1 tagging only, while second year filers must implement all 4 levels.
**Level 1 - Block Tagging (1st yr)**

Tag entire footnote as single block of text

**Level 2 — Significant Accounting Policies (2nd yr)**

Tag each significant accounting policy within the footnote
Same block tagging process as Level 1

**Level 3 — Tables (2nd yr)**

Tag each table within the footnote
Same block tagging process as Level 1

**Level 4 — Detailed Tagging (2nd yr)**

Tag each individual fact – any monetary value, percentage, or number must be associated with an XBRL tag

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For first year filers, each note is given a **block tag** to satisfy Level 1 requirements. This means that the entire note is associated with a single XBRL tag in text format. Generally the note is captured as HTML to preserve formatting of tables, footnotes, and other characteristics. Notice in Figure 5 below, that the entire note is tagged, as illustrated in **yellow**.

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Second year filers must continue the Level 1 tagging process but must additionally include tags around accounting policies and tables to satisfy Levels 2 and 3, respectively. Each accounting policy and each table must be given its own XBRL tag in text format. Again, HTML is commonly used for formatting purposes. Figure 6 illustrates Level 1-3 tagging for a sample note.

Lastly, second year filers must also satisfy Level 4 detailed tagging requirements, meaning that all numeric data reported in notes must also be tagged. This requirement includes numeric data shown in
tables, as well as embedded in text. Figure 7 illustrates a snippet of a note, with Level 4 detailed tagging shown in yellow.

As you can see, second year filings require significantly more involvement than first year filings. As a consequence, these filings will include more in-depth modeling of the extension taxonomy as well as a significant increase in the number of tags required.
Ensuring SEC Filing Acceptance

Once the necessary tags are completed, the filing must pass through a validation process to determine whether it will be accepted as a valid submission by the SEC. The SEC provides a very detailed explanation of requirements in an almost-500 page document called the EDGAR Filer Manual. This document is updated periodically by the SEC to incorporate additional rules or refine existing ones. Consequently, filers are recommended to check the SEC website frequently for new announcements and updates.

While filers should strive to meet all requirements set forth in the EDGAR Filer Manual, not every rule is enforced during the SEC’s acceptance process. For example, one rule states “An instance must contain a fact for each combination of line item and period that appears on the face of the financial statements of the corresponding official HTML/ASCII document.” However, the SEC does not actually check your XBRL instance against your HTML document to ensure full tagging of every item. The list of all error and warning messages that a filing may encounter is listed on the SEC’s website.

Choosing Your Filing Team

Now that we have a better understanding of the SEC requirements, the next step is to establish a plan to integrate XBRL filing generation with existing reporting processes. Teams must adopt resources that have the ability to generate a complete XBRL filing package, including both the XBRL extension taxonomy and instance document. These resources could come from third party entities offering XBRL filing services, or companies may decide to absorb this knowledge into their internal filing team.

This section will lead you through identifying the necessary contributors to the XBRL filing process, describing general roles and areas of knowledge that must be present either internally or through outside resources. Please note that the focus here is on XBRL-specific roles, and does not seek to encompass all roles required in managing your entire SEC filing. Later sections will focus on the tools and methodologies recommended, to assist each resource with fulfilling their roles and responsibilities.

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4 The most current version is always available on the SEC’s website at [http://www.sec.gov/info/edgar/edmanuals.htm](http://www.sec.gov/info/edgar/edmanuals.htm).

5 A complete list of SEC validation errors and warnings is listed at [http://www.sec.gov/info/edgar/xbrlerrormessages.htm](http://www.sec.gov/info/edgar/xbrlerrormessages.htm).
The US-GAAP Expert

There should be at least one team member with an in-depth understanding of the US-GAAP standard and the US-GAAP XBRL taxonomy. This resource must have the ability to navigate the US-GAAP taxonomy and identify relevant US-GAAP taxonomy patterns and concepts. The goal is to review each potential tag in your financial report and associate them with the appropriate US-GAAP items. For example, the US-GAAP taxonomy includes a concept called “Assets” that is intended to represent the “Total Assets” in a filer’s balance sheet. The US-GAAP domain expert is responsible for making these modeling decisions, by correlating the financials to US-GAAP concepts and tables wherever suitable.

The XBRL Taxonomy Expert

A team member with extensive XBRL taxonomy knowledge is necessary to oversee the development and maintenance of the XBRL extension taxonomy, an integral piece of the filing package. This resource will be skilled in creating and updating extension taxonomies, and must be fluent in XBRL topics including but not limited to XBRL dimensions, calculations, extended links, and labels. Such an expert should also be comfortable with XBRL validation errors and warnings such that these messages can be interpreted and acted upon swiftly. This person will work closely with the US-GAAP domain expert, to ensure that the designated US-GAAP concepts and structures will be accurately reflected into the extension taxonomy. Some accounting and finance background is also useful, since many XBRL properties are a reflection of their accounting-based characteristics. Examples include determining balance types (credit/balance) and period types (instant/duration).

The XBRL Tagging Expert

Once the extension taxonomy is complete, your financial report is ready for tagging. A team member who understands how the extension taxonomy correlates to the current financial data is needed to oversee this process. This process will involve creating and/or maintaining associations between the taxonomy and the data from your current financial report.

This resource should work closely with the XBRL taxonomy expert, since the taxonomy may evolve through the tagging process due to changes in the financial report. This person should also be familiar with XBRL validation errors, capable of interpreting and correcting instance document errors, and passing taxonomy errors back to the taxonomist.

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6 For this particular role, we are focusing on the US-GAAP accounting standard as the basis for an XBRL filing. The same general responsibilities and skill set would apply to other standards as well, such as IFRS.

7 Official XBRL standard recommendations are available from the XBRL International, Inc. website at [http://xbrl.org/](http://xbrl.org/). Specifically, taxonomist developing US-GAAP extension taxonomies for SEC filings should be familiar at a minimum with the XBRL 2.1 and XBRL Dimensions 1.0 specifications.
The end result is an XBRL instance document, a document that contains your financial data in XBRL format, which is the second component of your filing package.

The SEC Requirements Expert

At least one team member should have a complete understanding of the SEC filing requirements, in order to ensure that the filing package will be accepted by the SEC. This person should understand the rules of the EDGAR Filer Manual, and specifically be aware of those that are enforced by the SEC validation process. This role should have access to tools that help with the validation process, and work closely with both XBRL taxonomy and tagging experts to filter issues back to the right individuals for resolution. In addition, the SEC requirements expert should be familiar with the SEC Data Previewer tool, which demonstrates what the filing will look like once officially submitted.\(^8\) Often, this resource will work closely with executive management and other members of the financial team to sign off on final presentation details.

Tools and Methodology

Filing entities use a variety of tools to help make their filing process more manageable and efficient. For many financial teams, these tools include enterprise-level financial management systems, reporting software, Microsoft Excel spreadsheets, and Word documents. Along with these tools, filers have developed methodologies that have helped introduce predictability and efficiency into the filing processes. Together, these tools and methodologies provide assurances that a successful filing will be produced within the given timeline.

It should come as no surprise then that the new XBRL filing requirement means evaluating new tools and methodologies to ensure the same successes and efficiencies of the existing filing process. As with any new process, careful consideration must be given to determine which tools and methodologies work best for the team. This document describes a methodology for creating and managing XBRL filings, along with a recommended set of tools to help in each step of the process.

Please keep in mind, however, that every filing team is unique, and something that may work well for one team may not for another. Therefore, the recommendations below should always be customized according to each team’s needs.

Model, Extend, Tag, Approve (META)

In reading about the XBRL standard, the term metadata comes up quite a bit. The goal of XBRL is to be able to describe your financial data (or any data) in a meaningful re-usable way. These descriptions are called “data about data”, or in other words, metadata.

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\(^8\) The SEC Data Previewer is available for web-based usage at [https://datapreview.sec.gov/previewer/](https://datapreview.sec.gov/previewer/), and is also available for download at [http://www.sec.gov/spotlight/xbrl/renderingenginlicense.htm](http://www.sec.gov/spotlight/xbrl/renderingenginlicense.htm).
In this document META is also a 4-letter acronym for the XBRL filing methodology being introduced here. META stands for “Model”, “Extend”, “Tag”, and “Approve”. As illustrated in Figure 8 below, each step represents a specific task in the filing process, and the output of each task becomes the input to the following ones. Step #1 “Model the report” identifies the need to analyze your financial report as it pertains to an XBRL filing. The modeling decisions made in this step are critical to completing Step #2 “Extend the taxonomy”. Similarly, Step #2 produces the XBRL extension taxonomy which is a prerequisite to beginning Step #3 “Tag the data”. Finally, Step #3 results in the generation of an XBRL instance document, which completes the filing deliverables and allows for Step #4 “Approve the filing” to ensue. Thus, each step in the META methodology is a critical contributor to the filing process and must be treated with diligence and care. Each step will be discussed in further detail in the sections below.

Figure 8. The META filing methodology

Step #1: Model

The first step of the process is also the most time consuming and technically challenging. Taxonomy modeling involves in-depth US-GAAP and XBRL expertise, utilizing the first two roles defined earlier. The goal of this step is to develop a modeling scheme that describes your financial report in terms of US-GAAP. This step is not about building an XBRL extension taxonomy (something we’ll talk about in Step #2), but rather determining the correlations between the US-GAAP taxonomy and your reported data.

Breaking it Down

Breaking down your financial report into smaller sections makes modeling easier, since you can focus on one piece at a time. Often reports are split up by financial statements and notes, with each statement or note representing one section of the document. Second year filers may have further breakdowns within each individual note, to represent each accounting policy (level 2 tags), table (level 3 and 4 tags), and narratives involving numerical data (level 4 tags). By using this approach, we can more easily track our modeling progress (i.e. 4 out of 5 statements complete, and 2 out of 10 notes complete) and estimate timelines for completion.
Modeling 101

So what does it mean to model your financial statements? To start, let’s review Oracle’s 10K Balance Sheet shown in Figure 3. Remember that the end result will be to tag each one of the highlighted items. The task here is determining what each item should be tagged to. Does this item represent a US-GAAP concept? Is it a company-specific item? When possible, US-GAAP concepts should be chosen when available. This meets best practice recommendations and allows increased data comparability with other filers.

Figure 9 demonstrates the basic idea behind modeling, identifying which concepts to use and keeping track of these decisions. Notice that each line item is associated with a US-GAAP concept in this particular example. Also, note that the parenthetical data (numbers embedded within a line item) must also be tagged, and therefore must be associated with its own concept in the modeling phase.

As with most statements, the Balance Sheet as shown in Figure 9 is a fairly simple example. In some cases, simply marking up an existing Word document as we’ve shown here could be sufficient to complete your modeling task. The only requirement here is to associate every piece of reportable data with a corresponding XBRL concept, either from US-GAAP (or IFRS for IFRS filers) or a company-specific item.

Some filing teams may want to enhance this approach. Often multi-member teams require approval of these decisions before they are finalized. In the simplest case, introducing an extra column in your Word document stating “Approved” or “Under review” could suffice to meet these requirements. Teams might also add additional details to each mapped item for easier tracking purposes. This is particularly important when identifying company-specific items, since new XBRL concepts must have mandatory properties defined in the taxonomy. See Figure 10 which provides an enhanced modeling format for the same Balance sheet, this time in an Excel spreadsheet.
Figure 10. Enhanced Balance Sheet Model

Advanced Modeling — Tables and Notes

Often financial reports contain tables and narratives that require more sophisticated modeling techniques. While first-year filers may encounter these on a minimal basis, generally when dealing with the Statement of Equity, second-year filers are often immersed in these challenges. Recall that second-year filers must detail tag all financial notes, including numeric values within text and tables. These requirements will often utilize the US-GAAP [Table] pattern, one of the most complex and prevalent patterns in the US-GAAP taxonomy.

Figures 11(a) (b) and (c) demonstrate a simple table found in a financial note, and provides an example of how this table might be modeled. Notice that this table was determined by experts to represent a US-GAAP table pattern. As a result, all table components must be precisely identified, including all relevant [Table], [Axis], [Domain], [Member], and [Line Items]. Figure 11b provides a visual representation of the table, while Figure 11c uses the enhanced modeling format to provide specifics about the chosen concepts. Both types of representations are strongly recommended for modeling US-GAAP tables. It is the responsibility of your US-GAAP expert to be familiar with all US-GAAP taxonomy patterns and understand the appropriate modeling techniques to aid in the decision making process.

Figure 11a. Table in Financial Notes
Figure 11b. Table visualized using the US-GAAP [Table] pattern

Figure 11c. [Table] details in enhanced modeling format
Figure 11 is considered to be a fairly simple table model since there is only a single axis, and a 1-to-1 mapping from the actual display table to a US-GAAP [Table]. Often this is not the case. The following scenarios may also occur, as well as various other permutations, which your US-GAAP expert should be able to identify and make the appropriate modeling decisions for:

1) **A table may not use a US-GAAP table at all**

Some tables simply have line items and don’t require a US-GAAP [Table] structure. This is common for statements, i.e. Balance Sheet, Statement of Operations, etc, but also can occur for tables in your notes as well.

2) **A text block may be modeled as a US-GAAP table**

A filer might also split up a single table into multiple ones for easier viewing or simplification. For example, Figure 11a could have been separated into 1 table per period (2011 and 2011), or 1 table per domain member (Level 1, Level 2, and Total). Again, since the reported data is identical, any representation should correspond to the same XBRL model.

3) **Multiple tables may be modeled as a single US-GAAP table**

A filer might also split up a single table into multiple ones for easier viewing or simplification. For example, Figure 11a could have been separated into 1 table per period (2011 and 2011), or 1 table per domain member (Level 1, Level 2, and Total). Again, since the reported data is identical, any representation should correspond to the same XBRL model.

4) **A single table may be modeled as multiple US-GAAP tables**

A filer could model multiple tables into a single display table. For example, “Finite Lived” and “Infinite Lived” Intangible Assets are often shown in the same table for display purposes but are modeled as two separate US-GAAP tables.

5) **A US-GAAP table model may have multiple axes**

Tables must include one or more axes in the US-GAAP model, which may be explicitly or implicitly defined in your financial report. Figure 12 illustrates a table model utilizing 2 axes. Notice that some cells are grayed out to indicate that no reportable value exists.
Tools

Notice that we haven’t introduced any XBRL-specific software up to this point. Modeling decisions are about understanding how your financial statement correlates to the US-GAAP taxonomy. In the above examples, we’ve simply used Microsoft Word and Excel to keep track of these decisions. Only after these decisions are made can you begin building your actual filing.

To help with the modeling process, XBRL US offers a collection of materials to help filers become familiar with the US-GAAP taxonomy, including rules and recommendations for developing your extension taxonomy. The most valuable of these documents is the US GAAP Preparer’s Guide which is a must-read for all team members involved in the modeling process.9

XBRL tools are available to help you navigate the US-GAAP taxonomy and become familiar with US-GAAP concepts and models. For example, Oracle Hyperion Disclosure Management offers a Taxonomy Designer, a client-based tool for viewing and creating any XBRL taxonomy. Taxonomy Designer allows you to navigate the US-GAAP taxonomy directly from its online location, or download and access it directly from your own desktop. Users may also develop their SEC extension taxonomies using the same tool, even having multiple taxonomies open simultaneously for easier reference.

9 The US GAAP Preparer’s Guide is available at http://xbrl.us/documents/preparersguide.pdf. Other useful US-GAAP taxonomy materials, including release notes and use cases, may be found from the main website at http://xbrl.us.
Figure 13 shows a snapshot of Taxonomy Designer with a view of the US-GAAP taxonomy. Notice that the US-GAAP concept “Assets” is highlighted within the Statement of Financial Position, and its official documentation and references are available from the property panel on the right. The ability to access and review these details are extremely important within the modeling step of your filing process, in order to make the best determination of which US-GAAP concept is right for you.

The XBRL US website also provides a US-GAAP taxonomy viewer tool. The viewer is only accessible via the XBRL US website, and is restricted for US-GAAP viewing purposes only. See Figure 14 for a snapshot of the same US-GAAP taxonomy illustration of the “Assets” concept in the XBRL US viewer.

Which tool you use simply depends on your own preference and requirements. Some users may be restrained by internet firewalls, in which case using Taxonomy Designer directly on client with online and offline work options may be ideal.

![Figure 13. Oracle Hyperion Disclosure Management’s Taxonomy Designer view of Assets concept](image)

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Step #2: Extend

Once your financial report is modeled, each reported piece of information should now be associated with the appropriate XBRL concepts. These decisions should be captured in some set of modeling documents which may then be handed over to your XBRL extension taxonomy expert to start building your extension. The act of developing your extension taxonomy is described here as Step #2.

Building Your Extension

The goal of this step is simple – translate your modeling decisions into your XBRL extension taxonomy. Recall the Balance Sheet modeling exercise illustrated in Figures 9 and 10. Now, take a look at how this information is presented in the taxonomy, in Figure 15. Notice that each line item is presented in exactly the same order and with the same labels as in the actual 10K filing. Next, notice the highlighted blue line that indicates “Cash and cash equivalents” corresponds to the US-GAAP element “CashAndCashEquivalentsAtCarryingValue”, a decision made in Step #1 Model.
Similarly, consider the table example shown in Figure 11 and then take a look at Figure 16. Notice the same table components we identified earlier, i.e. [Table], [Axis], [Domain], [Member], [Line Items], now illustrated here in the extension taxonomy. Notice also the highlighted blue line here indicating the US-GAAP concept “FairValueAssetsMeasuredOnRecurringBasisTable” being used here to represent the [Table] component, again a decision made in Step #1.

![Figure 16. Detail Tagged Table in Oracle’s Taxonomy Designer](image)

Your taxonomy expert will ensure that all modeling decisions are incorporated into the taxonomy correctly and completely, including addressing all 3 taxonomy views: presentation, calculation, and definition.¹¹

**Validation**

Your taxonomy expert and your SEC requirements expert will need to work together to ensure that the extension taxonomy meets both XBRL and SEC filing requirements.¹ As with the modeling process, breaking the taxonomy down into smaller more manageable pieces will help simplify the building process and quantify progress. By validating piece-wise as well, the team will be alerted early on if any taxonomy issues are present, and issues can be fixed immediately and duplication of the same error can be prevented.

Tools

The XBRL extension taxonomy is essentially a collection of files made of a single XSD (XML Schema Definition) file and 4 XML files, and requires a taxonomy development tool to create and maintain these files. Oracle Hyperion Disclosure Management’s Taxonomy Designer (used for illustration purposes in Figures 14-16 above) allows users to create and manage their taxonomies without needing to worry about the underlying XML syntax.

The Oracle Hyperion Disclosure Management Taxonomy Designer offers the following key features for developing your extension taxonomy:

- Full XBRL validation capabilities
- Multi-taxonomy support
- Linkbase side-by-side viewing and synchronization capabilities
- Read only and edit modes
- Online and offline usage modes
- Tag search
- Drag-and-drop taxonomy development
- Import/Export capabilities

Taxonomy Designer provides full XBRL validation capabilities and also enforces user flows to prevent erroneous taxonomies from being created. Multiple taxonomies may be loaded simultaneously, so that the current period’s taxonomy may be compared with the US-GAAP industry-specific taxonomy, taxonomies from previous periods, or even taxonomies from other filers. Similarly, taxonomy linkbases may be loaded side-by-side so that presentation, calculation, and definition views may be reviewed more easily and developed more quickly. Import and export capabilities allow for faster taxonomy creation and easy taxonomy review across users.

Taxonomy Designer offers online/offline usage modes, utilizes caching mechanisms so that taxonomies may be automatically downloaded from the web and stored locally. This is extremely useful for US-GAAP extensions since filers can preserve imports to the official US-GAAP taxonomy locations while still leveraging the performance benefits of local access. Offline mode is also useful in locations with tight internet security, where firewalls and other constraints prevent access to certain websites.

Other feature highlights include search capabilities, view synchronization, and drag-drop functionality. When combined, these features allow for precise and efficient taxonomy development. Consider the action of utilizing the US-GAAP concept “Assets” in your extension taxonomy. First, locate the US-GAAP concept by searching by name, label, fuzzy or exact matches. Once identified, the “Assets” concept may be drag-and-dropped into the presentation view, into the precise desired location. With view synchronization, the user can easily locate the corresponding drop points in calculation and definition view. And lastly, drag-and-drop may again be used to move the item to these new locations.
Taxonomy Designer is a proven tool, used by SEC filers for extension taxonomy development as well as for core taxonomy development by regulators around the world. With full localization capabilities and a rich feature set, Taxonomy Designer offers a complete solution for taxonomy development and maintenance.

Step #3: Tag (aka Map)

Now that your extension taxonomy is built, you’re ready to start the tagging process. Tagging is the process of associating your taxonomy concepts with the actual data going into the current filing, and is performed or overseen by your XBRL tagging expert. The end result is an XBRL instance document, the final piece of your SEC filing package.

Tagging

The goal of the tagging process is to produce an XBRL instance document that accurately reflects the data reported for the current period and meets SEC filing rule requirements. See Figure 17, which illustrates the generation of your XBRL instance document from an existing financial statement.

Figure 17. The tagging process generates an XBRL instance document

Tagging generally requires the filer to be able to review their financial reports alongside their XBRL extension taxonomy. This allows for a more expedited association between the data being reported and its corresponding XBRL concept. Often, tools offer “drag-and-drop” techniques and other means of making the association. Figure 18 demonstrates how this process may be done using Oracle Hyperion Disclosure Management. Notice that the data “$179,575,571” highlighted in yellow has been successfully tagged to the XBRL concept “Gross Revenue”.

Along with associating a value to its XBRL concept, there are some additional pieces of information that must be added to complete the tagging process. An XBRL instance document is made of XBRL facts, where each fact represents 1 reported data item. In order to fully tag a data item to produce a valid fact, several pieces of information are required:

1) Data - the information being tagged, i.e. “39,174,000,000”
2) **XBRL Concept** – the taxonomy concept representing the data, which was identified in Step #1 and put into the taxonomy in Step #2, i.e. “us-gaap:AssetsCurrent”

3) **XBRL Context** - Additional information about who the filer is (i.e. Oracle), what date the number is relevant for (i.e. 2011-08-31), and what dimensions apply, if any

4) **XBRL Unit** - The measure is the data described in (i.e. US Dollars). Only required for numeric values.

5) **Decimals** - The accuracy of the data, specified by proximity to the decimal point. Only required for numeric values.

From the process described in Figure 18, only the information described in #1 and #2 above has been captured. The remaining two items, the context and unit, must be defined within the scope of the filing itself since they are not captured within the XBRL taxonomy. Figure 19 illustrates how the context and unit are defined in Oracle Hyperion Disclosure Management. Once defined, they must also be associated with the reported data, in a similar fashion as the XBRL concept show as shown in Figure 18.
Tagging an XBRL context may involve additional complexity when tagging a “table”, as defined by the US-GAAP [Table] pattern. Tables require the usage of XBRL dimensions, which are defined in your extension taxonomy and applied to your XBRL context. Your XBRL tagging and taxonomy experts should understand when dimensions are required, and how to apply them to your filing.

Validation

As with creating your extension taxonomy, your SEC requirements expert must work closely with your XBRL tagging expert to ensure that your XBRL instance document meets both XBRL and SEC filing requirements. Note that the SEC rules may be applicable to your taxonomy or filing, thus errors that are found in this stage may require changes to tags and/or to the taxonomy itself. As with modeling and taxonomy creation, breaking down your financial report into more granular sections will help simplify the tagging process. By running through validation section-by-section, the team will receive earlier notification if any issues are present, allowing them to react and resolve the issues more quickly and prevent similar errors from occurring further down the process.

Tools

Oracle Hyperion Disclosure Management (used for illustration purposes in Figures 18-19 above) allows users to generate their XBRL filings in a multi-user environment and re-use tags from filing period to period.

Oracle Hyperion Disclosure Management offers the following key tagging features:

- Data source and document level tagging capabilities
- Centralized tag storage
- Collaborative multi-user document creation
- Full XBRL validation support
- Tag override and suppression
- Global formatting and XBRL options
- Rollover Report wizard (discussed further in the “Maintenance and Rollover” section below)
When paired with other Oracle Hyperion enterprise performance management applications, XBRL taxonomies may be associated directly with data sources themselves, called **data source tagging**. This tagging feature allows the same mappings to be reused across various reports regardless of the chosen data points. For example, XBRL concepts can be mapped directly to account members in Oracle Hyperion Financial Reporting grids, as shown in Figure 20. Changing the User POV (Point of View) does not affect the XBRL mapping, but simply refreshes the data points.

Alternatively, XBRL taxonomies may be associated with the Microsoft Office documents themselves, known as **document-level** or **report-level tagging**. This technique allows for XBRL tagging directly to the data location in Microsoft Word or Excel, regardless of whether the data is inputted manually or comes from external sources. All XBRL tags in Oracle Hyperion Disclosure Management are stored centrally on the server, allowing multiple users to share tags across documents and data sources.

Another collaborative feature in Oracle Hyperion Disclosure Management is its **Master Document and Doclet** functionality. This feature allows complete financial reports to be broken down into sections for multi-user tagging. Each document section is known as a **doclet**, and all doclets are managed through a single parent document known as the **master document**. Figure 21 illustrates this relationship, demonstrating the usage of four doclets (Microsoft Word and Excel based) within a single master document. Doclets may be individually tagged and validated, and at any point in time, may be refreshed back into the master document to absorb any changes/additions. When the entire tagging process is complete, the final product may be reviewed completely within the Master document, validated for XBRL correctness, and ready for XBRL instance document generation.
At any point in the tagging process, full XBRL validation may be run to determine whether the report contains any errors or warnings. Calculation traces provide additional analysis, to determine whether rounding errors or credit/debit inconsistencies exist in the document. The Oracle Hyperion Disclosure Management review pane allows users to peruse all potential tagging issues at once, with error messages automatically linking back to the original source of the issue for quick navigation and more efficient error resolution.

The look-and-feel of a report may also trigger XBRL validation issues. For example, a positive number may be represented as a negative for presentation purposes. Or, a particular attribute in a data source must be hidden from view in the final report. For these situations, Oracle Hyperion Disclosure Management offers override, suppression, and formatting capabilities for additional flexibility in reporting. Override allows for substitution of an existing value with a new one, such replacing a negative value with its correct positive counterpart. Suppression allows data source tags to be “hidden” that would otherwise be reflected in the final report, a much better option than simply deleting a tag since it preserves the relationship between tag and the original data source for other usages. Lastly, formatting rules provide default parsing mechanisms so that Oracle Hyperion Disclosure Management can automatically recognize symbols in their intended usages for numeric data reporting, such with decimals and commas.

SEC filers have been very successful with Oracle Hyperion Disclosure Management as their complete solution for XBRL filings. Similarly, Oracle Hyperion Disclosure Management is widely used internationally as well, to satisfy the requirements of different XBRL regulatory mandates.

Step #4: Approve

The final stage to producing your XBRL filing is the approval process. Now that your filing package is complete, including both extension taxonomy and instance document, standard review processes should ensure proper taxonomy modeling and tagging. Often filers will find minor discrepancies during this step, which may trigger re-evaluation of a modeling decision or re-tagging of a data point. A filing may go through several evaluations before final sign-off and submission.
When considering your final XBRL filing package, there are 3 main areas of evaluation:

1) Acceptance – Ensuring that the SEC will accept your XBRL submission
2) Look-and-feel – Approval of how your filing will be viewed publically in the SEC’s website
3) Best practices – Optionally taking additional measures to meet best practices set forth above and beyond SEC submission requirements

Each of these will be reviewed more thoroughly in the sections below.

Acceptance

First and foremost, your filing must meet the SEC validation requirements in order to successfully submit. As a result, the most critical evaluation phase is “Acceptance”, ensuring that the filing meets all rules enforced by the SEC validation engine. Remember that all SEC validation rules are stated in the EDGAR Filer Manual. Specifically Volume II, Section 6 focuses on the rules for “interactive data”. However, the actual SEC validation process only checks a subset of these rules which are outlined on the SEC website. Your SEC Requirements expert should be able to interpret any errors or warnings that arise during testing and involve other team members as appropriate.

Look And Feel

All XBRL filings submitted to the SEC are publically available via the SEC’s website, and may be reviewed by users using the SEC Interactive Viewer tool. Unlike the corresponding 10K/10Q HTML documents which are entirely company specific, the SEC Interactive Viewer provides a generic way to view everyone’s filings. See Figure 22 for an example of Oracle’s latest filing on the SEC website.

Figure 22. Data Oracle 10K filing on the SEC website Interactive Viewer
The Interactive Viewer renders filings entirely based on a filer’s XBRL submission. The extension taxonomy provides the structure and labels for the content, and the instance document provides the actual data. In order to ensure your XBRL filing will be rendered appropriately by the SEC once it’s been submitted, the SEC offers the SEC Data Previewer website for previewing your submission. Alternatively, the data previewer tool may be downloaded and installed on client machines, to alleviate any concerns about sending confidential details over the internet. When paired with Oracle Hyperion Disclosure Management, the SEC Data Previewer is seamlessly integrated into your XBRL filing process. Users may review their filing using the SEC Data Previewer directly from the Oracle Hyperion Disclosure Management Office ribbon, as shown in Figure 23.

![Image of SEC Data Previewer integration with Oracle Hyperion Disclosure Management]

Figure 23. SEC Data Previewer integration with Oracle Hyperion Disclosure Management

When using the previewer tool, it is important to understand that your XBRL filing will not necessarily look like your standard HTML filing. The intent of XBRL is to capture your data model, rather than display and formatting details. As a result, while you have some control over how your filing looks in the SEC viewer (i.e. ordering, labels, etc), the most important goal of reviewing is to ensure your data is modeled correctly.

**Best Practices**

Once you’ve met the SEC requirements and you’ve determined that your filing preview is acceptable on the SEC Data Previewer, your filing may be submitted as-is with success. Recall, however, there are a number of rules and guidelines that should be followed that are not enforced by the SEC validation engine. Thus, to meet best practices and follow as closely to the SEC rules as possible there are other considerations you may want to incorporate into your filing process.

Some vendors offer validation services that attempt to address non-enforced SEC rules and best practices. Filers may choose to utilize these services to provide an additional layer of validation above meeting the base SEC requirements. Examples of these services include:

1) Additional EDGAR Filer Manual rules - Offering automated validation of EDGAR Filer Manual rules, including rules enforced by the SEC as well as a subset of additional rules.

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12 The SEC Data Previewer tool is available at [https://datapreview.sec.gov/previewer/](https://datapreview.sec.gov/previewer/).
When considering this offering, be aware that this validation suite is not standardized across vendors. Every vendor will provide a varied set of rules since there is no specified level of enforcement. Note also that no offering will be able to provide 100% EDGAR Filer Manual validation due to the manual nature of some rules.

2) XBRL US Consistency Checks - The XBRL US organization (who owns and distributes the US GAAP taxonomy) offers a private validation suite for SEC filings. The suite includes a set of checks to identify and correct potential XBRL issues including incorrect signage, missing concepts, or inconsistent usage of concepts.

3) US GAAP Preparer’s Guide Checks – The US-GAAP Preparer’s Guide provides filers with guidelines for creating their US-GAAP extension taxonomy. Vendors may choose to implement a subset of these guidelines to evaluate your extension taxonomy implementation, particularly around inconsistencies with [Table] pattern usage and modeling across taxonomy linkbases.

Maintenance and Rollovers

The META (Model, Extend, Tag, Approve) methodology describes the four critical components of a successful filing. However, as with all reporting processes, the XBRL filing workflow is not a fixed immutable process that is constantly forward-moving. Rather, each step in the process could trigger new discoveries, introduce changes or require decisions that can push for reconsideration of previously completed tasks.

Maintaining Your Taxonomy

Once the extension taxonomy is completed in Step #2 (Extend), taxonomy modifications will continue to be an ongoing process throughout the filing period. Tasks preceding and following may trigger changes that will cause revisits to the extension taxonomy. Modeling decisions made in Step #1 (Model) may undergo revisions, which will translate into taxonomy changes. Or, tagging complications in Step #3 (Tag) may reveal a mis-labeled concept or a missing line item that must be corrected. Even in the final approval stages of Step #4 (Approve), the CFO may decide to alter the formatting of the filing, which again could result in a taxonomy change.

With each taxonomy change the filing team must consider its affect on next steps. Particularly if the tagging process as begun, it is important to analyze the impact of changes on existing tags. For example, if a company-specific concept is replaced with a US-GAAP concept, it is important to recognize that the existing corresponding tag will no longer be available and a new tag will be needed.


as a replacement. Similarly property amendments or [Table] structure changes will also have tagging implications. Alternatively some changes will not affect tagging, including label modifications and re-ordering concepts.

Tools for Taxonomy Maintenance

Managing taxonomy changes and keeping them in sync with the rest of the filing process can be a tricky task in itself. Oracle Hyperion Disclosure Management includes Oracle WebCenter Content, a content management platform, to help manage your XBRL taxonomy and other documents.\textsuperscript{16}

Oracle’s WebCenter content management solution offers the following critical features:

\begin{itemize}
  \item Check in/Check out
  \item Version control
  \item User/role management
  \item Approval processes
  \item Web and desktop access
\end{itemize}

With a web-based interface for easy access and usability, Oracle WebCenter Content provides check in/check-out capabilities, version control, organizational tools and approval/routing mechanisms. Desktop integration allows for seamless integration with Oracle Hyperion Disclosure Management’s Taxonomy Designer tool. Correspondingly, user profiles allow for customization of taxonomy privileges for read/write access control.

Maintaining Your Tags

As with the extension taxonomy, Step #3 (Tag) may require alterations even once the entire financial report is fully tagged. Modeling decisions or taxonomy errors from Steps #1 and 2 (Model, Extend) may trigger taxonomy changes that lead to tagging modifications. Some examples of possible triggers are described in the section above called “Maintaining Your Taxonomy”. In addition, the financial report itself may require structural changes or the inclusion of last-minute details. For example, consider that a narrative is chosen to be converted into a table. The new table would need to be block tagged, even though the presented information is still the same. Similarly, if a new sentence is added to an existing narrative, it is important to consider whether numeric values have been introduced that will require tagging. As a result, any subset of tags may be introduced or revisited before the filing is deemed complete.

\textsuperscript{16} For additional information on Oracle WebCenter Content, please visit
http://www.oracle.com/technetwork/middleware/webcenter/content/index-094708.html
Tools for Tag Maintenance

Managing your tags and keeping them in sync with the taxonomy requires careful orchestration. Oracle Hyperion Disclosure Management offers the following critical features for maintenance purposes:

- Centralized XBRL tag storage
- Data-source and document-level tagging
- Rollover Report wizard (discussed in further detail in the section below)
- Automated taxonomy refresh
- Oracle WebCenter content management features (described above)

Oracle Hyperion Disclosure Management offers a centralized XBRL tag storage solution that provides tag reusability and sharing in a multi-user collaboration environment. The data-source tagging option gives users with the flexibility of tagging once, and preserving those tags across any permutations of that data. For example, if an Oracle Essbase cube is utilized as a data source within a financial report, a concept may be tagged once to the source and reflected in all locations where the data source member is exposed.17 In addition, both data source and document level tagging can leverage refresh capabilities to update pre-tagged content as updated numbers and text are generated by the filing team.

Oracle Hyperion Disclosure Management also allows filers to refresh their taxonomy as needed, automatically analyzing existing tags to ensure minimal tagging impact. Only taxonomy changes that directly impact tag characteristics, i.e. concept or property modifications, will trigger re-tagging requirements.

Oracle WebCenter Content packaged with Oracle Hyperion Disclosure Management offers content management capabilities that are applicable to tagging documents as well as taxonomy files. User security controls and versioning capabilities allow filers to manage report sections across users for a more efficient filing process.

Rollover

Once your first filing is complete, there are three key transition points that will require in-depth taxonomy modifications and tagging additions. Each transition involves a significant increase the number of data tags required, which therefore corresponds to a significant increase in taxonomy modeling complexity. These transitions are:

- Moving from a 10Q to 10K filing as a 1st year filer
- Moving from a 1st year to 2nd year filing

17 For additional information on Oracle Essbase, please visit http://www.oracle.com/us/solutions/ent-performance-bi/essbase-066549.html
• Moving from a 10Q to 10K filing as a 2nd year filer

For the most part, however, rolling over from one quarter to the next should require minimal taxonomy activity. As your financial report evolves, the taxonomy will evolve with it. However, keep in mind that the taxonomy only involves structural changes – i.e. adding a line item, modifying a table, changing a label – and does not involve the numbers or dates that are specific to a single filing. Therefore only these types of structural changes to your financial report will trigger taxonomy changes during rollovers.

Similarly, your tags should also remain fairly stable from one filing period to the next and rolling over from one quarter to the next should require minimum tagging activity. During the rollover process, your XBRL tagging expert should be aware of changes to the financial report, and should determine which changes will require tagging modifications. Global changes, including refreshing numeric data and modifying dates, should not require tagging reconsiderations. Through Oracle Hyperion Disclosure Management, the tag and its associations remain intact as the filing-specific information changes through the rollover process.

Tools for the Rollover Process

Oracle Hyperion Disclosure Management offers a rollover wizard to make your transition from one filing to the next as straightforward and efficient as possible. Figure 24 illustrates how to launch the Rollover Report from the Office ribbon. From here, simply follow the wizard instructions through 3 simple steps:

• Specify the save location for your new documents
• Select the appropriate taxonomy for the new filing period
• Register a name for the report with the central repository

![Figure 24. Oracle Hyperion Disclosure Management Office ribbon illustrating the Rollover Report Wizard](image)

Once the rollover process is complete, a copy of all your financial reports will be generated, ready to go for the next filing period. If using external data sources, simply update the data for the current period by modifying queries or refreshing Oracle Hyperion data source objects. Modify your XBRL properties through global update features, for example update all contexts to reflect the current reporting start and end dates.
Conclusion

Creating a successful SEC filing under the new interactive data guidelines can appear challenging at first. The key to success is planning ahead. Learn your filing requirements early, identify the right tools and resources, and develop a repeatable process using proven methodologies. Be sure to allocate additional time during your first few filings, to allow for knowledge ramp-up and learning new tools. Also, remember that there are three big transition periods that will increase the number of required XBRL tags: from first year 10Q to 10K filings, from first year to second year filings, and from second year 10Q to 10K filings. With these thoughts in mind you should be well on your way to developing a successful XBRL filing process.