

105 - Statement - CONSOLIDATED STATEMENTS OF INCOME

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 LEGAL ENTITY [AXIS]: ENTITY [DOMAIN] O

(IN THOUSANDS)			DATE	12 MONTHS ENDED 2008-12-31	12 MONTHS ENDED 2009-12-31	12 MONTHS ENDED 2010-12-31
UNIT	ITEM	NOTES				
USD	REVENUES			21,796,000	23,651,000	29,321,000
	COST OF REVENUES (INCLUDING STOCK-BASED COMPENSATION EXPENSE OF \$41, \$47, \$67)			8,622,000	8,844,000	10,417,000
	RESEARCH AND DEVELOPMENT (INCLUDING STOCK-BASED COMPENSATION EXPENSE OF \$732, \$725, \$861)			2,793,000	2,843,000	3,762,000
	SALES AND MARKETING (INCLUDING STOCK-BASED COMPENSATION EXPENSE OF \$1, \$1, \$1)				1,984,000	2,799,000
	GOODWILL IMPAIRMENT				1,668,000	1,962,000
	NET INCOME			4,227,000	6,520,000	8,505,000
	BASIC			0.01346	0.02062	0.02669
	DILUTED			0.01331	0.02041	0.02631
	NET INCOME			4,227,000	6,520,000	8,505,000
	BASIC			0.01346	0.02062	0.02669
DILUTED			0.01331	0.02041	0.02631	

Linkage | Label | Info

- http://www.com/taxonomy/role/StatementOfShareholdersEquityAndOtherComprehensiveIncome
- http://www.com/taxonomy/role/DisclosureChangesInTheComponentsOfComprehensiveIncome
- http://www.com/taxonomy/role/DisclosureComputationOfBasicAndDilutedNetIncomePerShare
- http://www.com/taxonomy/role/StatementOfIncomeAlternative
- http://www.com/taxonomy/role/StatementOfCashFlowsIndirect

5.22. Detailed Information

The appendix contains a section which provides additional details relating to report elements including their properties.



6. Information Models (Metapatterns)

The world is full of patterns and information technology engineers and architects leverage these patterns when trying to get a computer to do something effectively and efficiently for humans. Understanding the patterns which exist can help make both building and using software easier.

Business reports, including financial reports, have patterns. Another way of saying this is that business reports are not random. There are not an infinite number of patterns in business reporting.

The next section, *Business Reporting Use Cases*, introduces a set of approximately 30 business reporting use cases collected over a number of years. That set of 30 business use cases was condensed from many, many different business reporting use cases examined in order to understand how to model financial information using XBRL. These business use cases were also used within the USFRTF Patterns Guide which was created in order to help understand how to construct the US GAAP Taxonomy.

These 30 business use cases were distilled down further, basically to their essence. This distilled version is referred to here as a metapattern. Basically, every business reporting use case follows one or a combination of these metapatterns. While it is hard to say if these metapatterns will cover 100% of all business reporting use cases, it is hard to dispute that any of these 9 metapatterns.

The US GAAP Taxonomy Architecture refers to these metapatterns as *compact pattern definitions* and documents a number of these metapatterns in what it refers to as style guides. These style guides were never released publicly but they are referred to in the US GAAP Taxonomy Architecture. Everything within the US GAAP Taxonomy fits into one or a combination of these metapatterns.

Metapatterns explain the business semantics within a modelling of information expressed as an XBRL taxonomy. As such, these metapatterns can be said to express information models.

The following is a summary of the identified business reporting metapatterns.

- **Hierarchy:** A hierarchy information model denotes a hierarchy of concepts with no numeric relations. If no numeric relations exist, then the information model of the component is a hierarchy. Basically, anything can be modelled as a hierarchy. It is the addition of additional relations, typically computations, which turns a hierarchy into some other metapattern.
- **Roll Up:** A roll up information model computes a total from a set of other concepts. This information model is commonly referred to a "roll up", or the equation $A + B = C$. All concepts involved in this information model have the same set of characteristics and all must be numeric.
- **Roll Forward:** A roll forward information model reconciles the balance of a concept between two points in time. This information model is commonly referred to a "roll forward" or "movement analysis" or the equation: beginning balance + changes = ending balance. In this equation period [Axis] is as of two different points in time and the changes occur during the period between those two points in time.
- **Compound Fact:** A compound fact information model is characterized by the fact that some set of other concepts or some other information model exists for a set of characteristics expressed by one or more [Axis]. For



example, the salary information for the directors of an entity is a compound fact. The salary information is made up of salary, bonuses, director fees which roll up into total salary and this set of compound facts can be expressed for any number of directors, the director being the characteristic or axis of the compound fact.

- **Adjustment:** An adjustment information model reconciles an originally stated balance to a restated balance, the adjustment being the total change, between two different report dates. An adjustment is similar to a roll forward in that it is a reconciliation, however rather than the period [Axis] changing; it is the *Report Date [Axis]* which changes: originally reported balance + adjustment = restated balance.
- **Variance:** A variance information model reconciles some reporting scenario with another reporting scenario, the variance between reporting scenarios being the variance or changes. For example, a sales analysis which reconciles the concept sales for the reporting scenarios of actual and budgeted is a variance. The equation is: actual – budget = variance.
- **Complex Computation:** A complex computation information model can be thought of as a hierarchy plus a set of commutations between different concepts within that hierarchy which are challenging to model as the parent/child relations of a graph. The type of computations can vary significantly, thus the challenging in modelling. For example, the computation of earnings per share is a complex computation.
- **Text Block:** A text block information model is an information model which contains, by definition, only one concept and that concept expresses what amounts to a narrative or prose as escaped HTML within that one concept. For example, the narrative associated with a set of accounting policies expressed as a list or a table presentation format is a text block. As there is only one concept, there can be no relations within the information model.
- **Grid:** A grid information model is a pseudo metapattern which uses the presentation characteristics of the columns and rows of a table to model information. Because the grid models presentation information and not business semantics, it cannot be considered a metapattern. However, the grid is included in this list because the US GAAP Taxonomy uses a grid information model to model the statement of changes in equity.

You can obtain example XBRL instances and XBRL taxonomies and other information for each of these metapatterns which is helpful in understanding these metapatterns at the following URL:

<http://www.xbrlsite.com/DigitalFinancialReporting/Metapatterns/2011-07-15>

It is important to examine the details of these metapatterns, that is where the clues lie which provide understanding of each metapattern and the differences between the metapatterns. We now provide key information which is helpful in gaining an understanding of these business reporting metapatterns. Each uses a financial reporting oriented example as most business users understand financial reporting to a sufficient degree.



6.1. Hierarchy

A hierarchy information model denotes a hierarchy of concepts with no numeric relations. If no numeric relations exist, then the information model of the component is a hierarchy. Basically, anything can be modelled as a hierarchy. It is the addition of additional relations, typically computations, which turns a hierarchy into some other metapattern.

The *Hierarchy* metapattern models a hierarchy or a tree of information. A Hierarchy metapattern has no computations (i.e. no XBRL calculations or XBRL Formulas relating to relations between numeric values). A hierarchy can contain business rules such as reportability rules which helps one understand when specific information must be reported.

6.1.1. Visual Example

Sample Company
December 31, 2010

Basis of Reporting

Praesent fringilla feugiat magna. Suspendisse et lorem eu risus convallis placerat. Suspendisse potenti. Donec malesuada lorem id mi. Nunc ut purus ac nisl tempus accumsan.

Trade receivables

Sed magna felis, accumsan a, fermentum quis, varius sed, ipsum. Nullam leo. Donec eros.

Inventories

Inventry valuation method

Cost

Description of components

Proin elit sem, ornare non, ullamcorper vel, sollicitudin a, lacus. Mauris tincidunt cursus est. Nulla sit amet nibh. Sed elementum feugiat augue. Nam non tortor non leo porta bibendum. Morbi eu pede.

Cost method

FIFO

Investments in securities

Etiam ipsum orci, gravida nec, feugiat ut, malesuada quis, mauris. Etiam portitor. Ut venenatis, velit a accumsan interdum, odio metus mollis mauris, non pharetra augue arcu eu felis.

Bank borrowings

Ut ut risus nec nibh dictum posuere. Phasellus eleifend, diam vitae dapibus pulvinar, erat ligula auctor dui, eget congue justo lorem hendrerit tellus.

Provisions

Suspendisse vestibulum augue eu justo. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas.

6.1.2. Description of Example

The example shows a *Hierarchy* of accounting policies. If you are familiar with something like the outline feature of Microsoft Word then you know what a hierarchy is. There are no explicit relationships between concepts within this type of information model because XBRL most taxonomies don't generally distinguish between the types of relations. They could, but they currently do not. As such, we make no distinction between types of relations. Again, by definition everything is a *Hierarchy* unless additional information is added which turns the hierarchy into some other metapattern.

A *Hierarchy* can always be identified by a software application by the fact that there are no XBRL calculations or other business rules expressing computations within the taxonomy.

6.1.3. Extension Points

The following are the logical extension points for a *Hierarchy* metapattern:

- Add new [Axis]
- Add new [Member] to [Axis]
- Add new concepts to [Line Items] of *Hierarchy*



6.2. Roll Up

A roll up information model computes a total from a set of other concepts. This information model is commonly referred to a “roll up”, or by the equation $A + B = C$. All concepts involved in this information model have the same set of characteristics and all must be numeric.

The *Roll Up* metapattern can be thought of as a hierarchy metapattern with additional constraints. One additional constraint is that the total and the components of the total must all be numeric and of the same data type. Another constraint is that a business rule for the relations between the total and the set of concept which make up that total is expressed.

6.2.1. Visual Example

Sample Company December 31, (thousands of dollars)	2010	2009
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

6.2.2. Description

The *Roll Up* in the example above is a set of five concepts which add up to a sixth concept: Land + Buildings, Net + Furniture and Fixtures, Net + Computer Equipment, Net + Other Property, Plant and Equipment, Net = Property, Plant and Equipment, Net, Total. A *Roll Up* can have other Roll Ups within (i.e. nested), what amount to sub totals.

A *Roll Up* can always be identified by a software application by its set of XBRL calculations within the XBRL taxonomy.

6.2.3. Extension Points

The following are extension points for a *Roll Up* metapattern:

- Add new [Axis]
- Add new [Member] to [Axis]
- Add new concepts to the concepts being rolled up (i.e. a new total concept cannot be added, that would require an entirely new roll up); for example, adding “Airplanes” to the roll up above would make sense but adding another concept “Property, Plant and Equipment” would not make sense



6.3. Roll Forward

A roll forward information model reconciles the balance of a concept between two points in time. This information model is commonly referred to a “roll forward” or “movement analysis” or by the equation: beginning balance + changes = ending balance. In this equation, the Period [Axis] is as of two different points in time and the changes occur during the period between those two points in time.

The changes within a roll forward could take the form of one concept, a set of many change concepts, or one or more roll ups which aggregate to change concepts.

6.3.1. Visual Example

Sample Company		
December 31,		
(thousands of dollars)		
	<u>2010</u>	<u>2009</u>
Roll Forward of Land		
Land, Beginning Balance	1,147	1,147
Additions	1,992	400
Disposals	-193	-200
Translation difference	2,401	-200
	<hr/>	<hr/>
Land, Ending Balance	<u>5,347</u>	<u>1,147</u>

6.3.2. Description

The *Roll Forward* above reconciles the beginning balance of Land to the ending balance of Land. The XBRL instance provides Facts for two Roll Forwards, 2010 and 2009. Land, Beginning Balance + Additions - Disposals + Translation Difference = Land, Ending Balance. In the case above, the change concept is the total of a roll up.

A *Roll Forward* can be identified by the business rule which must be used to verify the computation of the reconciliation, beginning balance + changes = ending balance with a changing Period [Axis].

6.3.3. Extension Points

The following are extension points for a *Roll Forward* metapattern:

- Add new [Axis]
- Add new [Member] to [Axis]
- Add new concepts to the *Roll Up* of changes; (a new balance concept would never be added)
- Add a new *Roll Up* of changes or one or more change concepts; (i.e. a roll forward can have one or many changes)

Note that there are two approaches to modelling a roll forward. The first is to create a roll up to summarize all changes and then model only one change concept. The second is to not use a roll up and model each change separately. Semantically, the two are equivalent.



6.4. Compound Fact

A compound fact information model is characterized by the fact that for some set of concepts expressed within some information model; that information model can be expressed over some characteristic expressed as an [Axis]. Basically, it is the [Axis] which provides additional information which makes each information model unique. For example, the salary information for the directors of an entity is a compound fact. The salary information is made up of salary, bonuses, director fees and such information must be associated with a specific director to be meaningful and to distinguish, say, one salary from another salary.

6.4.1. Visual Example

Sample Company For Period Ending December 31, 2010				
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
frm:DirectorsAllMember	2,000	2,000	2,000	2,000

6.4.2. Description

In the example above salary information is expressed for the directors of an entity. The salary information (salary, bonus, director fee, and options granted) are the concepts which make up the compound fact. The director is the axis along which the salary information is expressed, here for the members John Doe, Jane Doe, and the total salary information for all directors.

Any information model could be expressed as a compound fact. In the example above the information model is a hierarchy. This information model might have also been modelled as a roll up had a total of all salary information been provided.

6.4.3. Extension Points

The following are extension points for a *compound fact* metapattern:

- Add new [Member] to [Axis] (generally, a new [Axis] would not be added but might be to further detail the primary characteristic)
- Add new concepts to [Line Items]
- Basically, extension points are determined by the specific information model of the compound fact



6.5. Adjustment

An adjustment information model reconciles an originally stated balance to a restated balance, the adjustment being the total change, between two different report dates. An adjustment is similar to a roll forward in that it is a reconciliation, however rather than the Period [Axis] changing; it is the *Report Date [Axis]* which changes: originally reported balance + adjustment = restated balance.

The *Adjustment* metapattern shows how to model an adjustment to a prior period financial statement for a change in accounting policy or correction of an error as defined by financial reporting standards. This same approach can be used for making adjustments to other beginning balances not related to financial reporting.

6.5.1. Visual Example

Sample Company December 31, (thousands of dollars)	2010	2009
<i>Prior Period Adjustment</i>		
Retained Earnings (Accumulated Losses), Originally Stated 2009	4,000	
Change in Accounting Policy	3,000	
Correction of an Error	-1,000	
Retained Earnings (Accumulated Losses), Restated 2009 Beginning Balance	6,000	

6.5.2. Description

The example *Adjustment* above reconciles the Retained Earnings (Accumulated Losses), Originally Stated in 2009 to its Restated 2009 Beginning Balance via the Prior Period Adjustments which make up the change. Note that an *Adjustment* looks similar in presentation to a roll forward, however it is different in that a different [Axis] is changing.

An *Adjustment* can be identified by software applications by the business rule which computes the adjustment to verify that it is correctly articulated within the XBRL instance: originally stated + adjustment = restated balance over a changing *Report Date [Axis]*.

6.5.3. Extension Points

The following are extension points for an *Adjustment* metapattern:

- Add new [Axis]
- Add new [Member] to [Axis]
- Add new adjustment concepts to [Line Items] of the adjustment; (new balance concepts cannot be added)



6.6. Variance

A variance information model reconciles some reporting scenario with another reporting scenario, the variance between reporting scenarios being the variance or changes. For example, a sales analysis which reconciles the concept sales for the reporting scenarios of actual and budgeted is a variance. The equation in this case is: actual – budget = variance. But a variance could take other forms such as a variance from forecast, variance from plan, etc.

A variance is characterised by a changing Reporting Scenario [Axis] and the information model of a variance could take the form of any information model such as a hierarchy, roll up, roll forward, etc.

6.6.1. Visual Example

Sample Company For Period Ending December 31, 2010			
Concept	Actual	Budgeted	Variance
Sales	6,000	5,000	1,000
Cost of Goods Sold	4,000	3,000	1,000
Contribution Margin	1,000	2,000	-1,000
Distribution Costs	1,000	1,000	0

6.6.2. Description

A *Variance* reconciles two different reporting scenarios differentiated using the *Reporting Scenarios [Axis]*, in the case here *Actual [Member]* and *Budgeted [Member]*, the difference being the *Variance*, or *Reporting Scenarios, All [Member]*.

A *Variance* can be identified by software applications by the business rule which verifies and computes the variance, $Actual [Member] + Budgeted [Member] = Reporting Scenarios, All [Member]$, all within the *Reporting Scenario [Axis]*.

[CSH: The Reporting Scenarios, All [Member] as the variance seems odd to me; this should probably be Variance [Member].]

6.6.3. Extension Points

The following are extension points for a *Variance* metapattern:

- Add new [Axis]
- Add new [Member] to an [Axis]
- Add new concepts to [Line Items]

What can change is determined by the information model of the concepts for which a variance is being expressed.



6.7. Complex Computation

A complex computation information model can be thought of as a hierarchy plus a set of commutations between different concepts within that hierarchy which are more challenging to model than a roll up or roll forward. The type of computations can vary significantly, thus the challenging in modelling. For example, the computation of earnings per share is a complex computation.

Basically, any hierarchy can be turned into a complex computation by adding business rules which express relations between the concepts within the [Line Items] of that hierarchy.

6.7.1. Visual Example

Sample Company For Period Ended December 31,	2010	2009
OTHER INFORMATION		
Earnings Per Share Components		
Net Income (Loss)	10,000,000	20,000,000
Weighted Average Common Shares	100,000,000	100,000,000
Earnings Per Share	0.10	0.20

6.7.2. Description

A *Complex Computation* metapattern is in essence a *Hierarchy* metapattern with *Business Rules* which express complex relations between numeric values contained in that hierarchy. In the example above, Earnings Per Share is expressed in relation to Net Income and Weighted Average Common Shares. The Weighted Average Common Shares computation is also expressed as a business rule.

An *Complex Computation* metapattern can always be identified by software as it does not fit into any other metapattern category. It will have some XBRL Formula, but it will not match any of the other XBRL Formulas for the other metapatterns.

6.7.3. Extension Points

The following are extension points for a *Complex Computation* metapattern:

- Add new [Axis]
- Add new [Member] to [Axis]
- Add new concepts to [Line Items]
- Add new business rules to set of relations



6.8. Text Block

A text block information model is an information model which contains, by definition, only one concept and that concept expresses what amounts to a narrative or prose as escaped HTML within that one concept. For example, the narrative associated with a set of accounting policies expressed as a list or a table presentation format is a text block. As there is only one concept, there can be no relations within the information model.

6.8.1. Visual Example

Duis fermentum

Sed mauris. Nulla facilisi. Fusce tristique posuere ipsum. Nulla facilisi. Aliquam viverra risus vitae ante. Sed rhoncus mi in wisi. Nullam nibh dui, molestie vitae, imperdiet non, ornare at, elit.

- Suspendisse accumsan, arcu vel ornare interdum, magna tellus porta mauris, in porta mi lacus sodales felis.
- Phasellus eleifend, diam vitae dapibus pulvinar, erat ligula auctor dui, eget congue justo lorem hendrerit tellus.
- Fusce gravida, ligula a placerat placerat, leo erat euismod lectus, et lacinia justo libero non pede.

DONEC PULVINAR NONUMMY ERAT

Etiam porttitor. Ut venenatis, velit a accumsan interdum, odio metus mollis mauris, non pharetra augue arcu eu felis. Ut eget felis. Mauris leo nulla, sodales et, pharetra quis, fermentum nec, diam.

6.8.2. Description

Any portion of a business report can be modelled as a [Text Block], referred to as “block tagged”. Alternatively, any portion could also be “detailed tagged” using one of the other information model metapatterns.

6.8.3. Extension Points

The following are extension points for a *Text Block* metapattern:

- Add new [Axis]
- Add new [Member] to [Axis]



6.9. Grid

A grid information model is a pseudo metapattern which uses the presentation characteristics of the columns and rows of a table to model information. Because the grid models presentation information and not business semantics, it cannot be considered a metapattern. However, the grid is included in this list because the US GAAP Taxonomy uses a grid information model to model the statement of changes in equity.

6.9.1. Visual Example

**Sample Company
December 31,
(thousands of dollars)**

	Common Stock	Additional Paid-in Capital	Retained Earnings (Accumulated Deficit)	Equity
Balance at December 31, 2009	150,000	50,000	200,000	400,000
Net Income (Loss)			200,000	200,000
Dividends			-100,000	-100,000
Common Stock Issued	25,000	25,000		50,000
Balance at December 31, 2010	175,000	75,000	300,000	550,000

HINT: In a grid, the axis are generally the columns of the grid and the concepts reported are the rows of the grid. Because the axis are unique to the grid and the rows repeat for every fact value reported, many portions of a grid cannot tie to other components of a business report.

6.9.2. Description

The grid is used to model the statement of changes in equity above. The axis Equity Component [Axis] assigned to a fact indicates which column the fact belongs in. The [Line Items] determines the rows of the table. The cells of the table are the intersections between the Equity Component [Axis] and the concept of the set of [Line Items] of the fact which should go into that cell.

6.9.3. Extension Points

The following are extension points for a *Grid* metapattern:

- Add new [Axis]
- Add new [Member] to [Axis]
- Add a new concept to [Line Items]

