1. Reconciliation of Models

This section reconciles various models to each other which is very helpful when implementing software.

1.1. Financial Report Semantics and Dynamics Theory perspective

This section reconciles the terminology of the Financial Report Semantics and Dynamics Theory terminology to the US GAAP XBRL Taxonomy, SEC model term, and XBRL technical syntax terminology.

Financial Report Semantics and Dynamics Theory Term	***Example***	**US GAAP/SEC Model Term**	**XBRL Technical Syntax Term**
Financial report – A financial statement plus supplementary financial information. Financial report can be broken down into components.	*Financial statement portion of a 10-Q or 10-K; financial statement issued by a private entity*	SEC XBRL financial filing; instance document; XBRL instance	XBRL instance + XBRL taxonomy
Financial report rudiments – One of the primitive building blocks of a financial report: financial report, component, characteristic, fact, relations	*See the examples from each rudimentary or primitive piece above*	Report element	Uses various technical syntax terms from XML, XML Schema, XLink, XBRL, XBRL Dimensions, XBRL Formula
Component – A portion of a financial report. Made up of facts and characteristics.	*Balance sheet, significant accounting policies, maturities of long-term debt*	Network + [Table]; Fact Table	Network + Hypercube
Characteristic – Describes a fact. Made up of a characteristic and the value of that characteristic.	*Legal entity of "consolidated entity"; Period of "2011-21-31"*	[Axis] + [Member] or [Line Items] (the concept is just another characteristic)	Dimension + Member; Primary Items (defined as XML schema element with the substitutionGroup value of "xbrli:item", a specific type, a specific period, and a specific balance; must NOT be abstract)
Relations – The relation from one concept to another concept.	*Assets = Liabilities + Equity; Beginning cash + net cash flows = ending cash*	Business rules, Domain partition aggregation model, Information model	Presentation relations, calculation relations, definition relations, XBRL Formula
Fact – Intersection of characteristics, a value, traits of the value if numeric, and parenthetical information	*Value of 1000 for the concept "Cash and cash equivalents" for the legal entity "consolidated entity" for the period ended "December 31, 2010" expressed in US Dollars rounded to millions*	Fact	Simple fact (compound facts are not allowed by US GAAP Taxonomy Architecture)
Relations between concepts – Relation between concepts within the concept characteristic	*Roll up, roll forward, hierarchy*	Roll up, roll forward, hierarchy	*--Does not have this level--*
Relations between characteristics – Relations between characteristic members	*North America, United States, Canada*	Domain partition aggregation model	*--Does not have this level--*
Relations between components – Flow, or the order or sequence of components	*Balance sheet, then income statement, then statement of changes in equity, …*	Flow, uses Network {SortCode} - {Type} - {Title}	*--Does not have this level--*
Parenthetical explanation – provide additional descriptive information about a fact.	*Parenthetical explanation on the bottom of a page, a footnote to a financial fact*	Footnote	XBRL Footnote

1.2. From Perspective of US GAAP/SEC Model

From the perspective of the US GAAP XBRL Taxonomy and SEC model perspective.

Financial Report Semantics and Dynamics Theory Term	*Example*	US GAAP/SEC Model Term	XBRL Technical Syntax Term
-- Undefined, uses specific report element name rather than this general term --	*Network, Table, Axis, Member, Line Items, Concept, Fact*	**Report element**	XML Schema element with specific attributes; different sets of attributes and attribute values define report elements to be different things
This is *part of a component*, but because different taxonomies use network, hypercube, or combinations of network/hypercube; this cannot be mapped to one physical technical syntax	*Balance sheet*	**Network** (must have a unique URI, must have a number, must have a sort group, must have a title)	Network expressed using the XLink extended link with an XBRL extended link role
This is *part of a component*, but because different taxonomies use network, hypercube, or combinations of network/hypercube; this cannot be mapped to one physical technical syntax	*Balance sheet*	**[Table]** (period must be "duration", must not have a balance attribute, must be abstract)	XML schema element with the substitutionGroup value of "xbrldt:hypercubeItem"
Characteristic description – This is part of a characteristic; the description of the characteristic	*The "Legal entity" to which a fact relates*	**[Axis]** (must have a type of "nonnum:domainMemberItem", period must be "duration", must not have a balance attribute, must be abstract)	XBRL Dimensions dimension which is XML schema element with the substitutionGroup value of "xbrldt:dimensionItem"; some characteristics are expressed within an XBRL instance as a context; the concept is expressed using XML Schema elements which have the substitutionGroup value of "xbrli:item". XBRL Formula refers to this as an "aspect"
Characteristic value – The value of a characteristic.	*"Consolidated entity" is the value of "Legal Entity" characteristic*	**[Member]**	XBRL Dimensions Member
Line items – Set of concepts	*Assets [Roll up] of a balance sheet*	**[Line Items]**	Primary Items
Line Item – This is the concept characteristic	*Cash and cash equivalents; Assets; Net income (loss)*	**Concept** or **Line Item** (one line item from the set of [Line Items])	XML schema element with the substitutionGroup value of "xbrli:item", a specific type, a specific period, and a specific balance; must NOT be abstract.
Fact – Intersection of characteristics, a value, traits of the value if numeric, and parenthetical information	*Value of 1000 for the concept "Cash and cash equivalents" for the legal entity "consolidated entity" for the period ended "December 31, 2010" expressed in US Dollars rounded to millions*	**Fact**	Simple fact (compound facts are not allowed)
Relations – The relation from one concept to another concept.	*Assets = Liabilities + Equity;* *Beginning cash + net cash flows = ending cash*	Business rules, Domain partition aggregation model, Information model	Presentation relations, calculation relations, definition relations, XBRL Formula
Relations between components – Flow, or the order or sequence of components	*Balance sheet, then income statement, then statement of changes in equity, …*	**Flow**, uses Network {SortCode} - {Type} - {Title}	*--Does not have this level--*

Financial Report Semantics and Dynamics Theory Term	***Example***	**US GAAP/SEC Model Term**	**XBRL Technical Syntax Term**
Relations between concepts – Relation between concepts within the concept characteristic	*Roll up, roll forward, hierarchy*	Roll up, roll forward, hierarchy	*--Does not have this level--*
Relations between characteristics – Relations between characteristic members	*North America, United States, Canada*	Domain partition aggregation model	*--Does not have this level--*
Set of financial reports which are being worked with; reading one, comparing across period for same reporting entity; comparing one or more financial reports from multiple reporting entities	*Comparing IBM, Apple, and Microsoft*	De facto standard is the RSS Feed provided by SEC	*--Does not have this level--*

1.3. Reconciliation of Financial Report Semantics and Dynamics Theory Terminology to XBRL Abstract Model 2.0

Reconciles the Financial Report Semantics and Dynamics Theory conceptual model to the XBRL Abstract Model 2.0.

Example	**Financial Report Semantics and Dynamics Theory Object**	**XBRL Abstract Model 2.0 Object**
Financial statement portion of a 10-Q or 10-K; financial statement issued by a private entity	**Financial report** – A financial statement plus supplementary financial information. Financial report can be broken down into components.	Document or Manifest
See the examples from each rudimentary or primitive piece above	**Financial report rudiments** – One of the primitive building blocks or objects of a financial report: financial report, component, characteristic, fact, parenthetical explanation, relation	Model Element
Balance sheet, significant accounting policies, maturities of long-term debt	**Component** – A portion of a financial report. Made up of facts which go together for some specific purpose and the relations between facts and relations between characteristics. (Common terms for this are array, matrix, hypercube, cube)	Cube, Cube Region
Reporting entity with CIK number 1234567890; Legal entity of "consolidated entity"; Period of "2011-21-31"; Property, plant and equipment class of "Land"	**Characteristic** – Describes a fact. Made up of a characteristic and the value of that characteristic.	Aspect
Assets = Liabilities + Equity; Beginning cash + net cash flows = ending cash	**Relation** – The relation from one object of a financial report to another object or objects. (Business rules, model structure, report sequence or ordering are types of relations)	Relation
Value of 1000 for the concept "Cash and cash equivalents" for the legal entity "consolidated entity" for the period ended "December 31, 2010" expressed in US Dollars rounded to millions	**Fact** – A single, observable, reported piece of information. Intersection of characteristics, a value, traits of the value if numeric, and parenthetical information	Data Point
Parenthetical explanation on the bottom of a page, a footnote to a financial fact	**Parenthetical explanation** – provide additional descriptive information about a fact.	Footnote
Roll up, roll forward, hierarchy	Relation between concepts within the concept characteristic	Relation
North America, United States, Canada	Relations between values of a characteristic	Relation
Balance sheet, then income statement, then statement of changes in equity, …	Relationship between components or the order or sequence of components	Relation
Units, rounding, balance type, period type	**Property** – Property or trait of an object.	Attribute

1.4. Reconciliation of US GAAP/SEC Model Terminology to XBRL Abstract Model 2.0

US GAAP XBRL Taxonomy and SEC model to XBRL Abstract Model 2.0.

Example	**US GAAP/SEC Model Object**	**XBRL Abstract Model 2.0 Object**
Financial statement portion of a 10-Q or 10-K; financial statement issued by a private entity	**SEC XBRL financial filing**; XBRL instance + XBRL taxonomy;	Document, Manifest
See the examples from each rudimentary or primitive piece above	**Report element**: Network, [Table], [Axis], [Member], [Line Items], Concept, Abstract concept, Fact, Footnote	Model Element
Balance sheet, significant accounting policies, maturities of long-term debt	**Network**	Cube, Cube Region
Balance sheet, significant accounting policies, maturities of long-term debt	**[Table]**	Cube, Cube Region
The "Legal entity" to which a fact relates	**[Axis]**	Aspect
"Consolidated entity" is the value of "Legal Entity" characteristic	**[Member]**	Aspect Value
Assets [Roll up] of a balance sheet	**[Line Items]**	Aspect
Cash and cash equivalents; Assets; Net income (loss)	**Concept** or **Line Item**	Aspect Value
Assets for the legal entity "consolidated entity" of the reporting entity with CIK 0000000001 for December 31, 2010	**Fact**	Data Point
Note that this is …	**XBRL footnote**	Footnote
US Dollars	**Units**	Aspect, Aspect Value
-6 (rounded to millions)	**Decimals**	Aspect, Aspect Value