

# 1. Disclosures

The purpose of this section is to explain the notion of the disclosure. All XBRL-based financial reports are made up of a set of disclosures. Note that the term “disclosure” is used in the general sense to describe a precise idea and the definition that we use here might be different than an accountant might interpret the definition of disclosure. To an accountant a “disclosure” might mean something included in the disclosure notes of a financial report. When we use the term disclosure, it includes anything that is disclosed within a financial report whether that disclosure is presented on the face of the primary financial statements, contained in the disclosure notes, or contained in supplementary information.

Disclosures have the property of having a specific concept arrangement pattern<sup>1</sup>. One or many Blocks<sup>2</sup> might be used to represent a disclosure. Disclosures are represented within a hypercube (explicit or implied), and contained within some structure which is represented by some combination of a Network and a Hypercube.

## 1.1. Basic Example of a Disclosure

Below you can see a rather basic example of a disclosure. A disclosure is described using disclosure mechanics rules<sup>3</sup>. The disclosure below has a roll up concept arrangement pattern. The total concept of that roll up is “Property, plant and equipment, net”. This is what the disclosure might look like:

Property, Plant and Equipment, Net [Roll Up]	Period [Axis]	
	2020-12-31	2019-12-31
<b>Property, Plant and Equipment, Net [Roll Up]</b>		
Land	5,347,000	1,147,000
Buildings, Net	244,508,000	366,375,000
Furnitures and Fixtures, Net	34,457,000	34,457,000
Computer Equipment, Net	4,169,000	5,313,000
Other Property, Plant and Equipment, Net	6,702,000	6,149,000
Property, Plant and Equipment, Net	<b>295,183,000</b>	<b>413,441,000</b>

A software application can be used to view and understand the disclosure information<sup>4</sup>. Below you see the name of the disclosure which was defined in an XBRL taxonomy schema “disclosures:PropertyPlantAndEquipmentRollUp”. The concept arrangement pattern is defined to be a “cm:RollUp”. That roll up concept arrangement pattern needs to have the concept “helloWorld:PropertyPlantAndEquipmentNet” as the total of the roll up. Using that information, that disclosure can be identified to be a property, plant, and equipment roll up of components even though there is no hypercube or network that specifically identifies the disclosure.

<sup>1</sup> Concept Arrangement Pattern, [http://www.xbrlsite.com/mastering/Part02\\_Chapter05.I\\_ConceptArrangementPatterns.pdf](http://www.xbrlsite.com/mastering/Part02_Chapter05.I_ConceptArrangementPatterns.pdf)

<sup>2</sup> Blocks, [http://www.xbrlsite.com/mastering/Part02\\_Chapter05.E2\\_Blocks.pdf](http://www.xbrlsite.com/mastering/Part02_Chapter05.E2_Blocks.pdf)

<sup>3</sup> Disclosure Mechanics, [http://www.xbrlsite.com/mastering/Part02\\_Chapter05.M\\_DisclosureMechnics.pdf](http://www.xbrlsite.com/mastering/Part02_Chapter05.M_DisclosureMechnics.pdf)

<sup>4</sup> Pacioli, Disclosure Mechanics Rules report, <https://auditchain.infura-ipfs.io/ipfs/QmZNFyzoNbf9Awa2vNE1BoVdMmb39KxixXoye7nyVAnMhU/disclosures.html>

#	Type	Name	Rule Expression
1	disclosure	disclosures:PropertyPlantAndEquipmentRollUp p Added • detections:1	Property, Plant, and Equipment [Roll Up] • disclosures:PropertyPlantAndEquipmentRollUp requires: • Concept Arrangement Pattern cm:RollUp • with helloWorld:PropertyPlantAndEquipmentNet  1 instance:  In network 30000 - Property, Plant, and Equipment by Component: Detected block Property, Plant and Equipment, Net [RollUp] with helloWorld:PropertyPlantAndEquipmentNet

We don't want to get into the details of disclosure mechanics rules at this time. For more information related to disclosure mechanics rules<sup>5</sup>, please see that section.

We want to focus on the notion of a disclosure at this point. We will do that now as we provide the reader with a quick reminder of the fragments of a financial report.

## 1.2. Financial Report Fragment Terminology

Different groups of people refer to different artifacts of a financial report by different names and may not have the notion of certain artifacts at all. Below is a comparison of terminology:

Definition	Seattle Method Term	XBRL Specification Term	US GAAP Taxonomy Term
A <b>report</b> is information published by a reporting entity at some point in time for some purpose.	Report	Instance	Financial Report
A <b>fragment</b> is a set of one-to-many blocks which go together for some specific purpose within a report.	Fragment	<no such artifact>	Report Fragment
A <b>structure</b> is a set of blocks.	Structure	Network + Hypercube	Report Group and Schedule
A <b>block</b> is a set of facts which go together (tend to be cohesive and share a certain common nature) for some specific purpose within a report.	Block	<no such artifact>	<no such artifact>
A <b>disclosure</b> is a set of one-to-many logical blocks of information.	Disclosure	<no such artifact>	<no such artifact>
A <b>fact</b> is reported. A fact defines a single, observable, reportable piece of information contained within a report contextualized for unambiguous interpretation or analysis by one or more distinguishing aspects.	Fact	Fact	Fact

At the highest level of a report and at the lowest level of a financial report there is similarity between the Seattle Method, the XBRL Technical Specification, and the US GAAP XBRL Taxonomy and other such financial reporting taxonomies. But in the middle, the fragments of a report, there are gaps. So, what do you do if you want to refer to a specific fragment of a report, a report model, a financial reporting scheme,

<sup>5</sup> Disclosure Mechanics, [http://www.xbrlsite.com/mastering/Part02\\_Chapter05.M\\_DisclosureMechnics.pdf](http://www.xbrlsite.com/mastering/Part02_Chapter05.M_DisclosureMechnics.pdf)

or compare reports or report models? If you don't have certain notions, it is impossible to work with reports effectively. That is why terms such as block and disclosure are used by the Seattle Method.

You can find more details about these financial report artifacts in the *Logical Theory Describing Financial Report*<sup>6</sup>.

### 1.3. Example Set of Disclosures

The best way to understand disclosures is to look at a set of disclosures and have a look around. A set of approximately 1,000 disclosures have been created for US GAAP which you can have a look at<sup>7</sup>.

Disclosure Name	Examples
Accelerated Share Repurchases [Hierarchy]	6
Accounting Changes and Error Corrections [Hierarchy]	0
Accounting Changes and Error Corrections Note [Note Level]	21
Accounting Changes Note [Note Level]	9
Accounts Payable and Accrued Liabilities [Roll Up]	11
Accounts Payable and Accrued Liabilities [Table Text Block] (DELETE)	0
Accounts Payable and Accrued Liabilities Note [Note Level]	9
Accounts Payable and Accrued Liabilities, Current [Roll Up]	78
Accounts Payable and Accrued Liabilities, Current, Note [Note Level]	18
Accounts Payable and Accrued Liabilities, Noncurrent [Roll Up]	2
Accounts Payable and Accrued Liabilities, Noncurrent, Note [Note Level]	4
Accounts Payable and Other Accrued Liabilities, Current [Roll Up]	2
Accounts Payable Disclosures [Hierarchy]	0
Accounts Payable [Roll Up]	3

An issue with the list of US GAAP disclosures is that it is an incomplete working prototype. It is a significant amount of work to create a full, complete, correct, set of disclosures for financial reporting schemes such as US GAAP or IFRS. What I am providing at the current time is a working prototype.

<sup>6</sup> Charles Hoffman, CPA and Rene van Egmond, *Logical Theory Describing a Financial Report (terse)*, [http://xbrlsite.com/seattlemethod/LogicalTheoryDescribingFinancialReport\\_Terse.pdf](http://xbrlsite.com/seattlemethod/LogicalTheoryDescribingFinancialReport_Terse.pdf)

<sup>7</sup> US GAAP Disclosures, <http://xbrlsite.azurewebsites.net/2020/reporting-scheme/us-gaap/documentation/Disclosures.html>

For US GAAP, within the set of about 1,000 disclosures is about 65 disclosures that have been built out and are working appropriately.

One of the completed disclosures is Inventory, Net (Current) [Roll Up]<sup>8</sup>. Focus on the information that is provided for that disclosure. A similar set of information will, eventually, be provided for each US GAAP and IFRS disclosure. All information is represented in machine readable XBRL.

To understand disclosures more, we need to introduce a few additional ideas related to disclosures, which we will do now.

## 1.4. Topics

A topic is simply a mechanism for organizing disclosures. Because there are literally a thousand disclosures, perhaps even more (I suspect that the final number will be somewhere between 500 and 5,000); a way to group disclosures is necessary. A topic is that mechanism. Here is an example of disclosures organized by topic<sup>9</sup>:

Line	Label	Type	Reference	Name
1	Disclosures	Network		http://xbrlsite.azurewebsites.net/2019/psas/disclosures/role/Disclosures
2	Financial Report	Heading	ASC 205	topics:FinancialReport
3	Primary Financial Statements	Heading	ASC 205	topics:PrimaryFinancialStatements
4	Balance Sheet	Topic	ASC 210	topics:BalanceSheet
5	Balance Sheet, Parenthetical, by Legal Entity [Hierarchy]	Disclosure		disclosures:BalanceSheetParenthetical
6	Temporary Equity, by Class [Abstract]	Disclosure		disclosures:TemporaryEquityByClass
7	Preferred Stock, by class, Balance Sheet Parenthetical [Hierarchy]	Disclosure		disclosures:PreferredStockByClass
8	Common Stock, by Class [Hierarchy]	Disclosure		disclosures:CommonStockByClass
9	Treasury Stock Share Repurchase Programs, by Program and Class of Stock [Hierarchy]	Disclosure		disclosures:TreasuryStockByClass
10	Assets [Roll Up]	Disclosure		disclosures:AssetsRollUp
11	Liabilities and Equity [Roll Up]	Disclosure		disclosures:LiabilitiesAndEquityRollUp
12	Balance Sheet	Disclosure		disclosures:BalanceSheet
13	Income Statement	Topic	ASC 225	topics:IncomeStatement
14	Net Income Breakdown [Roll Up]	Disclosure		disclosures:NetIncomeBreakdown
15	Earning Per Share Summary Information [Hierarchy]	Disclosure		disclosures:EarningPerShare
16	Income Statement, by Legal Entity [Roll Up]	Disclosure		disclosures:IncomeStatement
17	Income Statement, Parenthetical, by Legal Entity [Hierarchy]	Disclosure		disclosures:IncomeStatementParenthetical
18	Net Income (Loss) Available to Common Stockholders, Basic [Roll Up]	Disclosure		disclosures:NetIncomeLossAvailableToCommonStockholdersBasicRollUp
19	Statement of Income and Comprehensive Income [Roll Up]	Disclosure		disclosures:StatementOfIncomeAndComprehensiveIncome
20	Cash Flow Statement	Topic	ASC 230	topics:CashFlowStatement
21	Cash Flow Statement [Roll Forward]	Disclosure		disclosures:CashFlowStatement
22	Cash Flow, Supplemental Note [Note Level]	Disclosure		disclosures:CashFlowSupplementalDisclosures
23	Cash Flow, Operating Capital [Roll Up]	Disclosure		disclosures:CashFlowOperatingCapital
24	Cash Flow, Supplemental Information [Hierarchy]	Disclosure		disclosures:CashFlowSupplementalDisclosuresDisclosures

## 1.5. Templates

A template is simply a prototype of a disclosure that is represented in machine readable XBRL and can be imported directly into an XBRL-based digital financial report and then modified to meet the needs of a specific reporting entity.

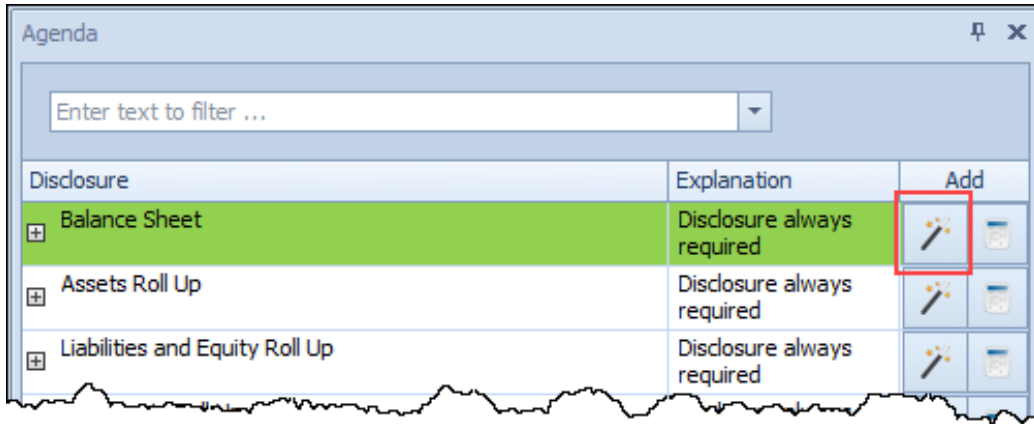
Imagine an expert system for creating financial reports as having an “agenda”. That agenda specifies everything that an economic entity is required to disclose. We will discuss this agenda further in the Reporting Checklist<sup>10</sup> section.

<sup>8</sup> Disclosure, *Inventory, Net (Current) [Roll Up]*, <http://xbrlsite.azurewebsites.net/2020/reporting-scheme/us-gaap/disclosures-topics/disclosures-detail/Disclosure-517.html>

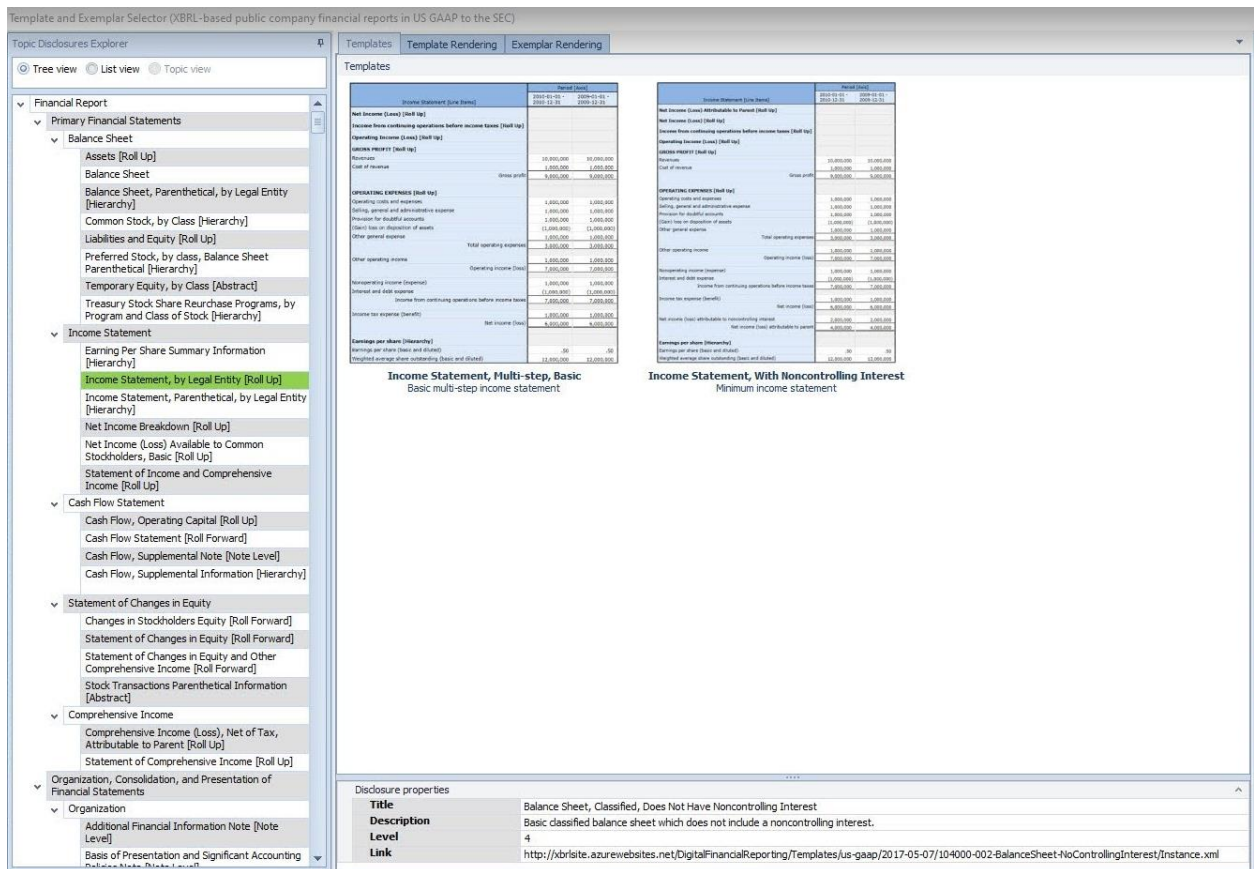
<sup>9</sup> *US GAAP Disclosures Organized by Topic*, [http://xbrlsite.azurewebsites.net/2020/reporting-scheme/us-gaap/disclosures-topics/disclosures\\_ModelStructure.html](http://xbrlsite.azurewebsites.net/2020/reporting-scheme/us-gaap/disclosures-topics/disclosures_ModelStructure.html)

<sup>10</sup> Reporting Checklist (a.k.a. Disclosure Rules), [http://www.xbrlsite.com/mastering/Part02\\_Chapter05.N\\_DisclosureRules.pdf](http://www.xbrlsite.com/mastering/Part02_Chapter05.N_DisclosureRules.pdf)

Templates are complete prototypes that are valid for a Disclosure. Templates can be imported. On the Agenda, you see a button for each Disclosure that is supposed to be in a report but does not yet exist:



When you press that button, a set of templates appears and the templates for the disclosure that you are working with is selected and each template is shown. Below you see a prototype set of templates for US GAAP Disclosures<sup>11</sup>:



<sup>11</sup> Template selector, [https://photos.google.com/share/AF1QipOfV4MNstK3tekpIcb6HraFJ9WLIJH-UzyQp\\_CwIVQvt-45mYhSpqNRCI7QOhoUw/photo/AF1QipOFYn1d9aaoSGBUWEYNo5QzoaTvhhp604xzp-OB?key=aTZTUWQ1VDdVaVNIidHotbkdoRGxNQVIQWkoxdHNN](https://photos.google.com/share/AF1QipOfV4MNstK3tekpIcb6HraFJ9WLIJH-UzyQp_CwIVQvt-45mYhSpqNRCI7QOhoUw/photo/AF1QipOFYn1d9aaoSGBUWEYNo5QzoaTvhhp604xzp-OB?key=aTZTUWQ1VDdVaVNIidHotbkdoRGxNQVIQWkoxdHNN)

When you click on a template to select it for import, the template, which is represented in global standard XBRL, is imported, the expert system application makes any necessary adjustments to the template to make sure namespaces and prefixes match, and then the user can edit the template as the deem appropriate.

## 1.6. Exemplars

An exemplar is similar to a template in that it is a complete prototype of a valid disclosure. However, the template is an actual report created by another reporting entity.

The SEC EDGAR system is a free, publicly available library of high quality financial reports created by public companies and then submitted to the SEC. Reports use both the US GAAP and IFRS financial reporting schemes.

Imagine a software application that was available to sort, search, filter all those reports by industry, accounting activity, report quality, or other criteria. Imagine that you could point at a report and extract a specific disclosure, import it into a report you are creating, and then modify what was imported rather than building a disclosure from scratch<sup>12</sup>.

Select Disclosure: (US GAAP)

#	Economic Entity Name
1	BOEING CO
2	BOEING CO
3	CARPENTER TECHNOLOGY CORP
4	CARPENTER TECHNOLOGY CORP
5	CATERPILLAR INC
6	CATERPILLAR INC
7	COCA COLA CO
8	COCA COLA CO
9	COLUMBUS MCKINNON CORP
10	COLUMBUS MCKINNON CORP
11	CUMMINS INC
12	CUMMINS INC
13	DIXIE GROUP INC
14	DIXIE GROUP INC
15	Dr Pepper Snapple Group, Inc.
16	Dr Pepper Snapple Group, Inc.
17	DUPONT E I DE NEMOURS & CO

**Rendering**

**Component: (Network and Table)**

Network	2408403 - Disclosure - Inventories (Inventory Disclosure Table) (Details) ( <a href="http://www.boeing.com/role/InventoriesInventoryDisclosureTableDetails">http://www.boeing.com/role/InventoriesInventoryDisclosureTableDetails</a> )
Table	(Implied)

Slicers (applies to each fact value in each table cell)

Reporting Entity [Axis]	0000012927 ( <a href="http://www.sec.gov/CIK">http://www.sec.gov/CIK</a> )
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Inventory Disclosure [Abstract]	Period [Axis]	
	2013-12-31	2012-12-31
<b>Inventory Disclosure [Abstract]</b>		
Long-term contracts in progress	12,608,000,000	15,130,000,000
Commercial aircraft programs	48,065,000,000	40,389,000,000
Commercial spare parts, used aircraft, general stock materials and other	7,793,000,000	7,206,000,000
Inventory before advances and progress billings	68,466,000,000	62,725,000,000
Less advances and progress billings	(25,554,000,000)	(24,974,000,000)
<b>Total</b>	<b>42,912,000,000</b>	<b>37,751,000,000</b>

Accountants copy, paste, adjust (i.e. CPA) disclosures all the time. Today, it is harder because everything is presentation oriented. With XBRL-based reports the representation of a disclosure can be directly copied.

I predict that these libraries of reports will exist for US GAAP, IFRS, and many other financial reporting schemes.

<sup>12</sup> Exemplars, [http://xbrl-site-app.azurewebsites.net/DisclosureBestPractices\\_USGAAP/DisclosureBestPractices.aspx?DisclosureName=InventoryNetRollUp](http://xbrl-site-app.azurewebsites.net/DisclosureBestPractices_USGAAP/DisclosureBestPractices.aspx?DisclosureName=InventoryNetRollUp)



## 1.7. Study this to Better Understand Disclosures

To better understand networks, hypercubes, blocks, and disclosures study the PROOF representation of a report<sup>13</sup>:

Line	Report Element Category	Report Element	Period Type	Balance	Report Element Name
1	01-Balance Sheet	Network			<a href="http://www.xbrlsite.com/seattlemethod/proof/role/BalanceSheet">http://www.xbrlsite.com/seattlemethod/proof/role/BalanceSheet</a>
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

Start with the report model, examine the report that was created, notice the organization of the networks, hypercubes, blocks, and disclosures<sup>14</sup>.

#	Network	Hypercube	Block	Pattern	Disclosures
1	01-Balance Sheet	Balance Sheet [Hypercube]	Assets	RollUp	disclosures:AssetsRollUp, disclosures:BalanceSheet
2	01-Balance Sheet	Balance Sheet [Hypercube]	Liabilities and Equity	RollUp	disclosures:BalanceSheet, disclosures:LiabilitiesAndEquityRollUp
3	02-Net Assets	Net Assets [Hypercube]	Net Assets	RollUp	disclosures:NetAssetsRollUp
4	03-Income Statement	Comprehensive Income Statement [Hypercube]	Net Income	RollUp	disclosures:IncomeStatement
5	04-Income Statement (Alternative)	Comprehensive Income Statement [Hypercube]	Net Income	RollUp	disclosures:IncomeStatementAlternative
6	05-Comprehensive Income	Comprehensive Income Statement [Hypercube]	Comprehensive Income	RollUp	disclosures:ComprehensiveIncome
7	06-Cash Flow	Cash Flow [Hypercube]	Net Cash Flow	RollUp	disclosures:CashFlowStatement, disclosures:NetCashFlowRollUp
8	06-Cash Flow	Cash Flow [Hypercube]	Assets, Beginning Balance	RollForward	disclosures:AssetsRollForward, disclosures:CashFlowStatement
9	07-Prior Period Errors	Prior Period Errors [Hypercube]	Equity, Originally Stated	Adjustment	disclosures:PriorPeriodError
10	08-Prior Period Errors (Alternative)	Prior Period Errors [Hypercube]	Prior Period Errors [Adjustment]	Set	disclosures:PriorPeriodErrorAlternative
11	09-Changes in Equity	Changes in Equity [Hypercube]	Equity, Beginning Balance	RollForward	disclosures:ChangesInEquity
12	10-Policies	Policies [Hypercube]	Basis of Reporting [Text Block]	Level1TextBlock	disclosures:BasisOfReporting
13	10-Policies	Policies [Hypercube]	Nature of Operations [Text Block]	Level1TextBlock	disclosures:NatureOfOperations
14	10-Policies	Policies [Hypercube]	Revenue Recognition Policy [Text Block]	Level1TextBlock	disclosures:RevenueRecognitionPolicy
15	11-Variance Analysis	Variance Analysis [Hypercube]	Net Income	RollUp	disclosures:VarianceAnalysis
16	12-Segment Revenues	Segment Revenues [Hypercube]	Segment Revenues [Set]	Set	disclosures:SegmentRevenues
17	13-Stock Plan Activity	Weighted Average Grant Date Fair Value [Hypercube]	Nonvested Fair Value, Beginning Balance	RollForwardInfo	disclosures:StockPlanActivity
18	14-Financial Highlights	Financial Highlights [Hypercube]	Financial Highlights [Set]	Set	disclosures:FinancialHighlights

The tools are not perfect yet, but if you invest the time you can master the understanding of networks, hypercubes, blocks, and disclosures and know how to use XBRL to represent financial reports.

<sup>13</sup> Proof, [http://www.xbrlsite.com/seattlemethod/golden/proof/base-taxonomy/proof\\_ModelStructure.html](http://www.xbrlsite.com/seattlemethod/golden/proof/base-taxonomy/proof_ModelStructure.html)

<sup>14</sup> Blocks, <https://auditchain.infura-ipfs.io/ipfs/QmNUY15G1dhTXCYuyvqYWZ33Nc6mKRUDz7GDqLFonaPs/blocks.html>