Business Reporting Metapatterns (2010-08-01)

This is a summary of metapatterns gleaned from the Business Reporting Use Cases. The Business Reporting Use Cases can be distilled down to these five patterns. Only these Metapatterns are used to express the Business Reporting Use Cases.

The fundamental metapatterns are:

- Hierarchy
- Roll Up
- Roll Forward

Two additional metapatterns are added, but they are actually variations of the there metapaterns above:

- Compound Fact (at least one additional Measure is added to differentiate the sets of concepts which make up a fact)
- Other Relations (computations other than a roll up or roll forward)

These metapatterns are derived from the metapatterns used within the US GAAP Taxonomy, but more strictly followed than those using the US GAAP Taxonomy are required.

The modeling within the XBRL taxonomy in these metapattern examples do not dictate what constitutes one metapattern or another, but rather they exist to help visualize the XBRL taxonomy metadata by someone reading the XBRL taxonomy. It is the characteristics of the metadata of the XBRL taxonomy which determines the metapattern, not the labeling of the taxonomy components. However, such labeling can help create an XBRL taxonomy correctly (logically) in lieu of an application which enforces these metapatterns, making it impossible to create an illogical XBRL taxonomy.

Hierarchy

Characteristics: No computations, concepts are related in some other way (i.e. they go together in some way). Concepts can be of any data type as the concepts.

Example:

Sample Company
December 31, 2010

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.

In the example above, the concepts are related in that they are all accounting policies. Concepts can have sub-hierarchies (concepts can be nested). The nesting of the concept determines some sort of relation (i.e. why are they shown as nested).

How to identify: Something is a Hierarchy if it is not a Roll Up or Roll Forward. This can be determined in that the characteristics of a Roll Up or Roll Forward cannot be found, allowing an application to deduce that it must be a Hierarchy.

Extension: Additional concepts can be added to the hierarchy..

Roll Up

Characteristics: Concepts are related in that they have a computation, they are involved in a simple summation of a set of concepts. Concepts within a Roll Up will always have the same data type.

Example:

Sample Company
December 31,
(thousands of dollars)

	2010	2009
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

In the example above, the first column on the left, Land + Buildings, Net + Furniture and Fixtures, Net + Computer Equipment, Net + Other Property, Plant and Equipment, Net = Property, Plant and Equipment, Net. In the case above, the relation is shown for two periods, 2010 and 2009.

How to identify: This metapattern can be always be identified the fact that a computation exists between the one balance. This can take two forms: (a) Beginning + Additions – Subtractions = Ending, (b) Beginning + Changes = Ending. This computation is expressed within an XBRL Formula. There also could be a Roll UP detailing the Changes.

Extension: The only place that it makes sense to add a new concept to this metapattern is to and another concept which adds to the total of Property, Plant and Equipment, Net (i.e. add another concept to the Roll Up).

Roll Forward

Characteristics: Concepts are related in that they are involved in a reconciliation of a balance at one point of time to that same concept at another point in time using the concepts which caused the change in the balance. This metapattern can detail the changes into a Roll Up which will always be a set of concepts which have a periodType of duration. All concepts in a Roll Forward are the same data type.

Example:

Sample Company
December 31,
(thousands of dollars)

	2010	2009
Roll Forward of 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

In the example above, the first column on the left Land at December 31, 2009 is reconciled to Land at December 31, 2010. The changes are Additions, Disposals, and Translation Difference. Those three concepts when totaled represent the total change between the balance of Land between the two periods.

How to identify: This metapattern can be always be identified the fact that a computation exists between the one balance. This can take two forms: (a) Beginning + Additions – Subtractions = Ending, (b) Beginning + Changes = Ending. This computation is expressed within an XBRL Formula. There also could be a Roll UP detailing the Changes.

Compound Fact

Characteristics: Not really a metapattern, but rather one of the other metapatterns (Hierarchy, Roll Up, Roll Forward) which has a special characteristic in that the concepts are related to each other in that they relate to some specific Measure.

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:DirectorsAllDomain	2,000	2,000	2,000	2,000

In the example above, this is a Hierarchy as no Roll Up relation is expressed (i.e. it could have been a Roll Up if there were some relation between Salary, Bonus, Director Fee, and Options Grated but none is expressed). The Salary and other concepts relate to one director. The directors are differentiated by having a Measure "Director [Measure]" in the XBRL taxonomy. This Measure can be totaled, meaning for example the Salary can be totaled for directors John Doe and Jane Doe to arrive at a total for all directors.

How to identify: This metapattern can be always be identified the fact that there is some Measure which differentiates other common Measures such as Legal Entity [Measure] or Calendar Time [Measure] which exists on typically every Fact within an XBRL instance. That Measure is unique to a specific Fact Group generally.

Other Relations

Characteristics: Not really a metapattern (most likely), but rather a Hierarchy with computations relations so complex that they cannot be expressed using a Roll Up or a Roll Forward.

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	0.01	0.02

In the example above, this is an Other Relations because the relation between the concepts is: Earnings Per Share = Net Income (Loss) / Weighted Average Common Shares.

How to identify: This metapattern can be always be identified by the XBRL Formulas which express the relations. The relations may be a computation or some reportability rule relating to the concepts within some Hierarchy. There are no other Roll Up or Roll Forward relations found in the XBRL taxonomy.