

Understanding Seattle Method Rules

by

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Helping software engineers and accountants understand the rule enforced by the Seattle Method.

2024-01-10 (DRAFT; Work in Progress)

<https://digitalfinancialreporting.blogspot.com/2024/12/financial-statement-mechanics-and.html>

1. Introduction

This document provides a concise, succinct explanation of the categories of rules enforced by the *Seattle Method*¹. Each category of rule is necessary in order to fundamentally create, verify, or extract information from an XBRL-based financial report.

The focus of this document is only explaining the theories, not justifying the theories. Read the information provided on the linked web pages in the section below for an explanation and justification for the theories. Read this document to simply understanding what each theory is getting at.

Sensemaking² is the process of determining the deeper meaning or significance or essence of the collective experience for those within an area of knowledge. These theories are the results of my sensemaking in the area of accountancy. For more information, see the *Essence of Accounting*³.

Links for technical information for implementing these theories is also provided in this document.

STATEMENT —OF— WACHOVIA NATIONAL BANK, WINSTON, N. C. JANUARY 29TH, 1906. (CONDENSED FROM REPORT TO THE COMPTROLLER OF THE CURRENCY.)		Reporting Entity [Aspect]	Wachovia http://www.comptroller.gov/D
RESOURCES.		Unit [Aspect]	iso4217:USD
		Concept [Aspect]	Period [Aspect]
			1906-01-29
Loans, including Overdrafts	\$ 511,789.61	Resources [Roll Up]	
U. S. Bonds and Premiums	52,300.00	Loans, Including Overdrafts	\$ 511,789.61
Real Estate, Furniture and Fixtures	4,500.00	U.S. Bonds and Premiums	52,300.00
Redemption fund with U. S. Treasurer	2,500.00	Real Estate, Furniture, and Fixtures	4,500.00
Cash and Due from Banks...	268,231.30	Redemption Fund with U.S. Treasurer	2,500.00
	\$839,320.91	Cash and Due from Banks	268,231.30
		Resources	\$ 839,320.91
		Liabilities [Roll Up]	
		Capital	150,000.00
		Surplus and Undivided Profits	171,167.89
		Circulation	50,000.00
		Deposits	468,153.02
		Liabilities	\$ 839,320.91

1.1. Brief Overview of Theories

The following is a very brief overview of the theories that drive the rules necessary for fundamentally crafting or working with an XBRL-based digital machine-readable financial statement. The theories are driven by the fundamental nature of a financial report; how a financial statement fundamentally works and how XBRL is being used today.

- **Theory of Physical Format Independence**⁴: A general-purpose financial statement system is the same regardless of the physical format or medium used to instantiate that financial statement be it clay tablets, papyrus, paper, "e-paper", or semantic formats such as XBRL or RDF. In terms of machine-readable technical formats such as XBRL, RDF, or other such technical formats; the focus of the remaining theories is not on the physical technical format.

¹ Charles Hoffman, CPA, Seattle Method, <http://xbrlsite.com/seattlemethod/SeattleMethod.pdf>

² Sensemaking, <http://xbrl.squarespace.com/journal/2021/11/18/sensemaking.html>

³ Charles Hoffman, CPA, *Essence of Accounting*, <https://xbrlsite.azurewebsites.net/2020/Library/EssenceOfAccounting.pdf>

⁴ *Theory of Physical Format Independence*, <https://digitalfinancialreporting.blogspot.com/2024/12/theory-of-physical-format-independence.html>

Rather, the focus is on the meaning conveyed within that physical technical formation; this is regardless of whatever that physical format is.

- **Theory of Mathematical Integrity**⁵: As accountants say, financial statements need to "foot" and "crosscast" and things need to "tick" and "tie". Always.
- **Theory of Model Structure**⁶: A financial statement structure has a describable model and the logic of that fundamental model is consistent for every financial statement. What might go into a financial statement can be different, but the financial statement model structure is consistent.
- **Theory of Blocks**⁷: A financial statement can be viewed as a set of useful "information blocks" or simply blocks that contain the information within that financial statement.
- **Theory of Fundamental Accounting Concepts and Reporting Styles**⁸: A financial statement has a set of fundamental accounting concepts which act as "corner stones" or "key stones" of that financial statement. While different reporting economic entities can have different sets of such corner stones or key stones; those different reporting economic entities can be grouped into reporting styles that use similar corner stones/key stones.
- **Theory of Types and Parts**⁹: Financial statement pieces are identifiable and can be categorized in to distinguishable types and parts. There are known relationships between those types and parts. Extension of those types and parts must be done to tie the new types and parts to existing types and parts.
- **Theory of Disclosures and Disclosure Mechanics**¹⁰: The information blocks contained within a financial statement can be identified as being a specific financial disclosure. Each specific financial disclosure can be described by a set of disclosure mechanics rules that explains the essence of that disclosure. If not specifically named and identified by some unique token, every disclosure can be identified using that disclosure mechanics information.
- **Theory of Reportability**¹¹: There are known rules for when something needs to be included within a financial statement. Not including something that should have been included is noncompliance.

⁵ *Theory of Mathematical Integrity,*

<https://digitalfinancialreporting.blogspot.com/2024/12/theory-of-mathematical-integrity.html>

⁶ *Theory of Model Structure,* <https://digitalfinancialreporting.blogspot.com/2024/12/theory-of-model-structure.html>

⁷ *Theory of Blocks,* <https://digitalfinancialreporting.blogspot.com/2024/12/theory-of-blocks.html>

⁸ *Theory of Fundamental Accounting Concepts and Reporting Styles,*

<https://digitalfinancialreporting.blogspot.com/2024/12/theory-of-fundamental-accounting.html>

⁹ *Theory of Types and Parts,* <https://digitalfinancialreporting.blogspot.com/2024/12/theory-of-types-and-parts.html>

¹⁰ *Theory of Disclosures and Disclosure Mechanics,*

<https://digitalfinancialreporting.blogspot.com/2024/12/theory-of-types-and-parts.html>

¹¹ *Theory of Reportability,* <https://digitalfinancialreporting.blogspot.com/2024/12/theory-of-reportability.html>

Are there potentially other theories which are helpful, even necessary, to describe a financial statement? Undoubtedly. I leave it to others to expand upon this rather obvious base.

2.Details of Each Theory

In this section, each theory is explained in terms that are helpful to someone trying to understand the theory, be that person an accountant or a software engineer or in terms a software engineer talking with an accountant might find helpful.

A theory is simply a communications tool. A theory helps a group of stakeholders communicate. These theories are not documented in a ridged formal manner, rather they are documented in a helpful, practical way. Why? Because I don't personally have a strong background in the formal documentation of a theory. Perhaps others can enhance this information by documenting it more formally.

The explanation of this information is not for the purpose of causing some sort of debate or theoretical discussion. The purpose is simply one of practicality. If one desires to digitize financial statements; one needs to describe how those digital financial statements work. This set of theories is a foundation for that.

Can someone come up with a better, improved theory? Sure. Others try and explain this information about business reports, a financial report being a specialization of a general business report, including XBRL International with their Open Information Model (OIM)¹² and OMG with their Standard Business Report Model (SBRM)¹³.

My formal documentation is within the software that operates in accordance with these theories.

2.1. *Theory of Physical Format Independence*

To enable something to be machine-readable, there needs to be a physical format that a machine can actually read. Physical formats like clay tables are obviously not capable of being read by a machine. Is paper readable by a machine, say using optical character recognition (OCR)? That type of "reading" is not in scope for my purpose here. I am not interested in explaining how a computer can be made to parse a financial statement.

Whatever the physical format; there are two important pieces that need to be considered. There is an understanding of that physical format and there is an understanding of the information that is being conveyed by the contents of that physical format.

Whether that physical format is XBRL, CSV, Excel, JSON, RDF, GQL, PROLOG, or whatever physical format; it is very hard to dispute that each physical format should be conveying the same meaning or logic if the financial statement is the same.

My focus is on the XBRL physical format. It is trivial to make certain that the XBRL physical technical format is correct because (a) XBRL International publishes a technical specifications of XBRL physical format¹⁴ and (b) XBRL International publishes

¹² XBRL International, Open Information Model, <https://specifications.xbrl.org/spec-group-index-open-information-model.html>

¹³ OMG, Standard Business Report Model, <https://www.omg.org/intro/SBRM.pdf>

¹⁴ XBRL International, XBRL Specifications, <https://specifications.xbrl.org/specifications.html>

a conformance suite¹⁵ that makes sure software created in compliant with that published technical specification.

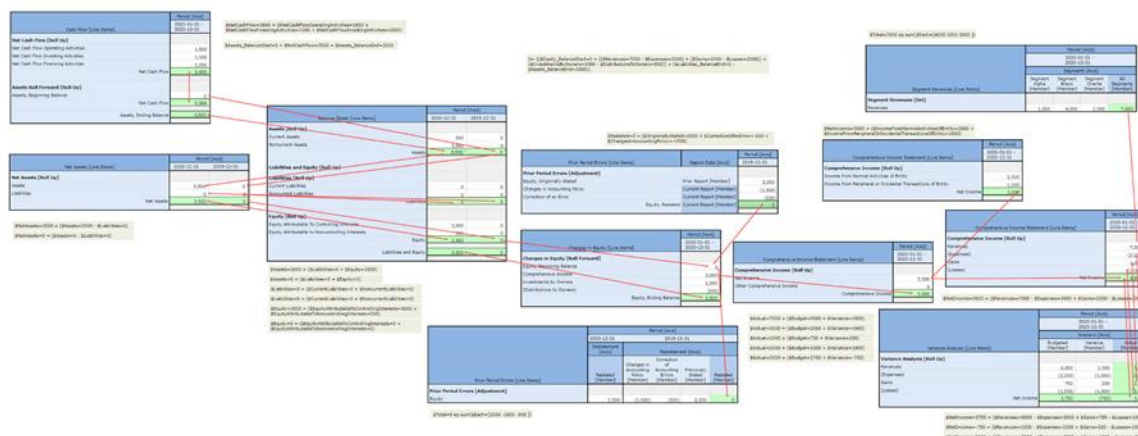
Quality of the XBRL physical format is extremely high, generally better than 99.9% for XBRL-based reports submitted to the SEC per measurements.

Note that the point of this section is not to state the obvious. The point of this section is really to distinguish XBRL technical syntax verification from all of the other verification that must be performed to make sure a financial statement creating using XBRL is a properly functioning system.

2.2. Theory of Mathematical Integrity

As accountants say, financial statements need to "foot" and "crosscast" and things need to "tick" and "tie". Always. No one would really disagree with this statement. Below is an example of the sort of mathematical relationships that exist in a financial statement¹⁶:

http://www.xbrlsite.com/seattlemethod/platinum/proof/PROOF_Articulation.jpg



As such, rules related to the important mathematical relationships should be used in the process of creating a financial statement, those rules should be used after the report is created to verify that the relations in a report are consistent with expectation, and analysts using report information should be provided with those rules such that the analysts can verify these mathematical relationships and use the relationships to understand reported information.

This includes all mathematical relationships such as roll ups, roll forwards, other arithmetical relations, restatements, differences between reported scenarios, dimensional roll ups, etc.

2.3. Theory of Model Structure

A financial statement structure has a describable model and the logic of that fundamental model is consistent for every financial statement. What might go into a

¹⁵ XBRL International, XBRL 2.1, Supporting Documents, <https://specifications.xbrl.org/work-product-index-group-base-spec-base-spec.html>

¹⁶ PROOF Articulation, http://www.xbrlsite.com/seattlemethod/platinum/proof/PROOF_Articulation.jpg

financial statement can be different, but the financial statement model structure is consistent. The following is information about the associations between the types of report elements used in such models from 6,751 XBRL-based financial reports submitted to the U.S. Securities and Exchange Commission (SEC)¹⁷:

		Parent						
		Network	Table	Axis	Member	LineItems	Abstract	Concept
		495,825	211,910	406,005	1,324,898	211,995	742,468	3,245,302
Child	Network	0	0	0	0	0	0	0
	Table	682	0	0	0	5	211,212	11
	Axis	0	405,998	0	0	0	7	0
	Member	4	0	475,280	849,583	2	29	0
	LineItems	41	211,712	0	0	90	152	0
	Abstract	493,480	168	0	3	100,789	147,603	425
	Concept	12	19	1	118	1,205,587	2,028,610	10,955

The above analysis makes two points. The first point is that a report model is made up of report elements that fit into one of the following categories or types of report elements: Network, Hypercube (a.k.a. Table), Dimension (a.k.a. Axis), Member, LineItems, Abstract, Concept.

The second point is that those report element categories or types have permitted and disallowed associations. Those associations can be documented as shown below:

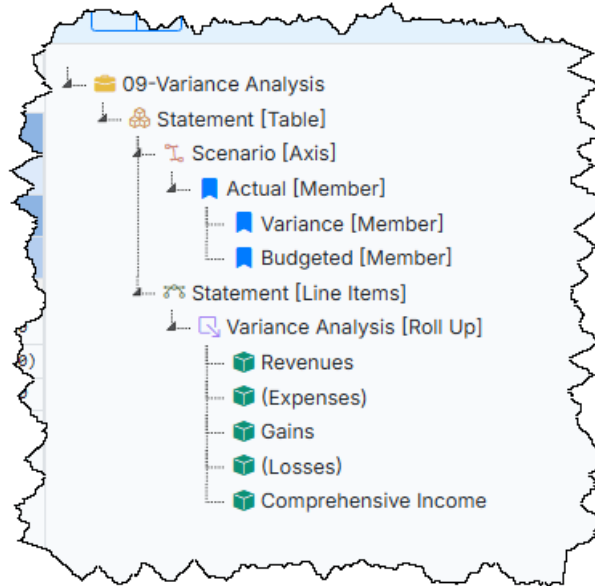
		Parent						
		Network	Hypercube	Dimension	Member	LineItems	Abstract	Concept
Child	Network	Illegal XBRL	Illegal XBRL	Illegal XBRL	Illegal XBRL	Illegal XBRL	Illegal XBRL	Illegal XBRL
	Hypercube	Permitted	Disallowed	Disallowed	Disallowed	Disallowed	Permitted	Disallowed
	Dimension	Disallowed	Permitted	Disallowed	Disallowed	Disallowed	Disallowed	Disallowed
	Member	Disallowed	Disallowed	Permitted	Permitted	Disallowed	Disallowed	Disallowed
	LineItems	Disallowed	Permitted	Disallowed	Disallowed	Disallowed	Disallowed	Disallowed
	Abstract	Permitted	Disallowed	Disallowed	Disallowed	Permitted	Permitted	Disallowed
	Concept	Disallowed	Disallowed	Disallowed	Disallowed	Permitted	Permitted	Disallowed

While it is the case that over 98% of all XBRL-based reports follow this pattern of logic, because these patterns are not enforced by the XBRL technical specification; they are none-the-less true as shown by existing reports.

There are a few types of associations that are potentially disputable. This in no way is inconsistent with this theory, it simply points out that there could be some flexibility in this model, perhaps. This idea is contrast to just being unconscious as to how report model associations might be represented.

The following is an example of the modeling of the report elements for a fragment of an XBRL-based report.

¹⁷ Charles Hoffman, CPA, *Analysis of 6,751 XBRL-based Public Company 10-Ks Submitted to SEC*, http://www.xbrlsite.com/mastering/Part05_Chapter08.F_AnalysisOf675110Ks.pdf



2.4. Theory of Blocks

A financial statement can be viewed as a set of useful "information blocks" or simply blocks that contain the information reported by that financial statement.

A block is a convenient unit of information.

Information has logical patterns¹⁸; the following is a summary of those information block logical patterns: set, roll up, roll forward, arithmetic, restatement, variance (a.k.a. difference), text block (a.k.a. prose), roll forward info, member aggregation (a.k.a. dimensional roll up).

The following are three examples of information blocks:

Roll up:

Concept [Aspect]	Period [Aspect]	
	2020-01-01 2020-12-31	
Comprehensive Income [Roll Up]		
Revenues	\$	7,000
(Expenses)		(3,000)
Gains		1,000
(Losses)		(2,000)
Comprehensive Income	\$	3,000

Roll Forward:

¹⁸ *Information Model Identification*,
<http://www.xbrlsite.com/mastering/InformationModelIdentification.pdf>

Concept [Aspect]	Period [Aspect]	
	2020-01-01 2020-12-31	
Changes in Equity [Roll Forward]		
Equity, Beginning Balance	\$	0
Comprehensive Income		3,000
Investments by Owners		1,000
(Distributions to Owners)		(500)
Equity, Ending Balance	\$	3,500

Roll Up plus a Member Aggregation:

Concept [Aspect]	Period [Aspect]		
	2020-01-01 2020-12-31		
	Scenario [Axis]		
	Variance [Member]	Budgeted [Member]	Actual [Member]
Variance Analysis [Roll Up]			
Revenues	\$ 1,000	\$ 6,000	\$ 7,000
(Expenses)	(1,000)	(2,000)	(3,000)
Gains	250	750	1,000
(Losses)	(1,000)	(1,000)	(2,000)
Comprehensive Income	\$ (750)	\$ 3,750	\$ 3,000

These identifiable, logical information blocks can be identified, distinguished from one another, and described¹⁹.

2.5. Theory of Fundamental Accounting Concepts and Reporting Styles

A financial statement has a set of fundamental accounting concepts which act as "corner stones" or "key stones" of that style of financial statement. While different reporting economic entities can have different styles and therefore different sets of such corner stones or key stones; those different reporting economic entities can be grouped into what I refer to as "reporting styles" that use similar corner stones/key stones.

The term "financial" as distinguished from "nonfinancial" as used in this context relates to whether information has flown through an accounting system which uses the double entry bookkeeping model. That fundamental model is grounded in what is commonly understood to be the "fundamental accounting equation"²⁰. On version or style of that fundamental accounting equation is:

$$\text{Assets} = \text{Liabilities} + \text{Equity}$$

¹⁹ Charles Hoffman, CPA, *Concept Arrangement Patterns*, http://www.xbrlsite.com/mastering/Part02_Chapter05.I_ConceptArrangementPatterns.pdf

²⁰ Wikipedia, *Accounting Equation*, https://en.wikipedia.org/wiki/Accounting_equation

Another version of the fundamental accounting equation is:

$$\text{Assets} - \text{Liabilities} = \text{Net Assets}$$

Again, while these styles of the fundamental accounting equation are different, while there are known to be other additional versions of the fundamental accounting equation; the point is that the patterns of this high-level mathematical association are known, well understood, and leverageable. Every financial reporting scheme which conveys a set of fundamental accounting concepts is based on some version of the fundamental accounting equation.

One very simple example of a set of fundamental accounting concepts published by the Financial Accounting Standards Board (FASB) is Statement of Financial Accounting Concepts No. 6, *Elements of Financial Statements*²¹ which defined ten fundamental accounting concepts:

1. Assets
2. Liabilities
3. Equity
4. Comprehensive Income
5. Investments by Owners
6. Distributions to Owners
7. Revenues
8. Expenses
9. Gains
10. Losses

Further, *Elements of Financial Statements* also defined or implies the following mathematical relationship between those fundamental accounting concepts:

$$\text{Assets}^{Tn} = \text{Liabilities}^{Tn} + \text{Equity}^{Tn}$$
$$\text{Comprehensive Income}^{Pn} = \text{Revenues}^{Pn} - \text{Expenses}^{Pn} + \text{Gains}^{Pn} - \text{Losses}^{Pn}$$
$$\text{Equity}^{Tn+1} = \text{Equity}^{Tn} + \text{Comprehensive Income}^{Pn+1} + \text{Investments by Owners}^{Pn+1} - \text{Distributions to Owners}^{Pn+1}$$

Note that fundamental accounting concepts, relations between those concepts, and groups referred to as reporting styles similarly exist for US GAAP and IFRS²².

2.6. Theory of Types and Parts

Building upon the notion of fundamental accounting concepts, relations between those concepts, and styles of reporting using those concepts is the notion that there is another level of detail beyond the higher-level fundamental accounting concepts and assemblies which are used to organize information reported in a financial statement.

²¹ FASB, *Statement of Financial Accounting Concepts No. 6, Elements of Financial Statements*, [https://www.fasb.org/Page/document?pdf=aop_CON6.pdf&title=CON%206%20\(AS%20AMENDED\)](https://www.fasb.org/Page/document?pdf=aop_CON6.pdf&title=CON%206%20(AS%20AMENDED))

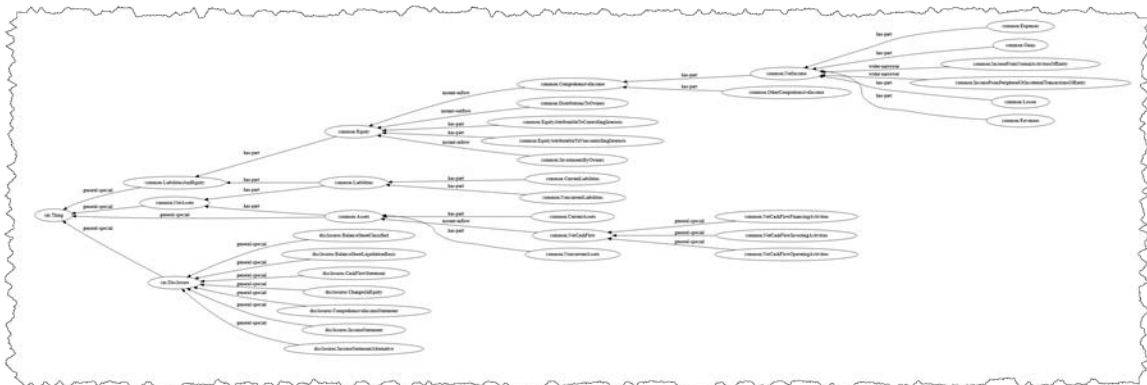
²² Fundamental Accounting Concepts, <http://accounting.auditchain.finance/fac/Index.html>

This information can be further categorized into additional layers of distinguishable types and parts.

There are known relationships between those types and parts. These types and parts are sometimes referred to as “wider” or “narrower” things or “general” or more “special” or specialized things or “classes” and “subclasses” and “super classes”. In the context of this discussion, we are discussing all of these things which are similar to each other.

Further, when a reporting economic entity creates a report; any extension of those higher-level fundamental accounting concepts or lower-level types and parts can be tied into this type and part model logically.

Saying this another way; there is nothing “stray” (i.e. not related to anything) which simply floats around on its own, associated in no way to anything.



2.7. Theory of Disclosures and Disclosure Mechanics

The information blocks contained within a financial statement can be identified as being a specific financial disclosure. Each specific financial disclosure can be described by a set of disclosure mechanics rules that explains the essence of that specific disclosure which is distinguishable from every other disclosure.

If not specifically named and identified by some unique token, every disclosure can be identified using that disclosure mechanics information as being that specific named disclosure.

Financial disclosures have logical design patterns. Design patterns are principle-driven guidelines accompanied by practical examples of how the patterns have been implemented in real life.

An archetype is a typical example of something, a template. An archetype can be seen as a good practices pattern; canonical form of something. Financial disclosures have archetypes and can be represented within a canonical form. Some of these disclosure archetypes are obvious. Others are based on best practices. Still others are based on emergent practices and some others are based on novel practices; but each disclosure is still driven by logical design patterns.

While disclosures are things²³ which are described in accounting standards such as the FASB’s Accounting Standards Codification (ASC)²⁴; that description tend not to be in a

²³ Things, <https://digitalfinancialreporting.blogspot.com/2024/11/things.html>

²⁴ FASB, Accounting Standards Codification, <https://asc.fasb.org/>

form that is understandable to a computer and unique names/labels are not provided that enable the creation of an identifiable token²⁵ to be assigned to each such financial disclosure.

Here is an example of a disclosure, shown in the screen shots below. The disclosure is of what could be called “components of inventories” or “disaggregation of inventories” or “breakdown of inventory”. Here is the disclosure as it might appear in a printed financial statement:

	<u>2016</u>	<u>2015</u>
Finished goods	\$2,668,700	\$2,101,300
Raw materials	3,035,000	2,717,300
Inventory reserve for obsolescence	(62,400)	(120,000)
	<u>\$5,641,300</u>	<u>\$4,698,600</u>

Here is the same information which was auto generated from an XBRL-based report model:

Inventory Disclosure [Abstract]	Period [Axis]	
	2016-12-31	2015-12-31
Inventory Disclosure [Abstract]		
Finished goods	2,668,700	2,101,300
Raw materials	3,035,000	2,717,300
Inventory reserve for obsolescence	(62,400)	(120,000)
Inventories, net	<u>5,641,300</u>	<u>4,698,600</u>

The screen shot below shows the machine-readable disclosure mechanics rules²⁶ which are represented in machine-readable XBRL rendered into human readable form and which describe the essence of the disclosure.

Consider the human readable renderings of the disclosure. Notice that the disclosure is of the mathematical logic pattern of a roll up. Notice that you would expect that the total of that roll up would be the same for every inventory breakdown; or, some named set of alternative total concepts might be provided. Notice that you would expect a certain set of concepts to make up the breakdown of that total.

Here is the screen shot that summarizes that essence in the form of a human readable representation which was auto generated from the machine readable XBRL-based representation that describes the essence of this specific disclosure and enables software applications to distinguish this disclosure from each and every other disclosure.

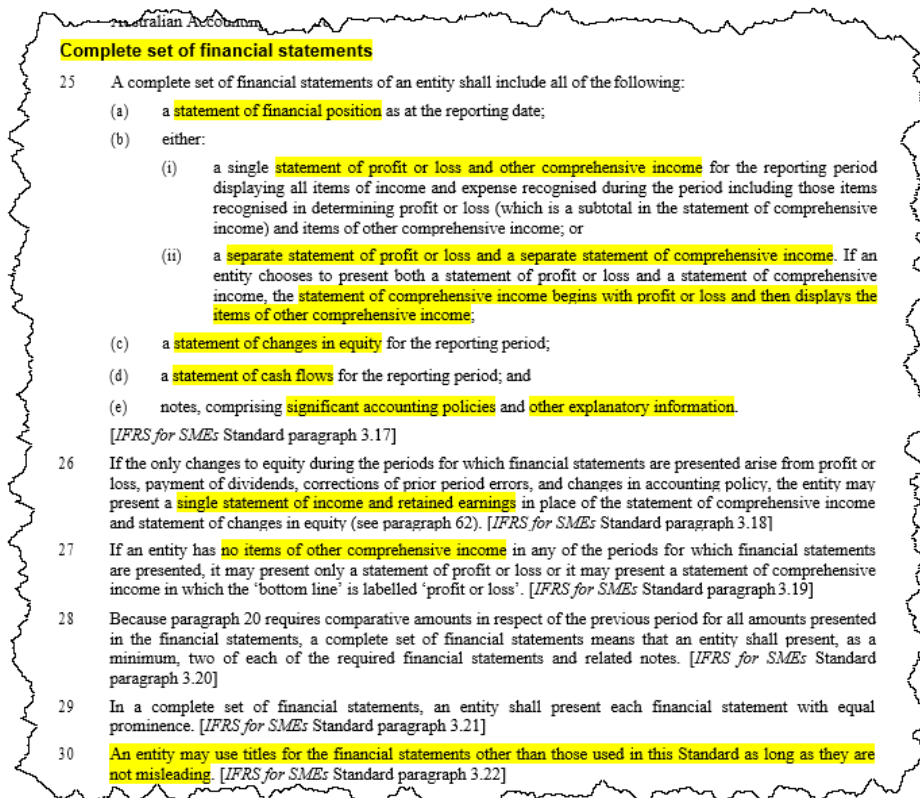
²⁵ Token, <https://digitalfinancialreporting.blogspot.com/2024/11/tokens.html>

²⁶ Disclosure mechanics rules examples in human readable form, <https://auditchain.infura-ipfs.io/ipfs/QmRbYM5cPUCauw4Ckvby5i5ktLjS5gPyrFov4Xv2iZRtn/disclosures.html>

For example; some disclosures are always required such as a balance sheet, an income statement, a cash flow statement, a statement of changes in equity, a description of the basis of reporting used, a description of the nature of the reporting economic entity, and such. Other disclosures, including policies which is a type of disclosure, are only required if a specific line item appears within the primary financial statements; for example, if the line item "Inventories, Net" appears in the balance sheet you would expect an inventory components breakdown and specific inventories policies to also exist in the financial statement.

It is not the case that software can determine each and every disclosure that is required; professional judgement is needed for that. However, there are many mechanical tasks that software can perform to assist a professional accountant trying to determine the disclosures that must appear within a financial statement in order to comply with reporting rules.

Below you see a partial example from financial reporting regulations that describe what a complete set of financial statements looks like.



The reportability rules, driven by the compliance rules published by a standards setter or regulator drive an agenda. The agenda, when satisfied, indicates that the report has been completed.

3. Technical Implementation

This section provides information about the technical implementation of the rules specified by these theories. Note that every representation of every rule is specified as part of these theories is implemented technically using the global standard XBRL. The technical syntax implementation is, therefore, covered by the XBRL technical specification and can be processed, at the XBRL level, using any off-the-shelf XBRL processor.

The actual processing of the arcroles and other semantics must be added as these semantics could be, but currently are not, specified by XBRL International with the exception of *Accounting Semantics Arcroles 1.0* which has been published²⁸. Basically, the *Seattle Method* implementation is a superset of what is described by XBRL International, there is a small amount of overlap. As XBRL International publishes more, the Seattle Method will transition to use published standards.

3.1. Working Prototype Implementations

The following provides a set of progressively larger and larger working prototype technical implementation artifacts that have been thoroughly and rigorously tested and are held out as proper technical implementations of these theories. Each of these examples work 100% as expected within to commercial software applications. Two other software applications process certain aspects of the eight theories.

- **Accounting equation** (the most basic implementation; one disclosure, one block, one rule, three terms):
http://www.xbrl.org/seattlemethod/platinum/ae/ae_ModelStructure.html
- **SFAC6** (still pretty basic, but three disclosures rather than one):
http://www.xbrl.org/seattlemethod/platinum/sfac6/sfac6_ModelStructure.html
- **SFAC8** (still basic, introduces the notion of reporting styles):
http://www.xbrl.org/seattlemethod/platinum/sfac8/sfac8_ModelStructure.html
- **Common Elements** (still rather basic, but beginning to look like an actual financial statement):
http://www.xbrl.org/seattlemethod/platinum/common/base-taxonomy/common_ModelStructure.html
- **MINI** (beginnings of a real financial statement, but technically still fairly basic): http://www.xbrl.org/seattlemethod/platinum/mini/base-taxonomy/mini_ModelStructure.html
- **PROOF** (slight resemblance to a financial statement, but extremely sophisticated and has all technical use cases incorporated):
http://www.xbrl.org/seattlemethod/platinum/proof/base-taxonomy/proof_ModelStructure.html
- **AASB 1060** (very sophisticated from both XBRL and financial reporting perspectives): https://xbrl.azurewebsites.net/2021/reporting-scheme/aasb1060/base-taxonomy/aasb1060_ModelStructure2.html

²⁸ XBRL International, *Accounting semantics arcroles 1.0*,
<https://www.xbrl.org/REQ/accounting-semantics-req/REQ-2023-01-04/accounting-semantics-req-2023-01-04.html>

At the top of each of the working prototypes are links to each and every file necessary for the implementation of the eight theories. Note that verification results are provided, example reports, and other useful artifacts.

PROOF (Platinum, CM)

[Standards](#) | [Terms](#) | [Structures](#) | [Entry Point](#) | [Knowledge Graph](#) | [Disclosures](#) | [Disclosure Mechanics](#) | [Reporting Styles \(FAC Consistency, Mappings, Derivation, Reporting Checklist, Type-subtypes\)](#) | [Model Structure](#) | [Reference Implementation](#) | [Download](#)

Line	Label	Report Element Category	Period Type	Balance	Report Element Name
1	01-Balance Sheet	Network			http://www.xbrl.com/seattlemethod/proof/role/BalanceSheet
2	Balance Sheet [Hypercube]	Hypercube			proof:BalanceSheetHypercube
3	Balance Sheet [Line Items]	LineItems			proof:BalanceSheetLineItems
4	Assets [Roll Up]	Abstract			proof:AssetsRollUp
5	Current Assets	Concept (Monetary)	As Of	Debit	proof:CurrentAssets
6	Noncurrent Assets	Concept (Monetary)	As Of	Debit	proof:NoncurrentAssets
7	Assets	Concept (Monetary)	As Of	Debit	proof:Assets
8	Liabilities and Equity [Roll Up]	Abstract			proof:LiabilitiesAndEquityRollUp
9	Liabilities [Roll Up]	Abstract			proof:LiabilitiesRollUp
10	Current Liabilities	Concept (Monetary)	As Of	Credit	proof:CurrentLiabilities
11	Noncurrent Liabilities	Concept (Monetary)	As Of	Credit	proof:NoncurrentLiabilities
12	Liabilities	Concept (Monetary)	As Of	Credit	proof:Liabilities
13	Equity [Roll Up]	Abstract			proof:EquityRollUp
14	Equity Attributable To Controlling Interests	Concept (Monetary)	As Of	Credit	proof:EquityAttributableToControllingInterests
15	Equity Attributable To Noncontrolling Interests	Concept (Monetary)	As Of	Credit	proof:EquityAttributableToNoncontrollingInterests
16	Equity	Concept (Monetary)	As Of	Credit	proof:Equity
17	Liabilities and Equity	Concept (Monetary)	As Of	Credit	proof:LiabilitiesAndEquity
18	02-Net Assets	Network			http://www.xbrl.com/seattlemethod/proof/role/NetAssets
19	Net Assets [Hypercube]	Hypercube			proof:NetAssetsHypercube
20	Net Assets [Line Items]	LineItems			proof:NetAssetsLineItems
21	Net Assets [Roll Up]	Abstract			proof:NetAssetsRollUp
22	Assets	Concept (Monetary)	As Of	Debit	proof:Assets
23	Liabilities	Concept (Monetary)	As Of	Credit	proof:Liabilities
24	Net Assets	Concept (Monetary)	As Of	Debit	proof:NetAssets
25	03-Income Statement	Network			http://www.xbrl.com/seattlemethod/proof/role/ComprehensiveIncome
26	Comprehensive Income Statement [Hypercube]	Hypercube			proof:ComprehensiveIncomeStatementHypercube
27	Comprehensive Income Statement [Line Items]	LineItems			proof:ComprehensiveIncomeStatementLineItems
28	Comprehensive Income [Roll Up]	Abstract			proof:ComprehensiveIncomeRollUp
29	Revenues	Concept (Monetary)	For Period	Credit	proof:Revenues
30	(Expenses)	Concept (Monetary)	For Period	Debit	proof:Expenses
31	Gains	Concept (Monetary)	For Period	Credit	proof:Gains
32	(Losses)	Concept (Monetary)	For Period	Debit	proof:Losses
33	Net Income	Concept (Monetary)	For	Credit	proof:NetIncome

3.2. Conformance Suite

A conformance suite in the style of XBRL International conformance suites is provided to help implement the theories²⁹:

XBRL-based Digital Financial Reporting Using Seattle Method Conformance Suite Tests

As of date: 2023-07-15

Published by <http://www.xbrl.com>

Min	# of Variations	Name	Owner	Description
	1	01-TestCase-billions.xml	charles.hoffman@me.com	Valid report and report model which shows that reported facts could be in the billions and software should be able to format (localizable) and render these facts appropriately.
	1	02-TestCase-trillions.xml	charles.hoffman@me.com	Valid report and report model which shows that reported facts could be in the trillions and software should be able to render these facts appropriately.
	1	03-TestCase-datatypes.xml	charles.hoffman@me.com	Valid report and report model which provides facts with each of the allowed fundamental datatypes. Note that custom data types can be defined based on these core types. Note that all data types resolve to XML Schema PART 2 Data types.
	1	04-TestCase-units.xml	charles.hoffman@me.com	Valid report and report model which show that a report might contain any number of different units. Note that there is a mechanism by which additional units may be defined by report creators

²⁹ Conformance Suite, <http://xbrl.com/seattlemethod/platinum-testcases/index.xml>

3.3. Business Use Cases and Test Cases

A comprehensive set of business use cases and test cases is provided to help those desiring to implement the eight theories³⁰.

1. Billions: Human Readable Rendering | All Files | Conformance Suite Test
2. Trillions: Human Readable Rendering | All Files | Conformance Suite Test
3. Data Types: Human Readable Rendering | All Files | Conformance Suite Test
4. Units: Human Readable Rendering | All Files | Conformance Suite Test
5. Many Currencies: Human Readable Rendering | All Files | Conformance Suite Test
6. Many Periods: Human Readable Rendering | All Files | Conformance Suite Test
7. Many Entities: Human Readable Rendering | All Files | Conformance Suite Test
8. Balance Sheet: Human Readable Rendering | All Files | Conformance Suite Test
9. Basic Dimensions: Human Readable Rendering | All Files | Conformance Suite Test
10. Hello World! Using Dimensions: Human Readable Rendering | All Files | Conformance Suite Test
11. Tick and Tie: Human Readable Rendering | All Files | Conformance Suite Test
12. Lorem Ipsum of All Patterns: Human Readable Rendering | All Files | Conformance Suite Test
13. Intersections: Human Readable Rendering | All Files | Conformance Suite Test
14. Dimensions, PPE: Human Readable Rendering | All Files | Conformance Suite Test
15. Dimensional Roll Forward: Human Readable Rendering | All Files | Conformance Suite Test
16. Logic: Human Readable Rendering | All Files | Conformance Suite Test
17. (Reserved) Working Trial Balance:
18. (Reserved) Lead Schedules:
19. (Reserved) Unlevered Discounted Cash Flow Model:
20. (Reserved) Debt Audit Working Papers:
21. Set: Human Readable Rendering | All Files | Conformance Suite Test
22. Roll Up: Human Readable Rendering | All Files | Conformance Suite Test
23. Roll Forward: Human Readable Rendering | All Files | Conformance Suite Test
24. Arithmetic: Human Readable Rendering | All Files | Conformance Suite Test
25. Member Aggregation: Human Readable Rendering | All Files | Conformance Suite Test
26. Member Nonaggregation: Human Readable Rendering | All Files | Conformance Suite Test
27. Variance: Human Readable Rendering | All Files | Conformance Suite Test
28. Adjustment: Human Readable Rendering | All Files | Conformance Suite Test
29. Text Block: Human Readable Rendering | All Files | Conformance Suite Test
30. Roll Forward Info: Human Readable Rendering | All Files | Conformance Suite Test
31. AE-BS1: Human Readable Rendering | All Files | Conformance Suite | Full Validation
32. SFAC6-BS1-IS1: Human Readable Rendering | All Files | Conformance Suite | Full Validation
33. SFAC8 Financial Reporting Scheme (Prototype)-Reference: Human Readable Rendering | All Files | Conformance Suite | Full Validation

3.4. Other Resources

There are many other additional resources provided to help those that desire to understand these eight theories described by the *Seattle Method*³¹. Don't hesitate to contact the author of this document if you desire additional information.

³⁰ PLATINUM Business Use Cases, Test Cases, and Conformance Suite, <https://digitalfinancialreporting.blogspot.com/2023/07/platinum-business-use-cases-test-cases.html>

³¹ Seattle Method, Resources, <http://xbrlsite.com/seattlemethod/resources.html>

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