

XBRLS Business Use Cases Guide

Draft, dated 2008-04-25

Document: XBRLS-BusinessUseCases-2008-04-25.doc

Files: XBRLS-BusinessUseCases-2008-04-18.zip

Editors

Name	Contact	Affiliation
Cliff Binstock	cliff.binstock@CoyoteReporting.com	Coyote Reporting
Charlie Hoffman, CPA	Charles.Hoffman@UBmatrix.com	UBmatrix
Mark Montoya	MMontoya@FDIC.gov	FDIC
René van Egmond	rene@c3ismc.com	C3i SMC LLC

Abstract

The purpose of this document is to explain the XBRLS meta-patterns and how those meta-patterns can be used to effectively meet common business use cases found in financial reporting. Many of these patterns are also use cases of general business reporting.

This information is helpful to taxonomy creators who wish to create internally consistent taxonomies or to show them how to articulate in XBRL specific use cases required within their taxonomies. The document is both somewhat of a cookbook and a best practices guide to creating high quality taxonomies and instance documents which are proven to be effective. Additionally, this document is useful to software vendors creating software as it helps them understand these business use case their users will likely require.

Readers of this document are assumed to have experience in creating taxonomies and instance documents. This document is not intended for the casual business user.

This document is not a technical guide to the XBRLS architecture; see the XBRLS Architecture Specification for that information. This document is a practical explanation of and guidance helpful to business users who desire to make use of XBRL.

Status

Circulation of this Draft is restricted to the authors. Recipients of this draft are invited to submit comments to the editors.

Acknowledgements

The information within this document has been accumulated over many years from many sources. Many people have either directly or indirectly contributed to the creation of the first "Patterns Document" and subsequent versions of the same information. The authors would like to thank those who have contributed to the collection and nurturing of this information: Thomas Egan, Josef Macdonald, Jim Richards, Roger Debreceeny, Walter Hamscher, David vun Kannon, Jeff Naumann, David Prather, Geoff Shuetrim, Alan Teixeira, Hugh Wallis, Allyson Ugarte, Colm O hAonghusa, Trevor Pyman, Giancarlo Pellizzari, Yossef Newman, Rob Blake, Mark Creemers, Marc van Hilvoorde, Herman Fischer, Ignacio Hernandez-Ros, Campbell Pryde, Paul Sappington, Yufei Wang, Luther Hampton, Mark Schnitzer, KK Tang, David Hardidge, David Huxtable, David Scott Stokes, Sergio de la fe, Barry Smith, Christopher Ball.

Table of Contents

1	Introduction	4
1.1	Evolution of this Information	4
1.2	What is XBRLS?	4
1.3	XBRLS Architecture	4
1.4	Scope.....	5
1.5	Organization of this document.....	5
1.6	Terminology.....	5
1.7	XBRLS Logical Model	7
1.8	Document conventions	8
2	Overview of Building Blocks, Meta-patterns, and Business Use Cases	8
2.1	Overview of Syntax Rules for All Meta-patterns	9
2.2	Overview of Building Blocks	10
2.3	Overview of Meta-patterns.....	10
2.4	Overview of Business Rules.....	10
2.5	Overview of Extension Points and Extensibility Rules	11
2.6	Overview of Syntax Rules	11
3	Building Blocks	11
4	Meta-patterns.....	13
4.1	Schedule Meta-pattern	14
4.2	Hierarchy.....	18
4.3	Calculation.....	23
4.4	Movement	27
4.5	Record	31
5	Summary of Business Use Cases.....	34
5.1	Summary Information for Business Use Cases.....	35
5.2	Information Provided for Each Business Use Case	36
5.3	Use Case Files.....	36
5.4	Rules Followed by all Use Cases	37
5.5	Guidance Not Provided by this Document	37
6	Business Use Cases.....	37
6.1	Simple Hierarchy	38
6.2	Hierarchy.....	41
6.3	Simple Calculation	42
6.4	Nested Calculation	43
6.5	Inverted Calculation.....	44
6.6	Multiple Calculations	46
6.7	Simple Movement.....	47
6.8	Simple Movement (Alternative: Using Movement Axis)	48
6.9	Complex Movement Using Items.....	49
6.10	Complex Movement Using Axis.....	49
6.11	Simple Compound Concept	50
6.12	Repeating Concept.....	51
6.13	Multiple Periods Compound Concept.....	52
6.14	Movements in Compound Concept	52
6.15	Nested Compound Concept	53
6.16	Reconciliation of Balance	54
6.17	Text Block	55
6.18	Restatement	56
6.19	Reissue Report	57
6.20	Reclassification.....	58
6.21	Prose	59
6.22	Comment	60
6.23	Sales Analysis	61
6.24	Segment Breakdown	61
6.25	Interim Report	63
6.26	Total with Detail	63

6.27	Composite Keys.....	64
A	References (non-normative).....	65
B	Document History	65

DRAFT

1 Introduction

The purpose of this document is to explain the XBRLS meta-patterns and how those meta-patterns can be used to effectively meet common business use cases found in financial reporting. Many of these patterns are also use cases of general business reporting.

This information is helpful to taxonomy creators who wish to create internally consistent taxonomies or to show them how to articulate in XBRL specific use cases required within their taxonomies. The document is both somewhat of a cookbook and a best practices guide to creating high quality taxonomies and instance documents which are proven to be effective. Additionally, this document is useful to software vendors creating software as it helps them understand these business use case their users will likely require.

Readers of this document are assumed to have experience in creating taxonomies and instance documents. This document is not intended for the casual business user.

This document is not a technical guide to the XBRLS architecture; see the XBRLS Architecture Specification for that information. This document is a practical explanation of and guidance helpful to business users who desire to make use of XBRL.

1.1 Evolution of this Information

The information in this document has evolved over many years. There has always been one goal in mind which is to make XBRL work better for business users. Helpful background information is contained in the document "XBRLS: How a simpler XBRL can make a better XBRL" which can be obtained from the following URL:

<http://xbrl.squarespace.com/storage/xbrls/XBRLS-How-simpler-can-be-better-2008-03-11.pdf>

1.2 What is XBRLS?

XBRLS can be thought of as a dialect of XBRL; one approach or technique. XBRLS is 100% XBRL compliant. XBRLS has a documented architecture specification. XBRLS is architected to minimize the cost to businesses of implementing XBRL and maximizing functionality realized. For more information on XBRLS see the XBRLS architecture document.

Each taxonomy created uses some approach or technique. That approach may or may not be documented, but there is an approach none-the-less. Each of these approaches can be thought of as a dialect. One dialect of may not be easily compatible with another dialect. Dialects may not need to be compatible. However, some taxonomies do have to be compatible with other taxonomies.

A lot has been learned over the past several years about constructing taxonomies. XBRLS really does not invent anything new. What it does do is take the best ideas and uses them to create a highly flexible, highly functional, maximally explicit, taxonomy architecture. Ideas are taken from the COREP, FINREP, IFRS-GP, US GAAP, Netherlands, and other taxonomies and combined to form XBRLS.

This document summarizes information relating to XBRLS within this document. Information in this document is not normative in this regard. Please see the XBRLS Architecture document for the definitive technical rules relating to XBRLS. Information in this document is intended to be easier to read versions of the official technical rules.

1.3 XBRLS Architecture

This document is not a technical guide to the XBRLS architecture; see the XBRLS Architecture Specification for that information. This document is a practical explanation of and guidance helpful to business users who desire to make use of XBRL.

The XBRLS Architecture specification can be obtained from the following URL:

1.4 Scope

This document was created with financial reporting specifically in mind, but anyone doing business reporting will likely benefit from the information in this document.

1.5 Organization of this document

This document is organized to be used as a reference.

1.6 Terminology

The following is terminology which is helpful to understanding this document. This terminology is intended to be at a level which is useful to business users. XML, XML Schema, XLink, and XBRL each define their own terminology. Much of the technical terminology of XBRL is inherited from XML, XML Schema, and XLink on which XBRL relies. Other terms are not well defined by XBRL.

This summary tries to create on consistent articulation of important base terminology which is useful to a business professional making use of XBRL. This terminology is targeted at semi-technical business professionals who must explain XBRL to non-technical business users. For more information about this terminology, please see the "Overview of the Logical Model" section of the XBRLS Architecture document.

XBRLS Term	Meaning
Concept	<p>The XML Schema term "element" is used within an XBRL taxonomy to define XBRL concepts. The term "concept" should be used, rather than the commonly used terms "element".</p> <p>A concept is a business concept. That concept is expressed within XBRL as an XML Schema element.</p>
Fact Value	<p>A fact value in an XBRL element within an instance document. That value has a concept associated with it. XBRL refers to these as items.</p>
Network of Relationships	<p>A network of relationships is two or more concepts which are organized within one or more XLink Extended Links which are of the same type (presentation, calculation, definition) and have the same extended link role. How XBRL uses extended links and how XLink uses extended links are different and this difference needs to be well understood. A network of relations is after all DTS processing has taken place, it is a result of that processing. A base set of arcs is the preprocessed version of the network.</p>
Schedule	<p>XBRLS meaning for what XBRL calls a hypercube. A business report can be broken down into components or individual "schedules" or "tables". A schedule is one section of a larger report.</p>
Flow	<p>Business reports have a "flow". For example, financial statements are organized with the balance sheet, income statement, cash flow statement, policies, and disclosures in a particular order which can be expected by a business user. The flow is basically how schedules are ordered.</p>
Shape	<p>Each schedule can be thought of as having a certain "shape". The shape can be describes as the rows and columns of schedule or table. Different schedules sometimes have different shapes.</p>

XBRLS Term	Meaning
Domain	Total of all the members.
Member	A value of an Axis or dimension.
Axis	XBRLS meaning for what XBRL calls a dimension.
Line Items	Line items is the collection of primary items which are allowable within a hypercube.
As of (or As at)	Instant periodType. For example, a balance sheet is as of (or as at) a point in time such as December 31, 2007.
For period (or For Period Ended; For period Ending)	Duration periodType. For example, an income statement is for a period of time such as for the year ended December 31, 2007.
Record	XBRL term tuple. A complex concept comprised of one or more simple concepts which can repeat (i.e. there can be more than one). For example, a "Related Party" is a [Record] because there can be more than one related party as compared to say a "Cash and Cash Equivalents Policy" of which there may be only one (i.e., it repeats). Director Compensation is a record because a Director Salary and Director Bonuses is meaningless unless it is associated with a Director Name.
Hierarchy	A [Hierarchy] is the simplest form of a relation as it has no calculations associated with it and it does not repeat. It is similar to a simple categorization or sub categorization.
Calculation	A form of a computation where all the concepts are of the same context. A [Calculation] is a simple summation with all concepts within the same context.
Movement	Reconciliation of concept from one instant to another instant. There are two types of movements. One is where there is a beginning balance, changes, and an ending balance; the only thing changing is the period. The second is a reconciliation of a balance to another balance and something other than the period changes; for example the reconciliation of retained earnings when there is a prior period adjustment, the balances are the originally stated value and the restated value, the changes are the adjustments to the originally stated balance giving rise to the restatement.
Business Rule	XBRL Formula, generally used where you cannot make an XBRL Calculation work because the computation is complex or because the fact values participate in different XBRL contexts.
Parent	Parent
Child	Child
Sibling	Sibling
Tree	Tree
Graph	Graph
Extension point	
Extensibility rules	
Meta-pattern	
Neutral format table	

XBRLS Term	Meaning
Fixed axes	
Variable axes	
Scale Factor	

1.7 XBRLS Logical Model

The following is a summary of the logical model of business reporting which is explained in the XBRLS Architecture Specification. This information helps users understand how the pieces of XBRLS fit together. An understanding of this terminology is helpful.

1. Some parties are creators of data, others are consumers of data. Parties can be both a consumer and a creator.
2. Business reports can be broken down into a collection of smaller components called "**schedules**" (sometimes referred to as tables). A report can be seen as a collection of schedules. A schedule is a collection of related information not from a presentation perspective, but from a logical use perspective. For example, a balance sheet is a schedule; its information is logically related. As it turns out, the logical relations can assist in rendering the information for human consumption and comprehension of the information. This is why, logically, a balance sheet and an income statement are two different schedules.
3. These schedules commonly consist of one or more patterns. For example a calculation or a movement-analysis, are patterns found in business reports. The semantics and structure of such constructs are expressed as **meta-patterns** within XBRLS.
4. The identified **meta-patterns** are: **hierarchy, calculation, movement, record**. A **schedule** is a container type meta-pattern which holds the other patterns.
5. A schedule may have one or more **axis** (aka XBRL Dimensions dimension). An axis has a domain (total, aka XBRL Dimensions domain) and members (aka XBRL Dimensions member). An entity or a portion of an entity (a segment) is an axis, even though this is articulated as a context within XBRL. A period is likewise an axis. These two axes articulated within XBRL as in the item context, are called "**quasi-dimensions**". **Units** are likewise an axis.
6. A schedule has **line items** which are contained within that.
7. **Line items** are organized within a taxonomy using **meta-patterns**.
8. **Fact values** are reported by business users in business reports. The fact values have a context. A context is expressed as a collection of axis member values. Together they define a unique "primary key" for a fact. A fact value which is numeric has a unit.
9. A meta-pattern has a **shape**. It can be thought of as the layout of information expressed by the meta-pattern. A shape can for instance be expressed as the rows and columns of a table. For example, accounting policies are disclosed for one period, many calculations are shown for the current period and prior period. These are two different shapes.
10. Business reports have a **flow**. For example, flow can be the balance sheet, then the income statement, then the cash flow statement, etc. Or, the flow can be within a report such as the flow within the management discussion and analysis section of a financial report.

11. Meta-patterns have logical and **pathological** points at which they can be extended by a user. Logical places where a meta-pattern can be extended are called **extension points** of a meta-pattern.
12. It is a domain expert's choice as to whether a report creator can extend a taxonomy at one of the logical extension points. Whether or not a business user can use a logical extension point within specific reporting system is articulated using **extensibility rules**.
13. Business users will never be able to agree on how data should be formatted or presented, this is why XBRL deemphasizes presentation, focusing more on articulating data. However, in order to understand provided information there must be enough organization in order to see relationships within the data. A minimal form of organization of data to allow a business user to visually see the data is called a **neutral format table**.
14. Axis can be of a **fixed** or **variable type depending on the schedule**. A fixed axis applies the same dimension member value to each fact value reported in the schedule. If a fact value set that has multiple dimension member values within the schedule, it is said to be variable.
15. A numeric fact value seen on or presented on a business report may have a **scale factor**. For example, a business report may say "in millions of dollars" and show the number "15,000,000" as simply "15" on the report. The scale factor can be seen as an axis, it must be set by the business user.
16. One business user's data set can be, and usually will likely be, different than another business user's data set. For example, different analysts care about different things. In addition to what is shown, how it is shown may be variable; for example consider an Excel pivot table, underlining, font, bold, etc.
17. A business report may have **comments** relating to fact values within that report.

1.8 Document conventions

The following formatting is used for examples in this document:

Editorial comments are denoted as follows and removed from final recommendations:

2 Overview of Building Blocks, Meta-patterns, and Business Use Cases

There are many important decisions that need to be made when building an XBRL taxonomy. Users should not be bothered by unimportant decisions that a software application could make if the software application had enough information.

This is what XBRLS meta-patterns are all about: giving software enough information in order to take over the mindless work that can be easily performed by a computer. This frees the business user to do the things that a computer cannot perform, no matter how much software which might exist, and allow him to focus on the value added work.

The XBRLS meta-patterns that have been created in order to provide a maximum of information to a software application. This will allow that application to verify that the taxonomy has been (or is being) created correctly. Either during the creation process or after the taxonomy has been created (for users who do not have XBRLS type functionality built into their XBRL taxonomy creation software), software applications can check the internal consistency of a taxonomy, the logic of the taxonomy, etc. This makes creating taxonomies much easier.

This document does not specify the XBRLS meta-patterns but rather explains them in terms which are helpful to business users who are somewhat technical. This explanation is not intended for the average business user, but rather for a business user consultant who may need to explain XBRL to the average business user, who desires to create new meta-patterns, etc.

A good way to think about this information is to think about things which are similar. A good candidate in our case is the simple Lego which we all have played with as children. Meta-patterns are like Lego blocks which are designed to serve a specific task and to connect with other types of Lego blocks. Another way to look at this is as sub components or subassemblies.

There are four sets of examples or “layers” with which to learn this information. These layers are described as follows:

1. **XBRLS Building Blocks** – Common components are used across meta-patterns. These common components are called building blocks. These building blocks are instantiated within the XBRLS schema file using the XML Schema substitutionGroup. The building blocks are basically sub-classes of the xbrli:item substitutionGroup.
2. **XBRLS Meta-patterns** – The XBRLS meta-patterns is the simplest example of using XBRLS. Each of the basic meta-patterns is describe in a single set of files which focuses on that specific meta-pattern. This focus helps to ground one’s understanding.
3. **XBRLS Business Use Cases** – The XBRLS business cases is a set of files which applies XBRLS to a set of identified business cases and shows how XBRLS would be used in each specific case. These tend to be more logical to a business user.
4. **XBRLS Comprehensive Example** – The XBRLS comprehensive example takes each of the use cases, combines them into a more real life type situation, balancing the minimum business use case with the maximum amount of technical complexity. Another way to say this is that the disadvantage of the XBRLS Business Use Cases is that they are created in isolation and it is hard to see how a specific use case would interact with other use cases. The comprehensive example combines the use cases together, showing this interaction. But, rather than doing this with a real life taxonomy (for example, the US GAAP Taxonomy has 16,000 concepts), the comprehensive example distills the important items to be communicated and shown down to their essence, but shows enough to be realistic and maximizes the business users ability to see real life examples.

These meta-patterns and use cases can be seen as and used as templates to help a business solve the problem that then need to solve. Software applications can leverage the meta-data buried deeply within each meta-pattern and guide a business user through their reporting situation and used as a template for their specific situation, based on a common set of business reporting situations.

2.1 Overview of Syntax Rules for All Meta-patterns

What we will do here is to articulate the essence of what is going on in order for a semi-technical business user can “see the moving parts”. This task is like walking a tight rope, balancing providing too much detail causing the important items to get lost and providing too little detail and important concepts are totally missed. Here, we endeavor to walk that tight rope.

The non-technical business user need not be familiar with these rules as software will enforce these rules. These rules make it easier for business users to make use of XBRL as they eliminated unnecessary options for which a business user would be responsible, had the decisions not be made by the XBRLS Architecture.

The following is a summary of rules which apply to the entire taxonomy. These rules are a Presentation, Calculation, Definition MUST be in sync. The structures within a network summary of what is contained within the XBRLS architecture.

1. MUST be consistent across all parts for the network. There is assumed to be a connection between each aspect (presentation, calculation, definition) of a network.
2. All non-abstract concepts MUST be contained within a [Hypercube] ([Schedule]). Meaning, the taxonomy cannot contain concepts which do not participate within an XBRL Dimension. All hypercubes are closed. All contextual information MUST be explicit, rather than leaving it up for the consuming application to determine.
3. All XBRL Dimensions [Axis] and [Domain]/[Member] information MUST be placed within the <segment> element of a context. The <scenario> concept is never used. There is no functional difference between the two. XBRL Dimensions allows either; however, there is no benefit to using one over the other. Eliminating one option eliminates a choice a business user needs to make. There are no negative ramifications of eliminating one of the context elements.
4. All relations MUST be provided for. All computations that exist within an instance must be provided for within the taxonomy. No computations/calculations are left to chance. The reasoning for this is to automate validation of all computations, rather than rely on manual validation/verification. Computations can be articulated using XBRL calculations or XBRL Formulas.
5. The Hypercube modeling does not make use of the {notAll} arcRole. This implies that there is no validation of providing information where it is not possible from a semantic point of view. It means there are no "holes" in the hypercube dimensional space like in the COREP taxonomy

2.2 Overview of Building Blocks

Building blocks are XBRL modeling components that have specific characteristics. Building blocks are 100% XBRL compliant, adding no additional attributes or other characteristics that make them noncompliant with the XBRL Specification. Building blocks are used to build meta-patterns. A building block is something that is a little bigger than an XBRL concept, but smaller than a meta pattern.

All building blocks are 100% XBRL compliant, but what they do is make it so a business user does not need to decide what to do. All building blocks are indicated using "[]", for example "[Hypercube]".

2.3 Overview of Meta-patterns

Meta-patterns are templates from which all business use cases are built. Meta-patterns organize building blocks and XBRL concepts into specific structures that are testable using automated testing. Using meta-patterns ensures consistency of modeling within a taxonomy, consistency of extension taxonomies and consistency across XBRL solutions.

2.4 Overview of Business Rules

Business rules is the term to denote all the rules that apply to the concepts within a taxonomy from a business user perspective. Some business rules are expressed in the form of XBRL calculations, some are expressed using XBRL formulas, and some are expressed using whatever proprietary methods are available by a user's application (and therefore ONLY usable by that user).

Every business rule is intended to be articulated within a taxonomy in order to maximize the validation which can be achieved via automated means, and therefore minimizing the validation which must be achieved manually. [RAVE: see point 5 above on the {notAll} arcRole – the question is how far to go with business rule markup in XBRL. The NTP Taxoffice is a point in case where rules modeling has gone way overboard...]

2.5 Overview of Extension Points and Extensibility Rules

Extension points are logical points – and the only points – where a taxonomy can be extended. They exist within a meta pattern.

Extensibility rules are rules, which take advantage of a meta-pattern's extension points in order to extend a taxonomy. A taxonomy creator may, or may not, choose to allow the extension of a taxonomy, using extensibility rules, at a logical extension point.

In addition to taxonomy extension points, the instance has extension points. For example, periods can be added as can units.

All extension points are articulated for each meta pattern and each use case **MUST** comply with these extension points. Taxonomy authors **MAY** provide extensibility rules which control or eliminate the use of extension points. Without information to the contrary in terms of extension rules, all extension points are deemed useable within a taxonomy.

2.6 Overview of Syntax Rules

Syntax rules are rules which have more to do with structuring the business data than to do with the business concepts themselves. Syntax rules articulated here can be enforced:

- Within a software application that supports XBRLS, by supporting verification of the structure and syntax of the taxonomy during creation. For example, when a structure is added in a taxonomy creation tool, the application **ONLY** lets the user do the right thing, not the wrong thing.
- After a taxonomy is created. If a software application does not support XBRLS, but it does support XBRL; then the taxonomy creator or instance creator can verify that the XBRL documents comply with XBRLS by running a validator which does support XBRLS.
- The final option is that a user can write their own syntax checker to verify the rules articulated by XBRLS.
- A non-practical option is to manually review a taxonomy to ensure compliance to the rules documented, but the probability that this can be done correctly is remote. It is listed here merely to complete the spectrum of options.

3 Building Blocks

The following is a summary of building blocks used by XBRLS and by the meta-patterns and business use cases modeled in this document.

Marker (optional)	Substitution Group or Type	Meaning
-------------------	----------------------------	---------

Marker (optional)	Substitution Group or Type	Meaning
[Abstract]	xbrls:abstractGroup	Used only above tables to organize tables within an extended link (network). Never used within another meta pattern. PeriodType MUST = "Duration". Type MUST = "String". MAY have "[Abstract]" marker in label.
[Schedule]	xbrldi:hypercubeItem	Provided by XBRL Dimensions specification.
[Axis]	xbrldi:dimensionItem	Provided by XBRL Dimensions specification.
[Line Items]	xbrls:lineItemsGroup	Indicates the concepts which are the [Line Items] part of a [Schedule]. MUST have all the characteristics of [Abstract].
[Hierarchy]	xbrls:hierarchyGroup	Indicates the concepts which are the root of a [Hierarchy] meta pattern. MUST have all the characteristics of [Abstract].
[Calculation]	xbrls:calculationGroup	Indicates the concepts which are the root of a [Calculation] meta pattern. MUST have all the characteristics of [Abstract].
[Movement]	xbrls:movementGroup	Indicates the concepts that are the root of a [Movement] meta pattern. MUST have all the characteristics of [Abstract].
[Text Block]	xbrls:textBlockItemType	Indicates the concepts which are [Text Block]s. These concepts allow white space characters such as page breaks and line feeds.
[Text]	xbrli:tokenItemType	Indicates the concepts which are intended to have values which are strings. Normal strings allow things such as to spaces in a row, line feeds, page breaks, and a space as the first or last character. This type eliminates that possibility, providing a more appropriate data type for certain types of concepts.

Marker (optional)	Substitution Group or Type	Meaning
[Record]	xbrls:recordGroup	Similar to a [Hierarchy] however intended to articulate information which would have been included within an XBRL tuple. [CSH: Someone suggested that a better term is [Set]. Not sure this is needed, may remove]
[Comment]	xbrls:commentGroup	Comments. These will only exist in DRAFT or pre-release versions of taxonomies. They should not cause an error to be thrown.

[CSH: To do. We still need to address the issue of being unable to organize the individual extended links.]

4 Meta-patterns

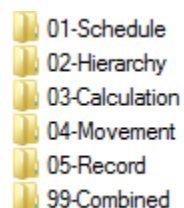
Life is full of patterns. As we said before, “Analyzing things in the form of patterns helps one understand them”. When we understand a pattern and recognize one in real life we benefit because a pattern comes with a lot of implied knowledge about the situation. For example, if I see a list or facts together with a fact named ‘total’ I can:

- assume that all the facts MUST add up to the total
- the facts are can actually be added
- the facts probably have some relation to each other in some interpretation context
- etc.

Meta-patterns are templates from which all business use cases are built. They make these types of relations explicit, rather than implicit. Meta-patterns organize building blocks and XBRL concepts into specific structures. Because of all the implied knowledge about situation when a pattern is used to describe it we can use the explicit and implicit knowledge to test the structure of the provided information and the values of the provided information. The patterns can be tested using automated testing procedures. If we only use patterns to describe taxonomy structure and information this will ensure consistency within a taxonomy, in the manner in which extension taxonomies are created and interoperability between XBRL solution.

The key point is therefore to analyze real world business reporting use cases and abstract the business reporting meta-patterns and the implied knowledge that comes with them. In the next chapters, we describe the business reporting meta-patterns we have abstracted from our analysis of financial statements and other reporting domains so far.

Note that physical implementations of these meta-patterns can be found in the meta pattern file referred to above. The directory structure of the ZIP file is below:



Each meta pattern is provided within the subdirectory with the meta pattern’s name. Provided for each meta pattern are:

- A taxonomy
- An instance document.
- A neutral format template.
- XSLT which creates a PDF of from the values within the instance document.
- Validation reports generated.

The last subdirectory "99-Combined" has all meta-patterns combined into one physical taxonomy and instance document.

4.1 Schedule Meta-pattern

The "Schedule" meta pattern is a container which is used by all other meta-patterns. The table holds all other portions of the pattern. A Schedule may contain a Hierarchy pattern, a Calculation pattern or a Movement pattern.

4.1.1 Example of meta-pattern

Sample Company
For Period Ending December 31,
(thousands of dollars)

	2007	2006	2005
Sales, all Segments, all Regions	32,038	35,805	32,465
Breakdown by Segment:			
Pharmaceuticals	20,181	18,150	15,275
Generics	2,433	1,973	1,823
Consumer Health	6,675	6,514	5,752
Other Segments	2,749	9,168	9,615
Breakdown by Region:			
US and Canada	10,214	12,649	10,137
Europe	11,901	10,374	10,396
Asia	5,639	4,371	3,210
Other regions	4,284	8,411	8,722

4.1.2 Characteristics of meta-pattern

The following is a summary of the characteristics of this meta pattern:

- The Schedule meta pattern is only used to enable the assignment of dimensions to concepts.
- All other meta-patterns MUST be contained within a Schedule meta pattern. This ensures that every concept reported as a fact value within an instance document will participate within a hypercube and therefore will contain explicit dimensional information within contexts.

4.1.3 Syntax rules of meta-pattern

The following is a summary of the rules that apply to this meta pattern:

1. A [Schedule] MUST have one [Line Items]. The [Line Items] MUST be the last child of the [Schedule] concept.
2. A [Schedule] MUST have one or more [Axis] as children.
3. A [Schedule] MUST have no children which are not [Axis] or [Line Items].
4. A [Line Items] MUST have at least one child.
5. A [Line Items] MUST NOT have decedents which are [Axis], [Domain], [Member], or [Schedule].
6. A [Line Items] MUST be an abstract concept
7. A [Hierarchy], [Calculation], or [Movement] block may appear within a [Schedule].

4.1.4 Taxonomy example of meta-pattern

The following is taxonomy information for this pattern:

Presentation:

Line	Balance Type	Period Type	Data Type	Label
1				Extended Link (10000 – Sales Analysis)
2		Duration	(Hypercube)	Sales Analysis [Schedule]
3		Duration	(Dimension)	Entity [Axis]
4		Duration	(Dimension)	Sample Company [Member]
5		Duration	(String)	Business Segment [Axis]
6		Duration	Monetary	Business Segments, All [Domain]
7		Duration	Monetary	Pharmaceuticals Segment [Member]
8		Duration	Monetary	Consumer Heath Segment [Member]
9		Duration	Monetary	Generics Segment [Member]
10		Duration	Monetary	Other Segments [Member]
11		Duration	(String)	Region [Axis]
12		Duration	Monetary	Regions, All [Domain]
13		Duration	Monetary	US and Canada Region [Member]
14		Duration	Monetary	Europe Region [Member]
15		Duration	Monetary	Asia Region [Member]
16		Duration	Monetary	Other Regions [Member]
17		Duration	[Line Items]	Sales Analysis [Line Items]
18		Duration	[Hierarchy]	Sales Analysis [Hierarchy]
18	Credit	Duration	Monetary	Sales

Calculation:

Line	Weight	Arcrole	Label
1			Extended Link (10000 – Sales Analysis)
2			(=) Business Segments, All [Domain]
3	1	Aggregator-Contributor	(+) Pharmaceuticals Segment [Member]
4	1	Aggregator-Contributor	(+) Consumer Heath Segment [Member]
5	1	Aggregator-Contributor	(+) Generics Segment [Member]
6	1	Aggregator-Contributor	(+) Other Segments [Member]
7			(=) Regions, All [Domain]
8	1	Aggregator-Contributor	(+) US and Canada Region [Member]
9	1	Aggregator-Contributor	(+) Europe Region [Member]
10	1	Aggregator-Contributor	(+) Asia Region [Member]

Line	Weight	Arcrole	Label
11	1	Aggregator-Contributor	(+) Other Regions [Member]

Note that relations exist between the [Domain] and the [Member]s. These computations are expressed using the "aggregator-contributor" approach. [CSH: This is temporary until the XBRL Formulas specification is released and software exists to perform this validation.]

Definition:

Line	Data Type	Arcrole	Label
1			Sales Analysis [Line Items]
2		Domain-Member	Sales Analysis [Hierarchy]
3		Domain-Member	Sales
4		Has-Dimension (All)	Sales Analysis [Schedule]
5		Dimension-Domain	Entity [Axis]
6		Dimension-Domain	Sample Company [Member]
7		Domain-Member	Business Segment [Axis]
8		Domain-Member	Business Segments, All [Domain]
9		Domain-Member	Pharmaceuticals Segment [Member]
10		Domain-Member	Consumer Health Segment [Member]
11		Dimension-Domain	Generics Segment [Member]
12		Dimension-Domain	Other Segments [Member]
13		Domain-Member	Region [Axis]
14		Domain-Member	Regions, All [Domain]
15		Domain-Member	US and Canada Region [Member]
16		Domain-Member	Europe Region [Member]
17		Domain-Member	Asia Region [Member]

- Note that there is only one real concept in this taxonomy that would be used as a fact value within the instance document and that is "Sales". The other information is used to articulate information about regions and segments. XBRL Dimensions provides this functionality.

4.1.5 Instance example of meta-pattern

The following is a table that shows information related to the instance document that expresses information relating to this modeling pattern. The data ties to the screen shot of the pattern:

Line	Concept	Context Ref	Unit Ref	Decimals	Value
1	Sales	D-2007-All	U-Monetary	INF	32038000
2	Sales	D-2006-All	U-Monetary	INF	35805000
3	Sales	D-2005-All	U-Monetary	INF	32465000
4	Sales	D-2007-Pharm	U-Monetary	INF	20181000
5	Sales	D-2006-Pharm	U-Monetary	INF	18150000
6	Sales	D-2005-Pharm	U-Monetary	INF	15275000
7	Sales	D-2007-Gen	U-Monetary	INF	2433000
8	Sales	D-2006-Gen	U-Monetary	INF	1973000
9	Sales	D-2005-Gen	U-Monetary	INF	1823000
10	Sales	D-2007-ConHealth	U-Monetary	INF	6675000
11	Sales	D-2006-ConHealth	U-Monetary	INF	6514000
12	Sales	D-2005-ConHealth	U-Monetary	INF	5752000

Line	Concept	Context Ref	Unit Ref	Decimals	Value
13	Sales	D-2007-OtherSeg	U-Monetary	INF	2749000
14	Sales	D-2006-OtherSeg	U-Monetary	INF	9168000
15	Sales	D-2005-OtherSeg	U-Monetary	INF	9615000
16	Sales	D-2007-US	U-Monetary	INF	10214000
17	Sales	D-2006- US	U-Monetary	INF	12649000
18	Sales	D-2005- US	U-Monetary	INF	10137000
19	Sales	D-2007-Europe	U-Monetary	INF	11901000
20	Sales	D-2006-Europe	U-Monetary	INF	10374000
21	Sales	D-2005-Europe	U-Monetary	INF	10396000
22	Sales	D-2007-Asia	U-Monetary	INF	5639000
23	Sales	D-2006-Asia	U-Monetary	INF	4371000
24	Sales	D-2005-Asia	U-Monetary	INF	3210000
25	Sales	D-2007-OtherRegions	U-Monetary	INF	4284000
26	Sales	D-2006-OtherRegions	U-Monetary	INF	8411000
27	Sales	D-2005-OtherRegions	U-Monetary	INF	8722000

The following is a calculation validation report:

Line	Label	W	B	D-P	Value	Source	Message
1 Dimensions period from 2005-01-01 to 2005-12-31 for SAMP Scenario-1							
2 U-Monetary							
3 pattern:Entity [Axis]//pattern:Sample Company [Member], pattern:Business Segment [Axis]//pattern:Business Segments, All [Domain]							
4	pattern:Sales[... , pattern:Region [Axis]//pattern:Regions, All [Domain]]		C	INF	32,465,000	both	OK
5	pattern:Sales[... , pattern:Region [Axis]//pattern:US and Canada Region [Member]]	1	C	INF	10,137,000	inst	
6	pattern:Sales[... , pattern:Region [Axis]//pattern:Europe Region [Member]]	1	C	INF	10,396,000	inst	
7	pattern:Sales[... , pattern:Region [Axis]//pattern:Asia Region [Member]]	1	C	INF	3,210,000	inst	
8	pattern:Sales[... , pattern:Region [Axis]//pattern:Other Regions [Member]]	1	C	INF	8,722,000	inst	
9 pattern:Entity [Axis]//pattern:Sample Company [Member], pattern:Region [Axis]//pattern:Regions, All [Domain]							
10	pattern:Sales[... , pattern:Business Segment [Axis]//pattern:Business Segments, All [Domain]]		C	INF	32,465,000	both	OK
11	pattern:Sales[... , pattern:Business Segment [Axis]//pattern:Pharmaceuticals Segment [Member]]	1	C	INF	15,275,000	inst	
12	pattern:Sales[... , pattern:Business Segment [Axis]//pattern:Consumer Health Segment [Member]]	1	C	INF	5,752,000	inst	
13	pattern:Sales[... , pattern:Business Segment [Axis]//pattern:Generics Segment [Member]]	1	C	INF	1,823,000	inst	
14	pattern:Sales[... , pattern:Business Segment [Axis]//pattern:Other Segments [Member]]	1	C	INF	9,615,000	inst	
15 Dimensions period from 2006-01-01 to 2006-12-31 for SAMP Scenario-1							
16 U-Monetary							
17 pattern:Entity [Axis]//pattern:Sample Company [Member], pattern:Business Segment [Axis]//pattern:Business Segments, All [Domain]							
18	pattern:Sales[... , pattern:Region [Axis]//pattern:Regions, All [Domain]]		C	INF	35,805,000	both	OK
19	pattern:Sales[... , pattern:Region [Axis]//pattern:US and Canada Region [Member]]	1	C	INF	12,649,000	inst	
20	pattern:Sales[... , pattern:Region [Axis]//pattern:Europe Region [Member]]	1	C	INF	10,374,000	inst	
21	pattern:Sales[... , pattern:Region [Axis]//pattern:Asia Region [Member]]	1	C	INF	4,371,000	inst	
22	pattern:Sales[... , pattern:Region [Axis]//pattern:Other Regions [Member]]	1	C	INF	8,411,000	inst	
23 pattern:Entity [Axis]//pattern:Sample Company [Member], pattern:Region [Axis]//pattern:Regions, All [Domain]							
24	pattern:Sales[... , pattern:Business Segment [Axis]//pattern:Business Segments, All [Domain]]		C	INF	35,805,000	both	OK
25	pattern:Sales[... , pattern:Business Segment [Axis]//pattern:Pharmaceuticals Segment [Member]]	1	C	INF	18,150,000	inst	
26	pattern:Sales[... , pattern:Business Segment [Axis]//pattern:Consumer Health Segment [Member]]	1	C	INF	6,514,000	inst	
27	pattern:Sales[... , pattern:Business Segment [Axis]//pattern:Generics Segment [Member]]	1	C	INF	1,973,000	inst	
28	pattern:Sales[... , pattern:Business Segment [Axis]//pattern:Other Segments [Member]]	1	C	INF	9,168,000	inst	
29 Dimensions period from 2007-01-01 to 2007-12-31 for SAMP Scenario-1							
30 U-Monetary							
31 pattern:Entity [Axis]//pattern:Sample Company [Member], pattern:Business Segment [Axis]//pattern:Business Segments, All [Domain]							
32	pattern:Sales[... , pattern:Region [Axis]//pattern:Regions, All [Domain]]		C	INF	32,038,000	both	OK
33	pattern:Sales[... , pattern:Region [Axis]//pattern:US and Canada Region [Member]]	1	C	INF	10,214,000	inst	
34	pattern:Sales[... , pattern:Region [Axis]//pattern:Europe Region [Member]]	1	C	INF	11,901,000	inst	
35	pattern:Sales[... , pattern:Region [Axis]//pattern:Asia Region [Member]]	1	C	INF	5,639,000	inst	
36	pattern:Sales[... , pattern:Region [Axis]//pattern:Other Regions [Member]]	1	C	INF	4,284,000	inst	
37 pattern:Entity [Axis]//pattern:Sample Company [Member], pattern:Region [Axis]//pattern:Regions, All [Domain]							
38	pattern:Sales[... , pattern:Business Segment [Axis]//pattern:Business Segments, All [Domain]]		C	INF	32,038,000	both	OK
39	pattern:Sales[... , pattern:Business Segment [Axis]//pattern:Pharmaceuticals Segment [Member]]	1	C	INF	20,181,000	inst	
40	pattern:Sales[... , pattern:Business Segment [Axis]//pattern:Consumer Health Segment [Member]]	1	C	INF	6,675,000	inst	
41	pattern:Sales[... , pattern:Business Segment [Axis]//pattern:Generics Segment [Member]]	1	C	INF	2,433,000	inst	
42	pattern:Sales[... , pattern:Business Segment [Axis]//pattern:Other Segments [Member]]	1	C	INF	2,749,000	inst	

- Note that the computations above are cross context (cross dimensions) and therefore cannot be enforced using XBRL Calculations. As such, “aggregator-contributor” type calculations are used to enforce this rule currently. Eventually when XBRL Formulas is available within software, using formulas will be the approach to achieve this type of validation.

4.1.6 Neutral format table of meta-pattern

The following is a neutral format table of this meta-pattern:

Fixed Axis:

Static Fields (Applies to all Fact Values)		
Perspective [Axis]:	Presentation Linkbase	
Entity [Axis]:	company: Sample Company [Member]	(+) Entity
Units [Axis]:	iso4217:USD	(+) Unit
Scale [Factor]:	1000	

Variable axis, Line Items, and Fact Values:

	A	B	C	D	E	F	G
1	Sales Analysis	gaap: Business Segment [Axis]	gaap: Region [Axis]	Period [Axis]			
2	Period [Axis]			[For period:] 2007-01-01 to 2007-12-31	[For period:] 2006-01-01 to 2006-12-31	[For period:] 2005-01-01 to 2005-12-31	(+) Period
3	Sales Analysis [Line Items]						
4	Sales Analysis [Hierarchy]						
5	Sales	gaap: Business Segments, All [Domain]	gaap: Regions, All [Domain]	32,038	35,805	32,465	
6							
7	Sales Analysis [Line Items]						
8	Sales Analysis [Hierarchy]						
9	Sales	company: Pharmaceuticals [Member]	gaap: Regions, All [Domain]	20,181	18,150	15,275	
10	Sales	company: Consumer Health Segment [Member]	gaap: Regions, All [Domain]	2,433	1,973	1,823	
11	Sales	company: Generics Segment [Member]	gaap: Regions, All [Domain]	6,675	6,514	5,752	
12	Sales	company: Other Segments [Member]	gaap: Regions, All [Domain]	2,749	9,168	9,615	
13							
14	Sales Analysis [Line Items]						
15	Sales Analysis [Hierarchy]						
16	Sales	gaap: Business Segments, All [Domain]	company: US and Canada [Member]	10,214	12,649	10,137	
17	Sales	gaap: Business Segments, All [Domain]	company: Europe [Member]	11,901	10,374	10,396	
18	Sales	gaap: Business Segments, All [Domain]	company: Asia [Member]	5,639	4,371	3,210	
19	Sales	gaap: Business Segments, All [Domain]	company: Other Regions [Member]	4,284	8,411	8,722	
20	(+) Concept	(+) Business Segment [Member]	(+) Region [Member]				

Extension Points:

Again, the pattern is only a container for other information. In this meta pattern the extension points for the meta data in the [Schedule] block are the [Member] values for the Business Segments [Axis] and the Regions [Axis] as indicated in cells [B20] and [C20].

The meta pattern can also be extended for the period axis that relates to the set of instance contexts that can be extended with additional periods, as indicated in cell [G2].

4.2 Hierarchy

The Hierarchy meta pattern is used to articulate information where there is no calculation type relation, or movement type computation. Hierarchies are used to organize a taxonomy.

4.2.1 Example of meta-pattern

Sample Company
December 31,

Accounting Policies

The financial statements have been prepared on the historical cost basis, except for the revaluation of land and buildings and certain financial instruments. The principal accounting policies adopted are set out below.

Inventories

Inventories are stated at the lower of cost and net realisable value. Cost comprises direct materials and, where applicable, direct labour costs and those overheads that have been incurred in bringing the inventories to their present location and condition. Cost is calculated using the weighted average method. Net realisable value represents the estimated selling price less all estimated costs to completion and costs to be incurred in marketing, selling and distribution. Inventories are comprised of raw materials and work in progress.

Financial Instruments

Financial assets and liabilities are recognised on the Group's balance sheet when the Group has become a party to the contractual provisions of the investment.

Trade receivables

Trade receivables are stated at their nominal value as reduced by appropriate allowances for estimated irrecoverable amounts.

Investments in securities

Investments in securities are recognised on a trade-date basis and are initially measured at cost.

Bank borrowings

Interest-bearing bank loans and overdrafts are recorded at the proceeds received, net of direct issue costs. Finance charges, including premiums payable on settlement or redemption, are accounted for on an accrual basis and are added to the carrying amount of the instrument to the extent that they are not settled in the period in which they arise.

Provisions

Provisions are recognised when the Group has a present obligation as a result of a past event which it is probable will result in an outflow of economic benefits that can be reasonably estimated.

Notice the indentations that make the information easier to comprehend. Hierarchies support the organization of information And can be used to represent a flat list or an indented list. Especially when dealing with long lists where information is inherently categorized grouping information is a good manner to represent the information.

4.2.2 Characteristics of meta-pattern

The following is a summary of the characteristics of this meta pattern:

- Categorizations can be created at multiple levels in order to provide for different common groupings of concepts.

4.2.3 Syntax rules of meta-pattern

The following is a summary of the rules that apply to this meta pattern within the presentation linkbase of a taxonomy:

1. A [Hierarchy] MUST be contained with the [Line Items] of a [Schedule]
2. A [Hierarchy] MUST start with the [Hierarchy] building block (the marker [Hierarchy], MUST have the substitutionGroup xbrls:hierarchyGroup.)

3. A [Hierarchy] MUST NOT contain any other meta pattern. [RAVE: ok ? need to think this through a bit to see if I can come up with a counter argument ☺). See comment later in doc at end of chapter)
4. A [Hierarchy] MAY contain other [Hierarchy]s.

4.2.4 Taxonomy example of meta-pattern

The following is taxonomy information for this pattern:

Presentation:

Line	Balance Type	Period Type	Data Type	Label
1			(Hypercube)	Extended Link (20000 – Accounting Policies)
2		Duration	(Dimension)	Accounting Policies [Schedule]
3		Duration	String	Entity [Axis]
4		Duration	String	Entities, All [Domain]
5		Duration	(Dimension)	Sample Company [Member]
6		Duration	String	Business Segment [Axis]
7		Duration	[Line Items]	Consolidated Group [Domain]
8		Duration	[Hierarchy]	Accounting Policies [Line Items]
9		Duration	[Text Block]	Accounting Policies [Hierarchy]
10		Duration	String	Basis of Presentation [Text Block]
11		Duration	[Text Block]	Basis of Presentation
12		Duration	String	Inventory Policy [Text Block]
13		Duration	String	Inventory Valuation Method
14		Duration	String	Description of Inventory Components
15		Duration	String	Inventory Cost Method
16		Duration	String	Description of Calculation of Net Realizable Value
17		Duration	[Text Block]	Financial Instruments Policy [Text Block]
18		Duration	String	Trade Receivables Policy
19		Duration	String	Investments in Securities Policy
20		Duration	[Text Block]	Bank Borrowings Policy
				Provisions Policy [Text Block]

Calculation:

There are no calculations for this meta pattern.

Definition:

Line	Data Type	Arcrole	Label
1			Extended Link (20000 – Accounting Policies)
2			Accounting Policies [Line Items]
3		Domain-Member	Accounting Policies [Hierarchy]
4		Domain-Member	Basis of Presentation [Text Block]
5		Domain-Member	Basis of Presentation
6		Domain-Member	Inventory Policy [Text Block]
7		Domain-Member	Inventory Valuation Method
8		Domain-Member	Description of Inventory Components
9		Domain-Member	Inventory Cost Method
10		Domain-Member	Description of Calculation of Net Realizable Value
11		Domain-Member	Financial Instruments Policy [Text Block]

Line	Data Type	Arcrole	Label
12		Domain-Member	Trade Receivables Policy
13		Domain-Member	Investments in Securities Policy
14		Domain-Member	Bank Borrowings Policy
15		Domain-Member	Provisions Policy [Text Block]
16		Has-Dimension (All)	Accounting Policies [Schedule]
17		Hypercube-Dimension	Entity [Axis]
18		Dimension-Domain	Entities, All [Domain]
19		Domain-Member	Sample Company [Member]
20		Hypercube-Dimension	Business Segment [Axis]
21		Dimension-Domain	Consolidated Group [Domain]

- The hierarchy is used to "categorize" concepts. While it is not necessary to provide this hierarchy (parent/child relations), it helps the reader of the taxonomy. Imagine reading this small taxonomy as a "flat list" of concepts. Imagine a much larger taxonomy with larger sections with no categorization.

4.2.5 Instance example of meta-pattern

The following is a table that shows information related to the instance document that expresses information relating to this modeling pattern. The data ties to the screen shot of the pattern:

Line	Concept	Context Ref	Fact Value
1	Basis of Presentation [Text Block]	D-2007	The financial statements have been prepared on the historical cost basis, except for the revaluation of land and buildings and certain financial instruments. The principal accounting policies adopted are set out below.
2	Basis of Presentation	D-2007	Historical Cost
3	Inventory Policy [Text Block]	D-2007	Inventories are stated at the lower of cost and net realisable value. Cost comprises direct materials and, where applicable, direct labour costs and those overheads that have been incurred in bringing the inventories to their present location and condition. Cost is calculated using the weighted average method. Net realisable value represents the estimated selling price less all estimated costs to completion and costs to be incurred in marketing, selling and distribution. Inventories are comprised of raw materials and work in progress.
4	Inventory Valuation Method	D-2007	Cost
5	Description of Inventory Components	D-2007	weighted average method
6	Financial Instruments Policy	D-2007	Financial assets and liabilities are recognized on the Group's balance sheet when the Group has become a party to the contractual provisions of the investment.
7	Trade Receivables Policy	D-2007	Trade receivables are stated at their nominal value as reduced by appropriate allowances for estimated irrecoverable amounts.
8	Investments in Securities Policy	D-2007	Investments in securities are recognized on a trade-date basis and are initially measured at cost.
9	Bank Borrowing Policy	D-2007	Interest-bearing bank loans and overdrafts are recorded at the proceeds received, net of direct issue costs. Finance charges, including premiums payable on settlement or redemption, are accounted for on an accrual basis and are added to the carrying amount of the instrument to the extent that they are not settled in the period in which they arise.

Line	Concept	Context Ref	Fact Value
10	Provisions Policy	D-2007	Provisions are recognized when the Group has a present obligation as a result of a past event which it is probable will result in an outflow of economic benefits that can be reasonably estimated.

- All values provided are string (text) rather than numeric as we have seen in previous patterns. As string/text, the fact values have no "Unit Ref" or "Decimals" values.

The following is a screen shot of the validation report:

Line	Label	W	B	D-P	Value	Source	Message	Formula	Trace
1	No calculations or formulas for instance items and contexts.								

There no computations expressed in Hierarchy meta-patterns and therefore the validation application does not validate relations. As such, even though there is a relation between the different segments for which information is being reported, there is no computational validation.

4.2.6 Neutral format table of meta-pattern

Fixed Axis:

Static Fields (Applies to all Fact Values)		
Perspective:	Presentation	
Entity [Axis]:	company: Sample Company [Member]	(+) Entity
Business Segment [Axis]:	gaap: Consolidated Group [Domain]	(+) Business Segment
Scale [Factor]:	1000	
Units [Axis]	NOT APPLICABLE	

Variable axis, Line Items, and Fact Values:

*	A	B	C
1	Accounting Policies	<i>Period [Axis]</i>	
2	Period [Axis]	[For period:] 2007-01-01 to 2007-12-31	(+) <i>Period</i>
3	Accounting Policies [Line Items]		
4	Basis of Presentation [Text Block]	The financial statements have been prepared on the historical cost basis, except for the revaluation of land and buildings and certain financial instruments. The principal accounting policies adopted are set out below.	
5	Basis of Presentation	Historical Cost	
6	Inventory Policy [Text Block]	Inventories are stated at the lower of cost and net realisable value. Cost comprises direct materials and, where applicable, direct labour costs and those overheads that have been incurred in bringing the inventories to their present location and condition. Cost is calculated using the weighted average method. Net realisable value represents the estimated selling price less all estimated costs to completion and costs to be incurred in marketing, selling and distribution. Inventories are comprised of raw materials and work in progress.	
7	Inventory Valuation Method	Cost	
8	Description of Inventory Components	weighted average method	
9	Financial Instruments Policy [Text Block]	Financial assets and liabilities are recognised on the Group's balance sheet when the Group has become a party to the contractual provisions of the investment.	
10	Trade Receivables Policy	Trade receivables are stated at their nominal value as reduced by appropriate allowances for estimated irrecoverable amounts.	
11	Investments in Securities Policy	Investments in securities are recognised on a trade-date basis and are initially measured at cost.	
12	Bank Borrowings Policy	Interest-bearing bank loans and overdrafts are recorded at the proceeds received, net of direct issue costs. Finance charges, including premiums payable on settlement or redemption, are accounted for on an accrual basis and are added to the carrying amount of the instrument to the extent that they are not settled in the period in which they arise.	
13	Provisions Policy	Provisions are recognised when the Group has a present	
14	(+) <i>Concept</i>		

Extension Points:

A [Hierarchy] block has one extension point. It may be only extended by adding new concepts (as indicated in cell [A14])

The pattern can also be extended by adding new periods (as indicated by cell [C2]).

[CSH: It would be logical to allow for [Calculation]s, [Movement]s, and other [Hierarchy]s within a hierarchy. However, you will run into "shape" mismatch issues. Should this be allowed, or show we stick to our guns and try and keep things within the same shape?]

[RAVE: That's what my previous remark was about ☺. I think for now we should keep it simple until we find hard evidence we need to open this model up. I think we can live with the simpler situation.]

4.3 Calculation

The calculation meta pattern articulates a calculation and how it would appear in a taxonomy.

4.3.1 Example of meta-pattern

Sample Company
December 31,
(thousands of dollars)

	2007	2006
ASSETS		
Property, Plant, and Equipment, Net		
Land	5,347	1,147
Buildings, Net	244,508	366,375
Furniture and Fixtures, Net	34,457	34,457
Computer Equipment, Net	4,169	5,313
Other Property, Plant, and Equipment, Net	6,702	6,149
Property, Plant and Equipment, Net, Total	295,183	413,441

The information above shows detail of property, plant, and equipment for two periods, similar to what a balance sheet might look like, although this is simplified to focus on the meta-pattern rather than the accounting aspect.

4.3.2 Characteristics of meta-pattern

The following is a summary of the characteristics of this pattern:

- Shows a series of numeric concepts that sums up to the value of another numeric concept.

4.3.3 Syntax rules of meta-pattern

The following is a summary of the rules that apply to this meta pattern within the presentation linkbase of a taxonomy:

1. A [Calculation] MUST be contained with the [Line Items] of a [Schedule].
2. The root of the [Calculation] is the [Calculation] marker and the xbrls:calculationMarker substitutionGroup.
3. A [Calculation]'s last child is the concept being calculated. For example, above the last child would be "Property, Plant and Equipment, Net, Total".
4. All concepts which participate in a [Calculation] MUST be of the same data type and MUST be numeric.
5. A [Calculation] MAY be nested within another [Calculation].

4.3.4 Taxonomy example of meta-pattern

The following is taxonomy information for this pattern:

Presentation:

Line	Balance Type	Period Type	Data Type	Label
1			(Hypercube)	Extended Link (30000 – Property, Plant and Equipment, by Component) Property, Plant and Equipment, by Component [Schedule]

Line	Balance Type	Period Type	Data Type	Label
2		Duration	(Dimension)	Entity [Axis]
3		Duration	String	Entities, All [Domain]
4		Duration	String	Sample Company [Member]
5		Duration	(Dimension)	Business Segment [Axis]
6		Duration	String	Consolidated Group [Domain]
7		Duration	[Line Items]	Property, Plant and Equipment, by Component [Line Items]
8		Duration	[Hierarchy]	Property, Plant and Equipment, Net [Calculation]
2	Debit	Instant	Monetary	Land
3	Debit	Instant	Monetary	Buildings, Net
4	Debit	Instant	Monetary	Furniture and Fixtures, Net
5	Debit	Instant	Monetary	Computer Equipment, Net
6	Debit	Instant	Monetary	Other Property, Plant, and Equipment, Net
7	Debit	Instant	Monetary	Property, Plant, and Equipment, Net, Total

Calculation:

Line	Balance Type	Period Type	Data Type	Element Label
				Extended Link (30000 – Property, Plant and Equipment, by Component)
1	Debit	Instant	Monetary	(=) Property, Plant, and Equipment, Net
2	Debit	Instant	Monetary	(+) Land
3	Debit	Instant	Monetary	(+) Buildings, Net
4	Debit	Instant	Monetary	(+) Furniture and Fixtures, Net
5	Debit	Instant	Monetary	(+) Computer Equipment, Net
6	Debit	Instant	Monetary	(+) Other Property, Plant, and Equipment, Net

Definition:

Line	Data Type	Arcrole	Label
1			Extended Link (30000 – Property, Plant and Equipment, by Component)
2			Property, Plant and Equipment, by Component [Line Items]
3		Domain-Member	Property, Plant and Equipment, Net [Calculation]
4		Domain-Member	Land
5		Domain-Member	Buildings, Net
6		Domain-Member	Furniture and Fixtures, Net
7		Domain-Member	Computer Equipment, Net
8		Domain-Member	Other Property, Plant, and Equipment, Net
9		Domain-Member	Property, Plant, and Equipment, Net
16		Has-Dimension (All)	Property, Plant and Equipment, by Component [Schedule]
17		Hypercube-Dimension	Entity [Axis]
18		Dimension-Domain	Entities, All [Domain]
19		Domain-Member	Sample Company [Member]
20		Hypercube-Dimension	Business Segment [Axis]
21		Dimension-Domain	Consolidated Group [Domain]

4.3.5 Instance example of meta-pattern

The table below shows information related to the instance document that expresses information relating to this meta pattern. The data ties to the screen shot of the pattern:

Line	Concept	Context Ref	Unit Ref	Decimals	Value
1	Land	I-2007	U-Monetary	INF	5347000
2	Land	I-2006	U-Monetary	INF	1147000
3	Buildings, Net	I-2007	U-Monetary	INF	244508000
4	Buildings, Net	I-2006	U-Monetary	INF	366375000
5	Furniture and Fixtures, Net	I-2007	U-Monetary	INF	34457000
6	Furniture and Fixtures, Net	I-2006	U-Monetary	INF	34457000
7	Computer Equipment, Net	I-2007	U-Monetary	INF	4169000
8	Computer Equipment, Net	I-2006	U-Monetary	INF	5313000
9	Other Property, Plant, and Equipment, Net	I-2007	U-Monetary	INF	6702000
10	Other Property, Plant, and Equipment, Net	I-2006	U-Monetary	INF	6149000
9	Property, Plant, and Equipment, Net	I-2007	U-Monetary	INF	295183000
10	Property, Plant, and Equipment, Net	I-2006	U-Monetary	INF	413441000

The following is a validation report that shows how the information is used to validate information with the calculations defined in the taxonomy.

Line	Label	W	B	D-P	Value	Source	Message
1	30000 - Property, Plant, and Equipment, by Component [http://www.xbrls.org/xbrls/PropertyPlantAndEquipmentByComponent]						
2	Context I-2006[at 2006-12-31 for SAMP Scenario-1]						
3	U-Monetary						
4	pattern:Property, Plant and Equipment, Net		D	INF	413,441,000	both	OK
5	pattern:Land	1	D	INF	1,147,000	inst	
6	pattern:Buildings, Net	1	D	INF	366,375,000	inst	
7	pattern:Furniture and Fixtures, Net	1	D	INF	34,457,000	inst	
8	pattern:Computer Equipment, Net	1	D	INF	5,313,000	inst	
9	pattern:Other Property, Plant and Equipment, Net	1	D	INF	6,149,000	inst	
10	Context I-2007[at 2007-12-31 for SAMP Scenario-1]						
11	U-Monetary						
12	pattern:Property, Plant and Equipment, Net		D	INF	295,183,000	both	OK
13	pattern:Land	1	D	INF	5,347,000	inst	
14	pattern:Buildings, Net	1	D	INF	244,508,000	inst	
15	pattern:Furniture and Fixtures, Net	1	D	INF	34,457,000	inst	
16	pattern:Computer Equipment, Net	1	D	INF	4,169,000	inst	
17	pattern:Other Property, Plant and Equipment, Net	1	D	INF	6,702,000	inst	

4.3.6 Neutral format table of meta-pattern

Fixed axis:

Static Fields (Applies to all Fact Values)		
Perspective:	Presentation	
Entity [Axis]:	company: Sample Company [Member]	(+) Entity
Business Segment [Axis]:	gaap: Consolidated Group [Domain]	(+) Business Segment
Units [Axis]:	iso4217:USD	(+) Unit
Scale [Factor]:	1000	

Variable axis, Line Items, and Fact Values:

*	A	B	C	D
1	Property, Plant and Equipment, by Component	<i>Period [Axis]</i>		
2	Period [Axis]	[As of] 2007-12-31	[As of] 2006-12-31	(+) Period
3	Property, Plant and Equipment, by Component [Line Items]			
4	Property, Plant and Equipment, Net [Calculation]			
5	Land	5,347	1,147	
6	Buildings, Net	244,508	366,375	
10	Furniture and Fixtures, Net	34,457	34,457	
11	Computer Equipment, Net	4,169	5,313	
12	Other Property, Plant and Equipment, Net	6,702	6,149	
13	(+) company: Concept; industry: Concept			
14	Property, Plant and Equipment, Net, Total	295,183	413,441	

Extension Points:

The [Calculation] block only has one logical extension point and that is just above the last child of the calculation. This means we can only add new items to the list that is summed up into the total concept.

[CSH: What about adding details to the concept "Land" as an example, providing details such as "Land, in Washington" and "Land, Outside Washington" or by Business Segment?]

[RAVE: This would need a nested [calculation] block with additional dimension-members. It is similar to the situation I showed last time. The dimension will be an additional regions dimension where the [block] above only reports on the dimension-aggregate. I'll work this out in an example.

In a way the reported values in the block are aggregation results over n-different dimensions

*	A	B	C	D	E
1	Property, Plant and Equipment, by Component	<i>Business Segment Axis</i>	<i>Period [Axis]</i>		
2	Period [Axis]		[As of] 2007-12-31	[As of] 2006-12-31	(+) Period
3	Property, Plant and Equipment, by Component [Line Items]				
4	Property, Plant and Equipment, Net [Total]				
5	Land	Consolidated	5,347	1,147	
		Segment A	1,000	1,001	
		Segment B	4,347	146	
6	Buildings, Net	Consolidated	244,508	366,375	
		Segment A	1,000	1,001	
		Segment B	243,508	365,374	
7	Furniture and Fixtures, Net [Total]				
	Furniture, Net	Consolidated	34,000	34,000	
8	Fixtures, Net	Consolidated	457	457	
9	Furniture and Fixtures, Net	Consolidated	34,457	34,457	
10	Computer Equipment, Net	Consolidated	4,169	5,313	
11	Other Property, Plant and Equipment, Net	Consolidated	6,702	6,149	
12	(+) company: Concept; industry: Concept				
13	Property, Plant and Equipment, Net, Total		295,183	413,441	
14					

It becomes like a kind of pivot table view when multiple dimensions come into play.

4.4 Movement

The Movement (or Roll Forward) meta pattern is a specific type of computation. A Movement is basically a reconciliation between two periods of time for the same concept. The reconciling items are finite.

[CSH: But I guess a movement could also be a reconciliation between two scenarios for the same concept, for example when something is restated. Need to look at this.]

4.4.1 Example of meta-pattern

Sample Company
December 31,
(thousands of dollars)

	2007	2006
Movement in Land		
Land, Beginning Balance	1,147	1,147
Additions	1,992	400
Disposals	-193	-200
Translation difference	2,401	-200
Land, Ending Balance	5,347	1,147

We see the beginning and ending balances of land with reconciling items for two years.

4.4.2 Characteristics of meta-pattern

The following is a summary of the characteristics of this pattern:

- A movement is a specific type of computation. A movement computation involves some concept balance as of one point in time, that same concept as of another point in time, and a total of the changes between the two periods of time. There is typically more than one thing that changes, therefore a calculation of all the things that change is provided.
- Examples of a movement are a cash flow statement, the statement of changes in equity, and a roll forward of property, plant, and equipment.
- A movement may, or may not, choose to have an "Other Changes" concept.

4.4.3 Syntax rules of meta-pattern

The following is a summary of the rules that apply to this meta pattern within the presentation linkbase of a taxonomy:

1. A [Movement] MUST be contained with the [Line Items] of a [Schedule].
2. A [Movement] MUST consist of a concept which is presented as a beginning balance and an ending balance (one concept, two different periods, the concept is an instant) and a total of the concepts which change between the two periods and that has the period type "duration".
3. The instant concept with a start period label role is the first child of the [Movement]
4. The instant concept with an end period label role is the last child of the [Movement] concept.
5. A [Calculation] is the second child of the [Movement] concept. All the rules of a normal [Calculation] apply to the [Calculation](s) used with the [Movement].
6. The data type of all concepts which participate within a [Movement] MUST be of the same type and numeric.
7. Neither a [Hierarchy], [Schedule] or another [Movement] may exist within a [Movement].

4.4.4 Taxonomy example of meta-pattern

The following is taxonomy information for this pattern:

Presentation:

Line	Balance Type	Period Type	Data Type	Label
1				Extended Link (40000 - Movement in Land)
2			(Hypercube)	Land [Schedule]
3		Duration	(Dimension)	Entity [Axis]
4		Duration	String	Entities, All [Domain]
5		Duration	String	Sample Company [Member]
6		Duration	(Dimension)	Business Segment [Axis]
7		Duration	String	Consolidated Group [Domain]
8		Duration	[Line Items]	Land [Line Items]
9		Duration	[Hierarchy]	Movement in Land [Movement]
10	Debit	Instant	Monetary	Land, Beginning Balance
11	Debit	Instant	Monetary	Land, Period Increase (Decrease) [Calculation]
12	Debit	Instant	Monetary	Land, Additions
13	Debit	Instant	Monetary	Land, Disposals
14	Debit	Instant	Monetary	Land, Translation Difference
15	Debit	Instant	Monetary	Land, Period Increase (Decrease)
16	Debit	Instant	Monetary	Land, Ending Balance

Calculation:

Line	Balance Type	Period Type	Data Type	Label
1				Extended Link (40000 - Movement in Land)
2	Debit	Duration	Monetary	(=) Land, Period Increase (Decrease)
3	Debit	Duration	Monetary	(+) Land, Additions
4	Credit	Duration	Monetary	(-) Land, Disposals
5	Debit	Duration	Monetary	(+) Land, Translation Difference

Definition:

Line	Data Type	Arcrole	Label
1			Extended Link (40000 - Movement in Land)
2			Land [Line Items]
3		Domain-Member	Movement in Land [Movement]
4		Domain-Member	Land
5		Domain-Member	Land, Period Increase (Decrease) [Calculation]
6		Domain-Member	Land, Additions
7		Domain-Member	Land, Disposals
8		Domain-Member	Land, Translation Difference
9		Domain-Member	Land, Period Increase (Decrease)
16		Has-Dimension (All)	Land [Schedule]
17		Hypercube-Dimension	Entity [Axis]
18		Dimension-Domain	Entities, All [Domain]
19		Domain-Member	Sample Company [Member]
20		Hypercube-Dimension	Business Segment [Axis]
21		Dimension-Domain	Consolidated Group [Domain]

Business Rules:

This meta pattern has a computation which cannot be validated using XBRL calculations as the fact values are not within the same context. As such, a business rule is provided to express this computation, which is:

$$\text{Ending Balance} = \text{Beginning Balance} + \text{Total Changes}$$

[CSH: Note that a formula is provided. This is temporary until the XBRL Formulas specification is available.]

4.4.5 Instance example of meta-pattern

The following is a table that shows information related to the instance document that expresses information relating to this modeling pattern. The data ties to the screen shot of the pattern:

Line	Concept	Context Ref	Unit Ref	Decimals	Value
1	Land	I-2005	U-Monetary	INF	1147000
2	Land, Additions	D-2006	U-Monetary	INF	400000
3	Land, Disposals	D-2006	U-Monetary	INF	200000
4	Land, Translation Difference	D-2006	U-Monetary	INF	-200000
5	Land, Period Increase (Decrease)	D-2006	U-Monetary	INF	0
6	Land	I-2006	U-Monetary	INF	1147000
7	Land, Additions	D-2007	U-Monetary	INF	1992000
8	Land, Disposals	D-2007	U-Monetary	INF	193000
9	Land, Translation Difference	D-2007	U-Monetary	INF	2401000
10	Land, Period Increase (Decrease)	D-2006	U-Monetary	INF	0
11	Land	I-2007	U-Monetary	INF	4200000

This is the calculations validation report:

Line	Label	W	B	D-P	Value	Source	Message
1	40000 - Movements in Land [http://www.xbrls.org/xbrls/MovementsInLand]						
2	Context D-2006[from 2006-01-01 to 2006-12-31 for SAMP Scenario-1]						
3	U-Monetary						
4	pattern:Land, Period Increase (Decrease)		D	INF	0	both	OK
5	pattern:Land, Additions	1	D	INF	400,000	inst	
6	pattern:Land, Disposals	-1	C	INF	200,000	inst	
7	pattern:Land, Translation Difference	1	D	INF	(200,000)	inst	
8	Context D-2007[from 2007-01-01 to 2007-12-31 for SAMP Scenario-1]						
9	U-Monetary						
10	pattern:Land, Period Increase (Decrease)		D	INF	4,200,000	both	OK
11	pattern:Land, Additions	1	D	INF	1,992,000	inst	
12	pattern:Land, Disposals	-1	C	INF	193,000	inst	
13	pattern:Land, Translation Difference	1	D	INF	2,401,000	inst	
14	Root						
15	Context I-2006[at 2006-12-31 for SAMP Scenario-1]						
16	(no unit)						
17	pattern:Land, Reconciles (pattern:Land[-P1Y] + pattern:LandPeriodIncreaseDecrease = pattern:Land)				true	formula	
18	Context I-2007[at 2007-12-31 for SAMP Scenario-1]						
19	(no unit)						
20	pattern:Land, Reconciles (pattern:Land[-P1Y] + pattern:LandPeriodIncreaseDecrease = pattern:Land)				true	formula	

4.4.6 Neutral format table of meta-pattern

Fixed axis:

Static Fields (Applies to all Fact Values)		
Perspective:	Presentation	
Entity [Axis]:	company: Sample Company [Member]	(+) Entity
Business Segment [Axis]:	gaap: Consolidated Group [Domain]	(+) Business Segment
Units [Axis]	iso4217:USD	(+) Unit
Scale [Factor]:	1000	

Variable axis, Line Items, and Fact Values:

*	A	B	C	D
1	Movement in Land	Period [Axis]	Scale [Factor]	gaap: Business Segment [Axis]/gaap: Consolidated Group [Domain]
2	Land [Line Items]			
3	Movement in Land [Movement]			
4	Land, Beginning Balance	[As of] 2005-12-31	1000	244,508
5	Land, Additions [Calculation]			
6	Land, Additions, from Purchase	[For Period] 2006-01-01 to 2006-12-31	1000	100
7	Land, Additions, from Acquisition	[For Period] 2006-01-01 to 2006-12-31	1000	300
8	Land, Additions, Total	[For Period] 2006-01-01 to 2006-12-31	1000	400
9	Land, Disposals	[For Period] 2006-01-01 to 2006-12-31	-1000	-200
10	Land, Translation Difference	[For Period] 2006-01-01 to 2006-12-31	1000	-200
11	(+) Concept			
12	Land, Period Increase (Decrease), Total	[For Period] 2006-01-01 to 2006-12-31	1000	400
13	Land, Ending Balance	[As of] 2006-12-31	1000	244,908
14				
15	Land [Line Items]			
16	Movement in Land [Movement]			
17	Land, Beginning Balance	[As of] 2006-12-31	1000	244,508
18	Land, Additions [Calculation]			
19	Land, Additions, from Purchase	[For Period] 2007-01-01 to 2007-12-31	1000	100,000
20	Land, Additions, from Acquisition	[For Period] 2007-01-01 to 2007-12-31	1000	9,659
21	Land, Additions, Total	[For Period] 2007-01-01 to 2007-12-31	1000	109,659
22	Land, Disposals	[For Period] 2007-01-01 to 2007-12-31	-1000	-193
23	Land, Translation Difference	[For Period] 2007-01-01 to 2007-12-31	1000	12,401
24	(+) Concept			
25	Land, Period Increase (Decrease), Total	[For Period] 2007-01-01 to 2007-12-31	1000	231,526
26	Land, Ending Balance	[As of] 2007-12-31	1000	476,034

Extension Points:

A [Movement] is logically extended by adding a new concept to the list of existing concepts which change. In the example above, a concept in the [Calculation] of "Land, Period Increase (Decrease), Total" is the only logical extension point.

[CSH: Same issue with other calculations. Could (should), for example, "Land, Disposals" be extended?]

[RAVE: It probably should be extensible, which means in certain cases the set of dimensions should be extensible?!??? Dangerous but probably required from a practical point of view. I suggest we ask this in the "accounting profession consulting group ☺"]

4.5 Record

The Record meta pattern is used to articulate information which is complex in nature, expressed in XBRL many times using a tuple. An example of this is, say, director compensation disclosure where a salary, bonuses, director fees, and options granted a director all relate to a specific director. The information is deemed complex as it must be bound together in some manner.

Note that a tuple is an inferior approach to articulating this information because the method used by XBRL to articulate a tuple is XML Schema as a complex type as such, a tuple cannot be changed once it is instantiated within a taxonomy due to the way XML Schema works.

Tuples also don't provide an ability to provide unique key values and they have other negative characteristics. As such, the approach here is used to articulate this type of information within an XBRLS type taxonomy.

4.5.1 Example of meta-pattern

Director	Salary	Bonus	Director Fee	Options Granted, at Fair Value
pattern:JohnDoeMember	1,000	1,000	1,000	1,000
pattern:JaneDoeMember	1,000	1,000	1,000	1,000
pattern:DirectorsAllDomain	2,000	2,000	2,000	2,000

Note that the schedule above shows information for two directors and then a total for all of the directors. The name of the director and the compensation information needs to be correctly related within an instance document.

4.5.2 Characteristics of meta-pattern

The following is a summary of the characteristics of this pattern:

- A record indicates one of two things: (a) that one or more concepts are related or form a "set" or "record", and (b) that that record may repeat.
- Each record has one or more keys. For example, the key above is the director's name. Keys of sets are articulated as an [Axis]. The [Axis] (the key or composite key) of each record must be unique to be able to correctly articulate the information within an XBRL context.
- Not all concepts within a record will be summarized. In the example above, all are summarized but this is not universally the case.

4.5.3 Syntax rules of meta-pattern

The following is a summary of the rules that apply to this meta pattern within the presentation linkbase of a taxonomy:

1. A [Record] MUST be contained with the [Line Items] of a [Schedule].
2. A [Record] MUST start with the [Record] building block (the marker [Record], MUST have the substitutionGroup xbrls:recordGroup).
3. A [Record] MAY contain one or more [Hierarchy], [Calculation] or [Movement] within the record.

4.5.4 Taxonomy example of meta-pattern

The following is taxonomy information for this pattern:

Presentation:

Line	Balance Type	Period Type	Data Type	Label
1				Extended Link (50000 – Director Compensation)
2			(Hypercube)	Director Compensation [Schedule]
3		Duration	(Dimension)	Entity [Axis]
4		Duration	String	Entities, All [Domain]
5		Duration	String	Sample Company [Member]
6		Duration	(Dimension)	Director [Axis]

Line	Balance Type	Period Type	Data Type	Label
7		Duration	String	Directors, All [Domain]
8		Duration	String	John Doe [Member]
9		Duration	String	Jane Doe [Member]
10		Duration	[Line Items]	Director Compensation [Line Items]
11		Duration	[Hierarchy]	Director [Record]
12	Debit	Duration	Monetary	Director, Salary
13	Debit	Duration	Monetary	Director, Bonuses
14	Debit	Duration	Monetary	Director, Fees
15	Debit	Duration	Monetary	Director, Options Granted, at Fair Value

Calculation:

There are no calculations for this meta pattern.

Definition:

Line	Data Type	Arcrole	Label
1			Extended Link (50000 – Director Compensation)
2			Director Compensation [Line Items]
3		Domain-Member	Director [Record]
4		Domain-Member	Director, Salary
5		Domain-Member	Director, Bonuses
6		Domain-Member	Director, Fees
7		Domain-Member	Director, Options Granted, at Fair Value
16		Has-Dimension (All)	Director Compensation [Schedule]
17		Hypercube-Dimension	Entity [Axis]
18		Dimension-Domain	Entities, All [Domain]
19		Domain-Member	Sample Company [Member]
20		Hypercube-Dimension	Director [Axis]
21		Dimension-Domain	Directors, All [Domain]
		Domain-Member	John Doe [Member]
		Domain-Member	Jane Doe [Member]

Business Rules:

There is a consistency assertion which specifies that the sum of the Salary, Bonuses, Fees, and Options Granted, at Fair Value equals the values for each director.

4.5.5 Instance example of meta-pattern

The following is a table that shows information related to the instance document that expresses information relating to this modeling pattern. The data ties to the screen shot of the pattern:

Line	Concept	Context Ref	Unit Ref	Decimals	Value
1	Director, Salary	D-2007-John	U-Monetary	INF	1000
2	Director, Bonuses	D-2007-John	U-Monetary	INF	1000
3	Director, Fees	D-2007-John	U-Monetary	INF	1000
4	Director, Options Granted, at Fair Value	D-2007-John	U-Monetary	INF	1000

Line	Concept	Context Ref	Unit Ref	Decimals	Value
5	Director, Salary	D-2007-Jane	U-Monetary	INF	1000
6	Director, Bonuses	D-2007-Jane	U-Monetary	INF	1000
7	Director, Fees	D-2007-Jane	U-Monetary	INF	1000
8	Director, Options Granted, at Fair Value	D-2007-Jane	U-Monetary	INF	1000
9	Director, Salary	D-2007-AllDirectors	U-Monetary	INF	2000
10	Director, Bonuses	D-2007- AllDirectors	U-Monetary	INF	2000
11	Director, Fees	D-2007- AllDirectors	U-Monetary	INF	2000
12	Director, Options Granted, at Fair Value	D-2007- AllDirectors	U-Monetary	INF	2000

4.5.6 Neutral format table of meta-pattern

Fixed axis:

Fixed Axis (Applies to all Fact Values)		
Entity [Axis]:	company: Sample Company [Member]	(+) Entity
Period [Axis]:	[For Period] 2007-01-01 to 2007-12-31	(+) Period
Units [Axis]:	iso4217:USD	(+) Unit
Scale [Factor]:	1000	

Variable axis, Line Items, and Fact Values:

*	A	B	C	D	
1	Director Compensation [Schedule]	John Doe [Member]	Jane Doe [Member]	(+) Director	Directors, All [Domain]
2	Director Compensation [Line Items]				
3	Director [Record]				
4	Director, Salary	1,000	1,000		2,000
5	Director, Bonuses	1,000	1,000		2,000
6	Director, Fees	1,000	1,000		2,000
7	Director, Options Granted, at Fair Value	1,000	1,000		2,000
8	(+) Concept				

Extension Points:

A [Record] can be extended by adding a new [Member].

A [Record] can be extended by adding a new concept to the set of [Line Items].

5 Summary of Business Use Cases

Taxonomies model information that will eventually be contained in XBRL-based financial reports, called XBRL instance documents. It is important that similar structures within a taxonomy be created in a consistent manner. Inconsistencies make taxonomies harder to understand and use. This document decomposes these patterns and, presents information helpful for taxonomy creators and for instance creators.

The overall goals of this document are to:

1. Communicate to taxonomy creators the specific way components of a specific nature should be modeled within a taxonomy in order to minimize variations. Conscious, desirable variations may still be appropriate, but these variations should be justifiable.

2. Help train those creating instance documents as to the characteristics within an instance document that are important and should be communicated and considered. For example, helping differentiate concepts, contexts, dimensions, and so forth.
3. Document understanding of this information and serve as a reference.

This document takes common components found in financial reporting and breaks them down to their fundamental essence. Each pattern builds on the last pattern shown, so the order in which this document is read is important.

This document takes common components found in financial reporting, boils them down to their fundamental essence. Each pattern builds on the last pattern shown, so the order that this document is read is important.

5.1 Summary Information for Business Use Cases

The following is a list of business use cases in the order in which they appear in this document.

#	Business Use Case Example	Use Case Name
BUC01	Financial Highlights	Simple Hierarchy
BUC02	Accounting Policies	Hierarchy
BUC03	Property, Plant and Equipment, by Component	Simple Calculation
BUC04	Balance Sheet	Nested Calculation
BUC05	Income Statement	Inverted Calculation
BUC06	Receivables Breakdown	Multiple Calculations
BUC07	Land Movement	Simple Movement
BUC07a	Land Movement	Simple Movement Using Axis (Barry's Example)
BUC08	Property, Plant and Equipment Movement	Complex Movement Using Items
BUC08a	Property, Plant and Equipment Movement	Complex Movement Using Axis
BUC09	Director Compensation Disclosure	Simple Compound Concept
BUC10	Subsequent Events Disclosure	Repeating Concept
BUC 11	Leaseholds Disclosure	Compound Concept, Multiple Periods
BUC 12	Share Options Disclosure	Compound Concept with Movement
BUC 13	Related Party Disclosure	Nested Compound Concept
BUC 14	Reconciliation of Cash	Reconciliation of Balance
BUC 15	Director Compensation Disclosure	Text Block
BUC 16	Restatement of Earnings	Restatement
BUC 17	Reissuance of Financial Statement	Reissue of Report
BUC 18	Reclassification Disclosure	Reclassification
BUC 19	Management Discussion and Analysis	Prose
BUC 20	Footnote Comment on Balance Sheet	Comment
BUC 21	Sales Analysis	Sales Analysis
BUC 22	Business Segments	Segment Breakdown
BUC 23	Interim Reporting	Interim Reporting
BUC 24	Common Stock tying to balance sheet	Total With Detail
BUC 25	Portfolio of Investments	Composite Keys

The business use cases are organized with simpler use cases shown first and each subsequent business use case building on the next.

5.2 Information Provided for Each Business Use Case

For each business use case, the following is shown:

- **Example** – This shows a human readable example of the data from a business report with which a domain user would be familiar. This communicates the pattern visually to provide a sense for what is being discussed.
- **Characteristics** – This is a description of the characteristics of the pattern.
- **Taxonomy** – This is a table that contains information that is helpful in understanding the modeling pattern. Information is provided for the presentation, calculation, and definition linkbases. This is as human readable as possible. This is not intended to be a 100% full description, which can be obtained by opening the actual taxonomy provided in a taxonomy editing or viewing application. See the sample files provided for a full understanding of this information.
- **Instance** – In this section the instance document is modeled in a human readable format. Seeing how the elements and the financial data are expressed in the instance document can help with understanding NTS modeling techniques. Additionally, calculation and formula validation reports are shown to help understand what calculations will be possible. This section tests the sample taxonomy to see if the desired results are achieved, proving that the achieved result is the desired result.
- **Neutral format table** – A neutral format table is provided for each use case.

This document starts simple and builds incrementally, adding one or two new ideas that help the reader understand how taxonomies and instance documents work. In the beginning of this document the patterns are rather simple. Increasing complexity is added incrementally in order to focus on one issue at a time. Distracting "noise" is removed from the patterns so that the essence of what is trying to be communicated is the focus, distracting presentation information, complexity, and so forth, are removed from the information in order to focus on specific points. Once each of these patterns is understood, techniques for identifying the patterns and turning the patterns into a taxonomy component will be more and more possible for complex financial reporting information.

Any financial reporting information can be expressed with these patterns. If this is not the case, then an additional pattern or patterns will be added to this document to make this the case. Every situation should be covered by this document.

5.3 Use Case Files

In addition to this document, a set of files have been created to go with this document. These files will help the user of this document understand the details of each modeling pattern and instance document. The files contain the following for each modeling pattern:

- A taxonomy created for each use case
- Taxonomy printouts for presentation, calculation, and definition links
- An instance document for each use case
- A human readable input form (Excel spreadsheet) for each use case
- Style sheets that show rendering the XBRL instance information into HTML, XSL-FO for rendering into PDF, and Excel
- Calculation and formula validation that show the validity of calculations expressed in the taxonomy
- Validation reports

- Renderings of the instance information for the use case in HTML, PDF, and Excel generated by the style sheets provided

5.4 Rules Followed by all Use Cases

The following are additional rules followed by the patterns which have been modeled. This guidance is used to create the actual taxonomies and instance documents provided.

5.4.1 A Style Guide is followed.

For all concept labels, a style guide is provided which facilitates the creation of consistent labels. Compliance with the style guide is achieved using automated validation against style guide rules.

5.4.2 Make all models with the current period nearest to the left, prior period to it's right, and any other prior periods moving right on the page.

Basically, models should flow left to right; not right to left. This is a restriction only on these models, not a restriction on preparers in general.

5.5 Guidance Not Provided by this Document

This document is not intended to be a guide to the following aspects of creating a taxonomy or instance document.

- Taxonomy file modularity. Taxonomies are created are generally less modular than one would create a production taxonomy.
- The use of references within a taxonomy. No references are provided.
- Documentation is not provided, but fake documentation is created within the taxonomy to pass FRTA validation.
- Style sheets which are provided are built to be easy to reverse engineer, rather than the most efficient or effective methods of creating style sheets.

6 Business Use Cases

This section provides a subsection for each modeling pattern. These modeling patterns are intended to be read in the order that they appear in this document as one modeling pattern builds on the next.

For each modeling pattern a table of information for the presentation and calculation information is provided. This information is intended to be as humanly readable and helpful as possible in understanding the key aspects of the modeling pattern. Full information should be gleaned from the sample taxonomy and its related instance document. To achieve this objective and to squeeze as much information into a small space, but still keep it readable, several short cuts are used. These short cuts are used consistently by each modeling pattern. These short cuts are described here to help the reader understand and read these tables:

- **Line** – Each entry in the table has a "Line" that is basically a line number for the line in the table. This line number is used to reference items in the table. Line is not a part of XBRL, only helpful in referring to information in the table of information.
- **Balance Type** – Balance type is optional and for balance types allowed, "Debit" refers to DEBIT, "Credit" for CREDIT. If there is no balance type, the cell is blank.
- **Period Type** – Period type is required and the values used are "Instant" and "Duration", which matches allowed values.

- **Data Type** – In XBRL data types (actually the "type" attribute) are shown as "xbrli:monetaryItemType". Rather than this, we will use "Monetary" to represent that value. Where the value is unclear, an explanation will be provided beneath the table. Abstract concepts will be shown in parenthesis, for example "(String)" means the concept is abstract. Generally, all abstract concepts will be strings. Also, per the USFRTF Style Guide, "[Abstract]" must be appended to the label of all abstract concepts.
- **Label** – We will work with unique labels and not show concept names. Where the labels are unclear, additional explanation will be provided beneath the table. The following additional information is important to understanding labels:
 - Weights will be shown in front of concepts where "(+)" indicates a weight of 1 and "(-)" indicates a weight of -1. Weights are only used in calculation relations. The root of calculations are shown with "(=)".
 - Extended links are identified by "Extended Link" in the beginning of the label with the description (which is required by FRTA), rather than the extended link URI itself that tends to be less readable by humans.
 - Indentation of the labels denotes hierarchy (parent-child relation) within the taxonomy.
 - For tuples, minOccurs and maxOccurs is not used, but rather [KEY] to denote a key, [OPT] for optional, [REQ] for required.

Certain information is important to understand the content instance documents. This will be explained for each modeling pattern. Here is a summary of instance document information for fact values expressed which relates to all modeling patterns:

- **Line** – Same as for the taxonomy; just for referencing purposes
- **Concept** – The concept from the taxonomy, again, using the label rather than the concept name.
- **Context Ref** – The context for the fact value. Unless otherwise stated, all information relates to the entity "Sample Company" for the balance sheet date of December 31, 2007 (context ref of I-2007), and income statement period from January 1, 2007 to December 31, 2003 (D-2007). The prior period is context I-2006 and D-2006, etc. Additional segment and scenario information is explained below the table of instance information.
- **Units Ref** – All units, unless otherwise specified, are US Dollars (U-Monetary). Shares use U-Shares, pure numbers use U-Pure, other units used will be described below the table.
- **Decimals** – All decimals will be INF (what you see is what you get).
- **Value** – This is the value of the fact value. Note that no formatting is used, only numbers.

Information provided about instances documents will be used to highlight specific information and point out differences between the modeling patterns. All patterns have sample instances. However, the sample instances provided may not contain all data points shown in the pattern in order to save space in the document. The sample instance documents in the files provided do contain all instance data.

6.1 Simple Hierarchy

An example of a simple hierarchy is the financial highlights section of a financial statement. The financial highlights contain what amounts to a collection of unrelated concepts. The simple hierarchy example contains one [Hierarchy] meta-pattern. This example shows only one "level" (i.e. no subcategories).

6.1.1 Example

The following is an example of this use case:

Sample Company
For Period Ending December 31,
(thousands of dollars, except number of employees)

	2007	2006	2005	2004	2003
Sales, Net	1,500	1,400	1,300	1,200	1,100
Income (Loss) from Continuing Operations	500	400	300	200	100
Net Income (Loss)	51	41	31	21	11
Cash Flow Provided by (used in) Operating Activities, Net	5,000	4,000	3,000	2,000	1,000
Capital Additions	1,000	650	550	450	350
Average Number of Employees	300	290	280	270	260

6.1.2 Characteristics

The following are the unique characteristics of this use case:

- Relative to each other, the concepts are unrelated to each other except for the fact that they all appear within the financial highlights hierarchy.

6.1.3 Taxonomy

The following is the taxonomy of this use case:

Presentation:

Line	Balance Type	Period Type	Data Type	Label
1				Extended Link (Financial Highlights)
2			[Schedule]	Financial Highlights [Schedule]
3			[Axis]	Business Segment [Axis]
4			[Domain]	Consolidated Group [Domain]
5			[Line Items]	Financial Highlights [Line Items]
6			[Hierarchy]	Financial Highlights [Hierarchy]
7	Credit	Duration	Monetary	Sales, Net
8	Credit	Duration	Monetary	Income (Loss) from Continuing Operations
9	Credit	Duration	Monetary	Net Income (Loss)
10	Credit	Duration	Monetary	Cash Flow Provided by (used in) Operating Activities, Net
11	Credit	Duration	Monetary	Capital Additions
12		Duration	Decimals	Average Number of Employees

Calculation:

There are no calculations for this meta pattern.

Definition:

Line	DELETE?	Arcrole	Label
1			Extended Link (Financial Highlights)
2			Financial Highlights [Line Items]

Line	DELETE?	Arcrole	Label
3		Domain-Member	Financial Highlights [Hierarchy]
4		Domain-Member	Sales, Net
5		Domain-Member	Income (Loss) from Continuing Operations
6		Domain-Member	Net Income (Loss)
7		Domain-Member	Cash Flow Provided by (used in) Operating Activities, Net
8		Domain-Member	Capital Additions
9		Domain-Member	Average Number of Employees
10		Has-Dimension (All) Hypercube- Dimension	Financial Highlights [Schedule]
11		Dimension	Business Segment [Axis]
12		Dimension-Domain	Consolidated Group [Domain]

XBRL Formulas:

There are no XBRL Formulas for this use case.

6.1.4 Instance

The following is the instance of this use case:

Line	Concept	Context Ref	Unit Ref	Decimals	Value
1	Sales, Net	D-2007	U-Monetary	INF	1500000
2	Sales, Net	D-2006	U-Monetary	INF	1400000
3	Sales, Net	D-2005	U-Monetary	INF	1300000
4	Sales, Net	D-2004	U-Monetary	INF	1200000
5	Sales, Net	D-2003	U-Monetary	INF	1100000
6	Income (Loss) from Continuing Operations	D-2007	U-Monetary	INF	500000
7	Income (Loss) from Continuing Operations	D-2006	U-Monetary	INF	400000
8	Income (Loss) from Continuing Operations	D-2005	U-Monetary	INF	300000
9	Income (Loss) from Continuing Operations	D-2004	U-Monetary	INF	200000
10	Income (Loss) from Continuing Operations	D-2003	U-Monetary	INF	100000
11	Net Income (Loss)	D-2007	U-Monetary	INF	51000
12	Net Income (Loss)	D-2006	U-Monetary	INF	41000
13	Net Income (Loss)	D-2005	U-Monetary	INF	31000
14	Net Income (Loss)	D-2004	U-Monetary	INF	21000
15	Net Income (Loss)	D-2003	U-Monetary	INF	11000
16	Cash Flow Provided by (used in) Operating Activities, Net	D-2007	U-Monetary	INF	5000000
17	Cash Flow Provided by (used in) Operating Activities, Net	D-2006	U-Monetary	INF	4000000
18	Cash Flow Provided by (used in) Operating Activities, Net	D-2005	U-Monetary	INF	3000000
19	Cash Flow Provided by (used in) Operating Activities, Net	D-2004	U-Monetary	INF	2000000
20	Cash Flow Provided by (used in) Operating Activities, Net	D-2003	U-Monetary	INF	1000000
21	Capital Additions	D-2007	U-Monetary	INF	1000000
22	Capital Additions	D-2006	U-Monetary	INF	650000
23	Capital Additions	D-2005	U-Monetary	INF	550000
24	Capital Additions	D-2004	U-Monetary	INF	450000

Line	Concept	Context Ref	Unit Ref	Decimals	Value
25	Capital Additions	D-2003	U-Monetary	INF	350000
26	Average Number of Employees	D-2007	U-Monetary	INF	300
27	Average Number of Employees	D-2006	U-Monetary	INF	290
28	Average Number of Employees	D-2005	U-Monetary	INF	280
29	Average Number of Employees	D-2004	U-Monetary	INF	270
30	Average Number of Employees	D-2003	U-Monetary	INF	260

- Note that all the fact values on lines 1 through 25 are “scaled” on the printout but that the last 5 in rows 26 through 30 are not. This shows why the Scale Factor [Axis] is variable in the neutral format table.

6.1.5 Neutral Format Table

The following is the neutral format table of this use case:

Fixed Axis:

Fixed Axis (Applies to all Fact Values)		
Entity [Axis]:	http://www.SampleCompany.com#SAMP	(+) Entity
Business Segment [Axis]:	pattern: Consolidated Group [Member]	(+) Business Segment

Variable Axis, Concepts, and Fact Values:

	A	B	C	D	E	F	G	H	I
2	Schedule of Financial Highlights [Schedule]	Scale [Factor]	Units [Axis]	[For period:] 2007-01-01/2007-12-31	[For period:] 2006-01-01/2006-12-31	[For period:] 2005-01-01/2005-12-31	[For period:] 2004-01-01/2004-12-31	[For period:] 2003-01-01/2003-12-31	(+) Period
3	Financial Highlights [Line Items]								
4	Financial Highlights [Hierarchy]								
5	Sales, Net	1000	iso4217:USD	1,500	1,400	1,300	1,200	1,100	
6	Income (Loss) from Continuing Operations	1000	iso4217:USD	500	400	300	200	100	
7	Net Income (Loss)	1000	iso4217:USD	51	41	31	21	11	
8	Cash Flow Provided by (used in) Operating Activities, Net	1000	iso4217:USD	5,000	4,000	3,000	2,000	1,000	
9	Capital Additions	1000	iso4217:USD	1,000	650	550	450	350	
10	Average Number of Employees	1	xbri:pure	300	290	280	270	260	
11	(+) Concept		(+) Units						

6.2 Hierarchy

The Hierarchy business use case is similar to the Simple Hierarchy, but builds on it by adding subcategories. This is a multi-level hierarchy. The example we are showing is for accounting policies. Additional examples would be certain types of disclosures.

[CSH: Should a [Hierarchy] be allowed to contain (a) another [Hierarchy], or (b) concepts which are [Abstract]? The reason not to allow this is to force the use of a [Text Block] in the taxonomy in order to facilitate requesting information at a variety of levels of detail?]

6.2.1 Example

Accounting Policies

The financial statements have been prepared on the historical cost basis, except for the revaluation of land and buildings and certain financial instruments. The principal accounting policies adopted are set out below.

Inventories

Inventories are stated at the lower of cost and net realisable value. Cost comprises direct materials and, where applicable, direct labour costs and those overheads that have been incurred in bringing the inventories to their present location and condition. Cost is calculated using the weighted average method. Net realisable value represents the estimated selling price less all estimated costs to completion and costs to be incurred in marketing, selling and distribution. Inventories are comprised of raw materials and work in progress.

Financial Instruments

Financial assets and liabilities are recognised on the Group's balance sheet when the Group has become a party to the contractual provisions of the investment.

Trade receivables

Trade receivables are stated at their nominal value as reduced by appropriate allowances for estimated irrecoverable amounts.

Investments in securities

Investments in securities are recognised on a trade-date basis and are initially measured at cost.

Bank borrowings

Interest-bearing bank loans and overdrafts are recorded at the proceeds received, net of direct issue costs. Finance charges, including premiums payable on settlement or redemption, are accounted for on an accrual basis and are added to the carrying amount of the instrument to the extent that they are not settled in the period in which they arise.

Provisions

Provisions are recognised when the Group has a present obligation as a result of a past event which it is probable will result in an outflow of economic benefits that can be reasonably estimated.

6.2.2 Characteristics

The following are the unique characteristics of this use case:

- This use case shows textual concepts which are related. For example, one relation is that all the concepts are accounting policies. Another example is that Trade Receivables, Investments in Securities and Bank Borrowings are categories of Financial Instrument policies.
- As indentation is useful in the printout of the example, it is useful in the taxonomy also to help organize the taxonomy and make it more readable. This may not be apparent in this small example, but consider a much larger taxonomy.
- There could be any number of levels of categories and subcategories (indentation). This is commonly referred to as "parent-child" type relations.
- A [Hierarchy] should not contain other [Hierarchy]s. Nor should a [Hierarchy] contain concepts which are [Abstract]. Rather, [Text Block]s should be used to organize subsections so that a business user can provide information for an entire category of concepts within one fact value.
- Using [Abstract] or additional [Hierarchy] concepts to denote additional categories would not allow data to be provided for "chunks" of concepts.

6.3 Simple Calculation

The Simple Calculation use case introduces the notion of calculations within a set of data. The [Calculation] is a special type of hierarchy in that (a) all the concepts are numeric in nature

and (b) the concepts are related in that they a series of concepts add to a total. In this use case one [Calculation] meta-pattern is used.

6.3.1 Example

Sample Company
December 31,
(thousands of dollars)

	2007	2006
ASSETS		
Property, Plant, and Equipment, Net		
Land	5,347	1,147
Buildings, Net	244,508	366,375
Furniture and Fixtures, Net	34,457	34,457
Computer Equipment, Net	4,169	5,313
Other Property, Plant, and Equipment, Net	6,702	6,149
	<hr/>	
Property, Plant and Equipment, Net, Total	295,183	413,441

6.3.2 Characteristics

The following are the unique characteristics of this use case:

- This use case shows a series of concepts which add up to a total. In the example, data is provided for two periods which is a characteristic of the instance document. The taxonomy expresses data which can be used for any number of periods.
- Calculations exist in the taxonomy (business rules) that express this semantic information allowing data provided to be validated against this rule to determine if the data provided is correct.
- Concepts which add up must be of the same periodType. Instance concepts can only add up to another instance concept; durations can only add up to another duration.
- Concepts which add up must be of the same type or data type. A concept which is monetary may not add up to a concept with is a decimal.

6.4 Nested Calculation

The Nested Calculation use case builds on the Simple Calculation by showing that calculations can be nested, meaning that one calculation can contain another calculation. In this use case, one [Calculation] meta-pattern is used within another [Calculation].

6.4.1 Example

Sample Company
December 31,
(thousands of dollars)

		As of December 31,	
		2007	2006
CURRENT			
Foreign		200	250
Domestic		50	250
	Current	250	500
DEFERRED			
Foreign		200	250
Domestic		50	250
	Deferred	250	500
Income Tax Expense (Benefit)		500	1,000

6.4.2 Characteristics

The following are the unique characteristics of this use case:

- Note that "Current" and "Deferred" are subtotals provided for "Income Tax Expense (Benefit)".
- This specific example could have been articulated in another way where the subtotals were "Foreign" and "Domestic" with "Current" and "Deferred" as the items being summarized. This is a choice of the taxonomy creator; to express it one way, the other way, or to provide both expressions of this calculation.

6.5 Inverted Calculation

This use case builds further on the Simple Calculation and the Nested Calculation use cases. Here the notion that deeply nested calculations are possible. An example of this is the income statement. In this use case a number of [Calculation] meta-patterns are nested together to express one set of calculation relations.

6.5.1 Example

Sample Company
December 31,
(thousands of dollars)

		For Year Ended December 31,	
		2007	2006
Revenues, Gross		1,000	2,000
Returns and Allowances		-1,000	-2,000
		Revenues, Net	0
Cost of Sales		-1,000	-2,000
		Gross Profit (Loss)	-1,000
Other Operating Expenses		-1,000	-2,000
Other Operating Income		1,000	2,000
		Operating Income (Loss)	-1,000
Nonoperating Expenses (Income)		1,000	2,000
		Income (Loss) from Continuing Operations Before Income Taxes	0
Income Tax Expense (Benefit)		1,000	2,000
		Net Income (Loss)	-1,000

6.5.2 Characteristics

The following are the unique characteristics of this use case:

- One new notion here in that there are four nesting levels within the calculation being expressed.
- Another new notion is that some of the calculations are additions others are subtractions. The "weight" attribute is used to express whether something should be added (expressed using a weight attribute value of 1) or subtracted (expressed using a weight value of -1).
- If balance attributes are provided on a concept software can automatically assign the weights for you because the rules for debits and credits are expressed within XBRL. For example, two debits are added, two credits are added, a debit is subtracted from a credit, and a credit is subtracted from a debit. However, if it is desired that a debit be added to a credit, for example in the adjustments to net income for calculating cash flows from operations in the indirect cash flow method; then the concept representing the sum of those to concepts which contain a balance attribute may not contain a balance attribute.
- Calculations can be thought of as somewhat of a tree. Many software applications implement calculations in the form of a tree, which is a choice of the software application when implementing its user interface. This causes calculations to appear inverted, moving from the total to the concepts which make up the total; rather than moving from the components of a total to that total.

6.6 Multiple Calculations

Again, the Multiple Calculations use case builds on the other calculation related use cases. Here we are introducing the notion of a "Network" and that if a concept can be added up in more than one way, each different way must be separated into a different network in order to avoid collisions in the calculations. In our example, we have three simple [Calculation] meta-patterns, each within its own network.

6.6.1 Example

Sample Company
December 31,
(thousands of dollars)

	2007	2006
TRADE AND OTHER RECEIVABLES		
Trade and Other Receivables, Net, by Component		
Trade Receivables, Net	8,790	6,431
Financing Lease Receivables, Net	2,498	1,263
Other Receivables, Net	1,305	1,096
Trade and Other Receivables, Net	12,593	8,790
Trade and Other Receivables, Net, by Net/Gross		
Trade and Other Receivables, Gross	18,280	13,472
Allowance for Doubtfull Accounts	-5,687	-4,682
Trade and Other Receivables, Net	12,593	8,790
Trade and Other Receivables, Net, by Current/Noncurrent		
Trade Receivables, Net, Current	6,340	5,701
Trade Receivables, Net, Noncurrent	6,253	3,089
Trade and Other Receivables, Net	12,593	8,790

6.6.2 Characteristics

The following are the unique characteristics of this use case:

- The main new characteristic we are focusing on here is that at times one concept can be added up in more than one way. If this is the case then different networks must be created to express the calculation otherwise the calculations would collide.
- When these different ways to sum Trade and Other Receivables, Net are articulated within a taxonomy, one could put all of the presentation relations within the same network. The collisions would only occur within the calculations. But then, the networks for the presentation and the networks for the calculations would be inconsistent. It is better to keep all networks consistent.
- Another notion which we will raise now is the use of the weight attribute. Consider the middle calculation of Trade and Other Receivables, Net where the gross amount is reduced by the allowance. Keep in mind that we are discussing creation of the taxonomy and not presentation of the value for the allowance as a positive or a negative value on the rendered report, using either approach we will show below the value can be rendered as a positive or as a negative. The issue is when creating the

taxonomy, should the concept "Allowance for Doubtful Accounts" be shown (a) as a debit and then a negative value placed in the instance document which is effectively a credit, or (b) as a credit and a positive value be placed in the instance document which is then subtracted from the gross amount? The reality is that either way would work and this has no impact on whether a positive or negative value for the allowance is presented on the printed report. The issue is that this should be consistently done one way or the other. For the US GAAP taxonomy and the IFRS taxonomy, this is to make the allowance a credit. FRTA mandates this approach.

6.7 Simple Movement

Now we look at a different type of computation, what is commonly referred to as a movement analysis or a roll forward. The use case below uses one [Movement]. Please see the explanation of the [Movement] meta-pattern for details about this use case, we will not repeat that information here.

Note that there are a number of details and issues relating to this type of use case. Please see the other movement related use cases for a complete explanation.

6.7.1 Example

Sample Company
December 31,
(thousands of dollars)

	2007	2006
Movement in Land		
Land, Beginning Balance	1,147	1,147
Additions	1,992	400
Disposals	-193	-200
Translation difference	2,401	-200
Land, Ending Balance	5,347	1,147

6.7.2 Characteristics

The following are the unique characteristics of this use case:

- The primary variation of the movement computation takes a balance (an instant, a beginning balance) at one point in time, changes over a period of time (a duration), and adds them up to come up with a new balance for a concept at another point in time (an instant which is the same concept as the first, an ending balance).
- Other variations exist; we will look at those later.
- Every movement contains root [Calculation] which could contain any number of sub-calculations. For example, a cash flow statement's root calculation is the net changes in cash, and there are a number of sub-calculations which separate the components of that one net change.
- The movement could just have easily been presented in the opposite form as the above screen shot with the periods as rows (rather than as columns as above) and with the items which change as columns (rather than as rows as above). How the information is presented has no impact on the actual use case. Either approach can be used to present the information.

- Note that the total of the changes is not shown in the screen shot above, but it is shown in the taxonomy. The [Movement] meta-pattern forces the inclusion of the total in the taxonomy, but does not require its use within the presentation. This raises the question as to whether that total should be provided within the instance document. The answer is that it should. This explicitly indicates to a processing application what the calculations are, rather than making the computer application guess. [CSH: This explanation is probably not enough. Many business users see this as disclosing additional information.]
- See the Restatement use case for more information about the [Movement] meta-pattern. This has another variation of a movement.
- As calculations cannot handle the computation of beginning balance plus changes to arrive at an ending balance as it is across context, this computation is expressed in the form of a formula. [CSH: I don't know that we should even discuss the need to use formulas, this is not really an issue to the business user, software developers need to take care of this and make this invisible to the user.]

6.8 Simple Movement (Alternative: Using Movement Axis)

This use case is the same as the simple movement; however the technical solution is different. [CSH: Either this one or the other needs to be dropped, no need for having two ways to model exactly the same thing.]

[CSH: A third way is to use axis for each class, see this option below.]

[CSH: Note that a FORTH way to do this is using tuples.]

6.8.1 Example

Sample Company
December 31,
(thousands of dollars)

	2007	2006
Movement in Land		
Land, Beginning Balance	1,147	1,147
Additions	1,192	400
Disposals	193	200
Translation difference	2,401	-200
Land, Ending Balance	5,347	1,147

6.8.2 Characteristics

The following are the unique characteristics of this use case:

- Characteristics for this are exactly the same as the complex movement using axis, see below.

6.9 Complex Movement Using Items

The Complex Movement Using Items use case builds on the Simple Movement by having several classes of the same thing move. So basically, this is really the same [Movement] meta-pattern repeated a number of times. This approach uses items to articulate the concepts to capture data for each "cell" in the set of movements.

6.9.1 Example

Sample Company
December 31,
(thousands of dollars)

	Land	Buildings, Net	Furniture and Fixtures, Net	Other Property, Plant, and Equipment, Net	Property, Plant, and Equipment, Net
Balance at December 31, 2005	1,000	1,000	1,000	1,000	4,000
Additions	1,000	1,000	1,000	1,000	4,000
Disposals	-1,000	-1,000	-1,000	-1,000	-4,000
Translation Difference	0	0	0	0	0
Other Increase (Decrease)	0	0	0	0	0
Balance at December 31, 2006	1,000	1,000	1,000	1,000	4,000
Additions	1,000	1,000	1,000	1,000	4,000
Disposals	-1,000	-1,000	-1,000	-1,000	-4,000
Translation Difference	0	0	0	0	0
Other Increase (Decrease)	0	0	0	0	0
Balance at December 31, 2007	1,000	1,000	1,000	1,000	4,000

6.9.2 Characteristics

The following are the unique characteristics of this use case:

- The characteristics of this use case are identical to the Simple Movement except for two things. First, there is more than one movement. Here there are five movements; one for each of the four classes of Property, Plant and Equipment, Net and one for the total of all classes of Property, Plant and Equipment.
- There is a need to tie the separate movements together, basically totaling the changes such as "Additions" and "Disposals" for each class.
- Not involved in the actual movement itself are other concepts which relate to a class, such as depreciation method for Buildings, estimated useful life for Buildings, and other disclosures. There is no way to relate this information to the movement analysis for the class using this approach.
- When a user extends the taxonomy it is much more complicated. The user has to add all the concepts for the new "cells" of information being added, wire them together correctly, and then ensure that the new cells participate in the calculation of the totals of the classes and the totals of the items which move.

6.10 Complex Movement Using Axis

This use case is exactly the same as the Complex Movement; it is only different in that a different technical approach is used to meet this use case. The problem with the Complex Movement approach which makes use of items for each "cell" of data, resulting in potentially a large number of concepts and an inability to connect other information about the a class with the movement information. This approach uses items to articulate the concepts for the total

of the class, here Property, Plant and Equipment, Net; and then it uses an axis to articulate the classes of which have such a movement. So, basically this is a Simple Movement with an axis for the members of the class.

6.10.1 Example

Sample Company
December 31,
(thousands of dollars)

	Land	Buildings, Net	Furniture and Fixtures, Net	Other Property, Plant, and Equipment, Net	Property, Plant, and Equipment, Net
Balance at December 31, 2005	1,000	1,000	1,000	1,000	4,000
Additions	1,000	1,000	1,000	1,000	4,000
Disposals	-1,000	-1,000	-1,000	-1,000	-4,000
Translation Difference	0	0	0	0	0
Other Increase (Decrease)	0	0	0	0	0
Balance at December 31, 2006	1,000	1,000	1,000	1,000	4,000
Additions	1,000	1,000	1,000	1,000	4,000
Disposals	-1,000	-1,000	-1,000	-1,000	-4,000
Translation Difference	0	0	0	0	0
Other Increase (Decrease)	0	0	0	0	0
Balance at December 31, 2007	1,000	1,000	1,000	1,000	4,000

6.10.2 Characteristics

The following are the unique characteristics of this use case:

- This use case is very similar to the Simple Movement except that an [Axis] is provided to identify each class.
- If the same [Axis], [Domain], and [Member]s are used in other [Schedule]s, then the two schedules can be combined together easily and, say, the movement information is tied to the accounting policies and disclosures of the same class. This is achieved because a user can simply query the fact values or concepts based on the [Axis]. Note that if different [Axis] are used in different schedules, the two [Schedule]s cannot be automatically bound together using software.
- A down side of this approach is that the members of the class are in different [Axis] than the total for the class and do not technically participate in some summations users might desire them to participate in. For example, the [Axis] on the balance sheet for say noncurrent assets which includes Property, Plant and Equipment would be different than the members Land, Building, etc. Some see this as a negative.
- When a user extends the taxonomy it is simpler; all they would likely do is add a new member to the [Axis] for the class of Property, Plant and Equipment.

6.11 Simple Compound Concept

The Simple Compound Concept use case requires that concepts be bound together forming a compound concept. This use cases makes use of one [Record] meta-pattern.

6.11.1 Example

Sample Company
For Period Ending December 31, 2007

Director	Salary	Bonus	Director Fee	Options Granted, at Fair Value
pattern:JohnDoeMember	1,000	1,000	1,000	1,000
pattern:JaneDoeMember	1,000	1,000	1,000	1,000
	2,000	2,000	2,000	2,000

6.11.2 Characteristics

The following are the unique characteristics of this use case:

- The example above shows director compensation information for directors of a company. It is necessary for the salary information to be bound together correctly and that information must be further bound to the correct director.
- In addition to the information for each director, information about the total for all directors is shown.
- The key values, in this case the director, is expressed as an [Axis].

6.12 Repeating Concept

The Repeating Concept use case points out another characteristic of complex concepts which is that they repeat. This use case is also a [Record] meta-pattern.

6.12.1 Example

Sample Company
For Period Ending December 31, 2007

SUBSEQUENT EVENTS

The following is a summary of events subsequent to the balance sheet date:

Description of subsequent event number 1 which relates to the loss of an uncollectable receivable and occurred on January 16, 2008.

Description of subsequent event number 2 which relates to the purchase of a business and occurred on February 1, 2008.

6.12.2 Characteristics

The following are the unique characteristics of this use case:

- This use case focuses on one thing which is that at times one, or perhaps more, concepts need to repeat.

- In the example an entity is disclosing its subsequent events. A company may have zero to many subsequent events. Each even could require the disclosure of one piece of information or a set of information. In both cases (one concept or a set of concepts) a [Record] is used to denote that this is the case.
- It is important to understand that the set of [Axis] (could be one or more) which identifies one record must be unique. If it is not unique, then duplicates will be created within an instance document.

6.13 Multiple Periods Compound Concept

This is a Hierarchy (or a Record).

6.13.1 Example

Sample Company
For Period Ending December 31, 2007

The following is a summary of leasehold land and buildings as of December 31, 2007 and 2006:

Leasehold	Location	Description	Tenure	Tenure Start Date	Land Area	2007 Value (at Cost)	2006 Value (at Cost)
pattern:LeaseholdAMember	Tacoma, Washington	Warehouse	Fifteen year lease	2000-01-01	1,000	5,000	4,000
pattern:LeaseholdBMember	Seattle, Washington	Warehouse	Twenty year lease	2000-01-01	100,000	50,000	40,000
Total					101,000	55,000	44,000

6.13.2 Characteristics

The following are the unique characteristics of this use case:

- This use case builds further on the compound concept. This specific use case shows how at times one concept can be used multiple times within a record. In this case the Value of the leasehold improvements is shown for the current period (2007) and the prior period (2006).
- In the taxonomy only once "Value" concept exists within the record. The two fact values are differentiated via the period.

6.14 Movements in Compound Concept

This use case further builds on the compound concept, showing a [Movement] being used within a [Record].

6.14.1 Example

Sample Company
December 31,
(thousands of dollars)

SHARE OWNERSHIP PLANS

The following is information relating to share ownership plan: pattern:ShareOwnershipPlan1Member .

These are the description, general conditions, and terms of share ownership plan 1

Awards:

Type	Outstanding 2006	Granted	Forfeited	Exercised	Expired	Outstanding 2007
pattern:ShareOwnershipPlan1Member	0	4,000	-1,000	-1,000	-1,000	1,000

6.14.2 Characteristics

The following are the unique characteristics of this use case:

- This use case specifically shows a [Movement] meta-pattern being used with a [Record].
- For this use case a company discloses its share option plans. The share option plans have award information disclosed in the form of a movement. Each share option plan has only one award.
- If more than one award is to be disclosed, there must be a way to distinguish one award from another award. This would be done by creating an [Axis] for each award.

6.15 Nested Compound Concept

This use case further builds on the compound concept. This shows how one compound concept or [Record] can be related to another [Record].

6.15.1 Example

Sample Company
December 31,
(thousands of dollars)

RELATED PARTY TRANSACTIONS

The following is a summary of related party of the company and transactions with those related parties:

Related Parties:

Name of Related Party	Type of Relationship	Nature of Relationship
pattern:RelatedParty1Member	Parent	This is other descriptive information about the relationship.
pattern:RelatedParty2Member	JointVenture	This is other descriptive information about the relationship.

Transactions with Related Parties:

Party	Transaction Description	Pricing Policy	Amount
pattern:RelatedParty1Member	Transaction 1 description	Cost	1000
pattern:RelatedParty1Member	Transaction 2 description	Cost	1000
pattern:RelatedParty2Member	Transaction 1 description	Cost	1000
pattern:RelatedParty2Member	Transaction 2 description	Cost	1000

6.15.2 Characteristics

The following are the unique characteristics of this use case:

- This use case shows two disclosures. The first disclosure is of related parties. The second disclosure relates to the transactions for each of the related parties.
- The transactions must be connected to the correct related party. This is done by using the Related Party [Axis] in both the related parties [Schedule] and also in the related party transactions [Schedule]. The [Axis] binds the two schedules together.
- Note that software can dynamically reconfigure the information for the user if the proper [Axis] are used within related [Records]. If different [Axis] are used, the software application could not know that the two similar [Axis] are really indicating the same thing.

6.16 Reconciliation of Balance

The Reconciliation of Balance use case has some of the characteristics of a [Record] and appears to have the characteristics of a [Movement], but really not. There is a difference between a reconciliation as used in this use case and a [Movement]. This use case basically shows the difference between two different instances whereas a [Movement] shows the same instance over a duration of time in most cases. Further, the numeric values within the [Record] of the items shown by the reconciliation have a period type of instance, not duration as with a [Movement].

6.16.1 Example

Sample Company
December 31,
(thousands of dollars)

	2007	2006
Cash and Cash Equivalents, per Balance Sheet	1,000	1,000
Reconciling Item A	500	500
Reconciling Item B	-500	500
Cash and Cash Equivalents, per Cash Flow Statement	1,000	2,000

6.16.2 Characteristics

The following are the unique characteristics of this use case:

- The example shows the items which reconcile the balance of Cash and Cash Equivalents per the Balance sheet with the balance per the Cash Flow Statement. These reconciling items themselves are instants.

6.17 Text Block

The [Text Block] is a type, not a meta-pattern. The [Text Block] has one purpose which is to allow a user to articulate what amounts to a block of text for a set of concept disclosures, rather than disclose smaller pieces of text and numeric information for each individual concept.

6.17.1 Example

Sample Company
For Period Ending December 31, 2007

DIRECTOR COMPENSATION

The following is a summary of director compensation for the period ended December 31, 2007:

Name of director	Salary	Bonus	Director fees	Fair Value of Options Granted
Director 1	1,000	1,000	1,000	1,000
Director 1	1,000	1,000	1,000	1,000
Total	2,000	2,000	2,000	2,000

6.17.2 Characteristics

The following are the unique characteristics of this use case:

- Compare this use case with the Simple Compound Concept use case. The information being disclosed is identical. The difference is how the information is disclosed.
- In this use case, all of the information for the director compensation disclosures is packed into one block of text. In the Simple Compound Concept use case, this information was disclosed in detail.
- The disadvantage of this use case is that a user of this information will not be able to effectively parse the [Text Block] and use the information in further processing. The [Text Block] itself is usable and many times easier to create.

6.18 Restatement

The Restatement use case introduces a different variation of the [Movement]. Rather than the [Movement] being between two periods which is the most common form of [Movement], here the period quasi-axis remains constant for both instants participating in the [Movement], it is some other [Axis] changes. In this case, the Report Date [Axis] changes.

6.18.1 Example

Sample Company
December 31,
(thousands of dollars)

	2007	2006
Statement of Changes in Equity (Fragment)		
Retained Earnings (Accumulated Losses), Originally Stated 2006	4,000	
Change in Accounting Policy	3,000	
Correction of an Error	-1,000	
Retained Earnings (Accumulated Losses), Restated 2006 Beginning Balance	6,000	
Retained Earnings (Accumulated Losses), Beginning Balance	6,000	0
Net Income (Loss)	7,000	5,000
Dividends	-1,000	-1,000
Retained Earnings (Accumulated Losses), Ending Balance	12,000	4,000

6.18.2 Characteristics

The following are the unique characteristics of this use case:

- There are many dynamics to this use case some of which are technical in nature and some of which are domain related, the accounting rules of a restatement.

- In this case an entity reported net income of a certain amount but then had to restate the prior period information per accounting rules. The accounting rules state that changes relating to changes in accounting policies and corrections of errors must be reported in a specific manner.
- In this use case the balance of Retained Earnings (Accumulated Losses) is shown as originally stated on the prior period financial report, the nature and amount of any restatements are shown, and the restated balance is shown.
- Note that concepts which participate in this use case impact other areas of the financial statement. It is somewhat dangerous showing this use case in isolation. For example, Retained Earnings (Accumulated Loss) would not only appear in the mini-statement of changes in equity shown, but also on the balance sheet. The computations must properly foot. How this information is articulated determines if the XBRL works. Therefore, it is important to structure the XBRL as to make all the pieces of the financial report work correctly.
- Note that in the instance document the Report Date [Axis] is used to differentiate the originally reported balance and the restated balance.

[CSH: It is unclear if the context information for the prior period adjustments are to be for the current period in which the restatement is presented, or for the prior period the period impacted by the restatement.]

[CSH: It is unclear how the Report Date [Axis] should be used. This shows issues for this pattern, but this also impacts other use cases for which a restatement has not been shown yet, but could be in the future.]

6.19 Reissue Report

This use case shows how to handle the situation where an entire report is recalled (or not recalled) and reissued at a later date.

6.19.1 Example

Sample Company
December 31,
(thousands of dollars)

	2007	2006
ASSETS		
Property, Plant, and Equipment, Net		
Land	5,347	1,147
Buildings, Net	244,508	366,375
Furniture and Fixtures, Net	34,457	34,457
Computer Equipment, Net	4,169	5,313
Other Property, Plant, and Equipment, Net	6,702	6,149
	<hr/>	
Property, Plant and Equipment, Net, Total	295,183	413,441

6.19.2 Characteristics

The following are the unique characteristics of this use case:

- Here a company releases a report on a specific date. That report is subsequently re-released to correct an error or some other reason.
- Note that this has nothing to do with , say, an SEC reporting rules or specific practices, it more has to do with the common practice of someone putting out a report, subsequently realizing that the report has a major mistake calling for it to be republished, and then the report is republished.
- Consider the systems which have obtained the old report and now must somehow differentiate that old report from the new report.
- In this case the Report By [Axis] is used to differentiate one report from another.

6.20 Reclassification

This use case shows another example of what sometimes occurs in reporting. Here a company reports information in one period and reclassifies the information in a subsequent period. This reclassification is not because of an error or change in accounting policy, but rather, say, if something which was not material in the past becomes material and requires a line item to be broken out from another line items in which both were combined; now they are shown separately.

6.20.1 Example

Sample Company
December 31,
(thousands of dollars)

	2007	2006	Previous 2006
ASSETS			
Property, Plant, and Equipment, Net			
Land	5,347	1,147	1,147
Buildings, Net	244,508	366,375	366,375
Furniture and Fixtures, Net	34,457	34,457	34,457
Computer Equipment, Net	4,169	5,313	
Other Property, Plant, and Equipment, Net	6,702	6,149	11,462
Property, Plant and Equipment, Net, Total	295,183	413,441	413,441

6.20.2 Characteristics

The following are the unique characteristics of this use case:

- In this use case a company reported in the prior period financial report (see the gray column to the right) combining Computer Equipment, Net and Other Property, Plant and Equipment, Net into one line item. In the current period financial report these numbers were separated into individual line items.
- Some systems may require the previously reported fact value to appear in the current period instance to help users of the information reconcile to prior period fact values. Other systems may not. This use case shows how this can be achieved.

[CSH: It is unclear to me if the actual prior period originally reported fact value should appear in the current instance document as reported but with a different report date to help the user of the current instance to see what has changed from the previous instance document.]

6.21 Prose

At times the order in which information is read or otherwise consumed makes a difference to users of the information and those presenting the information. However, XBRL instance documents have no notion of order of fact values within an instance document. A good example of this is the management discussion and analysis.

6.21.1 Example

MANAGEMENT DISCUSSION AND ANALYSIS

The following is an example/sample of the target use case for narratives. The information was taken from various existing examples and put together to minimize the effort required to put this example together. It may seem nonsensical, but it definitely shows the Actual use case. The Actual use case has the following characteristics:

- 1) It contains a mixture of paragraphs of text and tables of information,
- 2) The information MUST be viewed in a particular order to make sense,
- 3) There is typically a large volume of information, such as the "Management Discussion and Analysis",
- 4) The information can be unique to a company, no standard taxonomy concepts exist.
- 5) The information contains a mixture of "data" and "labels".

This example is intended to mimic the characteristics of the use case described above. It would likely be quite easy to find an example from a financial report which shows this use case in a form which is more comfortable to domain users (i.e., accountants). If the domain users would like this example updated to be more understandable to an accountant, we can put that together for them. But, this example is to show the characteristics of the use case with minimum effort, not to be 100% correct from a financial reporting perspective.

RECEIVABLES

Trade receivables are stated at their nominal value as reduced by appropriate allowances for estimated irrecoverable amounts.

Trade receivables include receivables from major customers.

Trade receivables include related party receivables.

DIRECTOR COMPENSATION

The following is a listing of director compensation:

Name of director	Salary	Bonus	Director fees	Fair Value of Options Granted
John James	0	0	60,000	0
Buck Rogers	672,619	1,111,486	0	562,000
Clark Kent	0	0	24,200	0
Lois Lane	0	0	27,000	0

ACCOUNTING POLICIES

The financial statements have been prepared on the historical cost basis, except for the revaluation of land and buildings and certain financial instruments. The principal accounting policies adopted are set out below.

Inventories

Inventories are stated at the lower of cost and net realizable value. Cost comprises direct materials and, where applicable, direct labor costs and those overheads that have been incurred in bringing the inventories to their present location and condition. Cost is calculated using the weighted average method.

Net realizable value represents the estimated selling price less all estimated costs to completion and costs to be incurred in marketing, selling and distribution.

Inventories are stated at the lower of cost and net realizable value. Included in inventory are: (a) raw materials, (b) supplies, (c) finished goods.

LONG TERM DEBT

The following is a summary of Long-term Debt outstanding as of December 31, 2004 and 2003:

	2004	2003
Note payable to a bank, principal payments of \$11,300 due September 15 and October 15, 2004, 2005, and 2006 with an additional principal payment of \$660 paid when the note is due on October 15, 2006, interest at prime plus 2% is payable monthly, secured by equipment	\$ 21,480	\$ 46,080
Note payable to a bank, principal payments of \$2,400 due monthly from August through January, interest at prime plus 2% payable monthly, due October 5, 2009, secured by a vehicle	85,000	0
Note payable to a related party, payable in semi-annual principal installments of \$10,000 plus interest at 10%, unsecured	0	45,000
Capital lease payable in monthly installments of \$1,200 including interest at 11.24, due February 2007, secured by a vehicle	33,261	42,782
Long Term Debt, Total	140,741	134,862
Current Portion of Long Term Debt	21,000	22,000
Non Current Portion of Long Term Debt	\$ 119,741	\$ 112,862

FINANCIAL INSTRUMENTS

Financial assets and financial liabilities are recognized on the Group's balance sheet when the Group has become a party to the contractual provisions of the instrument.

6.21.2 Characteristics

The following are the unique characteristics of this use case:

- This use case shows what amounts to a stream of information which either must be consumed in a specific order, or the preparer would prefer to be consumed in a specific order. The information is made up of many different shapes such as paragraphs, lists, tables of different sizes and shapes.
- One strategy is to put all information within one [Text Block].
- Another strategy is to break the information out into a number of [Text Block]s. The presentation linkbase is used to order the different [Text Block]s.
- Yet another strategy is to tag each individual concept. The presentation linkbase is then used to order the individual fact values.

[CSH: Note that I also want to show this as individual items (rather than a block of text) and show how this can be ordered using presentation links].]

6.22 Comment

This use case shows how to place comments within a financial report.

6.22.1 Example

Sample Company
For Period Ending December 31,
(thousands of dollars, except number of employees)

	2007	2006	2005	2004	2003
Sales, Net	1,500	1,400	1,300	1,200	1,100
Income (Loss) from Continuing Operations	500	400	300	200	100
Net Income (Loss) (a)	51	41	31	21	11
Cash Flow Provided by (used in) Operating Activities, Net	5,000	4,000	3,000	2,000	1,000
Capital Additions	1,000	650	550	450	350
Average Number of Employees (b)	300	290	280	270	260

COMMENTS:

(a). GENERAL: This is a footnote making general comments about net income.

(b). GENERAL: This is a footnote making general comments about the number of employees.

6.22.2 Characteristics

The following are the unique characteristics of this use case:

- In this use case two simple footnotes are added to the financial highlights.

6.23 Sales Analysis

[CSH: I think this should be changed to "Pivot Table".]

This use case shows how a pivot table can be articulated within a business report.

6.23.1 Example

Sample Company
For Period Ending December 31,
(thousands of dollars)

	2007	2006	2005
Sales, all Business Segments, all Geographic Areas	32,038	35,805	32,465

Breakdown by Business Segment:

Pharmaceuticals	20,181	18,150	15,275
Generics	2,433	1,973	1,823
Consumer Health	6,675	6,514	5,752
Other Segments	2,749	9,168	9,615

Breakdown by Geographic Area:

US and Canada	10,214	12,649	10,137
Europe	11,901	10,374	10,396
Asia	5,639	4,371	3,210
Other regions	4,284	8,411	8,722

6.23.2 Characteristics

The following are the unique characteristics of this use case:

- There is only one concept being used for all 27 cells of information. Each cell of information is differentiated using the Business Segment [Axis] and the Geographic Area [Axis].

6.24 Segment Breakdown

This use case shows the information commonly found within segment disclosures.

6.24.1 Example

2007

	Business Segment One	Business Segment Two	Eliminations	Consolidated
REVENUES				
External Sales	2,000	2,000	0	4,000
Inter-segment sales	1,000	1,000	-2,000	0
Revenue, Net	3,000	3,000	-2,000	4,000
RESULT				
Segment result	2,000	2,000	-1,000	3,000
Unallocated Corporate Expenses				2,000
Income (Loss) from Continuing Operations				500
Income (Loss) from Affiliates				-1,000
Income (Loss) from Investments				1,000
Income (Loss) from Continuing Operations Before Income Taxes				1,000
Income Tax Expense (Benefit)				-500
Net Income (Loss)				500
BALANCE SHEET				
Assets				
Segment Assets	5,000	5,000	-2,000	8,000
Investment in Affiliates				0
Unallocated Corporate Assets				4,000
Consolidated Assets				12,000
Liabilities				
Segment Liabilities	3,000	3,000	-2,000	4,000
Unallocated Corporate Liabilities				2,000
Consolidated Liabilities				6,000
OTHER INFORMATION				
Depreciation	250	250	0	500
Amortisation	250	250	0	500
Capital Additions	750	750	-500	1,000
Impairment Losses (Reversals) Recognized in Income	2,000	2,000	-3,000	1,000
Number of employees at end of year	200	100		300

6.24.2 Characteristics

The following are the unique characteristics of this use case:

- This use case shows consolidated totals to the right and business segment information to the left. Note the consolidation eliminations column.
- In addition to this there could be a need to differentiate continuing from discontinued operations.
- Note that the consolidated totals tie to the consolidated balance sheet, income statement, and cash flow statement.

6.25 Interim Report

This use case shows how interim reporting is achieved. Interim reports must take into consideration situations such as first quarter information reported in the first quarter may differ from first quarter results reported in the third quarter as adjustments are made to prior quarters to correct errors and adjust to better information.

6.25.1 Example

6.25.2 Characteristics

The following are the unique characteristics of this use case:

- To do...

6.26 Total with Detail

Many times disclosures contain information details information which is summarized elsewhere. This use case shows how to look for and understand these connections and the issues and problems which can occur if these situations are modeled incorrectly.

6.26.1 Example

Total:

LIABILITIES AND EQUITY

Current Liabilities

Accounts Payable	1,000	1,000
Accrued Interest Payable	1,000	1,000
Accrued Expenses	1,000	1,000
Other Payables and Accruals	0	0
Long-Term Debt, Current	1,000	1,000
Other Liabilities, Current	1,000	1,000

Liabilities, Current 5,000 5,000

Noncurrent Liabilities

Long-Term Debt, Noncurrent	500	500
Other Liabilities, Noncurrent	500	500

Liabilities, Noncurrent 1,000 1,000

Equity

Class A Preferred Stock; \$1 par value, authorized 10,000 shares; 10,000 shares issued and outstanding; liquidation preference	1,000	500
Class B Preferred Stock; \$1 par value, authorized 10,000 shares; 10,000 shares issued and outstanding; liquidation preference	1,000	500
Class A Common Stock; \$1 par value, authorized 10,000 shares; 10,000 shares issued and outstanding	500	500
Class B Common Stock; \$1 par value, authorized 10,000 shares; 10,000 shares issued and outstanding	500	500
Additional Paid in Capital	2,000	1,000
Retained Earnings (Accumulated Losses)	1,000	1,000

Equity 6,000 4,000

Liabilities and Equity 12,000 10,000

Detail:

	A	B	C	D	E	F	G	H	I	J	K
1	Schedule of Classes of Common Stock, by Class [Schedule]			gaap: Class of Common Stock, Description [Axis]							
2				company: Class A Common Stock [Member]	company: Class B Common Stock [Member]	(+/-) Class of Common Stock		gaap: All Classes of Common Stock [Domain]			
3		Units [Axis]	Scale [Factor]	Period [Axis]	Period [Axis]	Period [Axis]	Period [Axis]	Period [Axis]	Period [Axis]	Period [Axis]	Period [Axis]
4	Period [Axis]			As of 2006-12-31	As of 2007-12-31	As of 2006-12-31	As of 2007-12-31			As of 2006-12-31	As of 2007-12-31
5	Concept [Axis]										
6	Common Stock, by Class (Line Items)										
7	Common Stock, by Class (Record)										
8	Common Stock, Amount	iso4217:USD	1000	500	500	500	500			1,000	1,000
9	Common Stock, Par Value per Share	gaap:PerShare	1	1.00	1.00	1.00	1.00				
10	Common Stock, Share Subscriptions	xbrl:shares	1	10,000	10,000	10,000	10,000			20,000	20,000
11	Common Stock, Shares Authorized	xbrl:shares	1	10,000	10,000	10,000	10,000			20,000	20,000
12	Common Stock, Shares Issued	xbrl:shares	1	10,000	10,000	10,000	10,000			20,000	20,000
13	Common Stock, Shares Outstanding	xbrl:shares	1	3,000	3,000	3,000	3,000			6,000	6,000
14	(+) Concept										

6.26.2 Characteristics

The following are the unique characteristics of this use case:

- Information about the classes of stock is disclosed in several places in the disclosures. The information is also summarized on the face of the financial statements. Sometimes the summarized information is shown, other times it is not, but it does calculation into the total. All of this information must be tied together correctly and the proper concepts used, as opposed to inadvertently using two concepts to denote what is truly one concept used in two different places.

6.27 Composite Keys

At times a [Record] or really any portion of a [Schedule] requires more than one [Axis] to make the information unique. This use case covers this situation which is similar to what is known as a composite key in relational database terminology.

6.27.1 Example

Portfolio of Investments

The following is detail of the portfolio of investments of the company:

Shares	Description	Moody's Rating	S & P Rating	Value
2007				
SHORT-TERM INVESTMENTS				
United States				
USA				
gaap:InvestmentInGovernmentalEntitiesMember				
gaap:USFederalGovernmentMember				
10,000	gaap:TreasuryBills3.4712010Member	gaap:APlusPlusPlusMember	gaap:AAAMember	1,000
10,000	gaap:TreasuryBills3.3712011Member	gaap:APlusPlusPlusMember	gaap:AAAMember	1,000
Total Investments 2007				2,000
Shares	Description	Moody's Rating	S & P Rating	Value
2006				
SHORT-TERM INVESTMENTS				
United States				
USA				
gaap:InvestmentInGovernmentalEntitiesMember				
gaap:USFederalGovernmentMember				
10,000	gaap:TreasuryBills3.4712010Member	gaap:APlusPlusPlusMember	gaap:AAAMember	1,000
10,000	gaap:TreasuryBills3.3712011Member	gaap:APlusPlusPlusMember	gaap:AAAMember	1,000
Total Investments 2006				2,000

A References (non-normative)

- [XBRL] Phillip Engel, Walter Hamscher, Geoff Shuetrim, David vun Kannon, Hugh Wallis.
Extensible Business Reporting Language (XBRL) 2.1 Recommendation with corrected errata to 2005-11-07
<http://www.xbrl.org/SpecRecommendations/>
- [FRTA] Walter Hamscher (editor).
Financial Reporting Taxonomies Architecture 1.0 Recommendation with errata corrections dated 2006-03-20.
<http://www.xbrl.org/TechnicalGuidance/>
- [FRIS]
- [XBRLS] Cliff Binstock, Charles Hoffman, Mark Montoya, Rene van Egmond
XBRLS Architecture Specification
<http://xbrl.squarespace.com/xbrls>
- [ISSUES] Rene van Egmond, Charles Hoffman
XBRLS: How a simpler XBRL can make a better XBRL
<http://xbrl.squarespace.com/xbrls>

B Document History

Date	Editor	Summary
2008-01-27	Hoffman	First draft of document.
2008-01-30	Egmond	General review and edits
2008-02-05	Hoffman	Added examples of business use cases.
2008-02-09	Hoffman	Synced with current version of meta-patterns
2008-04-18	Hoffman	Added screen shots
2008-04-24	Hoffman	Added characteristics