1.Controlling Report Quality

The purpose of this section is to explain how to control the quality of an XBRL-based digital financial report. This includes understanding how to be sure such a report is a properly functioning logical system and the typical impediments that get in the way of creating reports that are consistent, precise, and complete.

This section helps you understand the impediments to creating a properly functioning XBRL-based financial report. Being conscious of the things that can go wrong helps you avoid quality issues with your XBRL-based reports. Machine readable rules are used to communicate the permissible manipulations of your report.

1.1. Computers are Dumb Beasts

If you are reading this you are likely an adult. But computers are not like adults, they are more like babies. Not children, babies. Computer have to be led by the hand and taken where you want them to go.

Rules provide a specification of the permissible manipulations of the model of a logical system. Rules prevent anarchy. Rules lead the computer by the hand, telling the computer where you need to go.

The accounting equation is a simple logical system. This section builds on a prior version¹ of the very basic "accounting equation" representation in XBRL. The point is to show the specific consequences of decisions that are made with respect to a logical system and the rules that are necessary as a result of those decisions.

You can download a zip file² that contains all of the XBRL examples or the humanreadable representation of the example³. The home page for this information can be found here⁴.

1.2. Simple Logical System: The Accounting Equation

The accounting equation⁵ is the fundamental basis for financial accounting. By definition, every financial reporting scheme⁶ has this high-level accounting equation model at its core. The accounting equation is:

"Assets = Liabilities + Equity"

The accounting equation defines three core **terms** of a financial report:

- Assets
- Liabilities
- Equity

¹ Accounting equation, prior verion, <u>http://xbrlsite.azurewebsites.net/2019/core/master-ae/</u>

² ZIP file download, <u>http://xbrlsite.azurewebsites.net/2020/core/master-ae/ae.zip</u>

³ Human readable representation, <u>http://xbrlsite.azurewebsites.net/2020/core/master-ae/evidence-package.zip</u>

⁴ Index page, <u>http://xbrlsite.azurewebsites.net/2020/core/master-ae/index.html</u>

⁵ Wikipedia, Accounting Equation, <u>https://en.wikipedia.org/wiki/Accounting_equation</u>

⁶ Charles Hoffman, CPA, *Comparison of Financial Reporting Schemes High Level Concepts*, <u>http://xbrlsite.azurewebsites.net/2018/Library/ReportingSchemes-2018-12-30.pdf</u>

The accounting equation defines those three terms and provides the mathematical relations (**rule** or **assertion**) between the three terms:

Assets = Liabilities + Equity

Depending upon how you read the definition of the accounting equation, it either explicitly says or at least implies the existence of a **structure**, the **Balance Sheet**, within which the three concepts exist. As such, the three terms, Assets, Liabilities, and Equity are **associated** with the Balance Sheet structure because they are part-of that structure.

With that information, an economic entity can create a financial statement that communicate **facts** about that economic entity. For example, the economic entity "ABC Company" might represent their assets, liabilities, and equity as of December 31, 2019:

- Assets = \$5,000
- Liabilities = \$1,000
- Equity = \$4,000

And so, the information that has been explained above can be represented as the following set of vertices and edges using graph theory⁷:



The accounting equation is a simple man-made logical system.

⁷ Wikipedia, *Graph Theory*, <u>https://en.wikipedia.org/wiki/Graph_theory</u>

A **logical system**⁸ (logical theory) enables a community of stakeholders trying to achieve a specific goal or objective or a range of goals/objectives to agree on important common models, structures, and statements for capturing meaning or representing a shared understanding of and knowledge in some universe of discourse.

As I have explained, a logical system or logical theory is made up of a set of **models**, **structures**, **terms**, **associations**, **assertions**, and **facts**. In very simple terms,

- **Logical theory**: A logical theory is a set of *models* that are consistent with that logical theory.
- **Model**: A model is a set of *structures*. A model is a permissible interpretation of a theory.
- **Structure**: A structure is a set of *statements* which describe the structure.
- **Statement**: A statement is a proposition, claim, assertion, belief, idea, or fact about or related to the universe of discourse. There are four broad categories of statements:
 - **Terms**: Terms are statements that define ideas used by the logical theory such as the ideas "assets", "liabilities", and "equity".
 - Associations: Associations are statements that describe permissible interrelationships between the terms such as "assets is part-of the balance sheet" or "assets = liabilities + equity" or "an asset is a 'debit' and is 'as of' a specific point in time and is always a monetary numeric value".
 - Assertions: (a.k.a. rules) Assertions are statements that describe what tend to be IF...THEN...ELSE types of relationships such as "IF the economic entity is a not-for-profit THEN net assets = assets liabilities; ELSE assets = liabilities + equity"
 - Facts: Facts are statements about the numbers and words that are provided by an economic entity within their financial report. For example, "assets for the consolidated legal entity Microsoft as of June 20, 2017 was \$241,086,000,000 expressed in US dollars and rounded to the nearest millions of dollars.

The statements within a logical system can be **consistent** or inconsistent or can contradict one another. A logical system can have high to low **precision** and high to low **coverage**. *Precision* is a measure of how precisely the information within a logical system has been represented as contrast to reality for the universe of discourse. *Coverage* is a measure of how completely information in a logical system has been represented relative to the reality for a universe of discourse. If a logical system is consistent, has high precision, and has high coverage it is said to be a properly functioning logical system.

Finally, nothing about this logical system is a "black box". The innerworkings are logical, they are clear, and humans can understand what is being expressed because

⁸ Charles Hoffman, CPA, *Explanation of a Financial Report Logical System in Simple Terms*, <u>http://xbrl.squarespace.com/journal/2019/11/1/explanation-of-a-financial-report-logical-system-in-simple-t.html</u>

they understand the rules of logic and they understand the terminology being used to explain the logical system. Information is knowable.

And so, if any of this is explained in machine-readable terms it must be done using auditable algorithms that are explainable to humans. Algorithms, including artificial intelligence, used by the enterprise or for accounting, reporting, auditing, and analysis needs to be explainable artificial intelligence. Explainable AI⁹ (XAI) provides insight into how the software algorithms reached its conclusions, an understandable "line of reasoning" so to speak.

1.3. Accounting Equation Logical System Represented Using XBRL

The following is a summary of the model of the accounting equation logical system expressed in both machine-readable and human-readable terms.

One specific thing to note is that additional details are being added to the simple explanation provided above. For example, above we defined "Assets". But now, we define "Assets" as being a data type of "monetary", being "as of" a specific point in time (i.e. instant), and being a "Debit". Computers need this precise representation to help humans achieve what they desire to achieve from this logical system. You probably were aware that Assets is a debit and as of a point in time and is a number.

TERMS^{10,11}:

Three simple terms are defined for the accounting equation logical system: Assets, Liabilities, Equity.

#	Label	Data Type	Period Type	Balance Type	Prefix				Count	
1	Assets	Monetary	As Of (instant)	Debit	ae	Filer label: A	ssets			1
						Documentati	on:			
						References:				
						Publisher		Reference Name	Reference Information	
						FASB	SFAC		Paragraph: 25	
									URIDate: 2019-10-22	
									URI: https://www.fasb.org/jsp/FASB/Document_C/DocumentPage? cid=1218220132802&acceptedDisclaimer=true	
									Number: 6	
						Name: ae:As	sets			
2	Equity	Monetary	As Of (instant)	Credit	ae	Filer label: E	quity			1
						Documentati	on:			
					References: Dublishan Deference Name Deference Information					
						Publisher		Reference Name	Reference Information	
						FASB	SFAC		Paragraph: 49	
									URIDate: 2019-10-22	
									URI: https://www.fasb.org/jsp/FASB/Document_C/DocumentPage? cid=1218220132802&acceptedDisclaimer=true	
									Number: 6	
						Name: ae:Eg	uity			
3	Liabilities	Monetary	As Of (instant)	Credit	ae	Filer label: Li	abilities			1
						Documentati	on:			
						References:				
						Publisher		Reference Name	Reference Information	
						FASB	SFAC		Paragraph: 35	
									URIDate: 2019-10-22	
									URI: https://www.fasb.org/jsp/FASB/Document_C/DocumentPage? cid=1218220132802&acceptedDisclaimer=true	
									Number: 6	
						Name: ae:Lia	bilities			

STRUCTURES^{12,13}

⁹ ACCA, Narayanan Vaidyanathan, *Explainable AI: Putting the user at the core*, <u>https://www.accaglobal.com/uk/en/professional-insights/technology/Explainable_AI.html</u>

¹⁰ Machine-readable terms, <u>http://xbrlsite.azurewebsites.net/2020/core/master-ae/ae.xsd</u>

¹¹ Human-readable terms, <u>http://xbrlsite.azurewebsites.net/2020/core/master-ae/evidence-package/contents/ReportElements-Concepts.html</u>

In addition to the three simple terms, one functional term is defined to represent the balance sheet structure: Balance Sheet [Hypercube]:

#	Label	Prefix	Standard label, Documentation, References, Concept name	Count
1	Balance Sheet [Hypercube]	ae	Filer label: Balance Sheet [Hypercube]	1
			Documentation:	
			References: NONE	
			Name: ae:BalanceSheetHypercube	

ASSOCIATIONS^{14,15}:

The association between the three terms and the balance sheet structure are provided. Some additional infrastructure report elements are provided to help organize the representation:

#	Label	Report Element Class	Period Type	Balance	Name
1	Balance Sheet [Hypercube]	[Table]			ae:BalanceSheetHypercube
2	Balance Sheet [Line Items]	[Line Items]			ae:BalanceSheetLineItems
3	Balance Sheet [Set]	[Abstract]			ae:BalanceSheetSet
- 4	Assets	[Concept] Monetary	As Of	Debit	ae:Assets
5	Liabilities	[Concept] Monetary	As Of	Credit	ae:Liabilities
6	Equity	[Concept] Monetary	As Of	Credit	ae:Equity

ASSERTIONS^{16,17}:

The mathematical relationship between the terms Assets, Liabilities, and Equity are represented.

#	Label	Result	Rule
1	\$Assets = (\$Liabilities + \$Equity) (CONSISTENCY_5)	Pass	\$Assets = (\$Liabilities + \$Equity)

FACTS^{18,19}:

We can create a set of facts to exercise the logical system. Facts representing Assets of \$5,000, liabilities of \$1,000, and equity of \$4,000 were created.

#	Reporting Entity [Axis]	Period [Axis]	Concept	Fact Value	Unit	Rounding	Parenthetical Explanations
1	GH259400TOMPUOLS65II (http://standards.iso.org/iso/17442)	2020-12-31	Assets	5000	USD	INF	
2	GH259400TOMPUOLS65II (http://standards.iso.org/iso/17442)	2020-12-31	Liabilities	1000	USD	INF	
3	GH259400TOMPUOLS65II (http://standards.iso.org/iso/17442)	2020-12-31	Equity	4000	USD	INF	

And so, the model above is used to explain the details of the human-readable representation that is also machine-readable below in the alternative Inline XBRL format²⁰:

¹² Machine-readable structures, <u>http://xbrlsite.azurewebsites.net/2020/core/master-ae/ae.xsd</u>

¹³ Human-readable structures, <u>http://xbrlsite.azurewebsites.net/2020/core/master-ae/evidence-package/contents/ReportElements-Tables.html</u>

¹⁶ Machine-readable assertions, <u>http://xbrlsite.azurewebsites.net/2020/core/master-ae/Consistency-5-</u> <u>Code-BS01-formula.xml</u>

¹⁷ Human-readable assertions, <u>http://xbrlsite.azurewebsites.net/2020/core/master-ae/evidence-package/contents/BusinessRulesSummary.html</u>

¹⁸ Machine-readable facts, <u>http://xbrlsite.azurewebsites.net/2020/core/master-ae/instance.xml</u>

²⁰ Human-readable and machine-readable facts using Inline XBRL, <u>http://xbrlsite.azurewebsites.net/2020/core/master-ae/instance.html</u>

 ¹⁴ Machine-readable associations, <u>http://xbrlsite.azurewebsites.net/2020/core/master-ae/ae-pre.xml</u>
 ¹⁵ Human-readable associations, <u>http://xbrlsite.azurewebsites.net/2020/core/master-ae/evidence-</u>package/contents/NetworkStructure-N0-RE6.html

¹⁹ Human-readable facts, <u>http://xbrlsite.azurewebsites.net/2020/core/master-ae/evidence-package/contents/NetworkFacts-N0-RE6.html</u>

Inline XBRL Business Report

Component: (Network and Table)							
Network	01-Balance Sheet (http://www.xbrlsite.com/ae/role/BalanceSheet)						
Table	Balance Sheet [Hypercube]						

Slicers (applies to each fact value in each table cell) Reporting Entity [Axis]

GH259400TOMPUOLS65II (http://standards.iso.org/iso/17442)

	Period [Axis]
Balance Sheet [Line Items]	2020-12-31
Balance Sheet [Set]	
Assets	5,000
Liabilities	1,000
Equity	4,000

PROPERLY FUNCTIONING: CONSISTENT, PRECISE, AND COMPLETE:

The logical system can be called **properly functioning** because all of the statements within the logical system are **consistent** with one another (i.e. there are no contradictions, there are no inconsistencies), it can be established that the logical system created **precisely** reflects the reality of the logical system (we just made the numbers up for ABC Company), and a **complete** set of statements seem to be included within the logical system.

A software application can take all of the statements made within the machinereadable version of this logical system and perform work. Below you see a humanreadable rendering of a Balance Sheet that was created from the XBRL-based representation of the accounting equation logical system:

	Period [Axis]
Balance Sheet [Line Items]	2020-12-31
Balance Sheet [Set]	
Assets	5,000
Liabilities	1,000
Equity	4,000

Result	Rule
Pass	\$Assets = \$Liabilities + \$Equity

The logical system of the accounting equation is therefore *consistent*, *precise*, and *complete* because all the statements are consistent with one another within the logical system, the logical system reflects the formal truths we wish to convey precisely, and a complete set of statements describe the logical system.

This graphic below shows a synopsis of the information and we can look at this synopsis and see that the logical system appears to be properly functioning because this is a relatively simple logical system:



And so, above we have shown one permissible interpretation or model of the logical system that is consistent with our logical theory.

Now, we want to use this base logical system that is properly functioning to explain the sorts of things that can make the system inconsistent, incomplete, or imprecise. This will help you to better understand what is entailed in creating a properly functioning logical system.

1.4. Properly and Improperly Functioning Logical Systems

Below you can see examples of each of six possible states of the accounting equation logical system. For example, the logical system can be functioning improperly if a single statement is left out, if one statement contradicts another statement within the logical system, if a statement is imprecise with respect to reality; all of these situations impact (a) the logical system and (b) what information is necessary to include within the logical system.

Here is a graphic depicting the first 6 states including the first which is a properly functioning logical system:



In the following sections I want to make some adjustments to the logical system which make the logical system either inconsistent, incomplete, or imprecise and explain why the system is then not a properly functioning logical system. To the six examples above I will add three additional examples. I made videos that explain each of these impediments to a properly functioning logical system which you can see in this video playlist, Understanding the Financial Report Logical System²¹.

Before we get to the improperly functioning logical systems, let's take one final look at the properly functioning logical system so that you can compare and contrast the properly functioning and improperly functioning logical systems.

1.5. State 1: Properly Functioning Logical System

For completeness, I want to start by mentioning again our properly functioning logical system which is consistent, complete, and precise. It can be helpful to contrast other states to this state to understand the difference between properly functioning logical systems and improperly functioning systems.

			Balance Sheet
	Period [Axis]		r
Balance Sheet [Abstract]	2020-12-31	Consistent	Assets = 5,000
Balance Sheet [Abstract]			Liabilities = 1,000
Assets	5,000	Complete 🚃	$F_{\text{current}} = 4.000$
Liabilities	1,000	(1)	Equity = 4,000
Equity	4,000	Precise	Assets = Liabilities + Equity
Result Rule			
Pass \$Assets = \$Liabilities + \$Equity			

Again, this is considered a properly functioning logical system because (a) all the statements within the system are **consistent**; (b) the set of statements that describe the system is **complete**; and (c) the information conveyed by the system is **precise** in its representation of reality. Further, we are formally declaring this "reality"²² to be our base understanding.

Also, we need to be explicit. We defined three terms "Assets", "Liabilities", and "Equity".

Now, you may know what those three terms are; but a computer does not. You have to define what you work with relative to something that you know. Imagine our system defines four terms, "fac:Assets", "fac:Liabilities", "fac:Equity", and "fac:LiabilitiesAndEquity"²³. You understand your system but you have to map every external system into your system²⁴. Your internal system understands more that the accounting equation system (i.e. you have LiabilitiesAndEquity). You have to be able to compute that value based on some other system's information²⁵. It is perfectly reasonable for our system to create a concept LiabilitiesAndEquity and compute that value even though the accounting equation logical system does not have that explicit value.

- ²¹ Understanding the Financial Report Logical System, <u>https://www.youtube.com/playlist?list=PLqMZRUzQ64B7EWamzDP-WaYbS_W0RL9nt</u>
- ²² YouTube, *Reality*, <u>https://youtu.be/eq2Jw6waaCI</u>
- ²³ Fundamental accounting concepts, <u>http://xbrlsite.azurewebsites.net/2020/core/master-ae/fac.xsd</u>
- ²⁴ Mapping from accounting equation to fundamental accounting concepts in our system, http://xbrlsite.azurewebsites.net/2020/core/master-ae/fac-mapping-definition.xml
 ²⁵ XBRL Formula to derive the value for LiabilitiesAndEquity,

http://xbrlsite.azurewebsites.net/2020/core/master-ae/fac-ImputeRule-LiabilitiesAndEquity-formula.xml

The point is that different economic entities have different models; but all models of a financial reporting scheme are reconcilable from/to one another in some manner²⁶.

1.6. State 2: Incomplete Coverage by Rules

The logical system #2 below is intended to show exactly the same information as our #1 properly functioning logical system, except that #2 leaves out the rule "Assets = Liabilities and Equity" which is showed as grayed out (i.e. because it is assumed to be missing from the logical system.

Coverage is a measure of how well you do or can represent a domain of information within a logical system. "Do" is about using the tools you have correctly and effectively. "Can" is about the capabilities of the tools you are using to represent the rule.

For example, if your logical system neglects to include the rule "Assets = Liabilities + Equity" or if your tools don't provide the capabilities to allow you to represent that rule; then there is the possibility that the facts being represented to be represented incorrectly and the system will not detect the inconsistency. As such, that logical system has **incomplete coverage**.



While this specific state #2 does have the Assets, Liabilities, and Equity facts consistent with the absent rule; the system is still incomplete because the coverage can be improved by adding the missing rule. If that missing rule is added, then the logical system can be considered complete again.

1.7. State 3: Inconsistent and Imprecise

All the statements in the system must be consistent for the logical system to be considered properly functioning. If statements are inconsistent, the logical system is not is not properly functioning. In this system #3, the values for Assets, Liabilities, and Equity are inconsistent with the rule "Assets = Liabilities + Equity". From looking at the information provided, it is impossible to know exactly which of the three facts are incorrect; it is only possible to understand that the statements made within the logical system is inconsistent. It could be the case that the rule is incorrect.

²⁶ Charles Hoffman, CPA, *Special Theory of Machine-based Automated Communication of Semantic Information of Financial Statements*, <u>http://xbrl.squarespace.com/journal/2019/12/30/special-theory-of-machine-based-automated-communication-of-s.html</u>



However, given that we know from state #1 that the value for Assets is 5,000 and not 8,000; the facts in this system is imprecise because the fact for Assets does not reflect reality.

1.8. State 4: Unreported Facts

In state #4, the situation is that the economic entity representing information in their report neglected to include the fact for Liabilities. Whether it is the case that a fact can, or cannot, be left unreported is a decision that can be made by the stakeholders of the system.

If it is the case that it is decided that the fact "Liabilities" can be omitted if both Assets and Equity are reported; then you must provide a rule to derive the value of Liabilities when that fact is not reported. Below you see that the system has been adjusted in state #4' to add the rule "IF Assets exists and if Equity exists; THEN Liabilities = Assets - Equity"²⁷.



If it were likewise true that either Assets²⁸ or Equity²⁹ could also be left unreported, similarly derivation rules could be created for each of those facts. Note that XBRL Formula chaining³⁰ can be used to physically derive unreported facts if any one of these three facts remain unreported. Note that it is impossible to derive missing information if any two of the facts remain unreported. Adding the derivation rule makes the system complete.

²⁷ Here is the impute or derivation rule that would be added to the accounting equation logical system for this situation, <u>http://xbrlsite.azurewebsites.net/2020/core/master-ae/ImputeRule-Key-1-Code-BS-Impute-01-formula.xml</u>

²⁸ XBRL Formula rule for deriving Assets, <u>http://xbrlsite.azurewebsites.net/2020/core/master-ae/ImputeRule-Key-3-Code-BS-Impute-03-formula.xml</u>

²⁹ XBRL Formula rule for deriving Equity, <u>http://xbrlsite.azurewebsites.net/2020/core/master-ae/ImputeRule-Key-2-Code-BS-Impute-02-formula.xml</u>

³⁰ Deriving Facts Using XBRL Formula Chaining (Example), <u>http://xbrl.squarespace.com/journal/2019/4/24/deriving-information-using-xbrl-formula-chaining-example.html</u>

Allowing certain line items of a report to go unreported specifies the need to create rules to derive missing information. Or saying this another way, omitting the possibility of unreported facts negates the need for creating derivation rules.

A second downside of allowing unreported facts is that you lose the parity check or cross check if facts can go unreported. Said another way, it would be considered best practice to not leave important high-level financial report line items to go unreported.

1.9. State 5: Incomplete

Similar to state #4, in state #5 the logical system is incomplete because both (a) the fact Liabilities is unreported and also (b) the consistency rule "Assets = Liabilities + Equity" is missing from the logical system. Because both a fact and the rule are missing from the logical system, it would be impossible to deduce the value of Liabilities in this case. There is not enough information in the logical system to allow Liabilities to be derived. At a minimum, a consistency crosscheck rule³¹ plus the derivation rule to impute Liabilities³² would be necessary.



Again, consistent with state #4; Assets and Equity would require similar rules and there is no parity check of reported information.

1.10. State 6: Imprecise

A logical system is a true and fair representation of some agreed upon realism. **Precision** is a measure of how precisely you do or can represent the information of a domain within a logical theory. The reality that we formalized in state #1 indicates that "Assets = Liabilities + Equity". Yet, in the state #6 example, the rule "Assets = Liabilities" was provided. Further, the values of Assets and Liabilities are, in fact, consistent with the rule that has been provided.

Remember that in state #1 we formalized our truth to be that "Assets = Liabilities + Equity". As such, this logical system can be described as being imprecise. To make this logical system precise, all that needs to be done is to fix the rule.

³¹ XBRL Formula consistency crosscheck rule Assets = Liabilities + Equity,

http://xbrlsite.azurewebsites.net/2020/core/master-ae/Consistency-5-Code-BS01-formula.xml ³² XBRL Formula derivation rule to impute Liabilities, <u>http://xbrlsite.azurewebsites.net/2020/core/master-ae/ImputeRule-Key-1-Code-BS-Impute-01-formula.xml</u>



1.11. State 7: Extension Concept

In state #7 on the left, what we are trying to convey is that the economic entity reported the fact for Liabilities using the extension concept "Payables" that it had created. If a fact is represented using an extension concept created by a reporting entity; then a "general-special" or "wider-narrower" or "class-equivalentClass" association must be created to indicate to software applications of the relationship so that information can be used correctly. State #7' on the right, the rule "Payables is a specialization of the more general term Liabilities" has been added to the logical system which allows the system to operate effectively³³.



1.12. State 8: Base Taxonomy Wider/Narrower Concept Use

State #8 on the left below is similar to state #7 in that a different concept is used to report a fact; but while state #7 focuses on using an extension concept; state #8 points out that using a wider or narrower base taxonomy concept gives exactly the same result.

Now, our base state #1 does not have the concept "Payables"; but let's assume for a moment that it does have the concept "Payables". Also suppose that there was no information in the base logical system indicating the relationship between "Payables" and any other concept. If a fact is represented using a BASE TAXONOMY CONCEPT by a reporting entity; then a "general-special" or "wider-narrower" or "class-equivalentClass" association must exist in that base taxonomy to indicate that some concept is a permissible alternative for some other concept.

³³ XBRL Definition relations showing example of a mapping rule, <u>http://xbrlsite.azurewebsites.net/2020/core/master-ae/fac-mapping-definition.xml</u>

State #8' on the right adds the rule "Payables is a specialization of the more general term Liabilities"³⁴.



1.13. State 9: Defining a Completely New Structure

State #9 below on the left focuses on the structure as contrast all the prior examples which focused on the terms and rules. If a new structure is created, the new structure must be referenced to the base taxonomy and the new structure needs to be explained using machine-readable rules³⁵. Even base taxonomy structures need to be defined in order to be referred to³⁶. When you say "Balance Sheet" you know what that means. But a machine does not know.

A base taxonomy should (a) provide all necessary structures separately, not intermingle different models in the same set of associations and (b) define what each structure must look like. Remember, computers are like babies and need to be led by the hand in order to understand the details you need them to understand.



Finally, in our case we have only one disclosure, the Balance Sheet. In our case, the Balance Sheet is always required to be reported per this logical system. As such, that rule is stated in a machine-readable reporting checklist³⁷. Other logical systems with more disclosures will have more rules relating to when a disclosure is required to be provided in a report.

1.14. State 10: Organizing Disclosures Using Topics

State #10 points out that while the accounting equation logical system has one structure, the balance sheet, ultimately if a complete financial reporting scheme

http://xbrlsite.azurewebsites.net/2020/core/master-ae/fac-mapping-definition.xml ³⁵ XBRL Definition relations used to represent structure rules,

http://xbrlsite.azurewebsites.net/2020/core/master-ae/dm-1355-rules-def.xml

³⁴ XBRL Definition relations showing example of a mapping rule,

³⁶ XBRL taxonomy schema used to define "Balance Sheet",

http://xbrlsite.azurewebsites.net/2020/core/master-ae/disclosures.xsd

³⁷ XBRL Definition relations used to represent a reporting checklist or disclosure rules, <u>http://xbrlsite.azurewebsites.net/2020/core/master-ae/reporting-checklist-rules-def.xml</u>

were represented one might have hundreds or even thousands of disclosures. Disclosures can be organized into topics³⁸. Then, rather than having one flat list of disclosures, they can be organized into a handy hierarchy³⁹.



1.15. More Complex Examples

While the accounting equation logical system is small, it can be used to demonstrate incredibly sophisticated functionality. To see more sophisticated examples, see my *Modern Approach to Creating Financial Reporting Scheme* examples⁴⁰ and the document *Proving Financial Reports are Properly Functioning Logical Systems*⁴¹ which starts with the accounting equation logical system, then models the slightly larger SFAC 6 elements of a financial statement logical system, the common elements of a financial report logical system, a MINI financial reporting scheme logical system, and then contrasts that to the Microsoft 10-K financial report logical system.

What all this shows is how rules are used to specify permissible manipulations of a logical system.

1.16. XBRL Structure Validation

Finally, when representing information within XBRL presentation relations, use these rules to make sure you don't make any mistakes in your representation⁴².

					Parent			
		Network	Table	Axis	Member	Line Items	Abstract	Concept
	Network	Illegal XBRL						
	Table	OK	Disallowed	Disallowed	Disallowed	Disallowed	ОК	Disallowed
_	Axis	Disallowed	ОК	Disallowed	Disallowed	Disallowed	Disallowed	Disallowed
Child	Member	Disallowed	Disallowed	ОК	ОК	Disallowed	Disallowed	Disallowed
0	Line Items	Disallowed	ОК	Disallowed	Disallowed	Disallowed	Disallowed	Disallowed
	Abstract	Abstract OK		Disallowed	Disallowed	ок	ОК	Disallowed
	Concept	Disallowed	Disallowed	Disallowed	Disallowed	OK	ОК	Disallowed

http://xbrlsite.azurewebsites.net/2019/Library/ProvingFinancialReportAreProperlyFuncioning.pdf

³⁸ XBRL taxonomy schema used to represent topics, <u>http://xbrlsite.azurewebsites.net/2020/core/master-ae/topics.xsd</u>

³⁹ XBRL definition relations used to create a hierarchy of disclosures,

http://xbrlsite.azurewebsites.net/2020/core/master-ae/disclosures-with-topics-def.xml ⁴⁰ Modern Approach to Creating a Financial Reporting Scheme,

http://xbrl.squarespace.com/journal/2019/12/19/modern-approach-to-creating-a-financial-reportingscheme.html

⁴¹ Proving Financial Reports are Properly Functioning Logical Systems,

⁴² XBRL definition relations to represent structure rules for report element relations,

http://xbrlsite.azurewebsites.net/2020/prototype/sbrm/sbrm-structure-rules-strict-def.xml

2. Validating Report Information

This section walks you through the process of validating XBRL-based digital financial reports leveraging machine-readable rules using automated machine-based processes. We start with validating the model structure. Then we tackle the fundamental accounting concept relations. Then the disclosure mechanics. Finally, the reporting checklist.

2.1. Validating Model Structure

This section walks you through validation of the model structure using the Pesseract digital financial reporting tool in the Viewer/Validation mode. This demonstration uses an XBRL-based public company financial filing which was submitted to the U.S. SEC. Local files and IFRS filings can be validated in the same manner.

2.1.1.STEP 1: Load the XBRL-based public company financial filing

The following process can be used to load any 10-Q or 10-K XBRL-based financial report submitted by a public company to the SEC⁴³.

Open the Pesseract application, select "Open", and then "Open XBRL instance from URL".



In the dialog box that appears, enter the URL of the XBRL-based public company financial filing which was submitted to the SEC. For this demonstration, we will be using this XBRL-based financial filing which was made to the U.S. SEC:

http://www.sec.gov/Archives/edgar/data/1337068/000117494716002678/mgyr-20160331.xml

0	pen XBRL instance from URL		23
	http://www.sec.gov/Archives/edgar/data/1337068/000117494716002678/mgyr-20160331.xm	ıl	-
	OK Cancel		

⁴³ XBRL Cloud provides the Edgar Dashboard which is an easy way to search for a financial filing for any public company for any period, <u>https://edgardashboard.xbrlcloud.com/edgar-dashboard/</u>

Press the OK button, then the XBRL-based document will be loaded into the application.

NOTE: You can open a local version of an XBRL-based financial filing using the "Open XBRL instance file" option.

2.1.2.STEP 2: Run report model structure validation

Notice that the document has been loaded into the application. Notice the following things about the user interface:

- 1. The "**Report Profile**" has been detected to be an "XBRL-based public company financial reports in US GAAP to the SEC".
- 2. The "Report Validation Status" icons are all GRAY which indicates that no validation has been performed at this point.



Now, press the "Model Structure" icon from the Report Validation Status group, then select the "Run Validation" option.



Notice that the "Model Structure Validation Results" form is shown which shows an analysis of the relations between the categories of report elements that make up the structure of the report as shown below:

Child				Parent			
	Network	Table	Axis	Member	LineItems	Abstract	Concept
Network	0	0	0	0	0	0	0
Table	0	0	0	0	0	0	0
Axis	0	29	0	0	0	0	0
Member	0	0	35	110	0	0	0
LineItems	0	56	0	0	0	0	0
Abstract	0	0	0	0	46	30	0
Concept	0	0	0	0	75	305	0

Further, the "Model Structure" Report Validation Status turns GREEN:



You can close the "Model Structure Validation Results" form.

2.2. Validating Fundamental Accounting Concept Relations

Next, we look at the process of validating the fundamental accounting concept relations. Recall that the fundamental accounting concept relations are the core relations of a financial report, forming the keystones of a report.

2.2.1.STEP 3: Run the fundamental accounting concept relations validation

Next, we will run the fundamental accounting concept validation (FAC). The first step in this process is to make sure the filing has the correct reporting style code assigned. For this specific filing, the reporting style code should have automatically been set to "INTBX-BSU-CF1-ISS-IEMIX-OILN". Press on the "Fundamental Accounting Concepts" icon to check this:



NOTE: This code should be set. However, if it is not set; go to the "Set Reporting Style" menu item and select that style from the list and set the reporting style code to "INTBX-BSU-CF1-ISS-IEMIX-OILN".

Then select the "Run validation" from the Fundamental Accounting Concepts icon to execute the validation. The following messages appear:

ID	Test	Result	Evaluation
FAC_CONSISTENCY_1	fac:Equity = (fac:EquityAttributableToParent + fac:EquityAttributableToNoncontrollingInterest)	×	fac:Equity[us-page:StochholdersEquity[includingPortionAttributableToNoncontrollingInterest] 47,203,000]] = (fac:EquityAttributableToParent] 47,203,000] + fac:EquityAttributableToParent] 47,203,000] + fac:EquityAttributableToParent[47,203,000] + fac:Equity
FAC_CONSISTENCY_10	fac:NetCashFlowFromEnvestingActivites= (fac:NetCashFlowFromEnvestingActivitesContinuing + fac:NetCashFlowFromEnvestingActivitesDiscontinued)	×	fache/Cad/PowFrenitwestrgActivites[(12,554,000)] = (fachetCad/PowFrenitwestrgActivitesContinung(ac-gasphetCad/PowHeat/ndmestrgActivitesContinungOperations[(12,554,000)]] + fachetCad/PowFrenitwestrgActivitesDoorninues(0])
FAC_CONSISTENCY_11	fac:NetCashFlowFromFinancingActivities = (fac:NetCashFlowFromFinancingActivitiesContinuing + fac:NetCashFlowFromFinancingActivitiesDiscontinued)	2	fachelCa#PfoxfromFinandpsktivites[11,150,000] = (fachelCa#PfowFromFinandrpsktivitesContinung[us-gasptietCa#PfovidedB/UsedInFinandrpsktivitesContinungOperators[11,150,000]] + fachelCa#PfowFromFinandpsktivitesDisontinues[0])
FAC_CONSISTENCY_16	fac:IncomeLossFromContinuingOperationsAfterTax = (fac:IncomeLossFromContinuingOperationsBeforeTax - fac:IncomeTaxExpenseBenefit)	×	fschromeLosafronContinuingOperational/terTax[497,000] = (fschromeLosafronContinuingOperationationTerTax[auguatizences.comFronContinuingOperationationTerretAndIncomeLosaFronEguityMethodInvestments[782,000]] - fschromeTaxExpendent[Usi spacificational EduceratedEnter[155,000]])
FAC_CONSISTENCY_17	fac:NetIncomeLoss = (fac:IncomeLossFromContinuingOperationsAfterTax + fac:IncomeLossFromDiscontinuedOperationsVetD/Tax + fac:EntraordnaryTemoOfficomeExpenseVetOfTax)	×	factlethnomet.exs[us-gaap:Profit.exs[487,000]] = {factincomet.exsPronContinuingOperationsAfterTail[487,000] + factincomet.exsPronDisonInvedOperationsHetOTfail[0] + facEnt.acrdnery(temsOffncomeExpenseHetOTfail[0])
FAC_CONSISTENCY_18	factNetIncomeLoss = (factNetIncomeLossAttributableToParent + factNetIncomeLossAttributableToNoncontrollingInterest)	2	fac:Net/Incomet.oss/jas-gaap/Profit.oss[-487,000]] = (fac:Net/Incomet.ossAttrbuibleToWarent[-487,000] + fac:Net/Incomet.ossAttrbuibleToWarent[-487,000])
FAC_CONSISTENCY_19	fac:NetIncomeLossAvailableToCommonStockholdersBasic = { fac:NetIncomeLossAttrbutableToParent - fac:NetEnceStockViolendsAndUtherAdjustments }	×	factletincome.cosAvalableTisCommonStochholdensbasic[us-gaap:tetincomet.cosAvalableTisCommonStochholdensbasic[407,000]] = {facthetincomet.cosAttableTisCommonStochholdensbasic[407,000]] = {facthetincomet.cosAttableTisCommonStoch
FAC_CONSISTENCY_2	fac:Assets = fac:LiabilitiesAndEquity	4	fac:Assets[us-gaap:Assets] 562,318,000]] = fac:LiabilitiesAndEquity[us-gaap:LiabilitiesAndEtockholdersEquity[562,318,000]]
FAC_CONSISTENCY_20	fac:ComprehensiveIncomeLoss = (fac:ComprehensiveIncomeLossAttributableToParent + fac:ComprehensiveIncomeLossAttributableToNoncontrollingInterest)	×	fac:ComprehensiveEncomeLossAttributableToPenent(us-gase:ComprehensiveEncomeLossAttributableToPenent(us-gase:ComprehensiveEncomeLossAttributableToPenent(us-gase:ComprehensiveEncomeLossAttributableToPenentComprehensiveEncomeLossAttributableTo
FAC_CONSISTENCY_21	fac:ComprehensiveIncomeLoss = (fac:HietIncomeLoss + fac:OtherComprehensiveIncomeLoss)	×.	fac:ComprehensiveIncomeLoss[470,000] = (fac:NetTricomeLoss[us-gaapsProfit.oss[487,000]] + fac:OtherComprehensiveIncomeLoss[us-gaap:OtherComprehensiveIncomeLoss[us-gaaps-OtherComprehens
FAC_CONSISTENCY_27	fac:InterestIncomeExpenseOperatingNet = (fac:InterestAndDividendIncomeOperating fac:InterestExpenseOperating)	2	[sc.imerestb:comeSperatoples[u=gaap.imerestb:comeSperatoples[i=1,750,00]] - (fsc.imerestAvaDividendincomeOperatorg(u=gaap.imterestAvaDividendincomeOperatorg[s-gaap.imterest
FAC_CONSISTENCY_28	fac:InterestIncomeExpenseAfterProvisionForLosses = (fac:InterestIncomeExpenseOperatingNet - fac:ProvisionForLoanLeaseAndOtherLosses)		faciliterestincendpreneablerProvisionFaciones/jurgeschinestincendpreneablerProvisionFacionarium (2,743,000)] = { faciliterestincendpreneablerProvisionFaciones/jurgeschinestincendpreneabler(8,212,000)] faciliterestincendpreneabler(8,212,000)]
FAC_CONSISTENCY_48	fac:IncomeLossFromContinuingOperationsBeforeTax = { fac:InterestIncomeExpenseAfterProvisionForLosses + fac:InterestIncome - fac:InoniterestExpense)	×	fac:hnomei.com/romContruingOperational/fore Tanjun gaup:hnomei.com/romContruingOperational/fore/romCont
FAC_CONSISTENCY_5	factLiabilitiesAndEquity = (factLiabilities + factCommitmentsAndContingencies + factTemporaryEquity + factEquity)		for:LinblessAndDauh/Los papoLiablesAndDauh/ederdiatry (532,138,000)] = (for:LinbleBerg(arganz)LinbleBerg(515,115,000)] + for:CennetmentsAndContingencies(0) +
FAC_CONSISTENCY_50	factNetCashFlow = (factNetCashFlowContinuing + factNetCashFlowDiscontinued + factExchangeGainsLosses)	×	fachtetCathFlow[us-gaap:CathAndCathEguvalentBFriddhoresetExcesse[2,830,000]] – (fachtetCathFlowContinuing[2,820,000] + fachtetCathFlowDiscontinue(0] + factExchangeGansLosses[0])
FAC_CONSISTENCY_6	fac:NetCashFlow = (fac:NetCashFlowFromOperatingActivities + fac:NetCashFlowFromEnvestingActivities + fac:NetCashFlowFromFinancingActivities + fac:ExchangeGanituses)	×	fachetCal/HowEve gaapCalifyIndiantEsunientEnvirolIncreamExcrease[2,820,000]] = { fachetCal/HowEvenEngleCtivities[4,224,000] + fachetCal/HowFromEvenEngleCtivities[11,150,000] + facExcPangGaratouses[0]]
FAC_CONSISTENCY_7	fac:NetCashPlowContinuing = (fac:NetCashPlowPromOperatingActivitiesContinuing + fac:NetCashPlowFromTinvestingActivitiesContinuing) fac:NetCashPlowFromFinancingActivitiesContinuing)	×	fachetCadProxContrung[2,820,000] = (fachetCadPfon/FonCpenstropkchritesContrung);a gapotetCadProx/feedSubetCoperatorplctvitesContrungOpperatorn[4,224,000]] + fachetCadPfon/FonTimeterspacktimet.comtrung[a,gapatetCadProvideBlyGetContrungOperatorn[1,2554,000]] + fachetCadPfon/FonTimetrangscheitesContrung];a gapatetCadProvideBlyGetContrungOperatorn[1,150,000]])
FAC_CONSISTENCY_8	fac:NetCashFlowDiscontinued = (fac:NetCashFlowFromOperatingActivitiesDiscontinued + fac:NetCashFlowFromDinvestingActivitiesDiscontinued + fac:NetCashFlowFromFinancingActivitiesDiscontinued)	v	fachetCathFoxDscontinued[0] = (fachetCathFoxFoxDpeatingActivitedDscontinued[0] + fachetCathFoxFoxTineStropActivitedDscontinued[0] + fachetCathFoxFoxTineStropActivitedDscontinued[0])
FAC_CONSISTENCY_9	fac:NetCashFlowFromOperatingActivities = (fac:NetCashFlowFromOperatingActivitiesContinuing + fac:NetCashFlowFromOperatingActivitiesOiscontinued)	v	fachetCa#PexFenCperatingActivites[4,224,000] = (fachetCa#PexFenCperatingActivitesContinuing[is-gaap:tetCa#Pex/ede5/UsedInOperatingActivitesContinuingOperations[4,224,000]] + fachetCa#PexPenCperatingActivites(Discontinued[0])

The messages indicate that all the fundamental accounting concept relations are valid which are indicated by the GREEN results but one is inconsistent with expectation. The inconsistent result is indicated by the ORANGE cell in the Result field.

Further, notice that the "Fundamental Accounting Concept" icon turned ORANGE to indicate that an inconsistency has been detected.



Notice that two THREE additional tabs were added to the application. One is the FAC Validation Result which you were looking at above, another is the FAC Taxonomy which explains all of the FAC validation rules, and the third is the FAC instance which provides the validation result.

		man har	Mar Adaman	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Prop	<u></u>	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	or munication
3	Instance (mgyr-201	60331.xml)	Taxonomy (mgyr-20160331.xsd)	FAC Instance (mgyr-20160331	.xml)	FAC Ta	axonomy	FAC Validation Result 🗙
4	ID	Test			Result	Eva	aluation	
		far tv-(f	ac Fruity Athibutahla To Pricent	the second		مر الم	vity[us.gr	

Select the "FAC Instance" tab. Notice the line Network/Table on the left that is ORANGE, indicating the location of the inconsistency:

Home Business Rules Op	tions and Preferences Tools View	Debugging	Analysis	Windows	Help			
V Open Print Save File rs		Accountin	lamental g Concepts *	To Do List *	Report Properties * Properties	compa reports i t	based public iny financial in US GAAP to he SEC port Profile	Viewer Application Mode
Instance (mgyr-20160331.xml) Ta	xonomy (mgyr-20160331.xsd) FAC	Instance (mgyr-	-20160331.xml)	× FAC	Taxonomy	FAC Validati	on Result	
Components		Dynamic Rer	ndering Mod	del Structure	Fact Ta	ble	Business Rules Stru	cture Business F
Filter Type	▼ Filter Status ▼	Component	(Network an	d Table)				
		Network	001	- Document	General Info	rmation		
Enter text to filter		Table	Gen	eral Informa	tion [Table]			
		Reporting Er	ntity [Axis]			00013	337068 http://www.sec	c.gov/CIK
Network	Table							
001-General Information	General Information [Table]					Period	[Axis] 🔻	
102-Balance Sheet, Unclassified	Balance Sheet, Unclassified [Table]	General Info	rmation [Line I	tems]		201	15-10-01/2016-03-31	
205.1-Income Statement, Interest Based Revenues	Income Statement, Interest Based Revenues [Table]		formation [Hie	erarchy]				
211-Net Income (Loss) Breakdown	Net Income (Loss) Breakdown [Table]	Entity Regist					ar Bancorp, Inc.	_
212-Net Income (Loss) Available to Common Breakdown	Net Income (Loss) Available to Common Breakdown (Table)	Entity Centra Entity Filer C	· · · ·				37068 er Reporting Company	_
301-Statement of Comprehensive Income	Statement of Comprehensive Income (Loss) [Table]	Trading Sym	bol			0	a reporting company	
311-Comprehensive Income (Loss)	Comprehensive Income (Loss)	Fiscal Year E	nd			09-3	0	
Breakdown	Breakdown [Table]	Fiscal Year F	ocus			2016		
401-Cash Flow Statement	Cash Flow Statement [Table]	Fiscal Period	Focus			Q2		
411.1-Net Cash Flow Breakdown	Net Cash Flow Breakdown [Table]	Document Ty	ype			10-Q		
420.1-Continuing and Discontinued Net Cash Flow Breakdown	Cash Flow Statement [Table]	Balance Shee	et Date			2016-	03-31	
Network Table	001-General Information							
Type	General Information [Table] Document							
Level	UNKNOWN							
Status (of Component)	InProgress							
- Disclosure	an rogicað							

Click on the ORANGE Network/Table and that report fragment appears in the panel on the right (see the screen shot below). You can see that the fact for the line item "Interest Income (Expense) After Provision for Loan Losses" has an ORANGE highlighting, indicating that there is some sort of inconsistency. If you get out your calculator and compute the value, you notice that the report says the value is 7,743,000 but you will likely compute the value 7,744,000. There is a \$1,000 difference between what was reported and the what the computation shows.

If you click on the reported fact for the line item "Provision for Loan, Lease, and Other Losses", a form will appear. Click on the "Provenance" tab and you will see that two facts were discovered in the XBRL-based financial report.

The fundamental accounting concept relations validation shows that the XBRL-based financial report contains conflicting information. Further investigation of reporting concepts will confirm this inconsistency.

		Taxonomy (mgyr-20160331.xsd) FA			.xml) × FAC Taxo		/alidation Result	2
omponent	S			nic Rendering	Model Structure	Fact Table	Business Rules Struct	ure Business Rules
ilter Type	 Filter Level 	Filter Status		onent: (Netwo				
			Networ	ĸ			nt, Interest Based Revenue	25
Enter tex	kt to filter	*	Table		Income Statement, I	Interest based Rev	/enues [i able]	
			Repor	ting Entity [Axis]			0001337068 http://www.sec.	jov/CIK
	Network	Table					Period [Axis]	1
01-Genera	al Information	General Information [Table]						2
	e Sheet, Unclassified	Balance Sheet, Unclassified [Table]		e Statement [Li			2015-10-01/2016-03-31	
05.1-Inco ased Reve	me Statement, Interest enues	Income Statement, Interest Based Revenues [Table]		ncome (Loss) [
11-Net In	come (Loss) Breakdown	Net Income (Loss) Breakdown [Table]	[Roll		Continuing Operat	ions Arter Tax		•
12-Net In ommon Br	come (Loss) Available to eakdown	Net Income (Loss) Available to Common Breakdown [Table]		ne (Loss) from	Continuing Operat	ions Before Tax		1
01-Statem ncome	ent of Comprehensive	Statement of Comprehensive Income (Loss) [Table]	[Roll	Up]	pense), After Provi			
	ehensive Income (Loss)	Comprehensive Income (Loss)	Intere	est Income (Ex	pense), Net [Roll U	p]		Computation
reakdown		Breakdown [Table]	Intere	st and Dividend	Income, Operating		9,970,000	does not foo
	low Statement	Cash Flow Statement [Table]	Intere	st Expense, Ope	rating		1,758,000	
	Cash Flow Breakdown	Net Cash Flow Breakdown [Table]		Inte	rest Income (Expense), Operating, Net	8,212,000	
	inuing and Discontinued Ne Breakdown	t Cash Flow Statement [Table]	Provisi	on for Loan, Lea	se, and Other Losses		468,000	7 5
				Int	erest Income (Expens		7,743,000	
			Newint	erest Income		for Losses		· · · · · · · · · · · · · · · · · · ·
Networ	k	205. 1-Income Statement, Interest B		erest Expense			1,063,000	
Table		Income Statement, Interest Based R	Nonint	erest Expense	e (Loss) from Conti		8,024,000	
Тур _{Fa}	ct Characteristics and Prop	erties			e (Loss) from Conti	Before Tax	782,000	
Lev		Provenance			nefit)		295,000	
Juai	Properties Occurrences fac:ProvisionForLoanLease	AndOtherLosses[us-gaap:ProvisionForLoan	LeaseAndO	therLosses[_	e (Loss) from Conti	nuing Operations After Tax	487,000	
	468,000]]				ontinued Operations		0	
			No. of Concession, Name		N	et Income (Loss)	487.000	
				-			107,000	
F	act origin:							
	1 us-gaap:Provisi	ionForLoanLeaseAndOtherLosses		468,000)
	2 us-gaap:Provisi	ionForLoanAndLeaseLosses		469,000				
	3 us-gaap:Provisi	ionForLoanLossesExpensed	-			Proven	ance tab	
							e origin of	
(Conflicting / con					the fact	returned	
	values							2
								
-								

2.2.2.STEP 4: Determine if the inconsistency is an error

where We to find the concept "uswant out gaap:ProvisionForLoanLeaseAndOtherLosses" is being used. To do this, first, select "Instance" tab to work with that document. Next, select the "Tools" tab from the toolbar ribbon. Enter or copy/paste "ProvisionForLoanLeaseAndOtherLosses" into the "Search" tool. Press the "Search" button and the "Search Result" form appears on the right side of the screen. Click on the line item "Provision for loan losses" and you can see that this is the concept which is being picked up by the validation, that value is \$468,000. If you not click on the "Statement of Operations" Network/Table, you can see that a different concept was used which has a value of \$469,000 on the income statement representation.

🚔 🗐 🤊 🕭 • 😓 •			Instance (mgyr-20160331	.xml) - Pesseract			
Business Rules	Options and Preferences To	ools View Debugging	Analysis Windows Help				
ProvisionForLoanLe Sear		ev Referenced Report Properties Taxonomies (XBRL Syntax)	Additional Disclosure 1 Metadata * Templates *	axonomy			
Search	Explore Semantics	Technical	Information				
	X Taxonomy (mgyr-20160331.xsd) FAC Instance (mgyr-20160	I331.xml) FAC Taxonomy	FAC Validation Result			
Components		Rendering Mo	del Structure Fact Table	Business Rules Structure	e Business Rules	Ed 🔶 🕨	Search Result
Filter Type	el 🔹 Filter Status 🔹	Component: (Network an Network		ements of Cash Flows			Report Elements
Enter text to filte	*	Table Imp	lied [Table]				1 Provision for loan losses
Enter text to hite	Ť	Reporting Entity [Axis]		0001337068 http://www.sec.gov	V/CIK		
Network	Table			Period [Axis] 🕆 👻			
001 - Document - Document	Statement [Table]	Implied [Line Items]		2015-10-01/2016-03-31	2014-10-01/201	5 02 21	
002 - Statement - C Select	the "Instance" tab		s of Cash Flows [Abstract]	2015-10-01/2016-03-31	2014-10-01/201	5-03-31	
Balance Sheets to Sear	ch that document.	Operating activities	sol cash nows [Abstract]			—— ā	
Balance Sheets (Parenthetical)		Net income		487,000		329,000	
004 - Statement - Consolidated	Implied [Table]	Adjustment to reconcile	net income to net cash	407,000		329,000	
Statements of Operations 005 - Statement - Consolidated	Implied [Table]	provided by operating a	tivities				
Statements of Comprehensive	Implied [robie]	Depreciation expense		379,000		446,000	
Income	Obstances (Proble)	Premium amortization on in	vestment securities, net	96,000		146,000	
006 - Statement - Consolidated Statements of Changes in	Statement [Table]	Provision for loan losses	asl artate owned	468,000		590,000	: Search results. Double
Stockholders' Equity		Proceeds from the sales of		270,000		25,000	click to navigate to fact
007 - Statement - Consolidated Statements of Cash Flows	Implied [Table]		Udits	3,040,000		,441,000	with this concept in
101 - Disclosure - BASIS OF	Implied [Table]	Report Element Properties			23	(42,000)	report.
PRESENTATION		Properties Labels R	eferences Occurrences			(42,000)	
102 - Disclosure - RECENT ACCOUNTING	Implied [Table]	Report Standard La				53,000	
PRONOUNCEMENTS		Base Standard Lab	Provision for Loan, Lease,	and Other Losses		9,000	
103 - Disclosure - CONTINGENCIES	Implied [Table]	Documentation	Amount of expense relate	d loan transactions, lease transact	tions, credit loss	195,000	
104 - Disclosure - EARNINGS PER	Implied [Table]	• III	from transactions other th	an loan and lease transactions, an	id other loss	(26,000)	
> Network	007 - Statement - Consolidated		based on assessment of u account to their net realize	ncollectability from the counterpart able value.	ty to reduce the	153,000)	
> Table	Implied [Table]	·				(80,000)	
Туре	Statement	Class	the state of			(36,000)	
Level	UNKNOWN	Class	[Concept] Monetary us-gaap			(757,000)	
Status (of Component)	InProgress	Balance Type	Debit			,771,000	
 Disclosure 		Period Type	For Period (duration)				
		Data Type	Monetary (xbrli:monetary)			100.000	
Message List Console		Name ID	us-gaap:ProvisionForLoan				
	ages as there are errors/warnings.	10	us-gaap_ProvisionForLoan	LeaseAndOtherLosses			

This confirms that there is, in fact, a conflict/contradiction in the facts which have been reported.

Fact Charact	eristics and Prope	rties		23
Properties	Occurrences	Provenance		
fac:Provisio 468,000]]	onForLoanLeaseA	ndOtherLosses	[us-gaap:ProvisionForLoanLeaseAn	dOtherLosses[🔺
Fact origin:				
1	us-gaap:Provisio	nForLoanLease	AndOtherLosses	468,000
2	us-gaap:Provisio	nForLoanAndLe	easeLosses	469,000
3	us-gaap:Provisio	nForLoanLosse	sExpensed	-

Further, the roll forward of the provision for loan losses does not correctly foot and it uses the same concept which was reported on the income statement. You can find that disclosure by searching on the value "468000". Clear the search text box by clicking the red "X", the search results show up on the right of the application. The third fact is in the disclosure you are looking for:



NOTE: You have to reconfigure the disclosure by dragging the "Class of Financing Receivable Type [Axis]" to the columns.

Because this information is contradictory, this inconsistency is confirmed to be an ERROR in the XBRL-based financial filing of this public company.

2.2.3. STEP 5: Confirming the inconsistency by comparing information across periods

To further determine if an inconsistency is an error, one can compare the information reported within one XBRL-based financial report with other reports for the same economic entity and therefore see if the inconsistency is unique to one specific period or whether the same inconsistency **exists for other periods**. To do this you use the comparison functionality of the application.

Select "Open" from the Home menu toolbar and then "Compare XBRL instances" from the menu:



In the comparison dialog you can enter as many XBRL instances as you might want to compare. Add the following XBRL instances using that comparison dialog:

- http://www.sec.gov/Archives/edgar/data/1337068/000117494716002678/mgyr-20160331.xml
- http://www.sec.gov/Archives/edgar/data/1337068/000117494716002074/mgyr-20151231.xml
- http://www.sec.gov/Archives/edgar/data/1337068/000117494715001835/mgyr-20150930.xml
- http://www.sec.gov/Archives/edgar/data/1337068/000117494715001349/mgyr-20150630.xml
- http://www.sec.gov/Archives/edgar/data/1337068/000117494715000845/mgyr-20150331.xml

After copying and pasting these XBRL instances the comparison dialog will look like the following screen shot below.

	۵
	Browse Insert
V	Filename
V	http://www.sec.gov/Archives/edgar/data/1337068/000117494715000845/mgyr-20150331.xml
S	http://www.sec.gov/Archives/edgar/data/1337068/000117494715001349/mgyr-20150630.xml
V	http://www.sec.gov/Archives/edgar/data/1337068/000117494715001835/mgyr-20150930.xml
1	http://www.sec.gov/Archives/edgar/data/1337068/000117494716002074/mgyr-20151231.xml
V	http://www.sec.gov/Archives/edgar/data/1337068/000117494716002678/mgyr-20160331.xml
	OK Cancel Clear

Press the OK button and the documents will load. Select the network "205.1-Income Statement, Interest Based Revenues" and you will see a five year comparison shown side-by-side which you can use to further investigate inconsistencies:

omponents		Rendering Model Structure Fact Table	Business Rules Structur	e Business Rules Elem	ents		
Filter Type 💌 Filter Level	 Filter Status 	Component: (Network and Table)	ment. Interest Based Revenues				
		Table Income Statement, Interest Based					
Enter text to filter	v						
	Table	Reporting Entity [Axis]	0001337068 http://www.sec.go	v/CIK	Ŷ		
Network 10.1-General Information			Period (Axis)				
	General Information [Table]	Income Statement [Line Items]	2015-10-01/2016-03-31	2015-10-01/2015-12-31	2014-10-01/2015-09-30	2014-10-01/2015-06-30	2014-10-01/2015-03-31
102-Balance Sheet, Unclassified	Balance Sheet, Unclassified [Table]		2015-10-01/2016-03-31	2015-10-01/2015-12-31	2014-10-01/2015-09-30	2014-10-01/2015-06-30	2014-10-01/2015-03-31
205. 1-Income Statement, Interest Based Revenues	Income Statement, Interest Based Revenues [Table]	Net Income (Loss) [Roll Up] Income (Loss) from Continuing Operations After Ta					
211-Net Income (Loss) Breakdown	Net Income (Loss) Breakdown [Table]	[Roll Up]	•				
212-Net Income (Loss) Available to Common Breakdown	Net Income (Loss) Available to Common Breakdown [Table]	Income (Loss) from Continuing Operations Before T [Roll Up]	ax				
301-Statement of Comprehensive Income	Statement of Comprehensive Income (Loss) [Table]	Interest Income (Expense), After Provision for Loss [Roll Up]	es .				
311-Comprehensive Income (Loss)	Comprehensive Income (Loss)	Interest Income (Expense), Net [Roll Up]					
Breakdown	Breakdown [Table]	Interest and Dividend Income, Operating	9,970,000	5,002,000	19,437,000	14,429,000	9,588,000
401-Cash Flow Statement	Cash Flow Statement [Table]	Interest Expense, Operating	1,758.000	892,000	3.196.000	2,357,000	1,579,000
411. 1-Net Cash Flow Breakdown	Net Cash Flow Breakdown [Table]	Interest Income (Expense), Operating, 1	Vet 8,212.000	4.110.000	16.241.000	12.072.000	8.009.000
420. 1-Continuing and Discontinued Net Cash Flow Breakdown	Cash Flow Statement [Table]	Provision for Loan, Lease, and Other Losses	468,000	178,000	1,264,000	936,000	590,000
		Interest Income (Expense) After Provis for Los		3,932,000	14,977,000	11,136,000	7,419,000
Network .		Noninterest Income	1,063,000	621,000	1,990,000	0	0
Table	205. 1-Income Statement, Interest B Income Statement, Interest Based R	Noninterest Expense	8,024,000	4,051,000	15,657,000	0	0
Type	Income Statement, Interest Based R Document	Income (Loss) from Continuing Operation		502,000	1.310.000	817.000	453,000
Level	UNKNOWN	Before T Income Tax Expense (Benefit)	ax				
Status (of Component)	InProgress	Income Tax Expense (benefit) Income (Loss) from Continuing Operation	295,000	193,000	413,000	243,000	124,000
Disclosure		After T		309,000	897,000	574,000	329,000
		Income (Loss) from Discontinued Operations, Net of Tax	0	0	0	0	0
		Net Income (Lo	ss) 487,000	309,000	897,000	574,000	329,000

If you click on the line item "Provision for Loan, Lease, and Other Losses" for the periods that show no inconsistencies, you can see that the value for the two concepts reported always have the same value.

Interest Income (Expense), Operating, Net 8,212,000 4,110,000 Loan, Lease, and Other Losses 468,000 178,000 Interest Income (Expense) After Provision for Losses 7,743,000 3,932,000 Fact Characteristics and Properties 53 Income Fact Characteristics and Properties 53 Income Income Income Fact Characteristics and Properties 53 Fact Properties Cocurrences Provenance Factorigin: Factorigin:
Interest Income (Expense) After Provision for Losses 7,743,000 3,932,000 ncome xpense Fact Characteristics and Properties 23 Income (Fact Characteristics and Properties 23 Income (FactProvisionForLoanLeaseAndOtherLosses[us-gaap:ProvisionForLoanLeaseAndOtherLosses[Income (FactProvisionForLoanLeaseAndOtherLosses[us-gaap:ProvisionForLoanLeaseAndOtherLosses[Factorigin:
for Losses 7,745,000 3,952,000 hcome spense Fact Characteristics and Properties \$3 Income Fact Characteristics and Properties \$3 Income Froperties \$23 Income Income Income Income FactProvisionForLoanLeaseAndOtherLosses[us-gaap:ProvisionForLoanLeaseAndOtherLosses[Income FactProvisionForLoanLeaseAndOtherLosses[us-gaap:ProvisionForLoanLeaseAndOtherLosses] Income Fact origin:
Fact Characteristics and Properties S3 Income (Properties Occurrences properties Occurrences Provenance income (fac:ProvisionForLoanLeaseAndOtherLosses[us-gaap:ProvisionForLoanLeaseAndOtherLosses[. Image: Comparison of the
xpense (Bene Income (fac:ProvisionForLoanLeaseAndOtherLosses[us-gaap:ProvisionForLoanLeaseAndOtherLosses[) from Discont Fact origin:
xpense (sene Income () from Discont 178,000]] Fact origin: 1
1 us-gaap:ProvisionForLoanLeaseAndOtherLosses 178,000
2 us-gaap:ProvisionForLoanAndLeaseLosses 178,000
3 us-gaap:ProvisionForLoanLossesExpensed -

2.2.4. STEP 6: Confirming the inconsistency by comparing information across entities

Similar to how you compared information across periods in STEP 5, you can also compare information across reporting entities. Again, to do this you use the comparison functionality of the application.

Select "Open" from the Home menu toolbar and then "Compare XBRL instances" from the menu:



In the comparison dialog you can enter as many XBRL instances as you might want to compare. Add the following XBRL instances using that comparison dialog:

- http://www.sec.gov/Archives/edgar/data/1337068/000117494716002678/mgyr-20160331.xml
- http://www.sec.gov/Archives/edgar/data/1576336/000110465916120688/ajsb-20160331.xml
- http://www.sec.gov/Archives/edgar/data/1390312/000110465916121296/bkj-20160331.xml
- http://www.sec.gov/Archives/edgar/data/1515069/000143774916031367/crol-20160331.xml
- http://www.sec.gov/Archives/edgar/data/354869/000035486916000073/fmer-20160331.xml

After copying and pasting these XBRL instances the comparison dialog will look like the following screen shot below.

	Browse
\checkmark	Filename
1	http://www.sec.gov/Archives/edgar/data/1337068/000117494716002678/mgyr-20160331.xml
1	http://www.sec.gov/Archives/edgar/data/1576336/000110465916120688/ajsb-20160331.xml
1	http://www.sec.gov/Archives/edgar/data/1390312/000110465916121296/bkj-20160331.xml
1	http://www.sec.gov/Archives/edgar/data/1515069/000143774916031367/crol-20160331.xml
V	http://www.sec.gov/Archives/edgar/data/354869/000035486916000073/fmer-20160331.xml

First, note that five different entities are loaded:

Network	001 - Document -General Inform	nation				
Table	General Information [Table]					
Drop Filter Fields	Here					
		Period [Axis] 🗢 Reporting	g Entity [Axis]			
			2016-01-0	1/2016-03-31		2015-10-01/2016-03-31
General Informat	tion [Line Items]	0000354869 http:// www.sec.gov/CIK	0001390312 http:// www.sec.gov/CIK	0001515069 http:// www.sec.gov/CIK	0001576336 http:// www.sec.gov/CIK	0001337068 http:// www.sec.gov/CIK
General Inform	nation [Hierarchy]					
Entity Registrant	Name	FIRSTMERIT CORP /OH/	Bancorp of New Jersey, Inc.	Carroll Bancorp, Inc.	AJS Bancorp, Inc.	Magyar Bancorp, Inc.
Entity Central Ind	dex Key	0000354869	0001390312	0001515069	0001576336	0001337068
Entity Filer Catego	ory	Large Accelerated Filer	Smaller Reporting Company	Smaller Reporting Company	Smaller Reporting Company	Smaller Reporting Company
Trading Symbol		0	0	crol	0	0
Fiscal Year End		12-31	12-31	12-31	12-31	09-30
Fiscal Year Focus		2016	2016	2016	2016	2016
Fiscal Period Focu	us	Q1	Q1	Q1	Q1	Q2
Document Type		10-Q	10-Q	10-Q	10-Q	10-Q
Balance Sheet Da	ate	2016-03-31	2016-03-31	2016-03-31	2016-03-31	2016-03-31

Second, notice that of the five economic entities, only one has an inconsistency:

Network Table	205.1 - Document - Income Stateme Income Statement, Interest Based Rev	ent, Interest Based Revenues				
		vendes [rable]				
Drop Filter Fields Here						
		Period [Axis] - Reporting E	ntity [Axis] 🔺			
			2016-01-01/2	2016-03-31		2015-10-01/2016-03-31
Income Statement [Li	ne Items]	0000354869 http:// www.sec.gov/CIK	0001390312 http:// www.sec.gov/CIK	0001515069 http:// www.sec.gov/CIK	0001576336 http:// www.sec.gov/CIK	0001337068 http:// www.sec.gov/CIK
Net Income (Loss)	[Roll Up]					
[Roll Up]	Continuing Operations After Tax					
[Roll Up]	Continuing Operations Before Tax					
[Roll Up]	xpense), After Provision for Losses					
-	xpense), Net [Roll Up]					
Interest and Dividend		200,688,000	8,062,000	1,469,995	1,296,000	9,970,000
Interest Expense, Ope	-	15,532,000	1,836,000	226,178	159,000	1,758,000
Inte	erest Income (Expense), Operating, Net	185,156,000	6,226,000	1,243,817	1,137,000	8,212,000
Provision for Loan, Lea	ase, and Other Losses	7,809,000	300,000	30,166	(60,000)	468,000
Int	erest Income (Expense) After Provision for Losses	177,347,000	5,926,000	1,213,651	1,197,000	7,743,000
Noninterest Income		67,394,000	84,000	80,040	177,000	1,063,000
Ioninterest Expense		166,963,000	3,991,000	1,194,263	1,140,000	8,024,000
Inc	ome (Loss) from Continuing Operations Before Tax	77,778,000	2,019,000	99,428	234,000	782,000
Income Tax Expense (23,642,000	727,000	29,584	62,000	295,000
Inc	ome (Loss) from Continuing Operations After Tax	54,136,000	1,292,000	69,844	172,000	487,000
Income (Loss) from Di	iscontinued Operations, Net of Tax	0	0	0	0	0
	Net Income (Loss)	54,136,000	1,292,000	69,844	172,000	487,000

By examining which concepts were used to report the line item by each economic entity you can determine what might be correct and what might be incorrect. In the five different screen shots below for each of the five economic entities; notice that only one economic entity, the one with the inconsistency, reports more than one of the three probable fact values or if they do report more than one then the fact values of the two different facts are the SAME value. This information itself is not an indication as to whether this is an error or not. It is just information. But when you dig deeper and see how the economic entities are using the second concept you can determine if the use of the two concepts is consistent with the rules of logic.

Fact Characteristics and Properties	23	Fact Characteristics and Properties
Properties Occurrences Provenance		Properties Occurrences Provenance
fac:ProvisionForLoanLeaseAndOtherLosses[us-gaap:ProvisionForLoanLeaseAn 7,809,000]]	ndOtherLosses[🔺	fac:ProvisionForLoanLeaseAndOtherLosses[us-gaap:ProvisionForLoanAndLeaseLosses[300,000]]
Fact origin:		Fact origin:
1 us-gaap:ProvisionForLoanLeaseAndOtherLosses	7,809,000	0 1 us-gaap:ProvisionForLoanLeaseAndOtherLosses -
2 us-gaap:ProvisionForLoanAndLeaseLosses	7,809,000	0 2 us-gaap:ProvisionForLoanAndLeaseLosses 300,000
3 us-gaap:ProvisionForLoanLossesExpensed	-	3 us-gaap:ProvisionForLoanLossesExpensed -
Fact Characteristics and Properties Froperties Occurrences Provenance Fac:ProvisionForLoanLeaseAndOtherLosses[us-gaap:ProvisionForLoanAndLease30, 166]] Sector Secto	seLosses[E33 Fact Characteristics and Properties 5 Properties Occurrences Provenance Fac:ProvisionForLoanLeaseAndOtherLosses[us-gaap:ProvisionForLoanAndLeaseLosses[60,000)]]
Fact origin:	T	Fact origin:
1 us-gaap:ProvisionForLoanLeaseAndOtherLosses	-	1 us-gaap:ProvisionForLoanLeaseAndOtherLosses -
2 us-gaap:ProvisionForLoanAndLeaseLosses	30,166	
3 us-gaap:ProvisionForLoanLossesExpensed	-	3 us-gaap:ProvisionForLoanLossesExpensed -

Properties	Occurrences	Provenance		
fac:Provisio 468,000]] Fact origin:	nForLoanLeaseA	ndOtherLosses	[us-gaap:ProvisionForLoanLeaseAn	dOtherLosses[
· · · · · · · · · · · · · · · · · · ·				
	us-gaap:Provisio	onForLoanLease	AndOtherLosses	468,000
1	us-gaap:Provisio us-gaap:Provisio			468,000 469,000

2.2.5.STEP 6: Run the period comparison using SECXBRL.info

You can get a similar set of comparison information using SECXBRL.info using this URL.

Period comparison:

http://secxbrl.28.io/v1/_queries/public/api/spreadsheet-for-report.jq?token=c3049752-4d35-43da-82a2f89f1b06f7a4&report=IncomeStatementInterestBasedRevenues&cik=0001337068&fiscalYear=2012&fiscal Year=2013&fiscalYear=2014&fiscalYear=2015&fiscalYear=2016&fiscalPeriod=ALL&validate=true&format= html



Entity comparison:

http://secxbrl.28.io/v1/_queries/public/api/spreadsheet-for-report.jq?token=c3049752-4d35-43da-82a2f89f1b06f7a4&report=IncomeStatementInterestBasedRevenues&fiscalYear=2015&fiscalPeriod=FY&validat e=true&format-

 $\label{eq:selabels} indent=yes&labels=false&format=html&cik=0001337068&cik=0001576336&cik=0001390312&cik=0001515069&cik=0000880641&cik=0000354869&cik=0001602658&cik=0000716605&cik=0001216752&cik=0001216752&cik=0001216752&cik=0001216752&cik=0001216752&cik=0001442741&cik=0001528610&cik=0001100542&cik=0000046195&cik=0001403475&cik=0000275119&cik=0000072971\\ \end{tabular}$

Component: (Network and Table)																					
Network		Statement, Interest brisite.com/2014/Pr			ntarastRasadRe																
Table		ment, Interest Base				evenues (
Unit (Axis)	USD																				
Fiscal Period Type [Axis]	YTD, instant																				
										Fires	Year [Axis]										
											2015										
										Fiscal	Period (Axis)										
											FY										
	Reporting Entity [Axis]																				
Income Statement [Line Items]	AJS Bancorp, Inc. (1576336)	ALAMOGORDO FINANCIAL CORP (1100542)	BANK OF HAWAII CORP (46195)	BAYLAKE CORP (275119)	Bancorp of New Jersey, Inc. (1390312)	Bank of Marin Bancorp (1403475)	Carroll Bancorp, Inc. (1515069)	EAGLE FINANCIAL SERVICES INC (880641)	FIRSTMERIT CORP /OH/ (354869)	Investar Holding Corp (1602658)	Magyar Bancorp, Inc. (1337068)	PENNS WOODS BANCORP INC (716605)	PIONEER FINANCIAL SERVICES INC (1216752)	Polonia Bancorp Inc (1528610)	S&T BANCORP INC (719220)	SIMMONS FIRST NATIONAL CORP (90498)	TIDELANDS BANCSHARES INC (1178409)	TWO RIVER BANCORP (1343034)	WELLS FARGO & COMPANY/MN (72971)	Xenith Bankshares Inc. (1442741)	
Net Income (Loss) [Roll Up]	(10/0000)	(1100042)	(40100)	(270110)	(1000012)	(1400410)	(1010000)	(000041)	(004000)	(1002000)	(100/000)	(110000)	(1210/02)	(1020010)	(/ 19220)	(80480)	1100 (1110400)	(1040004)	(12011)	(1442.141)	
Income (Loss) from Continuing Operations After Tax [Roll Up]																					
Income (Loss) from Continuing Operations Before Tax [Roll Up]																					
Interest Income (Expense), After Provision for Losses [Roll Up]																					
Interest Income (Expense), Net [Roll Up]																					
Interest and Dividend Income, Operating	5,241,000	12,223,728	432,110,000		31,526,000		5,241,203	24,493,000	799,517,000					10,212,664	203,548,000	300,948,000	18,971,740	32,103,000	49,277,000,000		
Interest Expense, Operating	722,000	1,433,895	38,023,000	2,635,000	8,041,000	2,251,000	677,963	1,347,000	58,222,000	5,882,000	3,196,000	5,219,000	11,386,000	3,152,805	15,997,000	22,353,000	5,049,988	3,863,000	3,976,000,000	6,480,00	
Interest Income (Expense), Operating, Net	4,519,000								741.295.000										9 45.301.000.000		
Provision for Loan, Lease, and Other Losses	80.000	694,000	1,000,000	200,000	924,000	500,000	163,635	-227,000	45,100,000	1,885,000	1,264,000	2,300,000	25,185,000	73,150	10,388,000	9,022,000	1,175,000	490,000	2,442,000,000	2,599,00	
Interest Income (Expense) After Provision for Losses	4,439,000	10,095,831	 393,087,000 	 32,440,000 	22,561,000	 66,687,000 	4,399,605	23,373,000	698,195,000	29,593,000	9 14,977,000	 38,605,000 	9 40,056,000 e	6,986,709	177,163,000	269,573,000	10,748,754	27,750,000	42,859,000,000	27,762,00	
Noninterest Income	718,000	4,902,912	186,219,000		309,000	9,193,000	197,584	8,438,000	268,998,000	8,344,000	1,990,000	12,765,000	298,000	4,130,235	51,033,000	95,828,000	1,378,303	3,537,000	40,758,000,000	1,389,00	
Noninterest Expense	5,138,000	14,658,129	348,104,000		15,527,000		4,168,550	22,481,000	638,690,000	27,353,000	15,657,000		31,163,000	11,184,708	138,717,000	258,135,000	13,934,872	21,355,000	49,974,000,000	23,514,00	
Income (Loss) from Continuing Operations Before Tax	19,000	340,614	231,202,000	 11,726,000 	7,343,000	28,931,000	428,639	9,330,000	328,503,000	10,584,000	1,310,000	 17,634,000 	9,191,000	-67,764	91,479,000	9 107,264,000	o -1,809,755	9,932,000	33.641,000,000	5.637,00	
Income Tax Expense (Benefit)	-67,000	20,000	70,498,000	3,709,000	2,535,000	10,490,000	157,437	2,433,000	97,019,000	3,511,000	413,000	3,736,000	3,702,000	70,459	24,398,000	32,900,000	0	3,585,000	10,365,000,000	1,454,00	
Income (Loss) from Continuing Operations After Tax	86,000	320,614	0 160,704,000	8,017,000	4,808,000	18,441,000	271,202	6,897,000	229,484,000	7,073,000	9 897,000	13,898,000	5,489,000	-138,223	67,081,000	74,364,000	-1,809,755	6,347,000	23,278,000,000	4,183,00	
Income (Loss) from Discontinued Operations, Net of Tax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Extraordinary Items of Income (Expense), Net of Tax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Net Income (Loss)	88,000	320,614	160,704,000	8.017.000	4,808,000	18,441,000	271,202	0,897,000	229,484,000	7,073,000	897,000	13,898,000	5,489,000	-138,223	67.081.000	74,364,000	-1,809,755	0.347,000	23,278,000,000	4,183.00	

2.3. Validating Disclosure Mechanics

This section walks you through an overview of the validation of the disclosure mechanics and reporting checklist rules using the Pesseract digital financial reporting tool in the Viewer/Validation mode. This demonstration uses an XBRL-based public company financial filing which was submitted to the U.S. SEC and the XASB prototype financial reporting scheme. Local files, IFRS filings, and the financial reports of other financial reporting schemes⁴⁴ can also validated in the same manner.

2.3.1.STEP 1: Load the XBRL-based public company financial filing

The following process can be used to load any 10-Q or 10-K XBRL-based financial report submitted by a public company to the SEC⁴⁵. We will show the validation of the Microsoft 2017 10-K report that is included within Pesseract as an example financial report.

First, start Pesseract and press the "Get Started", and then "Load", and then select the first option that is show below to get the Microsoft 10-K:

⁴⁴ Modern Approach to Creating a Financial Reporting Scheme,

http://xbrl.squarespace.com/journal/2019/12/19/modern-approach-to-creating-a-financial-reporting-scheme.html

⁴⁵ XBRL Cloud provides the Edgar Dashboard which is an easy way to search for a financial filing for any public company for any period, <u>https://edgardashboard.xbrlcloud.com/edgar-dashboard/</u>



You will see information scrolling through the console pane at the bottom of the application:

Console	⇒ x
Loading information for network: 101220 - Disclosure - Revenue Classified by Major Geographic Areas (Detail) Loading information for network: 101230 - Disclosure - Revenue Classified by Significant Product and Service Offerings (Detail) Loading information for network: 101240 - Disclosure - Long-Lived Assets, Excluding Financial Instruments and Service Offerings (Parenthetical) (Detail) Loading information for network: 101250 - Disclosure - Long-Lived Assets, Excluding Financial Instruments and Tax Assets, Classified by Location of Controll Loading information for network: 101250 - Disclosure - Quarterly Information (Unaudited) (Detail) Loading information for network: 101270 - Disclosure - Quarterly Information (Unaudited) (Parenthetical) (Detail) Loading anformation for network: 101270 - Disclosure - Quarterly Information (Unaudited) (Parenthetical) (Detail) Balance attribute and preferred label role are not in sync for concept: us-gaap:RestructuringCharges	in(
Vectoria Announce of the second of the secon	•

After a few minutes, the Microsoft 10-K will load into the application:

Home Options and Proventional Proventions and Proventional Proventiona Proventional Proventiona Proventional Proventional	to the SEC		 Relations	ting Concepts * Mechanics * Cher		Referenced Viewer Taxonomies	
Fie	rs Report Profile		Report Validation St	tatus	rs Prop	erties Application Mode	
Instance (msft-20170630.xml)	X Taxonomy (msft-20170630.xsd)						
Components (128)		Rendering	Model Structure Fact Ta	Business Rules Struct	ture Business Rules Validation F	equits Elements	
componente (200)		Component: (Netw				Course Course	
 Network View Co 	mponent View O Block View	Network	100000 - Document - Docume	nt and Entity Information			
Filter Type - Filter	Level - Filter Status -	Table	Statement [Table]				
riiter i ype	Level	Reporting Entity [Av	isl	0000789019 http://www.sec.	nov/CTK	۲	
					301/011		
Enter text to filter	* Clear	Legal Entity [Axis]		Entity [Domain]		Ţ	
100000 - Document - Documer	it and Entity Information Statement				Period [Axis]		
	STATEMENTS Statement [Table]	Statement [Line Iter	ms]	Unit [Axis] 🗸	2017-07-31	2016-07-01/2017-06-30	2016-12-31
	HENSIVE INCOME STATEMENTS •	Document Type			2017-07-51		2010-12-51
Statement [Table]						10-К	
100030 - Statement - COMPRE	HENSIVE INCOME STATEMENTS	Amendment Flag				false	
 (Parenthetical) Statement 100040 - Statement - BALANC 		Document Period En				2017-06-30	
	E SHEETS (Parenthetical) Statement	Document Fiscal Yea				2017	
	OWS STATEMENTS Statement [Table]	Document Fiscal Per	iod Focus			FY	
		Trading Symbol				MSFT	
100070 - Statement - STOCKH Statement [Table]	OLDERS' EQUITY STATEMENTS ◆	Entity Registrant Na	me			MICROSOFT CORPORATION	
	TING POLICIES Statement [Table]	Entity Central Index	Key			0000789019	
	S PER SHARE Statement [Table]	Current Fiscal Year 8	End Date			06-30	
	NCOME (EXPENSE), NET Statement	Entity Well-known S	easoned Issuer			Yes	
100110 - Disclosure - INVESTM		Entity Current Report	ting Status			Yes	
100120 - Disclosure - DERIVAT	IVES Statement [Table]	Entity Voluntary File	rs			No	
	UE MEASUREMENTS Statement [Table]	Entity Filer Category				Large Accelerated Filer	
100140 - Disclosure - INVENTO	RIES	Entity Common Stop	k. Par Value Per Share	USD/shares / shares		0	
100150 - Disclosure - PROPER	TY AND EQUIPMENT Statement [Table]	Entity Common Stor	k. Shares Outstanding	shares	7,702,243,979		
	S COMBINATIONS . Statement [Table]	Entity Public Float	.,	USD	7,702,243,979		466,500,000,000
100170 - Disclosure - GOODW		I.R.S. Employer Ider	tification No	0.00		0	400,500,000,000
 100180 - Disclosure - INTANGI 		Tikto, Employer Ider				911144442	
 100190 - Disclosure - DEBT • 							
Component Properties Network	^						
Network Table	100000 - Document - Document and						
Disclosure	Statement [Table] disclosures:DocumentAndEntityInfor						
Confidence	HIGH						
Status	InProgress						
Collections	Invrogress						
Advanced	· · · · · · · · · · · · · · · · · · ·						
Hava hocu	Ŷ						
					-		

2.3.2.STEP 2: Run Validations, Disclosure Mechanics Validation Results

We are focusing on the disclosure mechanics validation and the reporting checklist validation. However, because it is easier to simply run all the validation that is what we will do.

On the menu ribbon, in the "Report Validation Status" group, press the icon in the lower right hand corner with the arrow.

Upon pressing the icon, the "Run Selected Validations" form will open as shown below with all of the validation options selected.

e Bas	se se	Analysis	Debugging	Windows	Help	man have have here here here here here here here he
BRL	Syn *	ntax Model Structure	EFM Rules	Type or Class Relations *		undamental Disclosure Reporting To Do R nting Concepts - Mechanics - Checklist - List - Prop
				Report Va	alidation 9	Status 🖓 🗧
4		Rendering	Model	Structure	Run Sel	ected Validations
		Component: (N				Press
		letwork		0 - Document -		XBRL Syntax
-	Ľ	able	Staten	ent [Table]		
		Reporting Entity	y [Axis]			Model Structure
	Ì	Legal Entity [Ax	dis]		\checkmark	EFM Rules
	1		1			Type or Class Relations
		Statement [Line	e Items]	_		Fundamental Accounting Concepts 17-07-314
≣		Document Type				Disclosure Mechanics
		Amendment Fla	g		\checkmark	Reporting Checklist
		Document Perio	d End Date			To Do List
		Document Fisca	Year Focus		Ċ	
		Document Fisca	l Period Focus			
		Trading Symbol				Run Cancel
		Entity Registran				
		Entity Central In				
					~	

Simply press the "Run" button and the validation process will begin.

After a few moments, you will notice that the icons in the "Report Validation Status" group will change color and that several additional documents will open in the application:

🚔 🔚 🖑) 🖄 + 🤚 + 📼	Instance (msft-20170630.xml) - Pesseract	_ 0
File Home Options and Preferences Tools View Knowle	edge Base Analysis Debugging Windows Help	
t Started New Open Save File rs Open Save Report Profile	Model EFM Rules Type or Class Fundamental Report Middon Status Disclosure Mechanics * Checklist To Do List Report Referenced From Properties Report Referenced From Properties Prop	Viewer Application Mode
Instance (msft-20170630.xml) × Taxonomy (msft-20170630.xsd)	Model Structure Validation Result FAC Validation Result FAC Taxonomy FAC Instance (msft-20170630.xml) Disdosure Mechanics	Taxonomy Di 🔻 🔶
Components (128)	Rendering Model Structure Fact Table Business Rules Structure Business Rules Validation Results Element	s
	Component: (Network and Table)	
Network View O Component View O Block View	Network 100000 - Document - Document and Entity Information	
Filter Type Filter Level Filter Status	Table Statement [Table]	
The type	Reporting Entity [Axis] 0000789019 http://www.sec.gov/CIK	F
Enter text to filter	Legal Entity [Avis]	
100000 - Document - Document and Entity Information Statement	Period [Axis] -	
⊞ 100010 - Statement - INCOME STATEMENTS ◆ Statement [Table]	Statement [Line Items] Unit [Axis] - 2017-07-31 2016-07-01/	2017-06-30 20
100020 - Statement - COMPREHENSIVE INCOME STATEMENTS .	Document Type	
Statement [Table]	Amendment Flag	
100030 - Statement - COMPREHENSIVE INCOME STATEMENTS (Parenthetical) ◆ Statement [Table]	Document Period End Date 2017-06-30	
100040 - Statement - BALANCE SHEETS Statement [Table]	201/-00-50	
100050 - Statement - BALANCE SHEETS (Parenthetical) Statement	2017	
100060 - Statement - CASH FLOWS STATEMENTS Statement [Table]		
100070 - Statement - STOCKHOLDERS' EQUITY STATEMENTS +		
Statement [Table]		RPORATION
	Entity Central Index Key 0000789019	
I 100080 - Disclosure - ACCOUNTING POLICIES ◆ Statement [Table]		
100080 - Disclosure - ACCOUNTING POLICIES ♦ Statement [Table] 100090 - Disclosure - EARNINGS PER SHARE ♦ Statement [Table] 100100 - Disclosure - OTHER INCOME (EXPENSE), NET ♦ Statement	Current Fiscal Year End Date	

The "EFM Rules" icon remains gray because the Pesseract application does not support EFM validation at this time. All the other validation icons turn green with the exception of the "Reporting Checklist" icon which turns orange.

Select the "Disclosure Mechanics Validation Result" window which was created when the validation was run. This is what you will see:

Mode	Stru	ture Validation Result	FAC Valida	tion Result	FAC Taxon	iomy FA	C Instance (msft-20	170630.xml) Dis	dosure Mecha	nics Taxonomy	Disclosure Mechanics Validat	tion Result × Reporting Checklist Taxonomy *
								Show more inform	ation			
rimar	y Info	rmation										
ŧ	C	isdosure	Category	Level		Pattern	Disclosure Found	Disclosure Consistent	Applicable	Representation Co	ncept [TEXT BLOCK]	Representation Concept DETAIL
]	1 /	ccounts Payable an	Disclosure	Level3TextBlog	k/Level4	RollUp	False	N/A	False	NOT-FOUND		NOT-FOUND
]	2 /	ccounts, Notes, Loa	Disclosure	Level3TextBloc	k/Level4	RollUp	False	N/A	False	NOT-FOUND		NOT-FOUND
]	3 /	ccrued Liabilities [Ro	Disclosure	Level3TextBloc	k/Level4	RollUp	False	N/A	False	NOT-FOUND		NOT-FOUND
]	4 4	ccumulated Other C	Disclosure	Level3TextBloo	k/Level4	RollForward	True	CONSISTENT	True	Schedule Of Accur	nulated Other Comprehensi	Stockholders Equity
]	5 4	lowance for Credit L	Disclosure	Level3TextBloc	k/Level4	RollForward	False	N/A	False	NOT-FOUND		NOT-FOUND
-	6 /	sset Retirement Obli	Disclosure	Level3TextBlog	k/Level4	RollForward	False	N/A	False	NOT-FOUND		NOT-FOUND
3	7 4	ssets [Roll Up]	Statement	Level4Detail		RollUp	True	CONSISTENT	True	NOT-EXPECTED		Assets
3	8 E	alance Sheet	Statement	Level4Detail		Component	True	CONSISTENT	True	-		+ · · · · · · · · · · · · · · · · · · ·
3	9 E	asis of Reporting No	Disclosure	Level 1TextBloc	:k	TextBlock	True	CONSISTENT	True	Basis Of Accountin	g Policy Policy [Text Block]	NOT-EXPECTED
3	10 0	ash Flow Statement	Statement	Level4Detail		RollUp	True	CONSISTENT	True	NOT-EXPECTED		Cash And Cash Equivalents Period Increase Decrease
3	11 0	eferred Tax Assets	Disclosure	Level3TextBloc	k/Level4	RollUp	True	CONSISTENT	True	Schedule Of Defer	red Tax Assets And Liabilitie	Deferred Tax Assets Liabilities Net
-	12	efined Benefit Plan,	Disclosure	Level3TextBloc	k/Level4	Hierarchy	False	N/A	False	NOT-FOUND		NOT-FOUND
3	13	efined Benefit Plan,	Disclosure	Level3TextBlog	k/Level4	Hierarchy	False	N/A	False	NOT-FOUND		NOT-FOUND
-	14 0	efined Benefit Plan,	Disclosure	Level3TextBlog	k/Level4	RollForward	False	N/A	False	NOT-FOUND		NOT-FOUND
-	15 0	efined Benefit Plan,	Disclosure	Level3TextBloo	k/Level4	RollForward	False	N/A	False	NOT-FOUND		NOT-FOUND
-	16	efined Benefit Plan,	Disclosure	Level3TextBloo	k/Level4	Hierarchy	False	N/A	False	NOT-FOUND		NOT-FOUND
-	17 0	efined Benefit Plan,	Disclosure	Level3TextBloo	k/Level4	RollUp	False	N/A	False	NOT-FOUND		NOT-FOUND
]	18 0	ocument and Entity	Document	Level4Detail		Hierarchy	True	N/A	False	NOT-EXPECTED		Entity Registrant Name
]	19 C	ocument Informatio	Document	Level4Detail		Hierarchy	True	CONSISTENT	True	NOT-EXPECTED		Document Fiscal Period Focus
]	20 E	ntity Information, b	Document	Level4Detail		Hierarchy	True	CONSISTENT	True	NOT-EXPECTED		Entity Registrant Name
3	21 F	air Value, Assets Me	Disclosure	Level3TextBloc	k/Level4	RollForward	False	N/A	False	NOT-FOUND		NOT-FOUND
]	22 F	inite-lived Intangible	Disclosure	Level3TextBloo	k/Level4	Hierarchy	True	N/A	False	Schedule Of Finite	Lived Intangible Assets Tab	NOT-FOUND
1	23 F	inite-lived Intangible	Disclosure	Level3TextBloo	k/Level4	Hierarchy	True	CONSISTENT	True	Schedule Of Finite	Lived Intangible Assets Tab	Finite Lived Intangible Asset Useful Life
	24 F	inite-lived Intangible	Disclosure	Level3TextBloc	k/Level4	Hierarchy	True	N/A	False	Scheduleof Finite I	ived Intangible Assets Futu	NOT-FOUND
	25 F	inite-lived Intangible	Disclosure	Level3TextBloo	k/Level4	RollUp	True	CONSISTENT	True	Scheduleof Finite I	.ived Intangible Assets Futu	Finite Lived Intangible Assets Net
	26 F	inite-lived Intangible	Disclosure	Level3TextBlog	k/Level4	RollUp	True	CONSISTENT	True	Schedule Of Finite	Lived Intancible Assets Tab	Finite Lived Intangible Assets Net

If you scroll down in this window you will see that there are 68 items listed and that the columns "Disclosure Found" and "Disclosure Consistent" are all green in color. That means that if a disclosure was found and if the found disclosure is consistent with the rules that exist, then the disclosure mechanics of the disclosure are OK.

Scroll down to line 39 where you will see the "Inventory, Net (Current) [Roll Up]" disclosure. Click on the "+" sign and the rules for that disclosure will open:

39 Inventory, Net (Current) [Roll Up]	Disclosure	Level3TextBlock/Lev	RollUp	True	CONSISTENT	True	Schedule Of I
Rules Line of Reasoning							
This disclosure: disclosures:InventoryNetRollL	lp						
- MUST be represented by a network with the	SEC Category:	cm:DisclosureType					4
- MUST be represented as a Level 4 Disclos	ure Detail with	the concept arrangement	pattern: cm:	RollUp			ា
- cm:RollUp REQUIRES total: us-gaap:Inver	ntoryNet						1
- Or by the allowed alternative concept:	us-gaap:Invento	oryNetOfAllowancesCustor	nerAdvances	AndProgressBill	lings		
- Or by the allowed alternative concept:	us-gaap:PublicUt	tilitiesInventory					1
- Or by the allowed alternative concept:	us-gaap:AirlineR	elatedInventory					
- Or by the allowed alternative concept:	us-gaap:RetailRe	elatedInventory					
- Or by the allowed alternative concept:	us-gaap:Energyl	RelatedInventory					_
- Or by the allowed alternative concept:	us-gaap:Agricult	uralRelatedInventory					
- MUST be represented as using the Level 3	Disclosure Tex	ct Block: us-gaap:Schedu	leOfInventor	yCurrentTable [®]	TextBlock		
- Or by the allowed alternative concept: us	-gaap:ScheduleC) fUtilityInventoryTextBlock	c				
- Requires the policy to be reported using the	Level 2 Policy	Text Block: us-gaap:Inv	entoryPolicy	TextBlock			(
- Or by the allowed alternative concept: us	-gaap:Inventory	MajorClassesPolicy					
- Or by the allowed alternative concept: us	-gaap:Inventory	SuppliesPolicy					
- Or by the allowed alternative concept: us	-gaap:Inventory	WorkInProcessPolicy					
- Or by the allowed alternative concept: us	-gaap:Inventory	FinishedGoodsPolicy	_ ~		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~ - (

What you see are the rules that are used to determine if the mechanical and structural aspects of this disclosure are satisfied. We will not discuss these rules in detail now, but we will say that the rules come from an XBRL definition linkbase that is provided⁴⁶.

Click the "Line of Reasoning" tab. What you will see on that tab is the line of reasoning used by the rules engine in the Pesseract application to determine if the

⁴⁶ Inventory, Net (Current) [Roll Up] disclosure information,

http://xbrlsite.azurewebsites.net/2020/reporting-scheme/us-gaap/disclosures-topics/disclosures-detail/Disclosure-517.html

disclosure is found or not and if the disclosure, when found, is consistent with the rules that exist that describe the disclosure:

Rules Line of Reasoning	٤
	validation explanation for disclosure: disclosures:InventoryNetRollUp ####
Level 4 Disclosure Detail	2
Looking in networks with SE	EC Category: Disclosure
Looking for blocks with con	cept arrangement pattern: RollUp
Looking for Concept: us-ga	ap:InventoryNet
*FOUND Concept: us-gaap	p:InventoryNet in network:
Concept located in network	k: 100710 - Disclosure - Components of Inventories (Detail)
Level 3 Disclosure Text B	lock ζ
Looking in networks with SE	EC Category: Disclosure
Looking for Level 3 Disclosu	ure Text Block: us-gaap:ScheduleOfInventoryCurrentTableTextBlock
*FOUND Level 3 Disclosure	: Text Block: us-gaap:ScheduleOfInventoryCurrentTableTextBlock in network:
Text block located in netwo	ork: 100370 - Disclosure - INVENTORIES (Tables)
Level 2 Policy Text Block	
Looking in networks with SE	EC Category: Disclosure
Looking for Level 2 policy to	ext block: us-gaap:InventoryPolicyTextBlock
*FOUND Level 2 policy text	t block: us-gaap:InventoryPolicyTextBlock in network:
Text block located in netwo	ork: 100300 - Disclosure - ACCOUNTING POLICIES (Policies)
Level 1 Note Text Block	ξ
Looking in networks with SE	EC Category: Disclosure
Looking for Level 1 note te	xt block: us-gaap:InventoryDisclosureTextBlock
*FOUND Level 1 note text	block: us-gaap:InventoryDisclosureTextBlock in network:
Text block located in netwo	ork: 100140 - Disclosure - INVENTORIES
CONCLUSION	5
Disclosure found in report:	True
Disclosure mechanics are C	:ONSISTENT because both the Level 3 Disclosure Text Block and Level 4 Disclosure Detail concepts were FOUND. \gtrsim
#### END of disclosure med	hanics validative explanation for this disclosure ####

Press "Control" and "F" at the same time and you will see that a search/filter control appears. Enter "Inven" into the text box and you will see that the disclosures are filtered:

Model Str	ucture Validation Result	FAC Validation Result	FAC Taxonomy	FAC Instance (m	sft-20170630.	.xml) Dis	closure Mechanics T	axonomy	Disclosure Mechanics Validation Resu	lt ×	Reporting Checklist Taxonomy		►
					She	ow more inform	ation						
× [nv	Inven * Find Clear												
Primary In	formation												
#	Disclosure		Category	Level	Pattern	Disclosure	Disclosure Con	Applic	Representation Concept [TEXT BLOCK]	Repre	sentation Concept DETAIL		
🖽 39	Inventory, Net (Current) [F	Roll Up]	Disclosure	Level3TextBlock/Le	RollUp	True	CONSISTENT	True	Schedule Of Inventory Current Table	Inven	tory Net		

2.3.3.STEP 3: View Online Validation Results

We have run this same validation using the disclosure mechanics and reporting checklist validation tool provided by XBRL Cloud and have posted the validation results to our web site⁴⁷.

The HTML based disclosure mechanics and reporting checklist generated by XBRL Cloud is very similar to the Pesseract version of the same information. Go to the "Inventory, Net (Current) [Roll Up]" disclosure and look at the rules and the line of reasoning:

⁴⁷ XBRL Cloud Disclosure Mechanics and Reporting Checklist,

http://xbrlsite.azurewebsites.net/2017/Prototypes/ReferenceImplementationSEC/Disclosure%20Mechanics%20and%20Reporting%20Checklist.html

Entity	Registrant Name:	ABC Company, Inc.					Documer	it Type:		10-К	
CIK:	(000000001					Fiscal Ye	ar / Period:		2016 / FY	
Disclo	osures Found: 29 of 70 (41%)						Disclosu	res Consistent: 66	of 70 (94%)	Disclosures Inco	nsistent: 4 of 70 (6%)
Show	v:	Only Inconsister	ncies OOnly R	leported OOnl	y Not Report	ted	□ Sho	w Level 1 Note Ar	nd Policy Con	cept Columns	
	Disclosure	Category	Level	Pattern	Applicable	Found	Disclosure Consistent	Representation Concept [TEXT BLOCK]	Representati Concept [DETAIL]	on Checklist Category	Reason
1	Document Information [Hierarchy]	DOCUMENT	Level4Detail	HIERARCHY	True	<u>True</u>	CONSISTENT	NOT- EXPECTED	Document Fiscal Period Focus	Required disclosure	Disclosure always required
2	Document and Entity Information [Hierarchy]	DOCUMENT	Level4Detail	HIERARCHY	False	True	N/A	NOT- EXPECTED	NOT-FOUND	Alternative representation	Not necessary, satisfied by Document Information [Hierarchy] disclose
3	Entity Information, by Legal Entity [Hierarchy]	DOCUMENT	Level4Detail	HIERARCHY	True	True	CONSISTENT	NOT- EXPECTED	Entity Registrant Name	Required disclosure	Disclosure always required
4	Document and Entity Information [Hierarchy]	DOCUMENT	Level4Detail	HIERARCHY	False	True	N/A	NOT- EXPECTED	NOT-FOUND	Alternative representation	Not necessary, satisfied by Entity Information, by Legal Entity [Hierarchy] disclosure
5	Balance Sheet	STATEMENT	Level4Detail	COMPONENT	True	True	CONSISTENT	NOT- EXPECTED	NOT- EXPECTED	Required disclosure	Disclosure always required, satisfied by Assets [Roll Up] and Liabilitie and Equity [Roll Up]
6	Assets [Roll Up]	STATEMENT	Level4Detail	ROLL UP	True	True	CONSISTENT	NOT- EXPECTED	Assets	Part of disclosure	Disclosure always required
7	Liabilities and Equity [Roll Up]	STATEMENT	Level4Detail	ROLL UP	True	True	CONSISTENT	NOT- EXPECTED	Liabilities and Equity	Part of disclosure	Disclosure always required
8	Income Statement, by Legal Entity (Ro Up)	STATEMENT	Level4Detail	ROLL UP	Тгие	True	CONSISTENT	NOT- EXPECTED	Net Income (Loss), Including Portion Attributable to Noncontrolling Interest		Disclosure always required
9	Statement of Income and	DISCLOSURE	Level4Detail	ROLL UP	False	True	CONSISTENT	NOT-	Net Income	Alternative	Not necessary, satisfied by Income Statement, by Legal Entity [Roll

The Microsoft 2017 10-K has exactly 194 structures. This is a breakdown of those structures by concept arrangement pattern⁴⁸ and by SEC reporting level:

Concept Arrangement Pa	attern Count	SEC Level	Count
Text Block	89	Level 4 Disclosure Detail	102
Set	64	Level 3 Disclosure Text Bl	ock 47
Roll Up	31	Level 2 Policy Text Block	23
Roll Forward	9	Level 1 Note Text Block	22
Roll Forward Info	1	-	

Of the 194 structures in the Microsoft 10-K, rules exist that verify only 49 of those which amounts to about 100 structures⁴⁹. Remember that most parts of an SEC are reported three times; once as a Level 1 Note Text Block, again as a Level 3 Disclosure Text Block, and again as a Level 4 Disclosure Detail. The exception are the document and entity information and the primary financial statements which are not provided as text blocks. Policies are reported twice; once in a Level 1 Note Text Block that contains the significant accounting policies and again as the Level 2 Policy Text Block for the individual policies. I would estimate that I am verifying 94 structures; about half of the report. Estimating precisely is tricky because it is unclear what the appropriate level of validation is necessary for Level 1 Note Text Blocks which are presentation related and Level 2 Policy Text Blocks. The only way

⁴⁸ Concept Arrangement Pattern,

http://xbrlsite.azurewebsites.net/2019/Framework/Details/ConceptArrangementPattern.html ⁴⁹ Microsoft Disclosure Mechanics validation result,

http://xbrlsite.azurewebsites.net/2017/Prototypes/Microsoft2017/Disclosure%20Mechanics%20and%20Re porting%20Checklist.html

to really find out is to actually undertake the task to verify 100% of an entire report which is on my list of things to do.

The point is, disclosure mechanics can only be validated using automated processes to the extent that machine readable disclosure mechanics rules exist.

Again, this is intended to be an overview of the disclosure mechanics rules. Additional details will be provided in subsequent documents.

2.4. Validating Reporting Checklist

Next we validate an XBRL-based digital financial report to make sure that it is consistent with the disclosure rules provided within a machine-readable reporting checklist.

2.4.1.STEP 4: Reporting Checklist Validation Results

The validation process has already been run, so we don't need to run that process again. Select the "Reporting Checklist Validation Result" window, you will see the following:

FAC Taxonomy	FAC Instance (msft-20170630.xml) Disclosu	re Mechanics Taxonomy	Disclosure Med	hanics Validation Result	Reporting Checklist Taxonomy	Reporting Chec	klist Validation	Result ×	* 4 ≻
#	Disclosure	Checklist Category		Reason Disclosure Must Ex	ist		Discovered	Expectation Met	Link to Disclosure M
v 0	Reporting Checklist								
v 1	Document Information [Hierarchy]	Required disclosure		Disclosure always required			True	CONSISTENT	Document Infon
2	Document and Entity Information [Hierarchy]	Alternative representation	n	Not necessary, satisfied by	Document Information [Hierarchy] dis	sclosure	True	N/A	Document and E
✓ 3	Entity Information, by Legal Entity [Hierarchy]	Required disclosure		Disclosure always required			True	CONSISTENT	Entity Informati
4	Document and Entity Information [Hierarchy]	Alternative representation	n	Not necessary, satisfied by	Entity Information, by Legal Entity [H	ierarchy] discl	True	N/A	Document and E
✓ 5	Balance Sheet	Required disclosure		Disclosure always required	, satisfied by Assets [Roll Up] and Liab	lities and Equi	True	CONSISTENT	Balance Sheet
6	Assets [Roll Up]	Part of disclosure		Satisfies Balance Sheet dis	closure		True	CONSISTENT	Assets [Roll Up]
7	Liabilities and Equity [Roll Up]	Part of disclosure		Satisfies Balance Sheet dis	dosure		True	CONSISTENT	Liabilities and Ec
✓ 8	Income Statement, by Legal Entity [Roll Up]	Required disclosure		Disclosure always required			True	CONSISTENT	Income Stateme
9	Statement of Income and Comprehensive Income [Roll U	Alternative representation	n	Not necessary, satisfied by	Income Statement, by Legal Entity [R	toll Up] disclos	True	N/A	Statement of In
× 10	Statement of Comprehensive Income [Roll Up]	Required disclosure		Disclosure always required			True	CONSISTENT	Statement of Cc =
11	Statement of Income and Comprehensive Income [Roll U	Alternative representation	n	Not necessary, satisfied by	Statement of Comprehensive Income	[Roll Up] discl	True	N/A	Statement of In
12	Cash Flow Statement [Roll Forward]	Required disclosure		Disclosure always required			True	CONSISTENT	Cash Flow State
13	Statement of Changes in Equity [Roll Forward]	Required disclosure		Disclosure always required			True	CONSISTENT	Statement of Ch
14	Nature of Operations Note [Note Level]	Required disclosure		Disclosure always required			False	INCONSISTENT	Nature of Opera
15	Basis of Reporting Note [Note Level]	Required disclosure		Disclosure always required			True	CONSISTENT	Basis of Reporti
16	Significant Accounting Policies Note [Note Level]	Required disclosure		Disclosure always required			True	CONSISTENT	Significant Acco
17	Revenue Recognition Policy [Policy Text Block]	Required disclosure		Disclosure always required			True	CONSISTENT	Revenue Recog
18	Inventory, Net (Current) [Roll Up]	Line item exists, then disc	dosure requi	Required because line item	us-gaap:InventoryNet was reported		True	CONSISTENT	Inventory, Net
× 19	Property, Plant and Equipment, Net, by Type [Roll Up]	Line item exists, then disc	losure requi	Required because line item	us-gaap:PropertyPlantAndEquipment	Net was repor	True	CONSISTENT	Property, Plant
20	Property, Plant and Equipment, Net, by Type [Roll Up] (A	Alternative representation	n	Not necessary, satisfied by	Property, Plant and Equipment, Net,	by Type [Roll	True	N/A	Property, Plant
21	Property, Plant and Equipment Useful Lives, by Type [Hi	r Line item exists, then disc	dosure requi	Required because line item	us-gaap:PropertyPlantAndEquipment	Net was repor	True	CONSISTENT	Property, Plant
v 22	Finite-lived Intangible Assets, Net, by Major Class [Roll L	p] Line item exists, then disc	dosure requi	Required because line item	us-gaap:FiniteLivedIntangibleAssetsN	let was reported	True	CONSISTENT	Finite-lived Inta
23	Finite-lived Intangible Assets, by Major Class [Hierarchy]	Alternative representation	n	Not necessary, satisfied by	Finite-lived Intangible Assets, Net, by	y Major Class [True	N/A	Finite-lived Inta
24	Finite-lived Intangible Assets, Estimated Useful Lives, by	Line item exists, then disc	dosure requi	Required because line item	us-gaap:FiniteLivedIntangibleAssetsN	let was reported	True	CONSISTENT	Finite-lived Inta
✓ 25	Finite-lived Intangible Assets, Future Amortization Exper	s Possible disclosure		Disclosure is present			True	CONSISTENT	Finite-lived Inta
26	Finite-lived Intangible Assets, Future Amortization Exper	s Alternative representation	n	Not necessary, satisfied by	Finite-lived Intangible Assets, Future	Amortization	True	N/A	Finite-lived Inta
27	Indefinite-lived Intangible Assets, by Major Class [Roll U] Line item exists, then disc	dosure requi	NOT required, because line	item us-gaap:IndefiniteLivedIntangibl	leAssetsExclu	False	N/A	Indefinite-lived
✓ 28	Goodwill [Roll Forward]	Line item exists, then disc	dosure requi	Required because line item	us-gaap:Goodwill was reported		True	CONSISTENT	Goodwill [Roll Fc
29	Goodwill, by Business Segment [Hierarchy]	Alternative representation	n	Not necessary, satisfied by	Goodwill [Roll Forward] disclosure		True	N/A	Goodwill, by Bus
30	Product Warranty Liability [Roll Forward]	Line item exists, then disc	dosure requi	NOT required, because line	item us-gaap:ProductWarrantyAccrua	I WAS NOT F	False	N/A	Product Warran
v 31	Long-term Debt Maturities [Roll Up]	Line item exists, then disc	losure requi	Required because line item	us-gaap:LongTermDebt was reported		True	CONSISTENT	Long-term Debt
32	Long-term Debt Maturities [Hierarchy]	Alternative representation	n	Not necessary, satisfied by	/ Long-term Debt Maturities [Roll Up] d	lisdosure	True	N/A	Long-term Debt
www.33m	Logg-term - to reserve by Instrument liver - but	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	المعادية ومعانس	Bunnico por anter the	www.en.zoutdes~retonolicoeo.zv	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	-True ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	CONSISTINT	-lang-to-below

If you scroll all the way down to the bottom you will notice that there are 70 line items in this validation result window. That represent all of the items within a machine-readable reporting checklist, also represented using XBRL definition relations⁵⁰.

The reporting checklist represents information about what disclosures are always required to be provided in a report, what disclosures are required if some specific line item is reported, alternative disclosures which can be used for some expected disclosure, and other such information.

⁵⁰ Human-readable reporting checklist rules with a link to the machine-readable version of the same rules, <u>http://xbrlsite.azurewebsites.net/2020/reporting-scheme/us-gaap/reporting-checklist/reporting-checklist-rules.html</u>

Note that if you click on the name of the disclosure (on the left), you navigate to the reporting checklist rules. If you click on the link to disclosure name (on the right), you navigate to the disclosure mechanics rules validation results. There, if you click on the "Representation Concept Detail" you will navigate to the actual disclosure within the report.

Again, we are just providing an overview here, so we will call this good for now.

2.4.2.STEP 3: View Online Validation Results

XBRL Cloud implements the reporting checklist slightly different than Pesseract. In Pesseract, the reporting checklist and disclosure mechanics are separate. XBRL Cloud puts the two reports together. You can see that same checklist here which looks as follows⁵¹:

Entity	Registrant Name: A	BC Company, Inc.					Documen	t Type:	1	0-К	
CIK:	(00000001					Fiscal Ye	ar / Period:	2	016 / FY	
Disclo	osures Found: 29 of 70 (41%)						Disclosu	res Consistent: 66	of 70 (94%)	Disclosures Inco	nsistent: 4 of 70 (6%)
Show	r: OAII OOnly Consistencies	Only Inconsiste	ncies Oonly R	Reported Oon	ly Not Repor	ted	□ Sho	w Level 1 Note Ar	nd Policy Conce	ept Columns	
1	Disclosure	Category	Level	Pattern	Applicable	Found	Disclosure Consistent	Representation Concept [TEXT BLOCK]	Representation Concept [DETAIL]	Checklist Category	Reason
1	Document Information [Hierarchy]	DOCUMENT	Level4Detail	HIERARCHY	True	True	CONSISTENT	NOT- EXPECTED	Document Fiscal Period Focus	Required disclosure	Disclosure always required
2	Document and Entity Information [Hierarchy]	DOCUMENT	Level4Detail	HIERARCHY	False	True	N/A	NOT- EXPECTED	NOT-FOUND	Alternative representation	Not necessary, satisfied by Document Information [Hierarchy] disclored
3	Entity Information, by Legal Entity [Hierarchy]	DOCUMENT	Level4Detail	HIERARCHY	True	True	CONSISTENT	NOT- EXPECTED	Entity Registrant Name	Required disclosure	Disclosure always required
4	Document and Entity Information [Hierarchy]	DOCUMENT	Level4Detail	HIERARCHY	False	<u>True</u>	N/A	NOT- EXPECTED	NOT-FOUND	Alternative representation	Nol necessary, satisfied by Entity Information, by Legal Entity [Hierarchy] disclosure
5	Balance Sheet	STATEMENT	Level4Detail	COMPONENT	True	True	CONSISTENT	NOT- EXPECTED	NOT- EXPECTED	Required disclosure	Disclosure always required, satisfied by Assets [Roll Up] and Liabiliti and Equity [Roll Up]
6	Assets [Roll Up]	STATEMENT	Level4Detail	ROLL UP	True	True	CONSISTENT	NOT- EXPECTED	Assets	Part of disclosure	Disclosure always required
7	Liabilities and Equity (Roll Up)	STATEMENT	Level4Detail	ROLL UP	True	True	CONSISTENT	NOT- EXPECTED	Liabilities and Equity	Part of disclosure	Disclosure always required
8	Income Statement, by Legal Entity (Ro Up)	STATEMENT	Level4Detail	ROLL UP	True	True	CONSISTENT	NOT- EXPECTED	Net Income (Loss), Including Portion Attributable to Noncontrolling Interest	Required disclosure	Disclosure always required

2.4.3. STEP 5: XASB Disclosure Mechanics and Reporting Checklist Validation Results

Close all of the Microsoft 10-K windows and we will now load the XASB prototype reporting scheme financial report and look at the disclosure mechanics and reporting checklist validation result.

On the menu ribbon, select the "Get Started" icon, then "Load", and then the "XASBbased Protoype Reporting Scheme (Demonstration)" report to load that report:

⁵¹ XBRL Cloud Reporting Checklist that is combined with the Disclosure Mechanics validation result, <u>http://xbrlsite.azurewebsites.net/2017/Prototypes/ReferenceImplementationSEC/Disclosure%20Mechanics</u> %20and%20Reporting%20Checklist.html



After you load the report, select "Report Validation Status" lower right hand icon to validate all of the categories of rules and when the validation is complete in less than a minute, you will see the following:

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O Network View Component View Bock View Filer Type Filer Level Filer Status Enter toor to filer Filer Level Filer Status Enter toor to filer Component Network Reporting Entity [Avis] 1224567890 http://regulator.gov/d Bas Statement: Financial Highlights Financial Highlights Report and and Machines/Entity [Avis] Report and and Machines/Entity [Avis] Bas Statement: Thrance Highlights Financial Highlights (Herner.V) Report Units [Avis] Report Oute [Avis] Bas Statement: Table/Component Final Financial Highlights (Herner.V) Report Units [Avis] Report Units [Avis] Bas Statement: Table/Component Final Financial Highlights (Herner.V) Report Units [Avis] 2010-01-01/2 Bas Statement: Toores Statement, Final Report Units [Avis] 2010-01-01/2 Report Units [Avis] 2010-01-01/2 Bas Statement: Toores Statement, Tavieg Per Share & Earrings Per Share & Share & Earrings Per Share & Earrings Per Share &	Components (56)		ß		Business Rules Struct	Business Rules Validation Re	esults 🛛 Eler 💶 🕨
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We are not going to repeat all the steps again. If you get lost simply go look at the Microsoft example again, repeat the steps if necessary until you are comfortable with the validation steps and navigating around in the documents that are provided.

What we want to point out in the XASB report is that there is a significantly higher correlation between the number of fact sets provided in the financial report and the rules provided to verify the disclosures. There are 133 fact sets in the report. There are 60 disclosures listed in the disclosure mechanics listing. Note that the disclosure mechanics listing has many disclosure that exist as Level 3 Disclosure Text Block and

as Level 4 Detail. In addition, there are 12 policies that exist in the fact sets but would not show up in the disclosure mechanics listing.

The point is that all of the pieces of the report can be accounted for. If all of the disclosures provided in an XBRL-based report are provided for and used by the disclosure mechanics validation result because the machine-readable rules exist, then 100% of the fact sets of a report can be verified to be consistent with the disclosure mechanics rules⁵²:

	Show more information											
ina	y Information											
	Disdosure	Category	Level	Pattern	Disdosure Found	Disclosure Consistent	Representation Concept [TEXT BLOCK]	Representation Concept DETAIL				
	1 Assets (Rol Up)	Unknown	Level4Detail	fre:RolUp	True	CONSISTENT	NOT-EXPECTED	Assets				
	2 Balance Sheet	Statement	Level4Detai	fro:Component	True	CONSISTENT						
	3 Basis of Reporting	Unknown	LevelsTextBlock	fro:TextBlock	True	CONSISTENT	Overall Pinancial Report Presentation and Display [HTML]	NOT-EXPECTED				
	4 Buildings [Roll Forward]	Unknown	Level3TextBlockAevel4Detai	fro:RolForward	True	CONSISTENT	Property, Plant, and Equipment Rol Forward [Schedule]	Buildings, Net				
	5 Business Segments	Unknown		fro:Component	False	CONSISTENT						
	6 Business Segments, Assets [Roll Up]	Unknown	Level3TextBlock/Level4Detail	fra:RolUp	True	CONSISTENT	Business Segments, Assets [Schedule]	Assets				
	7 Business Segments, Depreciation an	Unknown	Level3TextBlock/Level-Detail	freiRolUp	True	CONSISTENT	Business Segments, Depreciation and Amortization [Schedule]	Depreciation and Ameritzation				
	8 Business Segments, Liabilities [Rol Up]	Unknown	Level IT extilines it evel 40 et al	fra:Roll.in	True	CONSISTENT	Busness Segments, Liabilites [Schedule]	Labites				
	9 Business Segments, Other Informati	Unknown	Level3TextBlock/Level4Detail	fro:Herarchy	True	CONSISTENT	Business Segments, Other Information [Schedule]	Capital Additions				
	10 Business Segments, Result [Roll Up]	Linknown	Level3TextBlock/Level4Detail	fre:RolUp	True	CONSISTENT	Business Segments, Result [Schedule]	Net Income (Loss)				
	11 Business Segments, Revenues (Rol Up)	Unknaan	Level3TextBlock/Level4Detail	fraiBolUn	True	CONSISTENT	Business Segments, Revenues (Schedule)	Revenues, Net				
	12 Cash and Cash Equivalents Compone.		Level Textflock Level Octai	fra:RolUp	True	CONSISTENT	Cash and Cash Equivalents Components [Schedule]	Cash and Cash Equivalents				
	13 Cash Flow Statement, Direct Method	Unknown	Level-Detail	fre:RolUp	True	CONSISTENT	NOT-EXPECTED	Cash Flow, Net				
	14 Common Stock By Class	Unknown	Level3TextBlockLevel4Detail	fracilierarchy	True	CONSISTENT	Common Stock by Class [Schedule]	Common Stock				
	15 Director Compensation	Unknown	Level3TextBlock/Level4Detail	freiBallin	True	CONSISTENT	Directors Compensation (Schedule)	Director Salary, Bonuses, and Pees				
	16 Director Compensation, Options Gra		Level3TextBlockLevel4Detal	fraiHerarchy	True	CONSISTENT	Directors Compensation Options Granted [Schedule]	Director Options Granted, at Par Value				
	16 Director Compensation, Options Gra 17 Document Information	Unknown	Level4Detail	fro:Herarchy	True	CONSISTENT	NOT-EXPECTED	Document Title				
	18 Earnings Per Share Summary	Linknown	Level-Detail	fro:Hierarchy	True	CONSISTENT	NOT-EXPECTED	Earnings (Loss) per Share				
	19 Entity Address	Unknown	Level/Detail	frontierarchy	True	CONSISTENT	NOT-EXPECTED	Street 1				
	29 Entity Information	Unknown	LeveleDetai	froitherarchy	True	CONSISTENT	NOT-EXPECTED	Economic Foldty Name				
	20 Entity Information 21 Financial Highlights	Unknown	Level4Detail Level3TextBlock/Level4Detail	fro:Herarchy		CONSISTENT	NOT-EXPECTED Enancial Highlights (HTML)	Economic Entity Name Revenues, Net				
		Unknown	Level3TextBlock/Level4Detail Level3TextBlock/Level4Detail	fro:Hierarchy fro:RolForward	True	CONSISTENT		Revenues, Net Furniture and Extures, Net				
	22 Furniture and Fixtures [Roll Forward]	0.00.00101	Level3TextBlock/Level4Detail		True		Property, Plant, and Equipment Roll Forward [Schedule]					
1	23 Income Statement	Unknown		fre:RollUp	True	CONSISTENT		Net Income (Loss)				
	24 Income Tax Expense (Benefit) Comp		Level3TextBlock/Level4Detal	fre:RollUp	True	CONSISTENT	Income Tax Expense (Benefit) Components [Schedule]	Income Tax Expense (Benefit)				
	25 Inventory Components	Unknown	Level3TextBlock/Level4Detail	fro:RollUp	True	CONSISTENT	Inventory Components (Schedule)	Inventory				
	26 Investment	Unknown	Level3TextBlock/Level4Detail	fro:Hierarchy	True	CONSISTENT	Investments [Schedule]	Investments, at Cost				
	27 Land [Roll Forward]	Unknown	Level3TextBlock/Level4Detail	fro:RolForward	True	CONSISTENT	Property, Plant, and Equipment Roll Forward [Schedule]	Land				
	28 Leasehold, Land, and Building	Unknown	Level3TextBlock/Level4Detail	fro:Hierarchy	True	CONSISTENT	Leasehold Land and Buildings [Schedule]	Leasehold Land and Building, Value at Cost				
	29 Liabilities and Equity [Roll Up]	Unknown	Level4Detail	fro:RollUp	True	CONSISTENT	NOT-EXPECTED	Liabilities and Equity				
	30 Long-Term Debt Components	Unknown	Level3TextBlock/Level4Detail	frecRolUp	True	CONSISTENT	Long-Term Debt Components [Schedule]	Long-Term Debt				
	31 Long-Term Debt Current and Noncur	Unknown	Level3TextBlock/Level4Detail	fre:RollUp	True	CONSISTENT	Long-Term Debt Current and Noncurrent Breakdown (Schedule)	Long-Term Debt				
	32 Long-Term Debt Instruments	Unknown	Level3TextBlock/Level4Detail	froiHierarchy	True	CONSISTENT	Long-Term Debt Instruments [Schedule]	Debt Instrument, Description				
	33 Long-Term Debt Meturities	Unknown	Level3TextBlock/Level4Detail	fro:RolUp	True	CONSISTENT	Long-Term Debt Maturities (Schedule)	Long-Term Debt				
	34 Nature of Operations	Unknown	Level1TextBlock	fro:TextBlock	True	CONSISTENT	Nature of Business (HTML)	NOT-EXPECTED				
	35 Other Assets Current and Noncurren	Unknown	Level3TextBlock/Level4Detail	fre:RolUp	True	CONSISTENT	Other Assets, Current and Noncurrent Portion (Schedule)	Other Assets				
	36 Other Labilities Current and Noncurr	Unknown	Level3TextBlock/Level4Detail	fre:RolUp	True	CONSISTENT	Other Liabilities Current and Noncurrent Breakdown [Schedule]	Other Liabilities				
	37 Other Property, Plant, and Equipmen	. Unknown	Level3TextBlock/Level4Detail	fro:RolForward	True	CONSISTENT	Property, Plant, and Equipment Roll Forward [Schedule]	Other Property, Plant, and Equipment, Net				
	38 Payables and Accruais Components	Unknown	Level3TextBlock/Level4Detail	fre:RolUp	True	CONSISTENT	Payables and Accruals Components [Schedule]	Payables and Accruais				
	39 Preferred Stock Changes [Roll Forwa	Unknown	Level+Detail	fro:RolForward	True	CONSISTENT	NOT-EXPECTED	Preferred Stack				
	40 Preferred Stock, By Class	Unknown	Level3TextBlock/Level4Detail	fro:Hierarchy	True	CONSISTENT	Preferred Stock by Class [Schedule]	Preferred Stack				
	41 Prepad Expenses	Unknown	Level3TextBlock.Level4Detail	fra:RolUp	True	CONSISTENT	Prepaid Expenses Components [Scheck/e]	Prepaid Expenses				
	42 Property, Plant, and Ecupment Com		Level3TextBlockLevel4Detal	fre:RolUp	True	CONSISTENT	Property, Plant, and Equipment Components [Schedule]	Property, Plant and Equipment, Net				
	43 Property, Plant, and Equipment Est	Unknown	Level3TextBlockLevel4Cetal	fractierarchy	True	CONSISTENT	Property, Plant, and Equipment Estimated Useful Lives [Schedule]	Property, Plant and Equipment, Estimated Useful Life				
	44 Property, Plant, and Equipment Roll		Level3TextBlock/Level4Detal	fro:RolForward	True	CONSISTENT	Property, Plant, and Equipment Roll Forward [Schedule]	Property, Plant and Equipment, Net				
	45 Receivables Details, By Component	Unknown	Level3TextBlock/Level4Detail	fro:RollUp	True	CONSISTENT	Receivables, by Component (Schedule)	Receivables, Net, Current				
	46 Receivables Details, Dy Component 46 Receivables Details, Current and No	Unknown	Level3TextBlockLevel4Detai	fro:RolUp	True	CONSISTENT	Receivables, Current and Noncurrent (Schedule)	Receivables, Net				
	46 Receivables Details, Current and No 47 Receivables Details, Gross, Net	Unknown	Level3TextBlockLeverUetal	fre:RolUp		CONSISTENT	Receivables, Current and Noncurrent (schedule) Receivables, Net and Gross (Schedule)	Receivables, Net				
		Unknown			True							
	48 Reconciliation of Cash Summary	Crist Street	Level3TextBlock/Level4Detal	fre:RolUp	True	CONSISTENT	Reconcilation of to Cash Flow Statement, Summary [Schedule]	Cash and Cash Equivalents, per Cash How Statement				
	49 Recording Item of Cash and Cash E		Level3TextBlock/Level4Detail	frotHerarchy	True	CONSISTENT	Reconcilation of to Cash Flow Statement, Detail (Schedule)	Recording Item, Amount				
	50 Related Party	Unknown	Level3TextBlock/Level4Detail	fro:Herarchy	True	CONSISTENT	Related Parties [Schedule]	Related Party, Nature of Relationship				
	51 Related Party Transaction	Unknown	Level3TextBlock/Level4Detail	frottlerarchy	True	CONSISTENT	Related Party Trasactions (Schedule)	Related Party Transaction, Amount				
	52 Sales Analysis, by Customer	Unknown	Level3TextBlock/Level4Detail	fro:Hierarchy	True	CONSISTENT	Sales Analysis by Customer [Schedule]	Revenues, Net				
	53 Share Ownership Plan Stock Options		Level3TextBlock/Level4Detail	fro:RolForward	True	CONSISTENT	Share Options Outstanding Roll Forward [Schedule]	Share Ownership Plan, Share Options Outstanding				
	54 Significant Accounting Policies	Unknown	Level ITextBlock	fro:TextBlock	True	CONSISTENT	Significant Accounting Policies (Note)	NOT EXPECTED				
	55 Statement of Changes in Equity	Unknown	Level+Detail	fro:RollForward	True	CONSISTENT	NOT-EXPECTED	Equity				
	56 Statement of Changes in Equity, Co	Unknown	Level3TextBlock/Level4Detail	fro:RolForward	True	CONSISTENT	Common Stock Shares Outstanding Roll Porward [Schedule]	Common Stock, Shares Outstanding				
	57 Statement of Changes in Equity, Pre	Unknown	Level3TextBlock/Level4Detail	fro:RolForward	True	CONSISTENT	Preferred Stock Shares Outstanding Roll Forward [Schedule]	Preferred Stock, Shares Outstanding				
1	58 Statement of Changes in Eguity, Pric	Unknown	Level4Detail	fro:Adjustment	True	CONSISTENT	NOT-EXPECTED	Retained Earnings (Accumulated Losses)				
3	59 Subsequent Event	Unknown	Level3TextBlock/Level4Detail	frottlerarchy	True	CONSISTENT	Subsequent Events (Schedule)	Subsequent Event, Description				
8	60 Variance Analysis Gross Profit	Unknown	Level3TextBlockLevel4Detal	fre:Roll In	True	CONSISTENT	Variance Analysis [Schedule]	Gross Profit (Loss)				

This is similarly the case for the reporting checklist validation.

Explore the validation results of the XASB report!

⁵² Pesseract disclosure mechanics validation result, <u>http://xbrlsite.azurewebsites.net/2016/conceptual-model/reporting-scheme/xasb/taxonomy/Validation_DisclosureMechanics.jpg</u>