

Narrative Explaining Logical Conceptualization of a Financial Report

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August 1, 2019 (DRAFT)

The purpose of this resource is to provide a common sharable logical conceptualization¹ of the basic underlying model of a financial report. Key *terms* in this logical conceptualization are highlighted in bold the first time they are used and are referenced to additional information². The logical *relations* between terms are documented in this diagram³. The *assertions* in this conceptualization are documented in the form of axioms⁴. This conceptualization is also documented in machine-readable XBRL⁵ and in machine-readable OWL⁶. This conceptualization has been tested⁷ using four application profiles of XBRL-based financial reports⁸ by four different software vendors⁹. Curated metadata¹⁰ can be created using this conceptualization.

Basic Logical Conceptualization

A scalar is a fact which has no characteristics; it stands on its own. For example, the value of pi is a scalar, the value never changes; it always has the same value for everyone. (Pi or π is the ratio of a circle's circumference to its diameter and always has the value of equal to 3.14)

Fact Value
3.14

¹ Enhanced Description of an Ontology-like Thing, <http://xbrl.squarespace.com/journal/2019/7/19/enhanced-description-of-ontology-like-thing.html>

² Open Source Framework for Implementing XBRL-based Digital Financial Reporting, <http://xbrl.azurewebsites.net/2019/Framework/FrameworkEntitiesSummary.html>

³ Logical Model, <http://xbrl.azurewebsites.net/2016/conceptual-model/LogicalModel-2019-03-10.jpg>

⁴ Axioms, <http://xbrl.azurewebsites.net/2019/Framework/Axioms.html>

⁵ Prototype SBRM Represented in XBRL, <http://xbrl.squarespace.com/journal/2019/7/14/prototype-sbrm-represented-in-xbrl.html>

⁶ Prototype SBRM Representation in OWL, <http://xbrl.azurewebsites.net/2019/SBRM/sbrm.owl.xml>

⁷ Comparison of Renderings for Concept Arrangement Patterns, <http://xbrl.azurewebsites.net/2019/Prototype/conformance-suite/Production/ComparisonOfConceptArrangementPatternRenderings.pdf>

⁸ Profiles, <http://xbrl.azurewebsites.net/2018/Library/Profiles-2018-10-22.pdf>

⁹ Digital Financial Report Conformance Suite, <http://xbrl.azurewebsites.net/2019/Prototype/conformance-suite/Production/index.xml>

¹⁰ US GAAP Financial Report Ontology (Prototype), <http://xbrl.azurewebsites.net/2019/Prototype/New/Home.html>

A financial **report**¹¹ communicates facts. A **fact**¹² defines a single, observable, reportable piece of information contained within a financial report, or **fact value**¹³, contextualized for unambiguous interpretation or analysis by one or more distinguishing characteristics or aspects. For example, below are two facts with the values of “2,000” and “1,000”. However, the two facts above are not contextualized.

Fact Value
2,000
1,000

An **aspect**¹⁴ describes a fact. An aspect provides information necessary to describe a fact or distinguish one fact from another fact within a report. For example, below you see the concept aspect of the numbers “2,000” and “1,000” which relates to the concepts “Revenues” and “Net income” respectively:

Concept Aspect	Fact Value
Revenues	2,000
Net income	1,000

To fully describe a fact you need more than just one aspect. In XBRL-based financial reports, a fact must always provide three **core aspects**¹⁵: reporting entity that reported the fact, calendar period of the reported fact, and the concept that describes the reported fact. Below you see two facts which are characterized by three core aspects which are used to differentiate the two facts from one another.

Reporting Entity Aspect	Calendar Period Aspect	Concept Aspect	Fact Value
ABC Company	Jan 1, 2019 to Dec 31, 2019	Revenues	2,000
ABC Company	Jan 1, 2019 to Dec 31, 2019	Net income	1,000

In XBRL-based financial reports, in addition to the core aspects that you always must use, creators of reports can also provide additional **noncore aspects**¹⁶. A noncore aspect is simply some additional aspect that is created to further distinguish facts beyond the capabilities of the three core aspects. Below you see the noncore aspect “Legal Entity Aspect” has been added to the two facts we have been working with:

¹¹ Report, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/Report.html>
¹² Fact, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/Fact.html>
¹³ Fact Value, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/FactValue.html>
¹⁴ Aspect, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/Aspect.html>
¹⁵ Core Aspect, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/CoreAspect.html>
¹⁶ Noncore Aspect, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/NoncoreAspect.html>

Reporting Entity Aspect	Legal Entity Aspect	Calendar Period Aspect	Concept Aspect	Fact Value
ABC Company	Consolidated entity	Jan 1, 2019 to Dec 31, 2019	Revenues	2,000
ABC Company	Consolidated entity	Jan 1, 2019 to Dec 31, 2019	Net income	1,000

Fact values can be **numeric**¹⁷ or **nonnumeric**¹⁸. Numeric fact values require additional information to describe the units of the numeric fact and the rounding that is used to report the numeric fact. **Units**¹⁹ and **rounding**²⁰ are properties of the fact value that provide information necessary to describe numeric fact values. Below you see that the units of “US Dollars” and that the rounding of “Thousands of dollars”:

Reporting Entity Aspect	Legal Entity Aspect	Calendar Period Aspect	Concept Aspect	Fact Value	Units	Rounding
ABC Company	Consolidated entity	Jan 1, 2019 to Dec 31, 2019	Revenues	2,000	US Dollars	Thousands of dollars
ABC Company	Consolidated entity	Jan 1, 2019 to Dec 31, 2019	Net income	1,000	US Dollars	Thousands of dollars

To summarize where we are thus far and to be crystal clear; below you see one fact. That single fact is characterized by a set of four aspects. The numeric fact value is described as having units of “US Dollars” and that the fact value is rounded to the nearest “Thousands of dollars”.

Reporting Entity Aspect	Legal Entity Aspect	Calendar Period Aspect	Concept Aspect	Fact Value	Units	Rounding
ABC Company	Consolidated entity	Jan 1, 2019 to Dec 31, 2019	Revenues	2,000	US Dollars	Thousands of dollars

A **fact set**²¹ is a set of facts which go together (tend to be cohesive and share a certain common nature) for some specific purpose within a financial report. A common synonym for fact set is fact table. The term block is a synonym for fact set. Below you see three facts that make up a fact set that are used to describe the breakdown of revenues by geographic area.

¹⁷ Numeric Fact Value, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/NumericFactValue.html>

¹⁸ Nonnumeric Fact Value, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/NonnumericFactValue.html>

¹⁹ Units, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/Units.html>

²⁰ Rounding, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/Rounding.html>

²¹ Fact Set, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/FactSet.html>

Reporting Entity Aspect	Legal Entity Aspect	Geographic Area Aspect	Calendar Period Aspect	Concept Aspect	Fact Value	Units	Rounding
ABC Company	Consolidated entity	All Geographic Areas Combined	Jan 1, 2019 to Dec 31, 2019	Revenues	2,000	US Dollars	Thousands of dollars
ABC Company	Consolidated entity	North America	Jan 1, 2019 to Dec 31, 2019	Revenues	1,000	US Dollars	Thousands of dollars
ABC Company	Consolidated entity	South America	Jan 1, 2019 to Dec 31, 2019	Revenues	1,000	US Dollars	Thousands of dollars

Rules²² guide, control, suggest, or influence behavior. Rules cause things to happen, prevent things from happening, or suggest that it might be a good idea if something did or did not happen. Rules help shape judgment, help make decisions, help evaluate, help shape behavior.

Don't make the mistake of thinking that rules are completely inflexible and that you cannot break rules. Sure, maybe there are some rules that can never be broken. Maybe there are some rules that you can break. It helps to think of breaking rules as penalties in a football game. The point is that the guidance, control, suggestions, and influence offered by business rules are a choice of business professionals. The meaning of a rule is separate from the level of enforcement someone might apply to the rule.

A rule states a fact about the world. A synonym for rule is *assertion*.

So, considering our fact set below we know that the value “2,000” is for the concept “Revenues”, for the period “Jan 1, 2019 to Dec 31, 2019”, relates to the legal entity “Consolidated entity”, of the reporting entity “ABC Company” and is the total of all “Geographic Areas”. “North America” and “South America” are part of the *whole* “All Geographic Areas Combined”. A rule that expresses that relationship might be expressed as:

“All Geographic Areas Combined = North America + South America”.

Rules both describe and can be used to verify that reported facts are consistent with the provided description. There are many different types of rules including mathematical, structural, mechanical, logical, and accounting related rules.

Reporting Entity Aspect	Legal Entity Aspect	Geographic Area Aspect	Calendar Period Aspect	Concept Aspect	Fact Value	Units	Rounding
ABC Company	Consolidated entity	All Geographic Areas Combined	Jan 1, 2019 to Dec 31, 2019	Revenues	2,000	US Dollars	Thousands of dollars
ABC Company	Consolidated entity	North America	Jan 1, 2019 to Dec 31, 2019	Revenues	1,000	US Dollars	Thousands of dollars
ABC Company	Consolidated entity	South America	Jan 1, 2019 to Dec 31, 2019	Revenues	1,000	US Dollars	Thousands of dollars

²² Rule, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/Rule.html>

Grain²³ is the level of depth of information or granularity. The lowest level of granularity is the actual transaction, event, circumstance, or other phenomenon represented as the actual transaction within an accounting system. The highest level of granularity is the summarized information that is represented as a line item of say the income statement.

Considering the fact set you see below the fact outlined in red is one level of granularity as contrast to the other two facts that are outlined in green which provides the same information as is provided by the fact outlined in red, but at a different level of granularity.

Reporting Entity Aspect	Legal Entity Aspect	Geographic Area Aspect	Calendar Period Aspect	Concept Aspect	Fact Value	Units	Rounding
ABC Company	Consolidated entity	All Geographic Areas Combined	Jan 1, 2019 to Dec 31, 2019	Revenues	2,000	US Dollars	Thousands of dollars
ABC Company	Consolidated entity	North America	Jan 1, 2019 to Dec 31, 2019	Revenues	1,000	US Dollars	Thousands of dollars
ABC Company	Consolidated entity	South America	Jan 1, 2019 to Dec 31, 2019	Revenues	1,000	US Dollars	Thousands of dollars

And so hopefully you get an idea of the logical model of a financial report. Now we want to shift gears a bit and be a bit more specific as to how financial reports are represented using XBRL.

An **information model definition**²⁴ is created to represent each fragment of a report using the XBRL format. The following pieces, or **report elements**²⁵, are used to construct the information model description: **Network**²⁶, **Table**²⁷, **Axis**²⁸, **Member**²⁹, **Line Items**³⁰, **Abstract**³¹, and **Concept**³².

Below you see the information model description of the structure of a fragment of a report, in this case one fact set which is used to describe the components of inventory:

²³ Grain, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/Grain.html>

²⁴ Information Model Definition, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/InformationModelDefinition.html>

²⁵ Report Element, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/ReportElement.html>

²⁶ Network, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/Network.html>

²⁷ Table, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/Table.html>

²⁸ Axis, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/Axis.html>

²⁹ Member, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/Member.html>

³⁰ Line Items, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/LineItems.html>

³¹ Abstract, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/Abstract.html>

³² Concept, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/Concept.html>

#	Label	Report Element Class	Period Type	Balance	Name
1	Inventory, by Component [Table]	[Table]			gaap:InventoryByComponentTable
2	Legal Entity [Axis]	[Axis]			frm:LegalEntityAxis
3	Consolidated Entity [Member]	[Member]			frm:ConsolidatedEntityMember
4	Inventory, by Component [Line Items]	[Line Items]			gaap:InventoryByComponentLineItems
5	Inventory, by Component [Roll Up]	[Abstract]			gaap:InventoryByComponentRollUp
6	Finished Goods	[Concept] Monetary	As Of	Debit	gaap:FinishedGoods
7	Work in Progress	[Concept] Monetary	As Of	Debit	gaap:WorkInProgress
8	Raw Material	[Concept] Monetary	As Of	Debit	gaap:RawMaterial
9	Inventory	[Concept] Monetary	As Of	Debit	gaap:Inventory

Something is important to point out. We mentioned that in XBRL you have core aspects and noncore aspects. In the typical software application created today, the core aspects reporting entity and calendar period are not represented in the information model description that is typically created by software applications.

Below you see a truer information model description which includes the reporting entity and the calendar period. Also, per the US GAAP XBRL Taxonomy, the IFRS XBRL Taxonomy the term “[Axis]” is used as a synonym of “Aspect”. Axis and aspect are synonyms and mean the same thing. Also “Period” and “Calendar Period” are the same thing.

#	Label	Report Element Class	Period Type	Balance	Name
1	Inventory, by Component [Table]	[Table]			gaap:InventoryByComponentTable
2	Reporting Entity [Axis]	[Axis]			xbri:ReportingEntityAxis
3	http://regulator.gov/id#1234567890	[Member]			http://regulator.gov/id#1234567890
4	Period [Axis]	[Axis]			xbri:PeriodAxis
5	12/31/2010	[Member]			12/31/2010
6	12/31/2009	[Member]			12/31/2009
7	Legal Entity [Axis]	[Axis]			frm:LegalEntityAxis
8	Consolidated Entity [Member]	[Member]			frm:ConsolidatedEntityMember
9	Inventory, by Component [Line Items]	[Line Items]			gaap:InventoryByComponentLineItems
10	Inventory, by Component [Roll Up]	[Abstract]			gaap:InventoryByComponentRollUp
11	Finished Goods	[Concept] Monetary	As Of	Debit	gaap:FinishedGoods
12	Work in Progress	[Concept] Monetary	As Of	Debit	gaap:WorkInProgress
13	Raw Material	[Concept] Monetary	As Of	Debit	gaap:RawMaterial
14	Inventory	[Concept] Monetary	As Of	Debit	gaap:Inventory

Another part of the information model description is the mathematical rules that are used to describe and verify the roll up relations of the concepts that are a part of the information model description. Here is the roll up relations that are part of this information model description.

#	Label	Report Element Class	Weight	Balance	Name
1	Inventory	[Concept] Monetary			gaap:Inventory
2	Finished Goods	[Concept] Monetary	+1	Debit	gaap:FinishedGoods
3	Work in Progress	[Concept] Monetary	+1	Debit	gaap:WorkInProgress
4	Raw Material	[Concept] Monetary	+1	Debit	gaap:RawMaterial

Another part of the information model description is the facts within the fact set themselves. Here is the fact set or the **fact table**³³ for the facts that go with the information model description provided above.

#	Reporting Entity [Aspect]	Period [Aspect]	Concept [Aspect]	Legal Entity [Aspect]	Fact Value	Unit	Rounding
1	http://regulator.gov/id#1234567890	12/31/2010	Finished Goods	Consolidated Entity [Member]	600,000	USD	Thousands
2	http://regulator.gov/id#1234567890	12/31/2009	Finished Goods	Consolidated Entity [Member]	600,000	USD	Thousands
3	http://regulator.gov/id#1234567890	12/31/2010	Work in Progress	Consolidated Entity [Member]	300,000	USD	Thousands
4	http://regulator.gov/id#1234567890	12/31/2009	Work in Progress	Consolidated Entity [Member]	300,000	USD	Thousands
5	http://regulator.gov/id#1234567890	12/31/2010	Raw Material	Consolidated Entity [Member]	100,000	USD	Thousands
6	http://regulator.gov/id#1234567890	12/31/2009	Raw Material	Consolidated Entity [Member]	100,000	USD	Thousands
7	http://regulator.gov/id#1234567890	12/31/2010	Inventory	Consolidated Entity [Member]	1,000,000	USD	Thousands
8	http://regulator.gov/id#1234567890	12/31/2009	Inventory	Consolidated Entity [Member]	1,000,000	USD	Thousands

A software application takes the information model description structure, the information model description rules provided, the facts that are included within the fact set, and known best practices for rendering a business report that are coded into the software application in some manner and then generates a human-readable rendering of the reported information for a fragment or fact set of a report.

The following is the **rendering**³⁴ of the inventory components disclosure that we are working with above:

Reporting Entity [Aspect]	http://regulator.gov/id#1234567890	
Legal Entity [Aspect]	Consolidated Entity [Member]	
Concept [Aspect]	Period [Aspect]	
	12/31/2020	12/31/2019
Inventory, by Component (Roll Up)		
Finished Goods	600,000	600,000
Work in Progress	300,000	300,000
Raw Material	100,000	100,000
Inventory	1,000,000	1,000,000

Different software applications will provide slightly different renderings using the same XBRL-based input information.

³³ Fact Table, TO DO...

³⁴ Rendering, TO DO...

Component: (Network and Table)	
Network	JG - Schedule - Inventory, by Component
Table	Inventory, by Component [Table]
Reporting Entity [Axis]	1234567890 http://regulator.gov/id
Legal Entity [Axis]	Consolidated Entity [Member]
Unit [Axis]	USD
	Period [Axis] ▼
Inventory, by Component [Line Items]	2010-12-31 2009-12-31
Inventory, by Component [Roll Up]	
Finished Goods	600 600
Work in Progress	300 300
Raw Material	100 100
Inventory	1,000 1,000

Here is what the information model description looks like in that software application:

Label	Report Element Class	Period	Balance	Preferred Label Role	Name
▼ Inventory, by Component [Table]	[Table]			Standard Label	gaap:InventoryByComponentTable
▼ Legal Entity [Axis]	[Axis]			Standard Label	frm:LegalEntityAxis
Consolidated Entity [Member]	[Member]			Standard Label	frm:ConsolidatedEntityMember
▼ Inventory, by Component [Line Items]	[LineItems]			Standard Label	gaap:InventoryByComponentLineItems
▼ Inventory, by Component [Roll Up]	[Abstract]			Standard Label	gaap:InventoryByComponentRollUp
Finished Goods	[Concept] Monetary	As Of	Debit	Standard Label	gaap:FinishedGoods
Work in Progress	[Concept] Monetary	As Of	Debit	Standard Label	gaap:WorkInProgress
Raw Material	[Concept] Monetary	As Of	Debit	Standard Label	gaap:RawMaterial
Inventory	[Concept] Monetary	As Of	Debit	Standard Label	gaap:Inventory

Here is what the roll up rule relations representation looks like in that software application:

Label	Report Element Class	Balance	Weight	Name
▼ Inventory, by Component [Table]	[Table]		0	gaap:InventoryByComponentTable
▼ Inventory	[Concept] Monetary	Debit	0	gaap:Inventory
Finished Goods	[Concept] Monetary	Debit	1	gaap:FinishedGoods
Work in Progress	[Concept] Monetary	Debit	1	gaap:WorkInProgress
Raw Material	[Concept] Monetary	Debit	1	gaap:RawMaterial

Software applications use the rule relations that describe or explain the relations to verify that reported facts are consistent with that explanation. Here is the software application interface for verifying that the reported facts are consistent with the rules that explain the relations between the facts:

Label	Rendered Value	Op	Reported Value	Calculated Value	Balance	Result	Name
▼ Inventory, by Component [Line Items]							gaap:InventoryByComponentLineItems
▼ Inventory, by Component [Roll Up]							gaap:InventoryByComponentRollUp
Finished Goods	600	+	600		Debit		gaap:FinishedGoods
Work in Progress	300	+	300		Debit		gaap:WorkInProgress
Raw Material	100	+	100		Debit		gaap:RawMaterial
Inventory	1,000		1,000	1,000	Debit	Verified	gaap:Inventory

Label	Rendered Value	Op	Reported Value	Calculated Value	Balance	Result	Name
▼ Inventory, by Component [Line Items]							gaap:InventoryByComponentLineItems
▼ Inventory, by Component [Roll Up]							gaap:InventoryByComponentRollUp
Finished Goods	600	+	600		Debit		gaap:FinishedGoods
Work in Progress	300	+	300		Debit		gaap:WorkInProgress
Raw Material	100	+	100		Debit		gaap:RawMaterial
Inventory	1,000		1,000	1,000	Debit	Verified	gaap:Inventory

Information about the properties of each report element which makes up the information model description should be accessible to the user of the business report:

Report Element Properties

Properties | Labels | References | Occurrences | To Do

Report Standard Label Inventory

Base Standard Label

Documentation Duis sapien diam, deipibus sed, dictum quis, interdum ac, erat. Suspendisse urna. Proin non mauris. Proin sed odio. Phasellus sagittis orci quis orci.

Properties

Class [Concept] Monetary

Prefix gaap

Name gaap:Inventory

Other

Balance Type Debit

Period Type As Of (Instant)

Data Type Monetary (xbrl:monetaryItemType)

ID gaap_Inventory

Information about the properties of each fact which is represented within the report is accessible to the user of the financial report:

Fact Characteristics and Properties	
Properties	To Do
Reporting Entity	1234567890 http://regulator.gov/id
Period	2010-12-31
▸ Legal Entity [Axis]	Consolidated Entity [Member]
▾ Concept	Inventory
Name	gaap:Inventory
Prefix	gaap
Balance Type	Debit
Period Type	As Of (instant)
Data Type	Monetary (xbrl:monetaryItemType)
Fact Value	1000
Units	iso4217:USD
Decimals (rounding)	0

This same information is provided for each and every fact set that makes up a financial report. Facts could be used in multiple fact sets. The facts used in fact sets must be consistent within a fact set and between the individual fact sets that make up a report.

Advanced Logical Conceptualization

A financial report can be broken down into fragments. A **fragment**³⁵ is a set of one to many *fact sets* which go together some specific purpose within a report. For example, a balance sheet is a fragment of a financial report that is made up of two fact sets: a roll up of assets and a roll up of liabilities and equity.

Each fact set has a concept arrangement pattern property. A **concept arrangement pattern**³⁶ specifies the nature of the relationship between the concept aspect of an information model definition.

A **set**³⁷ is a type of concept arrangement pattern where concepts have no mathematical relations. Essentially, a set is a flat list of concepts. A synonym for set is hierarchy.

A **roll up**³⁸ is a type of concept arrangement pattern which represents a basic roll up type mathematical relationship: $\text{Fact A} + \text{Fact B} + \text{Fact C} = \text{Fact D}$ (a set of items and a total).

A **roll forward**³⁹ is a type of concept arrangement pattern which represents a basic roll forward mathematical relation: $\text{Beginning balance (stock)} + \text{change1 (flow)} + \text{change2 (flow)} + \text{change3 (flow)} = \text{Ending balance (stock)}$.

An **adjustment**⁴⁰ is a type of concept arrangement pattern which represents a basic mathematical reconciliation between an originally stated value and a restated value usually due to a correction or error: $\text{Originally stated balance} + \text{adjustment1} + \text{adjustment2} + \text{adjustment3} = \text{restated balance}$.

A **variance**⁴¹ is a type of concept arrangement pattern which represents a mathematical difference between two reporting scenarios: $\text{Amount (projected scenario)} + \text{Amount (variance)} = \text{Amount (actual scenario)}$.

A **complex computation**⁴² is a type of concept arrangement pattern which represents any arbitrary mathematical relationship between a set of numeric facts. A complex computation is comprised of some flat set of numeric concepts and a rule that represents the mathematical relation between that set of concepts.

³⁵ Fragment, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/Fragment.html>

³⁶ Concept Arrangement Pattern, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/ConceptArrangementPattern.html>

³⁷ Set, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/Set.html>

³⁸ Roll Up, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/RollUp.html>

³⁹ Roll Forward, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/RollForward.html>

⁴⁰ Adjustment, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/Adjustment.html>

⁴¹ Variance, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/Variance.html>

⁴² Complex Computation, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/ComplexComputation.html>

A **roll forward info**⁴³ is a type of concept arrangement pattern which represents a non-mathematical relation of information about a roll forward.

A **text block**⁴⁴ is a type of concept arrangement pattern which represents a non-mathematical relationship in the form of prose. A text block concept arrangement pattern is comprised of exactly one concept. There are three sub classes or type of text blocks: **Level 1 Note Text Block**⁴⁵, **Level 2 Policy Text Block**⁴⁶, and **Level 3 Disclosure Text Block**⁴⁷.

Each fact set has a member arrangement pattern property. A **member arrangement pattern**⁴⁸ expresses the relations between members within an aspect other than the concept aspect (which is explained by the concept arrangement pattern).

The members of an axis might be related mathematically. **Member aggregation**⁴⁹ is a type of member arrangement pattern where the members of an axis roll up the same as the roll up concept arrangement pattern. **Member flat**⁵⁰ list is a type of member aggregation pattern where the members for a flat list. **Member nonaggregating**⁵¹ is a type of member arrangement pattern where the members of an axis are not related mathematically but simply are used to differentiate reported facts.

Reported facts could need additional arbitrary descriptive information. A **parenthetical explanation**⁵² provides additional descriptive information about a fact. A synonym for parenthetical information is comment.

A financial **reporting scheme**⁵³ is a formal specification for how financial reports are to be created and the underlying accounting rules and is usually created by a standards setter or regulator. For example, US GAAP, IFRS, and IPSAS are all financial reporting schemes. Financial reports are not forms. Financial reporting schemes allow for a certain amount of flexibility and variability when reporting certain specific disclosures or subtotals contained within a disclosure. A **disclosure**⁵⁴ is a set of one to many fact sets or a set of one to many fragments which form an accounting disclosure that is either required by statutory or regulatory rules or provided at the

⁴³ Roll Forward Info, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/RollForwardInfo.html>

⁴⁴ Text Block, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/TextBlock.html>

⁴⁵ Level 1 Note Text Block, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/Level1NoteTextBlock.html>

⁴⁶ Level 2 Policy Text Block, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/Level2PolicyTextBlock.html>

⁴⁷ Level 3 Disclosure Text Block,

<http://xbrlsite.azurewebsites.net/2019/Framework/Details/Level3DisclosureTextBlock.html>

⁴⁸ Member Arrangement Pattern,

<http://xbrlsite.azurewebsites.net/2019/Framework/Details/MemberArrangementPattern.html>

⁴⁹ Member Aggregation, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/MemberAggregation.html>

⁵⁰ Member Flat List, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/MemberFlatList.html>

⁵¹ Member Nonaggregating,

<http://xbrlsite.azurewebsites.net/2019/Framework/Details/MemberNonaggregation.html>

⁵² Parenthetical Explanation,

<http://xbrlsite.azurewebsites.net/2019/Framework/Details/ParentheticalExplanation.html>

⁵³ Reporting Scheme, TO DO, <http://xbrlsite.azurewebsites.net/2018/Library/ReportingSchemes-2018-12-30.pdf>

⁵⁴ Disclosure, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/Disclosure.html>

discretion of a reporting entity. A **template**⁵⁵ is a representation of a possible disclosure that can be used as a prototype in the process of creating a report. An **exemplar**⁵⁶ is a representation of a disclosure from an existing report of some economic entity that can be leveraged in the process of creating a report.

Because variability exists in the allowed possible approaches that economic entities represent their financial disclosures, different economic entities have different reporting styles. A **reporting style**⁵⁷ is a set of relations, consistency crosscheck rules, mapping rules, and impute rules that are used to check fundamental accounting concept relations for a specific type of report or style of reporting. For example, a classified balance sheet and an order of liquidity balance sheet are two different reporting styles for creating a balance sheet.

A **consistency crosscheck rule**⁵⁸ is a type of rule that tests the relations of fundamental accounting concept relations within a report against a specified reporting style to make sure there are no inconsistencies or contradictions between reported facts within a report.

An **impute rule**⁵⁹ is a type of rule that explains how to logically derive a fact that have not been explicitly reported based on other facts that have been explicitly reported or which have been logically derived from other reported information. For example, an economic entity might not explicitly report the line item “Noncurrent assets”; but does report “Assets” and “Current assets”. Given the impute rule “Assets = Current assets + Noncurrent assets”; the fact value for Noncurrent assets can be reliably derived logically using the other two reported facts and the impute rule.

A **mapping rule**⁶⁰ is a type of rule that explains how a base reporting scheme taxonomy concept reported by an economic entity relates to a fundamental accounting concept. For example, the notion of “Cost of Revenue” could be reported using the concept “Cost of Revenue”, or “Cost of Goods and Services Sold”, or “Cost of Goods Sold”, or “Cost of Services Sold”, etc. Basically, mapping rules enable information to be extracted from a report reliably.

A **disclosure mechanics rule**⁶¹ is a type of rule that describes the structural and mechanical representation of a disclosure against a specification or prototype of that disclosure. For example, every disclosure that has the property of concept arrangement pattern of “roll up” must always have a total. A disclosure mechanics rule would specify the concept that would be used to represent that total. A specific disclosure, such as “inventory components roll up”

⁵⁵ Template, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/Template.html>

⁵⁶ Exemplar, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/Exemplar.html>

⁵⁷ Reporting Style, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/ReportingStyle.html>

⁵⁸ Consistency Crosscheck Rule, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/ConsistencyCrosscheckRule.html>

⁵⁹ Impute Rule, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/ImputeTypeRule.html>

⁶⁰ Mapping Rule, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/MappingTypeRule.html>

⁶¹ Disclosure Mechanics Rule, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/DisclosureMechanicsRule.html>

would be required to use a specific concept such as “Inventory, Net” to represent that total. A disclosure mechanics rule would specify that concept. Other concepts might be used as alternatives to some specific total concept to represent a disclosure. A disclosure mechanics rule would specify those alternatives. Every Level 4 Disclosure Detail representation has some complementary Level 3 Disclosure Text Block representation. A disclosure mechanics rule would specify that relation.

A **type or class rule**⁶² is a type of rule that expresses an allowed or a disallowed relation between two reporting scheme concepts for some reporting style. For example, the concept “Operating Expense (indirect operating expense)” would never be part of “Cost of Revenue (direct operating expense)”, a type or class rule would be used to explicitly disallow this relation. Alternatively, explicitly allowed relations are also expressed using type or class rules.

A **reporting checklist rule**⁶³ is a type of rule that describes the reportability of a statutory or regulatory disclosure required by a reporting scheme. For example, some disclosures are always required. Other disclosures are required only if a specific line item is reported. Other disclosures could be used as alternatives for some other disclosure.

A **report set**⁶⁴ is a set of one to many reports. For example, if you are comparing the reports of an economic entity for the past five years, the five reports that you use to perform that analysis are your report set.

A **reporting entity aspect**⁶⁵ is a core aspect that distinguishes the economic entity which creates a report.

A **calendar period aspect**⁶⁶ is a core aspect that distinguishes the calendar period of a reported fact. A **stock**⁶⁷ is a type of calendar period aspect that is used to represent a fact as of a specific point in time. A synonym for stock is instant. A **flow**⁶⁸ is a type of calendar period aspect that is used to represent a fact over a period of time. A synonym for stock is duration.

A **concept aspect**⁶⁹ is a core aspect that is used to express the concept that relates to a fact. Synonyms for concept aspect include primary item and line item.

⁶² Type or Class Rule, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/TypeClassRule.html>

⁶³ Reporting Checklist Rule, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/ReportingChecklistRule.html>

⁶⁴ Report Set, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/ReportSet.html>

⁶⁵ Reporting Entity Aspect, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/ReportingEntityAspect.html>

⁶⁶ Calendar Period Aspect, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/CalendarPeriodAspect.html>

⁶⁷ Stock, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/Stock.html>

⁶⁸ Flow, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/Flow.html>

⁶⁹ Concept Aspect, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/ConceptAspect.html>

A **fragment arrangement pattern**⁷⁰ is the relationship between fragments or the order or sequence of fragments within a report.

Prose⁷¹ is a type of fact value that is structure in nature (i.e. a table, an ordered list, an unordered list, paragraphs of text, or any combination of those structures).

Text⁷² is a type of fact value that is nonnumeric unstructured text (i.e. not prose).

A **logical rule**⁷³ is a type of rule expresses logical relations between entities that make up a report.

An **accounting rule**⁷⁴ is a type of logical rule that is used to express a logical assertion specifically related to accounting rules.

A **mechanical rule**⁷⁵ is a type of logical rule that is used to express the relations between the report elements that make up a disclosure.

⁷⁰ Fragment Arrangement Pattern, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/FragmentArrangementPattern.html>

⁷¹ Prose, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/Prose.html>

⁷² Text, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/Text.html>

⁷³ Logical Rule, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/LogicalRule.html>

⁷⁴ Accounting Rule, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/AccountingRule.html>

⁷⁵ Mechanical Rule, <http://xbrlsite.azurewebsites.net/2019/Framework/Details/MechanicalRule.html>