

Financial Report Creation Proof

Rigorously and methodically¹ verifying the precision and coverage of an XBRL-based financial report

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“He who loves practice without theory is like the sailor who boards a ship without a rudder and compass and never knows where he may cast.” *Leonardo da Vinci*

Executive summary:

- A financial report must be proven to be a properly functioning logical system.
- With paper or “e-paper” based reports that process MUST be human oriented (i.e., little to no automation) because software applications cannot read paper or e-paper based reports effectively (i.e., HTML, PDF, word processor documents)
- But with the structure XBRL provides; financial reports can be machine readable and therefore automation of the report construction process can be effectively automated.
- An expert system for creating financial reports is a construction-type expert system that only lets accountants create ONLY properly functioning financial reports.
- The construction-type expert system for creating financial reports is controlled by machine-readable rules that are represented using the global standard XBRL.
- This document shows how to provide a proof that verifies a financial report is a properly functioning logical system.

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

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Old technologies are making it increasingly difficult to keep up with today's fast paced information exchange. New technologies such as structured information, knowledge graphs, artificial intelligence, and digital distributed ledgers offer significant and compelling opportunities to make accounting, reporting, auditing, and analysis tasks and processes more efficient and effective.

Automation is about removing friction, driving costs down, speeding processes up, and improving efficiency and productivity. Automation is about improving processes in order to deliver goods and services that are better for less cost. Automation is about effective human-machine collaboration. Automation is about reducing the mechanical, monotonous, routine tasks that humans need to perform and letting computers take over those repetitive tasks so that humans focus on the higher value add tasks that they perform best.

With effective automation repeatable processes that are reliable because the processes can be controlled thus achieving verifiable high-quality of complicated information such as financial information. This control results in effective automation. With the implementation of self-service rules, accounting professionals can control their processes. Rules provide control; control leads to high-quality; high-quality enables effective, reliable automation.

The purpose of this document is to explain how to rigorously and methodically verify that an XBRL-based financial report is a properly functioning logical system. The synopsis is that you:

1. Verify that each fragment of the report is properly functioning.
2. Verify that there are no conflicts or contradictions between report fragments.

A basic XBRL-based financial report is used to explain the things that need to be considered so that you can prove to yourself that such a report is a properly functioning logical system.

Rules that Control

Rules provide control. There are several ways rules can be provided that enable the control. Rules can be referenced directly within an XBRL-based report. An example of this is provided by Pacioli²:

```
% FRF for SMEs - All rules attached including model structure %  
checkReport3("http://xbrlsite.com/2022/master-dynamic/reference-implementation/instance-  
WithRulesAttached-ALLRULES2.xml",  
[], [valueAssertionsCanDerive, doNOTaddFACzeros, saveToIPFS, extendedJSON , cacheValidity(3600)],  
Result, IPFSlink).
```

² Auditchain, *Pacioli Power User Tool*, <https://pacioli.auditchain.finance/tools/PowerUserTool.swinb>

Rules are automatically loaded because the rules are referenced directly by the XBRL based financial report. Here is the result from Pacioli's verification of the report:

<https://ipfs.infura.io/ipfs/QmYzQ7B3HsMiiKTX8zETsvGaB1fkhhkLPpy9JURZZToHcQ>

Pesseract³, which is a working proof of concept tool for viewing and verifying XBRL-based reports also has an approach for loading rules that are explicitly attached to an XBRL-based financial report: (note that a different report is used because Pesseract has a bug related to including model structure verification rules)

<http://xbrlsite.com//2022/master-dynamic/reference-implementation/instance-WithRulesAttached.xml>

	Available in Cache
<input checked="" type="checkbox"/> Model structure validation rules: <input type="text"/>	
<input checked="" type="checkbox"/> Fundamental accounting concept rules: <input type="text" value="http://xbrlsite.com//2022/master-dynamic/fac/ReportingStyles/FRFSME-BSC-IS01-CF1_schema.xsd"/>	No
<input checked="" type="checkbox"/> Reporting checklist rules: <input type="text" value="http://xbrlsite.com//2022/master-dynamic/reporting-checklist/reporting-checklist-rules-def.xml"/>	No
Disclosure mechanics rules: <input type="text" value="http://xbrlsite.com//2022/master-dynamic/disclosure-mechanics/disclosure-mechanics.xsd"/>	No
<input checked="" type="checkbox"/> Type or class relations <input type="text" value="http://xbrlsite.com//2022/master-dynamic/type-class/type-class-DisallowedRollUpRelations-rules-def.xml"/>	No

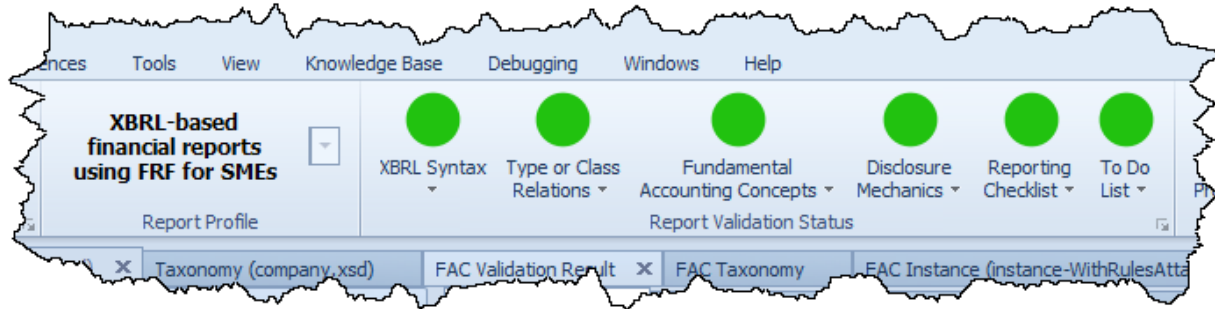
Report Verification Results

Both Pesseract and Pacioli provide batch processes that enable a report to be tested to see if the report is a properly functioning XBRL-based financial report. Here is a summary of the Pesseract report verification results:

³ Pesseract, <http://pesseract.azurewebsites.net>

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Similarly, Pacioli provides summary verification results⁴:

		TERMS		
		Mappings		
		FACTS (technical listing)		
		Type-subtype graph		
		Type-subtype table		
		Model Structure Validation		
1	1001 - Document - Document Information	Structures	Facts	Pivots
2	1002 - Document - Entity Information	Structures	Facts	Pivots
3	2001 - Statement - Balance Sheet	Structures	Facts	Pivots
4	2001.1 - Statement - Balance Sheet (Parenthetical), Classes of Common Stock	Structures	Facts	Pivots
5	2002 - Statement - Income Statement	Structures	Facts	Pivots
6	2003 - Statement - Cash Flow Statement	Structures	Facts	Pivots
7	4001 - Disclosure - Property, Plant, and Equipment Components	Structures	Facts	Pivots
8	FAC: 001-General Information	Structures	Facts	Pivots
9	FAC: 101-Statement of Financial Position, Classified (BSC)	Structures	Facts	Pivots
10	FAC: 201 Statement of Operations	Structures	Facts	Pivots
11	FAC: 211-Net Income (Loss) Breakdown	Structures	Facts	Pivots
12	FAC: 401-Statement of Cash Flow (CF1)	Structures	Facts	Pivots
13	FAC: 411.1-Net Cash Flow Breakdown	Structures	Facts	Pivots
14	FAC: 701.2-Validation Results	Structures	Facts	Pivots
		Graph of reasoning		
		Blocks		
		Blocks Graph		
		Metaverse (preliminary)		
		Derivation Rules		
		Calculations		
		Value Assertions		
	All Rules	Existence Assertions		
		Disclosure Mechanics rules		
		Report Checklist Rules		
		Messages		

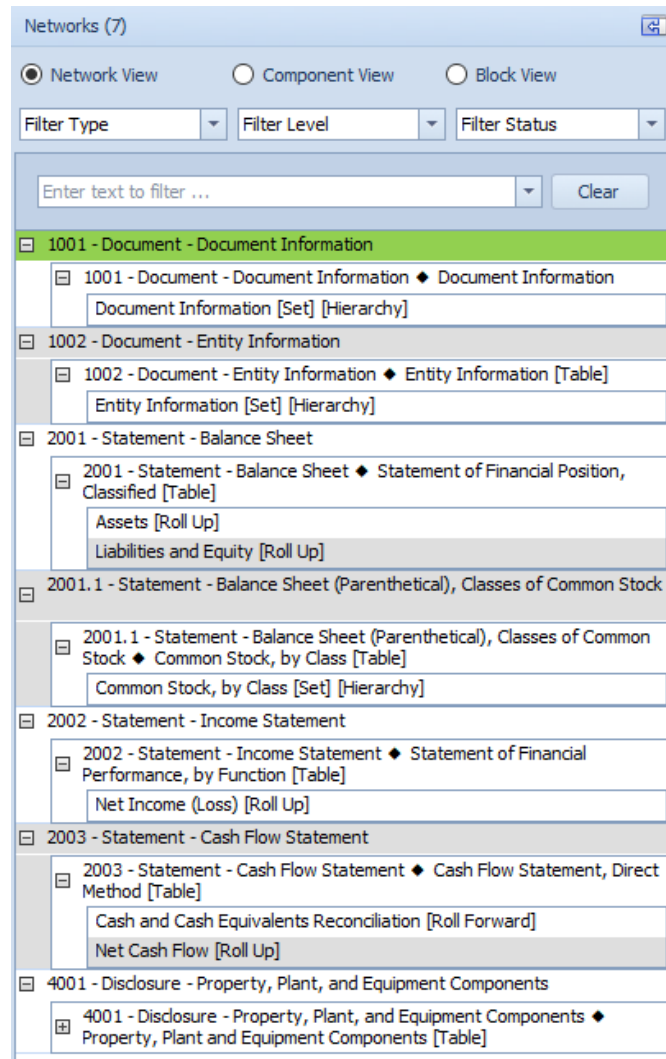
⁴ Pacioli Verification Results, <https://bafybeie6ibw5zkbhv5fv2fwcc5gpa5xubeg5ohftw2hzdllhoti5mnn6cu.ipfs.infura-ipfs.io/>

Working with Report Fragments

There are several approaches to working with the fragments of a financial report that has been represented using XBRL. Both Pacioli and Pesseract offer four breakdowns of those report fragments:

- Networks (tends to be technical oriented)
- Components (tends to be technical, a component is a Network + a Hypercube)
- Blocks (tends to be logically oriented)
- Disclosures (tends to be logically and accounting oriented)

When creating a report, the report creator (a) tries to construct each report fragment correctly and (b) tries to not have contradictions or inconsistencies between report fragments. Both Pesseract and Pacioli provide all four views of the fragments of a financial report outlined above.



Set of Fact Sets within an XBRL-based Report

From a presentation perspective, an XBRL-based report can be viewed as a set of XBRL networks and/or a set of networks/tables.

But from the perspective of the representation of information, the least common denominator is the **fact set** (a.k.a. Block)⁵. Here are the set of fact sets (i.e. blocks) for the report we are endeavoring to prove that are properly functioning to show that the entire report is properly functioning:

The screenshot shows a software interface titled 'Blocks (9)'. It has three radio buttons: 'Network View', 'Component View', and 'Block View' (which is selected). Below these are three dropdown menus for 'Filter Type', 'Filter Level', and 'Filter Status'. A search bar with the placeholder 'Enter text to filter ...' and a 'Clear' button is present. The main list contains the following items:

- Document Information [Set] [Hierarchy] (highlighted in green)
- Entity Information [Set] [Hierarchy]
- Assets [Roll Up]
- Liabilities and Equity [Roll Up]
- Common Stock, by Class [Set] [Hierarchy]
- Net Income (Loss) [Roll Up]
- Cash and Cash Equivalents Reconciliation [Roll Forward]
- Net Cash Flow [Roll Up]
- Property, Plant, and Equipment, Net, Components [Roll Up]

Below the list is a 'Block Properties' section with the following details:

Component	1001 - Document - Document Infor...
Abstract	Document Information [Line Items]
Concept Arrangement Pattern	Hierarchy
Member Aggregation Pattern	
Name	frf-sme:DocumentInformationSet
Label	Document Information [Set] [Hierar...
Disclosure	disclosures:DocumentInformation
Confidence	HIGH
Status	InProgress

As can be seen, there are a total of nine fact sets that need to be proven to be correct. Further, it is also important to be sure that the information represented within one fact set does not contradict information reported within other fact sets.

⁵ Charles Hoffman, CPA, *Narrative Explaining Logical Conceptualization of a Financial Report*, <http://xbrlsite.azurewebsites.net/2019/Framework/NarrativeConceptualization.pdf>

Disclosure Mechanics

One aspect of proving that a report is properly functioning is to prove that each fact set is properly functioning per a set of disclosure mechanics rules for each fact set. We will start by proving the first fact set and then iteratively prove each of the nine different fact sets within this XBRL-based report.

(1) Document Information [Set]

A set of disclosure mechanics rules are provided for the document information fact set. The report is consistent with those disclosure mechanics rules.

#	Disclosure	Category	Level	Pattern	Disclosure Found	Disclosure Consistent	Applicable	Representation Concept [TEXT BLOCK]	Representation Concept DETAIL
4	Document Information	Unknown	Level4Detail	Hierarchy	True	CONSISTENT	True	NOT-EXPECTED	Document Title

Rules	Line of Reasoning
This disclosure: discloses:DocumentInformation	
- MUST be represented using the Hypercube/[Table] named: frf-sme:DocumentInformationTable	
- MUST be represented as a Level 4 Disclosure Detail with the concept arrangement pattern: cm:Hierarchy	
- cm:Hierarchy REQUIRES concept: frf-sme:DocumentTitle	
- The Hierarchy MUST contain the Level 4 Detailed Concept: frf-sme:ReportingStyleCode	
- The Hierarchy MUST contain the Level 4 Detailed Concept: frf-sme:BalanceSheetDate	
- The Hierarchy MUST contain the Level 4 Detailed Concept: frf-sme:IncomeStatementPeriod	

This is the rendering of this fact set:

Reporting Entity [Axis]	GH259400TOMPUOLS65II http://standards.iso.org/iso/17442
Legal Entity [Axis]	Consolidated Entity [Member]
Period [Axis]	2020-01-01/2020-12-31
Unit [Axis]	
Drop Column Fields Here	
Document Information [Line Items]	Fact Value
Document Information [Set]	
Reporting Style Code	FRFSME-BSC-IS01-CF1
Document Title	Financial Statement
Balance Sheet Date	2020-12-31
Income Statement Period	2020-01-01
Document Identifier	1234567890-0987654321
Document Description	General purpose financial report
Document Creator	Charles Hoffman, CPA
Document Language	English
Document Fiscal Period Focus	FY
Document Fiscal Year Focus	2020

(2) Entity Information [Set]

A set of disclosure mechanics rules are provided for the entity information fact set. The report is consistent with those disclosure mechanics rules.

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Primary Information									
#	Disclosure	Category	Level	Pattern	Disclosure Found	Disclosure Consistent	Applicable	Representation Concept [TEXT BLOCK]	Representation Concept DETAIL
5	Entity Information	Unknown	Level4Detail	Hierarchy	True	CONSISTENT	True	NOT-EXPECTED	Economic Entity Name

Rules	Line of Reasoning
This disclosure: disclosures:EntityInformation	
- MUST be represented using the Hypercube/Table named: frf-sme:EntityInformationTable	
- MUST be represented as a Level 4 Disclosure Detail with the concept arrangement pattern: cm:Hierarchy	
- cm:Hierarchy REQUIRES concept: frf-sme:EconomicEntityName	
- The Hierarchy MUST contain the Level 4 Detailed Concept: frf-sme:EconomicEntityIdentifier	

This is the rendering of this fact set:

Reporting Entity [Axis]	GH259400TOMPUOLS65II http://standards.iso.org/iso/17442	
Legal Entity [Axis]	Consolidated Entity [Member]	
Period [Axis]	2020-01-01/2020-12-31	
Unit [Axis]		
Drop Column Fields Here		
Entity Information [Line Items]	Fact Value	
Entity Information [Set]		
Economic Entity Name	Sample Company	
Economic Entity Identifier	GH259400TOMPUOLS65II	

(3) Assets [Roll Up]

A set of disclosure mechanics rules are provided for the assets roll up fact set. The report is consistent with those disclosure mechanics rules.

#	Disclosure	Category	Level	Pattern	Disclosure Found	Disclosure Consistent	Applicable	Representation Concept [TEXT BLOCK]	Representation Concept DETAIL
1	Assets Roll Up	Unknown	Level4Detail	RollUp	True	CONSISTENT	True	NOT-EXPECTED	Assets

Rules Line of Reasoning

This disclosure: disclosures:AssetsRollUp

- MUST be represented using the Hypercube/Table named: frf-sme:StatementOfFinancialPositionClassifiedTable
- MUST be represented as a **Level 4 Disclosure Detail** with the concept arrangement pattern: cm:RollUp
- cm:RollUp REQUIRES total: frf-sme:Assets

This is the rendering of this fact set:

Reporting Entity [Axis]	GH259400TOMPUOLS65II http://standards.iso.org/iso/17442	
Reporting Scenario [Axis]	Actual [Member]	
Legal Entity [Axis]	Consolidated Entity [Member]	
Unit [Axis]	USD	
	Period [Axis] ▼	
Statement of Financial Position, Classified [Line Items]	2020-12-31	2019-12-31
Assets [Roll Up]		
Current Assets [Roll Up]		
Cash and Cash Equivalents	0	1,000
Receivables, Net, Current	2,000	1,000
Inventory	1,000	1,000
Prepaid Expenses	500	500
Other Current Assets	1,500	1,500
Current Assets, Total	5,000	5,000
Noncurrent Assets [Roll Up]		
Property, Plant, and Equipment, Net, Total	4,000	4,000
Investment in Unconsolidated Subsidiaries and Nonproportionally Consolidated Joint Ventures	0	0
Other Noncurrent Assets	3,000	1,000
Noncurrent Assets, Total	7,000	5,000
Assets, Total	12,000	10,000

Note that the fragment is created consistently with the disclosure mechanics rules and that the mathematical computations are as expected as can be seen by the GREEN coloring of the cells that contain mathematical computations, in this case roll ups.

(4) Liabilities and Equity [Roll Up]

A set of disclosure mechanics rules are provided for the liabilities and equity roll up fact set. The report is consistent with those disclosure mechanics rules.

Primary Information									
#	Disclosure	Category	Level	Pattern	Disclosure Found	Disclosure Consistent	Applicable	Representation Concept [TEXT BLOCK]	Representation Concept DETAIL
6	Liabilities and Equity ...	Unknown	Level4Detail	RollUp	True	CONSISTENT	True	NOT-EXPECTED	Liabilities and Equity
Rules Line of Reasoning This disclosure: disclosures:LiabilitiesAndEquityRollUp - MUST be represented using the Hypercube/[Table] named: frf-sme:StatementOfFinancialPositionClassifiedTable - MUST be represented as a Level 4 Disclosure Detail with the concept arrangement pattern: cm:RollUp - cm:RollUp REQUIRES total: frf-sme:LiabilitiesAndEquity									

This is the rendering of this fact set:

Reporting Entity [Axis]	GH259400TOMPUOLS65II http://standards.iso.org/iso/17442	
Reporting Scenario [Axis]	Actual [Member]	
Legal Entity [Axis]	Consolidated Entity [Member]	
Unit [Axis]	USD	
Period [Axis] ▼		
Statement of Financial Position, Classified [Line Items]	2020-12-31	2019-12-31
Liabilities and Equity [Roll Up]		
Liabilities [Roll Up]		
Current Liabilities [Roll Up]		
Payables from Exchange Transactions	3,000	3,000
Long-Term Debt, Current	1,000	1,000
Other Current Liabilities	1,000	1,000
Current Liabilities, Total	5,000	5,000
Noncurrent Liabilities [Roll Up]		
Long-Term Debt, Noncurrent	500	500
Other Noncurrent Liabilities	500	500
Noncurrent Liabilities, Total	1,000	1,000
Liabilities, Total	6,000	6,000
Equity [Roll Up]		
Equity Attributable to Controlling Interest [Roll Up]		
Common Stock	1,000	1,000
Retained Earnings (Accumulated Deficits)	3,000	2,000
Equity Attributable to Controlling Interest	4,000	3,000
Equity Attributable to Noncontrolling Interest	2,000	1,000
Equity	6,000	4,000
Liabilities and Equity, Total	12,000	10,000

(5) Common Stock, by Class [Set]

A set of disclosure mechanics rules are provided for the common stock by class fact set. The report is consistent with those disclosure mechanics rules.

#	Disclosure	Category	Level	Pattern	Disclosure F...	Disclosure Consi...	Applicable	Representation Concept [TEXT BLOCK]	Representation Concept DETAIL
9	Share Capital by ...	Unknown	Level4Detail	Hierarchy	True	CONSISTENT	True	NOT-EXPECTED	Common Stock

Rules Line of Reasoning

This disclosure: disclosures:ShareCapitalByClass

- MUST be represented using the Hypercube/[Table] named: frf-sme:CommonStockByClassTable
- MUST be represented using the Axis named: frf-sme:ClassOfCommonStockAxis
- MUST be represented as a **Level 4 Disclosure Detail** with the concept arrangement pattern: cm:Hierarchy
- cm:Hierarchy REQUIRES concept: frf-sme:CommonStock

This is the rendering of this fact set:

Reporting Entity [Axis]		GH259400TOMPULS65II http://standards.iso.org/iso/17442					
Reporting Scenario [Axis]		Actual [Member]					
Legal Entity [Axis]		Consolidated Entity [Member]					
Period [Axis]		2020-12-31			2019-12-31		
Class of Common Stock [Axis]							
Common Stock, by Class [Line It...	Unit [Axis]	Class A Common Stock [Member]	Class B Common Stock [Member]	All Classes of Common Stock [Member]	Class A Common Stock [Member]	Class B Common Stock [Member]	All Classes of Common Stock [Member]
Common Stock, by Class [Set]							
Common Stock, Par Value per Share	pure	1	1		1	1	
Common Stock, Share Subscriptions	shares	10,000	10,000		10,000	10,000	
Common Stock, Shares Authorized	shares	10,000	10,000		10,000	10,000	
Common Stock, Shares Issued	shares	10,000	10,000		10,000	10,000	
Common Stock, Shares Outstanding	shares	3,000	3,000		3,000	3,000	
Common Stock	USD	500	500	1,000	500	500	1,000

(6) Net Income (Loss) [Roll Up]

A set of disclosure mechanics rules are provided for the net income (loss) roll up fact set. The report is consistent with those disclosure mechanics rules.

#	Disclosure	Category	Level	Pattern	Disclosure ...	Disclosure Con...	Applic...	Representation Concept [TEXT BLOCK]	Representation Concept DETAIL
10	Statement of Financial Perform...	Unknown	Level4Detail	RollUp	True	CONSISTENT	True	NOT-EXPECTED	Net Income (Loss)

Rules Line of Reasoning

This disclosure: disclosures:StatementOfFinancialPerformanceByFunction
 - MUST be represented using the Hypercube/[Table] named: frf-sm:StatementOfFinancialPerformanceByFunctionTable
 - MUST be represented as a **Level 4 Disclosure Detail** with the concept arrangement pattern: cm:RollUp
 - cm:RollUp REQUIRES total: frf-sm:NetIncomeLoss

This is the rendering of this fact set:

Reporting Entity [Axis]	GH259400TOMPUOLS65II http://standards.iso.org/iso/17442	
Reporting Scenario [Axis]	Actual [Member]	
Legal Entity [Axis]	Consolidated Entity [Member]	
Unit [Axis]	USD	
	Period [Axis] ▼	
Statement of Operations [Line Items]	2020-01-01/2020-12-31	
Net Income (Loss) [Roll Up]		
Income (Loss) from Continuing Operations [Roll Up]		
Income (Loss) from Continuing Operations Before Tax [Roll Up]		
Revenue, Net [Roll Up]		
Sales Revenue, Net	5,000	6,000
Services Revenue, Net	1,000	1,000
Other Revenue, Net	1,000	1,000
Revenue, Net	7,000	8,000
Expenses [Roll Up]		
Cost of Sales	3,000	8,000
Cost of Services	1,000	1,000
Operating Expenses	1,000	1,000
Nonoperating Expenses	1,000	1,000
Expenses	6,000	11,000
Income (Loss) from Continuing Operations Before Tax	1,000	(3,000)
Income Tax Expense (Benefit)	500	1,000
Income (Loss) from Continuing Operations After Tax	500	(4,000)
Income (Loss) from Discontinued Operations	0	0
Net Income (Loss)	500	(4,000)

(7) Net Cash Flow [Roll Up]

A set of disclosure mechanics rules are provided for the net cash flow roll up fact set. The report is consistent with those disclosure mechanics rules.

#	Disclosure	Category	Level	Pattern	Disclosure ...	Disclosure Con...	Applic...	Representation Concept [TEXT BLOCK]	Representation Concept DETAIL
7	Net Cash Flow Roll Up	Unknown	Level4Detail	RollUp	True	CONSISTENT	True	NOT-EXPECTED	Net Cash Flow

Rules Line of Reasoning

This disclosure: disclosures:NetCashFlowRollUp

- MUST be represented as a **Level 4 Disclosure Detail** with the concept arrangement pattern: cm:RollUp
- cm:RollUp REQUIRES total: frf-sme:NetCashFlow
- MUST be represented using the Hypercube/Table named: frf-sme:CashFlowStatementDirectMethodTable

This is the rendering of this fact set:

Reporting Entity [Axis]	GH259400TOMPUOLS65II http://standards.iso.org/iso/17442	
Reporting Scenario [Axis]	Actual [Member]	
Legal Entity [Axis]	Consolidated Entity [Member]	
Unit [Axis]	USD	
Period [Axis]	2020-01-01/2020-12-31	
Cash Flow Statement, Direct Method [Line Items]	2020-01-01/2020-12-31	2019-01-01/2019-12-31
Net Cash Flow [Roll Up]		
Net Cash Flows from Operating Activities [Roll Up]		
Proceeds from Taxation	1,000	6,000
Payments of Employee Costs	(1,000)	(1,000)
Payments of Interest	(1,000)	(1,000)
Net Cash Flow from (used in) Operating Activities	(1,000)	4,000
Net Cash Flows from Investing Activities [Roll Up]		
Payments for Purchases of Property, Plant, and Equipment	(1,000)	(2,000)
Proceeds from Sale of Property, Plant, and Equipment	3,000	1,000
Net Cash Flows from (used in) Investing Activities	2,000	(1,000)
Net Cash Flows from Financing Activities [Roll Up]		
Proceeds from Additional Borrowings	1,000	2,000
Repayment of Borrowings	(3,000)	(1,000)
Net Cash Flows from (used in) Financing Activities	(2,000)	1,000
Net Cash Flow	(1,000)	4,000

(8) Cash and Cash Equivalents [Roll Forward]

A set of disclosure mechanics rules are provided for the cash and cash equivalents roll forward fact set. The report is consistent with those disclosure mechanics rules.

x "Cash and Cash Equivalents" Find Clear									
Primary Information									
#	Disclosure	Category	Level	Pattern	Disclosure ...	Disclosure Con...	Applic...	Representation Concept [TEXT BLOCK]	Representation Concept DETAIL
2	Cash and Cash Equivalents Roll...	Unknown	Level4Detail	RollFor...	True	CONSISTENT	True	NOT-EXPECTED	Cash and Cash Equivalents
Rules Line of Reasoning This disclosure: disclosures:CashAndCashEquivalentsRollForward - MUST be represented as a Level 4 Disclosure Detail with the concept arrangement pattern: cm:RollForward - cm:RollForward REQUIRES beginning/ending balance: frf-sme:CashAndCashEquivalents - MUST be represented using the Hypercube/[Table] named: frf-sme:CashFlowStatementDirectMethodTable									

This is the rendering of this fact set:

Reporting Entity [Axis]	GH259400TOMPUOLS65II http://standards.iso.org/iso/17442	
Reporting Scenario [Axis]	Actual [Member]	
Legal Entity [Axis]	Consolidated Entity [Member]	
Unit [Axis]	USD	
	Period [Axis] ▼	
Cash Flow Statement, Direct Method [Line Items]	2020-01-01/2020-12-31	2019-01-01/2019-12-31
Cash and Cash Equivalents Reconciliation [Roll Forward]		
Cash and Cash Equivalents, Beginning Balance	1,000	(3,000)
Net Cash Flow	(1,000)	4,000
Cash and Cash Equivalents, Ending Balance	0	1,000

(9) Property, Plant, and Equipment [Roll Up]

A set of disclosure mechanics rules are provided for the property, plant, and equipment roll up fact set. The report is consistent with those disclosure mechanics rules.

#	Disclosure	Category	Level	Pattern	Disclosure ...	Disclosure Con...	Applic...	Representation Concept [TEXT BLOCK]	Representation Concept DETAIL
8	Property, Plant, and Equipmen...	Unknown	Level4Detail	RollUp	True	CONSISTENT	True	NOT-EXPECTED	Property, Plant and Equipment, Net

Rules	Line of Reasoning
This disclosure: discloses:PropertyPlantAndEquipmentNetSubclassificationsAlternative	
- MUST be represented using the Hypercube/[Table] named: frf-sm:PropertyPlantEquipmentComponentsTable	
- MUST be represented as a Level 4 Disclosure Detail with the concept arrangement pattern: cm:RollUp	
- cm:RollUp REQUIRES total: frf-sm:PropertyPlantAndEquipmentNet	

This is the rendering of this fact set:

Reporting Entity [Axis]	GH259400TOMPUOLS65II http://standards.iso.org/iso/17442	
Reporting Scenario [Axis]	Actual [Member]	
Legal Entity [Axis]	Consolidated Entity [Member]	
Unit [Axis]	USD	
	Period [Axis] ▼	
Property, Plant and Equipment Components [Line Items]	2020-12-31	2019-12-31
Property, Plant, and Equipment, Net, Components [Roll Up]		
Land	1,000	1,000
Buildings, Net	1,000	1,000
Furniture and Fixtures, Net	1,000	1,000
Machinery, Net	1,000	1,000
Property, Plant and Equipment, Net	4,000	4,000

Continuity Cross Checks of Fundamental Accounting Concept Relations

The FASB defines 10 classes of elements of a financial statement: assets, liabilities, equity, comprehensive income, investments by owners, distributions to owners, revenues, expenses, gains, and losses.

Each of these elements is related to other elements in specific way. These three equations explain those relationships:

1. Assets = Liabilities + Equity (i.e. the accounting equation)
2. Comprehensive Income = Revenues - Expenses + Gains – Losses
3. $0 = (\text{Equity}^{T0} + \text{Revenue}^{P1} - \text{Expenses}^{P1} + \text{Gains}^{P1} - \text{Losses}^{P1} + \text{InvestmentsByOwners}^{P1} - \text{DistributionsToOwners}^{P1}) + \text{Liabilities}^{T1} - \text{Assets}^{T1}$

T0 is the beginning balance of balance sheet accounts, P1 is the current period, and T1 is the ending balance of balance sheet accounts.

These fundamental relationships never change. A reporting economic entity might instantiate an item that reports information about the elements, but they (a) cannot change the meaning of the fundamental elements the FASB has defined or (b) contradict the core relationship between the elements.

A set of fundamental accounting concept relations mapped to the elements of a financial statement must not be inconsistent with or contradict these elements and relations.

Entity	Period	ID	Test	Result	Amount...	Evaluation
GH2594...	2020-FY	FAC_CONSISTE...	fac:Equity = (fac:EquityAttributableToParent + fac:EquityAttributableToNoncontrollingInterest)	True	0	fac:Equity[frf-sme:Equity[6,000]] = (fac:EquityAttributableToParent[frf-sme:EquityAttributableToControllingInterest[4,000]] + fac:EquityAttributableToNoncontrollingInterest[frf-sme:EquityAttributableToNoncontrollingInterest[2,000]])
GH2594...	2020-FY	FAC_CONSISTE...	fac:IncomeLossFromContinuingOperationsAfterTax = (fac:IncomeLossFromContinuingOperationsBeforeTax - fac:IncomeTaxExpenseBenefit)	True	0	fac:IncomeLossFromContinuingOperationsAfterTax[frf-sme:IncomeLossFromContinuingOperationsAfterTax[500]] = (fac:IncomeLossFromContinuingOperationsBeforeTax[frf-sme:IncomeLossFromContinuingOperationsBeforeTax[1,000]] - fac:IncomeTaxExpenseBenefit[frf-sme:IncomeTaxExpenseBenefit[500]])
GH2594...	2020-FY	FAC_CONSISTE...	fac:NetIncomeLoss = (fac:IncomeLossFromContinuingOperationsAfterTax + fac:IncomeLossFromDiscontinuedOperationsNetOfTax)	True	0	fac:NetIncomeLoss[frf-sme:NetIncomeLoss[500]] = (fac:IncomeLossFromContinuingOperationsAfterTax[frf-sme:IncomeLossFromContinuingOperationsAfterTax[500]] + fac:IncomeLossFromDiscontinuedOperationsNetOfTax[frf-sme:IncomeLossFromDiscontinuedOperations[0]])
GH2594...	2020-FY	FAC_CONSISTE...	fac:NetIncomeLoss = (fac:NetIncomeLossAttributableToParent + fac:NetIncomeLossAttributableToNoncontrollingInterest)	True	0	fac:NetIncomeLoss[frf-sme:NetIncomeLoss[500]] = (fac:NetIncomeLossAttributableToParent[500] + fac:NetIncomeLossAttributableToNoncontrollingInterest[0])
GH2594...	2020-FY	FAC_CONSISTE...	fac:Assets = fac:LiabilitiesAndEquity	True	0	fac:Assets[frf-sme:Assets[12,000]] = fac:LiabilitiesAndEquity[frf-sme:LiabilitiesAndEquity[12,000]]
GH2594...	2020-FY	FAC_CONSISTE...	fac:NetCashFlow = (fac:NetCashFlowFromOperatingActivities + fac:NetCashFlowFromInvestingActivities + fac:NetCashFlowFromFinancingActivities)	True	0	fac:NetCashFlow[frf-sme:NetCashFlow[(1,000)]] = (fac:NetCashFlowFromOperatingActivities[frf-sme:NetCashFlowFromUsedInOperatingActivities[(1,000)]] + fac:NetCashFlowFromInvestingActivities[frf-sme:NetCashFlowsFromUsedInInvestingActivities[2,000]] + fac:NetCashFlowFromFinancingActivities[frf-sme:NetCashFlowsFromUsedInFinancingActivities[(2,000)]])
GH2594...	2020-FY	FAC_CONSISTE...	fac:Assets = (fac:CurrentAssets + fac:NoncurrentAssets)	True	0	fac:Assets[frf-sme:Assets[12,000]] = (fac:CurrentAssets[frf-sme:CurrentAssets[5,000]] + fac:NoncurrentAssets[frf-sme:NoncurrentAssets[7,000]])
GH2594...	2020-FY	FAC_CONSISTE...	fac:IncomeLossFromContinuingOperationsBeforeTax = (fac:OperatingAndNonoperatingRevenues - fac:OperatingAndNonoperatingCostsAndExpenses)	True	0	fac:IncomeLossFromContinuingOperationsBeforeTax[frf-sme:IncomeLossFromContinuingOperationsBeforeTax[1,000]] = (fac:OperatingAndNonoperatingRevenues[frf-sme:RevenueNet[7,000]] - fac:OperatingAndNonoperatingCostsAndExpenses[frf-sme:Expenses[6,000]])
GH2594...	2020-FY	FAC_CONSISTE...	fac:Liabilities = (fac:CurrentLiabilities + fac:NoncurrentLiabilities)	True	0	fac:Liabilities[frf-sme:Liabilities[6,000]] = (fac:CurrentLiabilities[frf-sme:CurrentLiabilities[5,000]] + fac:NoncurrentLiabilities[frf-sme:NoncurrentLiabilities[1,000]])
GH2594...	2020-FY	FAC_CONSISTE...	fac:LiabilitiesAndEquity = (fac:Liabilities + fac:Equity)	True	0	fac:LiabilitiesAndEquity[frf-sme:LiabilitiesAndEquity[12,000]] = (fac:Liabilities[frf-sme:Liabilities[6,000]] + fac:Equity[frf-sme:Equity[6,000]])
GH2594...	2020-FY	FAC_CONSISTE...	fac:NetCashFlowDiscontinued = (fac:NetCashFlowFromOperatingActivitiesDiscontinued + fac:NetCashFlowFromInvestingActivitiesDiscontinued + fac:NetCashFlowFromFinancingActivitiesDiscontinued)	True	0	fac:NetCashFlowDiscontinued[0] = (fac:NetCashFlowFromOperatingActivitiesDiscontinued[0] + fac:NetCashFlowFromInvestingActivitiesDiscontinued[0] + fac:NetCashFlowFromFinancingActivitiesDiscontinued[0])

Blocks

The following is a summary of the blocks of this report provided by Pacioli:

#	Network	Hypercube	Block	Disclosures
1	1001 - Document - Document Information	Document Information [Table]	Document Information [Set] [Hierarchy]	disclosures:DocumentInformation
2	1002 - Document - Entity Information	Entity Information [Table]	Entity Information [Set] [Hierarchy]	disclosures:EntityInformation
3	2001 - Statement - Balance Sheet	Statement of Financial Position, Classified [Table]	Assets, Total [RollUp]	disclosures:AssetsRollUp, disclosures:StatementOfFinancialPositionClassified
4	2001 - Statement - Balance Sheet	Statement of Financial Position, Classified [Table]	Liabilities and Equity, Total [RollUp]	disclosures:LiabilitiesAndEquityRollUp, disclosures:StatementOfFinancialPositionClassified
5	2001.1 - Statement - Balance Sheet (Parenthetical), Classes of Common Stock	Common Stock, by Class [Table]	Common Stock, by Class [Set] [Hierarchy]	disclosures:ShareCapitalByClass
6	2002 - Statement - Income Statement	Statement of Financial Performance, by Function [Table]	Net Income (Loss) [RollUp]	disclosures:StatementOfFinancialPerformanceByFunction
7	2003 - Statement - Cash Flow Statement	Cash Flow Statement, Direct Method [Table]	Net Cash Flow [RollUp]	disclosures:CashFlowStatementIndirectMethod, disclosures:NetCashFlowRollUp
8	2003 - Statement - Cash Flow Statement	Cash Flow Statement, Direct Method [Table]	Cash and Cash Equivalents, Beginning Balance [RollForward]	disclosures:CashAndCashEquivalentsRollForward, disclosures:CashFlowStatementIndirectMethod
9	4001 - Disclosure - Property, Plant, and Equipment Components	Property, Plant and Equipment Components [Table]	Property, Plant and Equipment, Net [RollUp]	disclosures:PropertyPlantAndEquipmentNetSubclassificationsAlternative

This is similar information provided by Pesseract:

Blocks (9) G

Network View
 Component View
 Block View

Filter Type ▼
 Filter Level ▼
 Filter Status ▼

Clear

- Document Information [Set] [Hierarchy]
- Entity Information [Set] [Hierarchy]
- Assets [Roll Up]
- Liabilities and Equity [Roll Up]
- Common Stock, by Class [Set] [Hierarchy]
- Net Income (Loss) [Roll Up]
- Cash and Cash Equivalents Reconciliation [Roll Forward]
- Net Cash Flow [Roll Up]
- Property, Plant, and Equipment, Net, Components [Roll Up]

Block Properties ^

▶ Component	1001 - Document - Document Inform...
Abstract	Document Information [Line Items]
Concept Arrangement Pattern	Hierarchy
Member Aggregation Pattern	
Name	frf-sme:DocumentInformationSet
Label	Document Information [Set] [Hierarc...
Disclosure	disclosures:DocumentInformation
Confidence	HIGH
Status	InProgress

Advanced ▼
Collections ▼

Disclosures

The following is a summary of the disclosure of the report provided by Pacioli:

#	Network	Hypercube	Block	Disclosures
1	1001 - Document - Document Information	Document Information [Table]	Document Information [Set] [Hierarchy]	disclosures:DocumentInformation
2	1002 - Document - Entity Information	Entity Information [Table]	Entity Information [Set] [Hierarchy]	disclosures:EntityInformation
3	2001 - Statement - Balance Sheet	Statement of Financial Position, Classified [Table]	Assets, Total [RollUp]	disclosures:AssetsRollUp, disclosures:StatementOfFinancialPositionClassified
4	2001 - Statement - Balance Sheet	Statement of Financial Position, Classified [Table]	Liabilities and Equity, Total [RollUp]	disclosures:LiabilitiesAndEquityRollUp, disclosures:StatementOfFinancialPositionClassified
5	2001.1 - Statement - Balance Sheet (Parenthetical), Classes of Common Stock	Common Stock, by Class [Table]	Common Stock, by Class [Set] [Hierarchy]	disclosures:ShareCapitalByClass
6	2002 - Statement - Income Statement	Statement of Financial Performance, by Function [Table]	Net Income (Loss) [RollUp]	disclosures:StatementOfFinancialPerformanceByFunction
7	2003 - Statement - Cash Flow Statement	Cash Flow Statement, Direct Method [Table]	Net Cash Flow [RollUp]	disclosures:CashFlowStatementIndirectMethod, disclosures:NetCashFlowRollUp
8	2003 - Statement - Cash Flow Statement	Cash Flow Statement, Direct Method [Table]	Cash and Cash Equivalents, Beginning Balance [RollForward]	disclosures:CashAndCashEquivalentsRollForward, disclosures:CashFlowStatementIndirectMethod
9	4001 - Disclosure - Property, Plant, and Equipment Components	Property, Plant and Equipment Components [Table]	Property, Plant and Equipment, Net [RollUp]	disclosures:PropertyPlantAndEquipmentNetSubclassificationsAlternative

The following is a summary of disclosures of the report provided by Pesseract:

Primary Information									
#	Disclosure	Category	Level	Pattern	Disclosure Found	Disclosure Consistent	Applicable	Representation Concept [TEXT BLOCK]	Representation Concept DETAIL
1	Assets Roll Up	Unknown	Level4Detail	RollUp	True	CONSISTENT	True	NOT-EXPECTED	Assets
2	Cash and Cash Equivalents Roll Forward	Unknown	Level4Detail	RollForward	True	CONSISTENT	True	NOT-EXPECTED	Cash and Cash Equivalents
3	Cash Flow Statement, Indirect Method	Statement	UNKNOWN	Component	True	CONSISTENT	True	-	-
4	Document Information	Unknown	Level4Detail	Hierarchy	True	CONSISTENT	True	NOT-EXPECTED	Document Title
5	Entity Information	Unknown	Level4Detail	Hierarchy	True	CONSISTENT	True	NOT-EXPECTED	Economic Entity Name
6	Liabilities and Equity Roll Up	Unknown	Level4Detail	RollUp	True	CONSISTENT	True	NOT-EXPECTED	Liabilities and Equity
7	Net Cash Flow Roll Up	Unknown	Level4Detail	RollUp	True	CONSISTENT	True	NOT-EXPECTED	Net Cash Flow
8	Property, Plant, and Equipment, Net Subclassifi...	Unknown	Level4Detail	RollUp	True	CONSISTENT	True	NOT-EXPECTED	Property, Plant and Equipment, Net
9	Share Capital by Class	Unknown	Level4Detail	Hierarchy	True	CONSISTENT	True	NOT-EXPECTED	Common Stock
10	Statement of Financial Performance, by Function	Unknown	Level4Detail	RollUp	True	CONSISTENT	True	NOT-EXPECTED	Net Income (Loss)
11	Statement of Financial Position, Classified	Statement	UNKNOWN	Component	True	CONSISTENT	True	-	-

Type-Subtype Associations

Report elements are related to certain other report elements and not associated with other report elements. These permitted associations are documented using “type-subtype” or sometimes referred to as “wider-narrower” or “general-special” associations. These rules are added to this example using the following Pacioli verification script:

```
% FRF for SMEs – Autogenerated Inline XBRL %
checkReport3("http://xbrlsite.com//2022/master-dynamic/reference-implementation/instance-
WithRulesAttached-ALLRULES2.xml",
['http://xbrlsite.com//2022/master-dynamic/type-subtype/type-subtype-rules-def.xml'],
[valueAssertionsCanDerive, doNOTaddFACzeros, saveToIPFS, extendedJSON , cacheValidity(0)], Result,
IPFSlink).
```

<https://ipfs.infura.io/ipfs/QmW3KW5S7S9sYj9wwYYk453hpauiz6kxegNow9EZtr6pzK>

