

10. Verification of Digital Financial Reports

How do you know that your digital financial report is created properly? What evidence do you have which proves to yourself and others that your digital financial report is verifiably correct?

HINT: This is the complete Guide to Verification of an SEC XBRL Financial Report. The original version can be found here:

<http://xbrl.squarespace.com/digital-financial-reporting>

10.1. Defining verification

Verification is the process of research, examination, and other tasks and steps required to prove or establish validity; evidence that establishes or confirms the accuracy or truth of something. Verification is a formal assertion of validity.

Validity can be defined as being well grounded; producing the desired result; free from logical flaw; based on sound reasoning; cogent. (i.e. complete, correct, consistent, accurate, has fidelity, has integrity)

Validity when it comes to an SEC XBRL financial report is, arguably, that such a financial report is a true and fair representation of a reporting entities financial and nonfinancial information articulated by such a financial report.

A financial report can be said to be valid if it possesses certain traits which can be defined in general terms and for clarity are listed below to bring them into the reader's mind:

- **Completeness:** Having all necessary or normal parts, components, elements, or steps; entire.
- **Correctness:** Free from error; in accordance with fact or truth; right, proper, accurate, just, true, exact, precise.
- **Consistency:** Compatible or in agreement with itself or with some group; coherent, uniform, steady. Holding true in a group, compatible, not contradictory.
- **Accuracy:** Correctness in all details; conformity or correspondence to fact or given quality, condition; precise, exact; deviating only slightly or within acceptable limits from a standard.

While these four notions which relate to the "trueness" and "fairness" must exist for every fact reported by a financial report, they also need to exist when considering the financial report in its entirety.

Two other notions help bring the notion of trueness and fairness of information at the fact and at the report level into focus:

- **Fidelity:** Fidelity relates to the loyal adherence to fact or detail; exactness. The representation of the facts and circumstances represented within a financial report properly reflect, without distortion, reality. High fidelity is when the reproduction (a financial report) with little distortion, provides a result very similar to the original (reality of company and environment in which company operates).
- **Integrity:** Integrity is holistic fidelity. Integrity relates to the fidelity of the report in its entirety, of all parts of a financial report, from all points of view. Integrity is holistic accuracy, accurate as a whole. Integrity is the quality or



condition of being whole or undivided; completeness, entireness, unbroken state, uncorrupt. Integrity means that not only is each component of a financial report is correct but all the pieces of the financial report fit together correctly, all things considered.

To an accountant the notions of verification and validity and that a financial report must be complete, correct, consistent, and accurate as defined above are a statement of the obvious. We know this. Accountants have performed these tasks for hundreds of years and have a reputation for performing this task well. This is not new to accountants. Further, these traits which a financial report must possess are the obligations of those creating these reports; they are not options. Accountants don't pick and choose whether a financial report is to be true and fair; those traits must be true by definition.

HINT: To understand integrity correctly, it is important to understand the notion of an **"intersection"**. An intersection is a physical connection between two pieces of a financial report, some report element. For example, "Inventories" as a line item on the balance sheet and "Total inventories" as shown within the detailed breakdown of inventory is the same thing, the same physical fact. But, if this is not expressed correctly, such as if they were modeled as two different concepts, errors could be introduced into the digital financial report and the error can be masked by the improper modeling. Part of integrity is that there are no such modeling mistakes and therefore no mathematical errors which could possibly be masked by a modelling mistake.

10.2. True and fair representation is the goal

So what is a true and fair representation of financial information? We stated above in general terms that a true and fair representation is: complete, correct, consistent, accurate, is identified as having fidelity, and is identified as having integrity. If all these exist we can distinguish the financial report as being "valid".

But these terms are rather general. Looking at verification at a slightly more detailed level we might see the following traits as being important to distinguishing a financial report as a true and fair representation of a reporting entity's financial information:

- **Comply with US GAAP:** Clearly a financial report must comply with the rules of US GAAP including SEC rules, industry/activity practices, other common practices, and reporting entity choices where they have such choices.
- **Full inclusion/false inclusion:** Everything which should be disclosed has been disclosed as deemed appropriate by US GAAP, SEC, industry/activity practices, common practices, and reporting entity choices.
- **Foots, cross casts, ticks and ties:** A financial report foots, cross casts, and otherwise "ticks and ties". All mathematical relations must be intact. As accountants we understand this and many times this fact disappears into our unconsciousness because it is so ingrained into what we do and how we do it. Of course things foot and cross cast; of course the pieces tie together.
- **All financial report formats convey the same message:** A financial report can be articulated using paper and pencil, Microsoft Word, PDF, HTML, XBRL, RDF/OWL, or some other computer readable or computer readable formats. While the format may change, the message communicated, the story you tell, should not change. Each format should communicate the same message, regardless of the medium used to convey your message.



- **Justifiable/defensible report characteristics:** Facts reported and the characteristics which describe those reported facts should be both justifiable and defensible by the reporting entity.
- **Consistency between periods:** Financial information expressed within one reporting period should be consistent with the financial information expressed within subsequent reporting periods, where appropriate. Clearly new information will be added and information which becomes irrelevant will be removed from a financial report. Changes between report elements which existed in both periods should be justifiable and defensible as opposed to arbitrary and random.
- **Consistency with peer group:** If a reporting entity chooses one approach/report element and a peer chooses a different approach/report element; clearly some good, explainable reason should exist for such difference. The judgment of an accountant can determine if the difference is appropriate or not. Differences of opinion can also exist. However, some sort of rationale will likely exist for differences or similarities. Because of ambiguity, different conclusions can be reached and each be reasonable and appropriate.
- **Logical renderings:** Renderings of facts; characteristics describe facts; parenthetical explanations which further describe such facts; and other such model structures should make sense and be both consistent with other similar logical structures and logical from the perspective of the technical syntax used to articulate that information. While there may be differences of opinion as to how to format or present such information; there should be significantly less or no dispute about the logic. Disclosures are informational, they relate to information without regard to formatting or other presentational artifacts. Notes relate to organizing disclosures and are presentational in nature. Someone creating a financial report has far more latitude and discretion as to how to organize disclosures into notes than they do as to what must be disclosed.
- **Unambiguous business meaning:** A financial report should be unambiguous to an informed reader. The business meaning of a financial report should be clear/unambiguous to the creator of the financial report and likewise clear/unambiguous to the users of that financial report. Both the creator and users should walk away with the same message or story. A financial report should be usable by regulators, financial institutions, analysts, investors, economists, researchers, and others who desire to make use of the information the report contains.

Again, we don't think we are enlightening any accountants with this information. What we are doing is bringing this information into the fore front of your consciousness for a particular reason. There is something which is new.

What is new, and what must occur for these new digital mediums such as XBRL and financial reports expressed using XBRL to be successful, is for accountants to be able to perform these same tasks using these new digital mediums. And because computers can read these new mediums and understand what it is reading, computers can both help accountants with these verification tasks and point out situations where financial reports do not possess these distinguishing features. It is not hard to imagine that a computer can help understand if a financial report "ticks and ties", "cross casts and foots" according to the rules of the medium used to express that information.



But, to achieve this how to use such a digital medium must be well understood, the semantics or meaning of the medium must be well defined, and the mechanics of such a medium must be understood and the same for all parties involved in the creation or use of a financial report expressed using such medium.

10.3. Properly differentiating semantics and syntax

Critical to obtaining a proper understanding of verification is properly differentiating the terms semantics and syntax.

An SEC XBRL financial report is a definitive, discrete, finite set of objects. Obviously this has to be true, it is a physical thing. The truth is that a paper-based financial report is likewise a definitive, discrete, finite set of objects. The only difference between the two is the medium used to express the information.

No accountant really looks at a paper report in this manner, as a set of objects. But to create a digital expression of a financial report this is exactly what must occur: these specific objects must be identified and described. This is how the unstructured paper-based financial report becomes “digitized” and articulated as a digital financial report.

And these objects can be described and they have been described. We will get to this in a moment. There are two ways these objects which make up a financial report can be described: syntactically and semantically.

Syntax relates to how you say something, *semantics* relates to the meaning of what you say.

HINT: Explaining the difference between **syntax** and **semantics** is (a) critically important to what this document is trying to communicate and (b) beyond the scope of this document to explain in detail. We will assume that the reader understands this distinction. If you do not understand the difference between syntax and semantics, please stop reading now and be sure to understand this distinction clearly before you continue with this document because if you do not understand this distinction, this document will make little sense to you. Two good resources for understanding this distinction are the following:

The video How XBRL Works: <http://www.youtube.com/watch?v=nATJBPOiTxM>

This video about semantics: <http://www.youtube.com/watch?v=OGq8A2zfWKg>

When it comes to creating an SEC XBRL financial filing it is of critical importance to understand the following key points:

- Like was said, an SEC XBRL financial report, just like any other financial report expressed using any other medium, is a definitive, discrete, finite set of objects.
- Those objects can be looked at through the lenses of a technical syntax, such as the XBRL technical syntax, which describes how something is said.
- Those same objects can be looked at through the lens of semantics, which describes what you mean.
- Forcing business users to relate to those objects using the XBRL technical syntax is one way to working with an SEC XBRL financial report. But doing so



- has the ramification of requiring the business user to understand the XBRL technical syntax.
- Creating software which hides the XBRL technical syntax behind a layer of semantics is another way of working with an SEC XBRL financial report. Doing this has ramifications also. Doing this allows business users to relate to the SEC XBRL financial report in terms which they tend to already understand.
 - Business users are far more comfortable working with business semantics than with XBRL technical syntax. Nor should business users be forced to work with XBRL technical syntax.
 - Technical people do not understand how to create financial reports. Nor should they.

If you think about it, how could someone create a an SEC XBRL financial report and do so correctly without being able to formally verify that the SEC XBRL financial report is a true and fair representation of the reporting entity if the process they are using is a black box or a process which they don't understand?

10.4. Realizing what accountants and other business users need to be successful

Who needs to verify an SEC XBRL financial report to be sure that the financial report is a true and fair representation of the reporting entity and that it communicates what management chooses to communicate, given the requirements imposed by the SEC and US GAAP and using the choices desired by the reporting entity?

- An **accountant** or team of accountants can perform a specific set of steps which will allow them to be sure that the financial report which they created is a true and fair representation of the financial information of the reporting entity for which the financial report has been created.
- **Management** of the reporting entity (CEO, CFO, members of the audit committee, investor relations, legal counsel) for which the financial report has been created can ask the team of accountants "are you sure these are correct" and the accountant or team of accountants can reasonably reply, "yes, we are sure". Or, management can verify for themselves by performing specific tasks/steps.
- A **third party accountant** can state that a financial report "presents fairly" the financial information of the reporting entity because they have performed a specific set of tasks/steps which allow them to be sure that the financial report "presents fairly" such information.
- **Investors, regulators and analysts** who consume information need to be sure what they are consuming is correct.

Two key points about the list above are important to understand. First, note that the information technology department is not included in the list. The IT department does not generally sign off on a financial report. Second, how could anyone sign off or use an SEC XBRL financial report without being sure that the information is correctly expressed without understanding the XBRL technical syntax if an alternative approach to understanding the technical syntax does not exist?

Well, you don't need to understand the XBRL technical syntax if software makes sure that what you have said is always compliant to the XBRL technical syntax and provides you with transparency into what you have said and help you understand if it is what you meant to have said.



The key to verification of an SEC XBRL financial report which empowers business users to be sure they are saying what they mean to say and which follow the XBRL technical syntax without the business user needing to understand that technical syntax.

Focusing on semantics enables the business user to achieve exactly that.

10.5. Definition of semantic objects, relations, and properties

It was stated earlier in this document that a financial report is comprised of a definitive, discrete, finite set of objects, relations between those objects. Each of these objects and relations has a definitive, discrete, finite, set of properties.

This section defines these objects, relations, and properties.

Clear, concise definitions are important for two reasons. First, if terminology is not precise then communication cannot occur because parties to the communication cannot be sure they are talking about the same thing. Secondly, these objects need to be implemented within software applications and clear/unambiguous communication of these objects is necessary to enable such software to be implemented.

This document uses terminology defined by the Financial Report Semantics and Dynamics Theory and the US GAAP taxonomy Architecture. The Financial Report Semantics and Dynamics Theory provides a medium independent definition of a set of semantics and dynamics which have been proven to work with SEC XBRL financial filings. The US GAAP Taxonomy Architecture is a set of technical rules which must be followed by SEC filers who create XBRL financial reports.

HINT: We provide only a summary of information from the two documents mentioned above. For a better understanding of these two documents, please refer to the documents themselves.

10.6. Financial report level semantics

[CSH: This is a duplicate]

In order to "digitize" a financial report you need to break that financial report into pieces that a computer software application can interact with. Each of these pieces has to be referred to so some term needs to be created and used to discuss each of these financial report pieces. The following is a summary of these fundamental and important definitions of financial report semantics from the Financial Report Semantics and Dynamics Theory:

- **Financial report:** Report which communicates financial and nonfinancial information to users of that report. Financial reports contain facts, characteristics which describe those facts, parenthetical explanations of facts, relations between facts/characteristics. Each of these report elements has properties.
- **Component:** A component is a set of facts which go together for some specific purpose within a financial report. A component can also be broken down into subcomponents.
- **Fact:** A fact defines a single, observable, reportable piece of information contained within a financial report, or fact value, contextualized for unambiguous interpretation or analysis by one or more characteristics. Numeric fact values must also provide the additional traits "units" and



- “rounding” to enable appropriate interpretation of the numeric fact value. Facts may have zero or many parenthetical explanations which provide additional descriptive information related to the fact.
- **Characteristic:** A characteristic provides information necessary to describe a fact. A fact may have any number of characteristics.
 - **Parenthetical explanation:** Facts may have parenthetical explanations which provide additional descriptive information about the fact.
 - **Relation:** Components can be related to other components. Facts can be related to other facts. Characteristics can be related to other characteristics. Model structure is a type of relation which describes how report elements relate to one another. Business rules are a type of relation which describes computation type relations.
 - **Property:** Financial reports have a known set of properties. Components have a known set of properties. Facts have a known set of properties. Characteristics have a known set of properties. The concept characteristic has additional properties: period type, data type, balance type. Relations have a known set of properties.

For more details we encourage you to read the *Financial Report Semantics and Dynamics Theory*.

HINT: This video walks you through these terms: <http://www.youtube.com/watch?v=uC-hrpxJfA>.

10.7. US GAAP taxonomy implementation model of financial report semantics

[CSH: This is a duplicate]

A digital financial report must at some point be implemented. That implementation takes the form of some sort of model. A report element or model element is a piece of a digital financial report, a part of the implementation model. The types of report element or model elements can be grouped or categorized.

An SEC XBRL financial report is an implementation of a financial report as defined by the Financial Report Semantics and Dynamics Theory. The US GAAP Taxonomy Architecture defines important pieces of how an SEC XBRL financial report must be created, its model. The following is a summary of the US GAAP taxonomy implementation model of these financial report semantics as used in SEC XBRL financial filings:

- **Network:** A network is a one approach to break a digital financial report into smaller pieces. There are two reasons why you might need to break a financial filing into pieces: because you want to or because you have to. Specific semantics of networks are not defined by the SEC or by the US GAAP Taxonomy.
- **Table:** A table is used to combine facts which go together for some specific reason. Tables are comprised of axis and line items. The line items of a table share the axis defined within a table. There are two types of tables: explicit tables and implicit tables. Implicit tables only have the axis reporting entity and period. An explicit table always has at least one defined [Axis], it could have more than one. An explicit [Table] always has one set of [Line Items]. Specific semantics of tables are undefined.



- **Axis:** An axis is a means of providing information about the characteristics of a fact reported within a financial report.
- **Member:** A member is a possible value of an [Axis]. A [Member] is always part of a domain of an [Axis], thus the term "member" (i.e. of the domain or set; a domain is simply a set of [Member]s which relates to a specific [Axis]).
- **Line Items:** [Line items] are a set of concepts which can be reported by an entity, they can contain values. [Line Items] may also contain [Abstract] concepts which can never report values but rather are used to help organize the [Line Items].
- **Concept:** A concept refers to a financial reporting concept or a non-financial concept which can be reported as a fact within an SEC XBRL financial filing. A concept is sometimes referred to as a concrete concept, as compared to an abstract concept. [Line Items] contain concepts organized within a component which have the same information model. Concepts can be concrete (meaning they can be reported) or abstract (meaning that they are never reported; they are only used to organize the concepts contained within a set of line items).
- **Fact:** A fact is a single, observable, reportable piece of information contained within a financial report. Facts have values which could be textual, numeric, or prose. Numeric facts have two additional traits: units and rounding. Facts may have one or more additional parenthetical explanations. Facts are characterized by a set of [Axis] which provide additional important information necessary to understand the fact.

HINT: For more information about these report level semantic objects please see: <http://secxbrlglossary.wikispaces.com/Report+Element> and the US GAAP Taxonomy Architecture section 4.5 Implementation of Tables.

10.8. Connecting the report level model to its implementation model

The following table pulls the semantics of the *Financial Report Semantics and Dynamics Theory* together into its implementation model as an SEC XBRL financial filing which follows the US GAAP Taxonomy Architecture, effectively reconciling the two:

Financial Report Semantics and Dynamics Theory Term	US GAAP Taxonomy Architecture /SEC Model Term
Financial Report	SEC XBRL financial report (XBRL instance + XBRL taxonomy)
Component	Network + Table (explicit or implied)
Characteristic	Many different technical approaches including: [Axis], [Member], [Line Items], Concept, Entity identifier (semantically is an [Axis], Period (semantically is an [Axis])
Fact	Fact
Parenthetical Explanation	XBRL Footnote (which is not the same as a financial statement footnote)



Financial Report Semantics and Dynamics Theory Term	US GAAP Taxonomy Architecture /SEC Model Term
Relation (structural, business rules, flow)	Information Model (Roll up, roll forward, adjustment, variance, hierarchy, etc.); Member aggregation model (partial set, complete flat set, complete hierarchical set, etc.); Business rules (Roll up implemented as XBRL calculations syntax, roll forward, member aggregation, adjustment, variance, complex computation); Number, Category, Title which expresses sort order of networks
Property	XML element or XML attribute which could be implemented as XML, XBRL, XML Schema, or XLink technical syntax

HINT: It is not critical for business users to understand the details of how these two models are combined to enable the creation of an SEC XBRL financial report. What is important is that the scheme works and that they understand how to use software which implements this scheme. This informational summary is provided to more help technical people understand this connection and to provide both an overview of this connection and point to the additional details necessary to truly understand this connection.

More detailed information which connects and reconciles this terminology including an additional reconciliation to the XBRL technical syntax can be found in APPENDIX C which also reconciles the semantic objects to the XBRL technical syntax. Further, this diagram provides additional helpful information:

http://www.xbrl.org/2012/FinancialReportSemanticsAndDynamicsTheory/TheoryPlusImplementation_v2.pdf

Additional details on the *Financial Report Semantics and Dynamics Theory* can be found here:

<http://xbrl.squarespace.com/fin-report-sem-dyn-theory/>

Additional details on the implementation model of an SEC XBRL financial report can be found here:

<http://xbrl.squarespace.com/digital-financial-reporting/>

HINT: XBRL International has created a global standard report-level model, the XBRL Abstract Model 2.0. For more information please see:

<http://xbrl.squarespace.com/journal/2012/6/27/mapping-from-sec-xbrl-model-semantics-to-xbrl-abstract-model.html>



It is easy to validate a financial report which is created on paper. All you need to do is give the report to a competent accountant, hand them a 10-key and green eye shades, give them a paper disclosure checklist and your worries are over; the accountant will make sure it is correct. The problem is that this process is labor intensive, the knowledge of accountants can vary widely, it is time consuming because it is labor intensive and it is costly because it is labor intensive. Further, because accountants are human they can make mistakes.

SEC XBRL financial filings changes this equation. The XBRL format can be read by software applications and many of the verification processes can be automated as a result. You will never be able to do away with all human involvement. In fact, because the mindless work of making sure everything foots and cross casts and otherwise ticks and ties; the knowledge of an accountant can be applied to other important areas of verification which were never performed because the analysis budget was used up on the mindless tasks and these more important tasks can never be automated, they take human judgment.

Further, even this “automated verification” will be rendered obsolete when software applications perform these tests as you create your financial report within a software application which understands the semantics of a financial statement.

10.9. Visualizations of semantic objects, relations, and properties

The following are visualizations which provide examples for the objects into which a financial report can be broken down. The visualizations are organized in a top-down approach beginning with a dashboard which organizes verification information into logical groupings.

This set of semantic objects, relations, and properties is shown using the XBRL Cloud *Evidence Package* which is a product which can be used by accountants in the verification process. Other products have similar reports. XBRL Cloud’s reports are provided with permission from XBRL Cloud.

HINT: These visualizations are taken from HTML pages generated from a working prototype of a verification application. You can see the entire prototype at this URL:

<http://www.xbrlsite.com/US-GAAP-2012/ReferenceImplementation/2012-08-01/business-report-package>

The reference/model implementation of an SEC XBRL financial report was used to create this particular Evidence Package and the related screen shots. For more information, please see Appendix D: Reference/Model Implementation.

10.9.1. Verification dashboard

The verification dashboard is an aggregation and organization of all verification information into an easy to understand “dashboard” for a particular digital financial report.

The verification dashboard has three sections. The first section provides a summary of all automated verification testing results. The second section provides a summary of manual verification tasks. The third section provides details of verification results



by component of the digital financial report. This screen shot is an example of a verification dashboard:

Verification Dashboard

Automated Verification Summary

The goal is to create a verifiably correct true and fair representation of a reporting entity's financial information. The report should be complete, correct, consistent, accurate. The report should have fidelity and integrity.

	Status	Count of Relations	List	List	List	List	List	List	List	List	List
			XBRL Technical Syntax	Automatable EFM Rules	XBRL-US Consistency Suite Rules	Structure Rules (US GAAP Taxonomy Architecture)	US GAAP Domain Level Rules	Industry / Activity Specific Rules	Reporting Entity Specific Rules	Reportability Rules	Other Rules and Best Practices
Summary of all components (networks/tables)	Incomplete	451	OK	726	1	OK	OK	OK	OK	OK	119
Automated rules defined			0	0	0	0	0	0	0	119	0
Automated rules PASSED			0	0	0	0	0	0	0	200	0
Automated rules FAILED			0	726	1	0	0	0	0	0	119

Manual Verification Summary

	Status	Count of Relations	List	List
			EFM Review Tasks	Other Manual Review Tasks
Summary of all components (networks/tables)	Completed	451	OK	OK
Manual rules defined			0	0
Manual rules PASSED			0	0
Manual rules FAILED			0	0

Component Perspective

This matrix provides detail about the verification status of the individual components which make up the financial report.

Component (Network/Table)	Status	Count of Relations	Manual Review Tasks	XBRL Technical Syntax	EFM Rules	Model Logical Structure (US GAAP Taxonomy Architecture Rules)	US GAAP Core Financial Report Semantics	US GAAP Consistency Rules	Industry / Activity Specific Rules	Reporting Entity Specific Rules	US GAAP/SEC Disclosure Rules	Other Rules and Best Practices
1100 - Document - Document Information Document Information [Table]	Incomplete	10	OK	OK	726	OK	OK	1	OK	OK	OK	119
1200 - Document - Entity Information Entity Information [Table]	Completed	13	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
1300 - Document - Entity Listings Information Entity Listings [Table]	Completed	11	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
2001 - Statement - Balance Sheet Balance Sheet [Table]	Completed	44	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
2002 - Statement - Balance Sheet Balance Sheet	Completed	6	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

10.9.2. Report properties

The report properties visualization shows the properties of the financial report itself.

Report Properties

Summary/General Information

The following is a summary of general information about the report.

Entity registrant name	ABC Company, Inc.
Report identifier (target namespace)	http://www.abc.com/20121231
Prefix	abc
US GAAP taxonomy version	2012 US GAAP Taxonomy (http://fasb.org/us-gaap/2012-01-31)
Document type	10-K
Document period end date	2012-12-31
Document fiscal period focus	FY
Document fiscal year focus	2012
Report file name	https://demo.xbrlcloud.com/user/charles.hoffman@xbrlcloud.com/share/public/xbrl/site/Templates/000000-002-ModelReferenceImplementation-2012-08-01/abc-20121231.xml

10.9.3. Report objects summary

The report objects summary provides a summary of the objects contained within the financial report.



Report Objects Summary

Components	31
Networks	31
Tables	28
Axes	15
Members	45
Line Items	28
Abstracts	61
Concepts	152
Facts	524
Parenthetical explanations	2
Structural relations	451
Business rules	131

10.9.4. Report component summary

The component summary shows a list of the components contained within the financial report. Recall that a component is the combination of a network and a table.

Component Summary

A component is a combination of a network and a table. All facts exist within one or more networks. All facts also exist within one or more tables, be that table an explicitly defined [Table] or an implied table.

#	Sort Code	Type	Title	URI	Table (Explicit or Implied)
1	1100	Document	Document Information	http://www.abc.com/role/DocumentInformation	Document Information [Table]
2	1200	Document	Entity Information	http://www.abc.com/role/EntityInformation	Entity Information [Table]
3	1300	Document	Entity Listings Information	http://www.abc.com/role/EntityListingsInformation	Entity Listings [Table]
4	2001	Statement	Balance Sheet	http://www.abc.com/role/BalanceSheet	Balance Sheet [Table]
5	2002	Statement	Balance Sheet Parenthetical, General	http://www.abc.com/role/BalanceSheetParentheticalGeneral	Balance Sheet Parenthetical, General [Table]
6	2003	Statement	Balance Sheet Parenthetical, Preferred Stock	http://www.abc.com/role/BalanceSheetParentheticalPreferredStock	Stock by Class [Table]
7	2004	Statement	Balance Sheet Parenthetical, Common Stock	http://www.abc.com/role/BalanceSheetParentheticalCommonStock	Stock by Class [Table]
8	2005	Statement	Balance Sheet Parenthetical, Treasury Stock	http://www.abc.com/role/BalanceSheetParentheticalTreasuryStock	Class of Treasury Stock [Table]
9	2006	Statement	Income Statement	http://www.abc.com/role/IncomeStatement	Income Statement [Table]
10	2007	Statement	Comprehensive Income	http://www.abc.com/role/ComprehensiveIncome	Comprehensive Income [Table]
11	2008	Statement	Cash Flow Statement	http://www.abc.com/role/CashFlowStatement	Cash Flow Statement [Table]
12	2009	Statement	Prior Period Adjustment	http://www.abc.com/role/PriorPeriodAdjustment	Changes in Stockholders' Equity [Table]
13	2010	Statement	Changes in Total Stockholders' Equity	http://www.abc.com/role/ChangesInTotalStockholdersEquity	Changes in Stockholders' Equity [Table]
14	4010	Disclosure	Nature of Business	http://www.abc.com/role/NatureOfBusiness	Nature of Business [Table]
15	4020	Disclosure	Significant Accounting Policies	http://www.abc.com/role/SignificantAccountingPolicies	Significant Accounting Policies [Table]
16	4030	Disclosure	Property, Plant and Equipment Policies	http://www.abc.com/role/PropertyPlantAndEquipmentPolicies	Property, Plant and Equipment Components [Table]
17	5010	Disclosure	Cash, Cash Equivalents, and Marketable Securities	http://www.abc.com/role/CashCashEquivalentsAndMarketableSecurities	Cash, Cash Equivalents, and Marketable Securities [Table]
18	5020	Disclosure	Cash and Cash Equivalents Components	http://www.abc.com/role/CashAndCashEquivalentsComponents	Cash and Cash Equivalents Components [Table]
19	5030	Disclosure	Marketable Securities Components	http://www.abc.com/role/MarketableSecuritiesComponents	Marketable Securities [Table]
20	5040	Disclosure	Inventory Components	http://www.abc.com/role/InventoryComponents	Inventory Components [Table]
21	5050	Disclosure	Property, Plant and Equipment Components	http://www.abc.com/role/PropertyPlantAndEquipmentComponents	Property, Plant and Equipment Components [Table]
22	5060	Disclosure	Deferred Costs	http://www.abc.com/role/DeferredCosts	Deferred Costs Components [Table]
23	5070	Disclosure	Product Warranty Accrual	http://www.abc.com/role/ProductWarrantyAccrual	Product Liability Contingency [Table]
24	5080	Disclosure	Long-term Debt Instruments	http://www.abc.com/role/LongTermDebtInstruments	Long-term Debt Instruments [Table]
25	5090	Disclosure	Maturities of Long-term Debt	http://www.abc.com/role/MaturitiesOfLongTermDebt	Maturities of Long-Term Debt [Table]
26	5110	Disclosure	Other Noncurrent Liabilities	http://www.abc.com/role/OtherNoncurrentLiabilities	Other Noncurrent Liabilities [Table]
27	5120	Disclosure	Business Segments	http://www.abc.com/role/BusinessSegments	Business Segment Information, by Segment [Table]
28	5130	Disclosure	Geographic Areas	http://www.abc.com/role/GeographicAreas	Revenues from External Customers and Long-lived Assets by Geographic Area [Table]
29	5140	Disclosure	Nonmonetary Transactions	http://www.abc.com/role/NonmonetaryTransactions	Nonmonetary Transaction, by Type [Table]
30	5150	Disclosure	Select Financial Information	http://www.abc.com/role/SelectFinancialInformation	Select Financial Information [Table]
31	5160	Disclosure	Subsequent Events	http://www.abc.com/role/SubsequentEvents	Subsequent Event [Table]

10.9.5. Report business rules

The report business rules provide all business rules relations which relate to no particular component; rather they tend to be cross-component type rules.



Business Rules Summary Information				
Assertions				
	Found and compiled	Fired	Satisfied	Unsatisfied
Existence assertions	58	58	58	0
Value assertions	61	142	142	0
Consistency assertions	0	0	0	0
Total all assertions	119	200	200	0
Formulas				
	Found and compiled	Fired	Facts created	
Formulas	0	0	0	
Calculations				
	Found and compiled	Fired	Satisfied	Unsatisfied
Calculations	12	26	26	0
XBRL Formulas				
Existence Assertions				
ID	Satisfied			
ASSERTION_Exists_DocumentPeriodEndDate (evaluations 1)	Satisfied			
CORE_1002_LiabilitiesAndEquity_Exists_ALT (evaluations 1)	Satisfied			
IND_CI_1002_CurrentLiabilities_Exists_ALT (evaluations 1)	Satisfied			
CORE_1003_Equity_Exists_ALT (evaluations 1)	Satisfied			
CORE_1005_NetIncomeLoss_Exists_ALT (evaluations 1)	Satisfied			
CORE_1006_NetCashFlow_Exists_ALT (evaluations 1)	Satisfied			
ASSERTION_Exists_DocumentType (evaluations 1)	Satisfied			
ASSERTION_Exists_DocumentFiscalPeriodFocus (evaluations 1)	Satisfied			
CORE_1001_Assets_Exists_ALT (evaluations 1)	Satisfied			

10.9.6. Report elements

The report element visualization provides a listing of the report elements contained within the financial report. A report element is a distinct category of report objects. A report element relates to the dictionary of the report, not the information which is being reported by the report. (i.e. report elements do not include facts or parenthetical explanations)



Report Elements			
	All	Added	
Networks	31	31	100%
Tables	28	15	54%
Axes	13	0	0%
Members	45	10	22%
Line items	28	15	54%
Abstracts	61	25	41%
Concepts	152	2	1%

10.9.7. Networks

The networks visualization provides a listing of all networks and all the properties of a network.

Networks

#	Sort Code	Type	Title	URI	Relations Count
1	1100	Document	Document Information	http://www.abc.com/role/DocumentInformation	10
2	1200	Document	Entity Information	http://www.abc.com/role/EntityInformation	13
3	1300	Document	Entity Listings Information	http://www.abc.com/role/EntityListingsInformation	11
4	2001	Statement	Balance Sheet	http://www.abc.com/role/BalanceSheet	44
5	2002	Statement	Balance Sheet Parenthetical, General	http://www.abc.com/role/BalanceSheetParentheticalGeneral	6
6	2003	Statement	Balance Sheet Parenthetical, Preferred Stock	http://www.abc.com/role/BalanceSheetParentheticalPreferredStock	13
7	2004	Statement	Balance Sheet Parenthetical, Common Stock	http://www.abc.com/role/BalanceSheetParentheticalCommonStock	14
8	2005	Statement	Balance Sheet Parenthetical, Treasury Stock	http://www.abc.com/role/BalanceSheetParentheticalTreasuryStock	10
9	2006	Statement	Income Statement	http://www.abc.com/role/IncomeStatement	35
10	2007	Statement	Comprehensive Income	http://www.abc.com/role/ComprehensiveIncome	13
11	2008	Statement	Cash Flow Statement	http://www.abc.com/role/CashFlowStatement	39
12	2009	Statement	Prior Period Adjustment	http://www.abc.com/role/PriorPeriodAdjustment	12
13	2010	Statement	Changes in Total Stockholders' Equity	http://www.abc.com/role/ChangesInTotalStockholdersEquity	10
14	4010	Disclosure	Nature of Business	http://www.abc.com/role/NatureOfBusiness	5
15	4020	Disclosure	Significant Accounting Policies	http://www.abc.com/role/SignificantAccountingPolicies	9
16	4030	Disclosure	Property, Plant and Equipment Policies	http://www.abc.com/role/PropertyPlantAndEquipmentPolicies	14
17	5010	Disclosure	Cash, Cash Equivalents, and Marketable Securities	http://www.abc.com/role/CashCashEquivalentsAndMarketableSecurities	8
18	5020	Disclosure	Cash and Cash Equivalents Components	http://www.abc.com/role/CashAndCashEquivalentsComponents	14
19	5030	Disclosure	Marketable Securities Components	http://www.abc.com/role/MarketableSecuritiesComponents	13
20	5040	Disclosure	Inventory Components	http://www.abc.com/role/InventoryComponents	10
21	5050	Disclosure	Property, Plant and Equipment Components	http://www.abc.com/role/PropertyPlantAndEquipmentComponents	15
22	5060	Disclosure	Deferred Costs	http://www.abc.com/role/DeferredCosts	9
23	5070	Disclosure	Product Warranty Accrual	http://www.abc.com/role/ProductWarrantyAccrual	14
24	5080	Disclosure	Long-term Debt Instruments	http://www.abc.com/role/LongTermDebtInstruments	21
25	5090	Disclosure	Maturities of Long-term Debt	http://www.abc.com/role/MaturitiesOfLongTermDebt	12
26	5110	Disclosure	Other Noncurrent Liabilities	http://www.abc.com/role/OtherNoncurrentLiabilities	8
27	5120	Disclosure	Business Segments	http://www.abc.com/role/BusinessSegments	18
28	5130	Disclosure	Geographic Areas	http://www.abc.com/role/GeographicAreas	12
29	5140	Disclosure	Nonmonetary Transactions	http://www.abc.com/role/NonmonetaryTransactions	14
30	5150	Disclosure	Select Financial Information	http://www.abc.com/role/SelectFinancialInformation	12
31	5160	Disclosure	Subsequent Events	http://www.abc.com/role/SubsequentEvents	13

10.9.8. Tables

The tables visualization provides a listing of all tables and the properties of a table.



#	Label	Prefix	Standard label, Documentation, References, Concept name	Count
1	Balance Sheet [Table]	abc	Filer label:Balance Sheet [Table] Documentation:Balance sheet. References:NONE Name: abc:BalanceSheetTable	1
2	Balance Sheet Parenthetical, General [Table]	abc	Filer label:Balance Sheet Parenthetical, General [Table] Documentation:Balance Sheet Parenthetical, General [Table] References:NONE Name: abc:BalanceSheetParentheticalGeneralTable	1
3	Business Segment Information, by Segment [Table]	us-gaap	Standard label:Schedule of Segment Reporting Information, by Segment [Table] Documentation:A table disclosing the profit or loss and total assets for each reportable segment of the entity. An entity discloses certain information on each reportable segment if the amounts (a) are included in the measure of segment profit or loss reviewed by the chief operating decision maker or (b) are otherwise regularly provided to the chief operating decision maker, even if not included in that measure of segment profit or loss. References:NONE Name: us-gaap:ScheduleOfSegmentReportingInformationBySegmentTable	1
4	Cash and Cash Equivalents Components [Table]	us-gaap	Standard label:Schedule of Cash and Cash Equivalents [Table] Documentation:Schedule of cash and cash equivalent balances. This table excludes restricted cash balances. References:NONE Name: us-gaap:ScheduleOfCashAndCashEquivalentsTable	1
5	Cash Flow Statement [Table]	abc	Filer label:Cash Flow Statement [Table] Documentation:Cash Flow Statement [Table] References:NONE Name: abc:CashFlowStatementTable	1
6	Cash, Cash Equivalents, and Marketable Securities [Table]	abc	Filer label:Cash, Cash Equivalents, and Marketable Securities [Table] Documentation:Cash, Cash Equivalents, and Marketable Securities [Table] References:NONE Name: abc:CashCashEquivalentsAndMarketableSecuritiesTable	1
7	Changes in Stockholders' Equity [Table]	abc	Filer label:Changes in Stockholders' Equity [Table] Documentation:Changes in Stockholders' Equity [Table] References:NONE Name: abc:ChangesInStockholdersEquityTable	2
8	Class of Treasury Stock [Table]	us-gaap	Standard label:Class of Treasury Stock [Table] Documentation:Different classes of treasury stock along with the different attributes of the treasury stock. References:NONE	1

HINT: Note that a [Table] is implemented as an XML Schema element, just like an [Axis], [Member], [Line Items], and Concept. Each of these report element types must have properties (which are implemented as XML Schema attributes) of type, and period. Each [Table] must be abstract and have the substitutionGroup xbrldt:hypercubeItem. However, this information is syntax; not semantics. These required but meaningless properties can be automatically verified by software and can therefore be ignored by a business user who is using appropriately implemented software.

10.9.9. Table properties

The [Table] properties visualization provides a more detailed listing of [Table] properties.

Name: us-gaap:NonmonetaryTransactionByTypeTable

Report Element Properties

Report Standard Label	Nonmonetary Transaction, by Type [Table]
Base Taxonomy Standard Label	Nonmonetary Transaction, by Type [Table]
Documentation	Transactions involving exchanges with other entities that involve principally nonmonetary assets or liabilities or relate to a transfer of nonmonetary assets for which the Entity receives no assets in return.
Report Element Class	Table
Prefix (From Taxonomy)	us-gaap
Name	us-gaap:NonmonetaryTransactionByTypeTable
ID	us-gaap_NonmonetaryTransactionByTypeTable

Labels of Report Element

From	Role	Label	Lang
Filer	Standard label	Nonmonetary Transaction, by Type [Table]	en-US
Base	Standard label	Nonmonetary Transaction, by Type [Table]	en-US

References of Report Element

Publisher	Reference Name	Reference Information
-----------	----------------	-----------------------

Name: abc>SelectFinancialInformationTable



10.9.10. Axes

The axes visualization provides a listing of all [Axis] and the properties of a [Axis].

#	Label	Prefix	Standard label, Documentation, References, Concept name	Count
1	Business Segments [Axis]	us-gaap	Standard label: Business Segments [Axis] Documentation: Information by business segments. References: NONE Name: us-gaap:StatementBusinessSegmentsAxis	1
2	Cash and Cash Equivalents Type [Axis]	us-gaap	Standard label: Cash and Cash Equivalents [Axis] Documentation: Information by type of cash and cash equivalent balance. References: NONE Name: us-gaap:CashAndCashEquivalentsAxis	1
3	Class of Stock [Axis]	us-gaap	Standard label: Class of Stock [Axis] Documentation: Information by the different classes of stock of the entity. References: NONE Name: us-gaap:StatementClassOfStockAxis	4
4	Debt Instrument [Axis]	us-gaap	Standard label: Debt Instrument [Axis] Documentation: Information by type of debt instrument, including, but not limited to, draws against credit facilities. References: NONE Name: us-gaap:DebtInstrumentAxis	1
5	Geographic Area [Axis]	us-gaap	Standard label: Geographical [Axis] Documentation: Information by geographical segments. References: NONE Name: us-gaap:StatementGeographicalAxis	1
6	Instrument Type [Axis]	us-gaap	Standard label: Instrument [Axis] Documentation: Information categorized by legal agreement. References: NONE Name: us-gaap:InstrumentAxis	1
7	Legal Entity [Axis]	dei	Standard label: Legal Entity [Axis] Documentation: The set of legal entities associated with a report. References: NONE	31

HINT: Note that the reporting entity axis which is implemented as the XBRL instance context element identifier and the period axis also implemented as an XBRL instance are both semantically just like any other [Axis]. These two quasi-[Axis] are not shown in the above listing.

10.9.11. Axes properties

The [Axis] properties visualization provides a more detailed listing of [Axis] properties.

Report Element Properties ✕

Report Standard Label	Legal Entity [Axis]
Base Taxonomy Standard Label	Legal Entity [Axis]
Documentation	The set of legal entities associated with a report.
Report Element Class	Axis
Prefix (From Taxonomy)	dei
Name	dei:LegalEntityAxis
ID	dei_LegalEntityAxis

Labels of Report Element

From	Role	Label	Lang
Filer	Standard label	Legal Entity [Axis]	en-US
Base	Standard label	Legal Entity [Axis]	en-US

References of Report Element

Publisher	Reference Name	Reference Information
-----------	----------------	-----------------------



10.9.12. Members

The members visualization provides a listing of all [Member]s and the properties of a [Member].

#	Label	Prefix	Standard label, Documentation, References, Concept name	Count
1	Actual [Domain]	us-gaap	Standard label:Scenario, Actual [Member] Documentation:Domain member used to indicate actual financial results. References:NONE Name: us-gaap:ScenarioActualMember	1
2	Advertising Barter Transactions [Member]	us-gaap	Standard label:Advertising Barter Transactions [Member] Documentation:Transactions in which there is a nonmonetary exchange of advertising, or the rights to place advertising, advertising is swapped for equal amounts of cash, or advertising is exchanged for other goods and services. References:NONE Name: us-gaap:AdvertisingBarterTransactionsMember	1
3	All Business Segments [Domain]	us-gaap	Standard label:Segment [Domain] Documentation:A component of an enterprise representing facts about an entire consolidated business entity disaggregated by business or economic activities. References:NONE Name: us-gaap:SegmentDomain	1
4	All geographic areas [Domain]	us-gaap	Standard label:Segment, Geographical [Domain] Documentation:The name of a geographic segment representing facts about a reporting entity disaggregated by the geographic area of the entities activities. This element may be used to identify operations in an individual country or group of countries depending on materiality. If a Geographical segment is an individual country use the countries defined in the Country Domain (Domain -2000) to identify the country segment. References:NONE Name: us-gaap:SegmentGeographicalDomain	1
5	Bank time deposits [Member]	us-gaap	Standard label:Bank Time Deposits [Member] Documentation:Certificates of deposit (CD) or savings accounts with a fixed term or understanding the customer can only withdraw by giving advanced notice with a bank or other financial institution. A CD is a short to medium-term investment available at banks and savings and loan institutions where a customer agrees to lend money to the institution for a certain amount of time and is paid a predetermined rate of interest. References:NONE Name: us-gaap:BankTimeDepositsMember	2
6	Business Segment Alpha [Member]	abc	Filer label:Business Segment Alpha [Member] Documentation:Business Segment Alpha [Member] References:NONE Name: abc:BusinessSegmentAlphaMember	1
7	Business Segment Bravo [Member]	abc	Filer label:Business Segment Bravo [Member] Documentation:Business Segment Bravo [Member] References:NONE	1

HINT: Note that a [Domain] is a type of [Member].

10.9.13. Members properties

The [Member] properties visualization provides a more detailed listing of [Member] properties.

g is swapped for equal amounts of cash, or advertising is exchanged for other goods and services.

Report Element Properties

Report Standard Label	All geographic areas [Domain]
Base Taxonomy Standard Label	Segment, Geographical [Domain]
Documentation	The name of a geographic segment representing facts about a reporting entity disaggregated by the geographic area of the entities activities. This element may be used to identify operations in an individual country or group of countries depending on materiality. If a Geographical segment is an individual country use the countries defined in the Country Domain (Domain -2000) to identify the country segment.
Report Element Class	Domain
Prefix (From Taxonomy)	us-gaap
Name	us-gaap:SegmentGeographicalDomain
ID	us-gaap_SegmentGeographicalDomain

Labels of Report Element

From	Role	Label	Lang
Filer	Standard label	All geographic areas [Domain]	en-US
Base	Standard label	Segment, Geographical [Domain]	en-US

References of Report Element

Publisher	Reference Name	Reference Information
-----------	----------------	-----------------------



10.9.14. Line items

The line items visualization provides a listing of all [Line Items] and the properties of the [Line Items].

#	Label	Prefix	Standard label, Documentation, References, Concept name	Count
1	Balance Sheet [Line Items]	abc	Filer label:Balance Sheet [Line Items] Documentation:Balance sheet line items. References:NONE Name: abc:BalanceSheetLineItems	1
2	Balance Sheet Parenthetical, General [Line Items]	abc	Filer label:Balance Sheet Parenthetical, General [Line Items] Documentation:Balance Sheet Parenthetical, General [Line Items] References:NONE Name: abc:BalanceSheetParentheticalGeneralLineItems	1
3	Cash and Cash Equivalents [Line Items]	us-gaap	Standard label:Cash and Cash Equivalents [Line Items] Documentation:Line items represent financial concepts included in a table. These concepts are used to disclose reportable information associated with domain members defined in one or many axes to the table. References:NONE Name: us-gaap:CashAndCashEquivalentsLineItems	1
4	Cash Flow Statement [Line Items]	abc	Filer label:Cash Flow Statement [Line Items] Documentation:Cash Flow Statement [Line Items] References:NONE Name: abc:CashFlowStatementLineItems	1
5	Cash, Cash Equivalents, and Marketable Securities [Line Items]	abc	Filer label:Cash, Cash Equivalents, and Marketable Securities [Line Items] Documentation:Cash, Cash Equivalents, and Marketable Securities [Line Items] References:NONE Name: abc:CashCashEquivalentsAndMarketableSecuritiesLineItems	1
6	Changes in Stockholders' Equity [Line Items]	abc	Filer label:Changes in Stockholders' Equity [Line Items] Documentation:Changes in Stockholders' Equity [Line Items] References:NONE Name: abc:ChangesInStockholdersEquityLineItems	2
7	Class of Stock [Line Items]	us-gaap	Standard label:Class of Stock [Line Items] Documentation:Line items represent financial concepts included in a table. These concepts are used to disclose reportable information associated with domain members defined in one or many axes to the table. References:NONE	2

HINT: Note that the [Line Items] is basically an axis for the concept which is basically the member for the line items axis.

10.9.15. Line items properties

The [Line Items] properties visualization provides a more detailed listing of the [Line Items] properties.

Report Element Properties X

Report Standard Label	Debt Instrument [Line Items]
Base Taxonomy Standard Label	Debt Instrument [Line Items]
Documentation	Line items represent financial concepts included in a table. These concepts are used to disclose reportable information associated with domain members defined in one or many axes to the table.
Report Element Class	Line Items
Prefix (From Taxonomy)	us-gaap
Name	us-gaap:DebtInstrumentLineItems
ID	us-gaap_DebtInstrumentLineItems

Labels of Report Element

From	Role	Label	Lang
Filer	Standard label	Debt Instrument [Line Items]	en-US
Base	Standard label	Debt Instrument [Line Items]	en-US

References of Report Element

Publisher	Reference Name	Reference Information



10.9.16. Abstract

The abstract visualization provides a listing of all report elements whose only purpose is to organize other report elements.

Abstracts

#	Label	Prefix	Standard label, Documentation, References, Concept name	Count
1	Adjustments to reconcile to cash provided by operations [Roll Up]	us-gaap	Standard label:Adjustments to Reconcile Net Income (Loss) to Cash Provided by (Used in) Operating Activities [Abstract] Documentation:Adjustments to reconcile to cash provided by operations [Roll Up] References:NONE Name: us-gaap:AdjustmentsToReconcileNetIncomeLossToCashProvidedByUsedInOperatingActivitiesAbstract	1
2	Assets [Roll Up]	us-gaap	Standard label:Assets [Abstract] Documentation:Assets [Roll Up] References:NONE Name: us-gaap:AssetsAbstract	1
3	Balance Sheet Parenthetical General [Hierarchy]	abc	Filer label:Balance Sheet Parenthetical General [Hierarchy] Documentation:Balance Sheet Parenthetical General [Hierarchy] References:NONE Name: abc:BalanceSheetParentheticalGeneralHierarchy	1
4	Business Segment Information [Hierarchy]	abc	Filer label:Business Segment Information [Hierarchy] Documentation:Business Segment Information [Hierarchy] References:NONE Name: abc:BusinessSegmentInformationHierarchy	1
5	CANADA	country	Standard label:CANADA Documentation:CANADA References:NONE Name: country:CA	1
6	Cash and Cash Equivalents [Hierarchy]	abc	Filer label:Cash and Cash Equivalents [Hierarchy] Documentation:Cash and Cash Equivalents [Hierarchy] References:NONE Name: abc:CashCashEquivalentsHierarchy	1
7	Cash and Cash Equivalents [Roll Forward]	abc	Filer label:Cash and Cash Equivalents [Roll Forward] Documentation:Cash and Cash Equivalents [Roll Forward] References:NONE Name: abc:CashCashEquivalentsRollForward	1

HINT: Note that abstract report elements can never be reported and therefore the data type, period type, and balance are semantically meaningless properties. The term "abstract" as used here is not the same as the use of the XBRL technical syntax attribute "abstract".

10.9.17. Abstract properties

The abstract properties visualization provides a more detailed listing of the abstract report element properties.

Report Element Properties ✕

Report Standard Label	Changes in working capital items [Abstract]
Base Taxonomy Standard Label	Increase (Decrease) in Operating Capital [Abstract]
Documentation	Changes in working capital items [Abstract]
Report Element Class	Abstract
Prefix (From Taxonomy)	us-gaap
Name	us-gaap:IncreaseDecreaseInOperatingCapitalAbstract
ID	us-gaap_IncreaseDecreaseInOperatingCapitalAbstract

Labels of Report Element

From	Role	Label	Lang
Filer	Standard label	Changes in working capital items [Abstract]	en-US
Base	Standard label	Increase (Decrease) in Operating Capital [Abstract]	en-US

References of Report Element

Publisher	Reference Name	Reference Information



10.9.18. Concepts

The concepts visualization provides a listing of all concepts and the properties of the concept.

#	Label	Data Type	Period Type	Balance Type	Prefix	Standard label, Documentation, References, Concept name	Count
1	2014	Monetary	As Of (instant)	Credit	us-gaap	Standard label:Long-term Debt, Maturities, Repayments of Principal in Year Two Documentation:Amount of long-term debt, sinking fund requirements, and other securities redeemable at fixed or determinable prices and dates maturing in the second fiscal year following the latest fiscal year. References:NONE Name: us-gaap:LongTermDebtMaturitiesRepaymentsOfPrincipalForYearTwo	1
2	2015	Monetary	As Of (instant)	Credit	us-gaap	Standard label:Long-term Debt, Maturities, Repayments of Principal in Year Three Documentation:Amount of long-term debt, sinking fund requirements, and other securities redeemable at fixed or determinable prices and dates maturing in the third fiscal year following the latest fiscal year. References:NONE Name: us-gaap:LongTermDebtMaturitiesRepaymentsOfPrincipalForYearThree	1
3	2016	Monetary	As Of (instant)	Credit	us-gaap	Standard label:Long-term Debt, Maturities, Repayments of Principal in Year Four Documentation:Amount of long-term debt, sinking fund requirements, and other securities redeemable at fixed or determinable prices and dates maturing in the fourth fiscal year following the latest fiscal year. References:NONE Name: us-gaap:LongTermDebtMaturitiesRepaymentsOfPrincipalForYearFour	1
4	2017	Monetary	As Of (instant)	Credit	us-gaap	Standard label:Long-term Debt, Maturities, Repayments of Principal in Year Five Documentation:Amount of long-term debt, sinking fund requirements, and other securities redeemable at fixed or determinable prices and dates maturing in the fifth fiscal year following the latest fiscal year. References:NONE Name: us-gaap:LongTermDebtMaturitiesRepaymentsOfPrincipalForYearFive	1
5	Accounts payable	Monetary	As Of (instant)	Credit	us-gaap	Standard label:Accounts Payable, Current Documentation:Carrying value as of the balance sheet date of liabilities incurred (and for which invoices have typically been received) and payable to vendors for goods and services received that are used in an entity's business. Used to reflect the current portion of the liabilities (due within one year or within the normal operating cycle if longer). References:NONE Name: us-gaap:AccountsPayableCurrent	1
6	Accounts payable	Monetary	For Period (duration)	Debit	us-gaap	Standard label:Increase (Decrease) in Accounts Payable Documentation:The increase (decrease) during the reporting period in the aggregate amount of liabilities incurred (and for which invoices have typically been received) and payable to vendors for goods and services received that are used in an entity's business. References:NONE Name: us-gaap:IncreaseDecreaseInAccountsPayable	1
7	Accounts receivable	Monetary	For Period (duration)	Credit	us-gaap	Standard label:Increase (Decrease) in Accounts Receivable Documentation:The increase (decrease) during the reporting period in amount due within one year (or one business cycle) from customers for the credit sale of goods and services. References:NONE	1

HINT: Note that only concepts have balance type, period type, and data type which are meaningful semantically.

10.9.19. Concept properties

The concept properties visualization provides a more detailed listing of concept properties.

Report Element Properties

Report Standard Label	Inventories
Base Taxonomy Standard Label	Inventory, Net
Documentation	Carrying amount (lower of cost or market) as of the balance sheet date of inventories less all valuation and other allowances. Excludes noncurrent inventory balances (expected to remain on hand past one year or one operating cycle, if longer).
Report Element Class	Concept
Prefix (From Taxonomy)	us-gaap
Balance Type	Debit
Period Type	As Of (instant)
Data Type	Monetary (xbrli:monetaryItemType)
Name	us-gaap:InventoryNet
ID	us-gaap_InventoryNet

Labels of Report Element

From	Role	Label	Lang
Filer	Standard label	Inventories	en-US
Base	Standard label	Inventory, Net	en-US
Filer	Total label	Total inventories, net	en-US
Base	Total label	Inventory, Net, Total	en-US

References of Report Element

Publisher	Reference Name	Reference Information
FASB	Accounting Standards Codification	Section: 35 Topic: 330 URI: http://asc.fasb.org/extlink&oid=6386567&loc=d3e3927-108312



10.9.20. Component model structure (for each component)

The component structural relations visualization provides a listing of the relations between the report elements which make up a component.

Component: (Network and Table)					
Network	4020 - Disclosure - Significant Accounting Policies (http://www.abc.com/role/SignificantAccountingPolicies)				
Table	Significant Accounting Policies [Table]				
#	Label	Report Element Class	Period Type	Balance	Name
1	Significant Accounting Policies [Table]	[Table]			abc:SignificantAccountingPoliciesTable
2	Legal Entity [Axis]	[Axis]			dei:LegalEntityAxis
3	Consolidated Entity [Domain]	[Domain]			dei:EntityDomain
4	Significant Accounting Policies [Line Items]	[Line Items]			abc:SignificantAccountingPoliciesLineItems
5	Cash and cash equivalents policy [Text Block]	[Concept] String	For Period		us-gaap:CashAndCashEquivalentsPolicyTextBlock
6	Receivables policy [Text Block]	[Concept] String	For Period		us-gaap:ReceivablesPolicyTextBlock
7	Inventories policy [Text Block]	[Concept] String	For Period		us-gaap:InventoryPolicyTextBlock
8	Debt policy [Text Block]	[Concept] String	For Period		us-gaap:DebtPolicyTextBlock
9	Revenue recognition policy [Text Block]	[Concept] String	For Period		us-gaap:RevenueRecognitionPolicyTextBlock

10.9.21. Component model structural relations report element properties

The component structural relations contain report elements. Key properties of each report element can be seen on the visualization. All report properties are provided by the report element properties. For example, this is the properties of the first report element:

Report Element Properties ✕

Report Standard Label	Cash and cash equivalents policy [Text Block]
Base Taxonomy Standard Label	Cash and Cash Equivalents, Policy [Policy Text Block]
Documentation	Disclosure of accounting policy for cash and cash equivalents, including the policy for determining which items are treated as cash equivalents. Other information that may be disclosed includes (1) the nature of any restrictions on the entity's use of its cash and cash equivalents, (2) whether the entity's cash and cash equivalents are insured or expose the entity to credit risk, (3) the classification of any negative balance accounts (overdrafts), and (4) the carrying basis of cash equivalents (for example, at cost) and whether the carrying amount of cash equivalents approximates fair value.
Report Element Class	Concept
Prefix (From Taxonomy)	us-gaap
Balance Type	
Period Type	For Period (duration)
Data Type	String (xbri:stringItemType, nonnum:textBlockItemType)
Name	us-gaap:CashAndCashEquivalentsPolicyTextBlock
ID	us-gaap_CashAndCashEquivalentsPolicyTextBlock

Labels of Report Element

From	Role	Label	Lang
Filer	Standard label	Cash and cash equivalents policy [Text Block]	en-US
Base	Standard label	Cash and Cash Equivalents, Policy [Policy Text Block]	en-US

References of Report Element

Publisher	Reference Name	Reference Information

HINT: This is a duplication, the report element properties where shown previously.



10.9.22. Component fact table (for each component)

The component fact table visualization provides a listing of the facts which make up the component.

Fact Table Summary

Component: (Network and Table)									
Network	1100 - Document - Document Information (http://www.abc.com/role/DocumentInformation)								
Table	Document Information [Table]								
#	Reporting Entity	Period	Legal Entity [Axis]	Concept	Value	Unit	Rounding	Parenthetical Explanations	
1	0000000001 (http://www.sec.gov/CIK)	2012-01-01 - 2012-12-31	Consolidated Entity [Domain]	Document period end date	2012-12-31				
2	0000000001 (http://www.sec.gov/CIK)	2012-01-01 - 2012-12-31	Consolidated Entity [Domain]	Amendment flag	false				
3	0000000001 (http://www.sec.gov/CIK)	2012-01-01 - 2012-12-31	Consolidated Entity [Domain]	Document fiscal period focus	FY				
4	0000000001 (http://www.sec.gov/CIK)	2012-01-01 - 2012-12-31	Consolidated Entity [Domain]	Document fiscal year focus	2012				
5	0000000001 (http://www.sec.gov/CIK)	2012-01-01 - 2012-12-31	Consolidated Entity [Domain]	Document type	10-K				

HINT: The fact table is useful for quickly scanning a component for items which stand out when compared to other items in the same component.

10.9.23. Component fact table, fact characteristics and properties

The fact characteristics and properties visualization focuses on the characteristics and properties for one specific fact. Provided are the characteristics of the fact, the fact value, traits of the fact if the fact is numeric and parenthetical explanations for the face.

Fact Properties ✕

Characteristic, trait or fact	Value of characteristic, trait, or fact
Reporting Entity	0000000001 (http://www.sec.gov/CIK)
Period	2012-01-01 - 2012-12-31
Legal Entity [Axis]	Consolidated Entity [Domain]
Concept	Document period end date
Fact value	2012-12-31
Units	
Decimals (rounding)	
Parenthetical explanation (i.e. footnote)	(None)

HINT: While not necessary because the component rendering provides all this information, it is helpful to sometimes have fact information provided in this manner.

10.9.24. Fact parenthetical explanations

The fact parenthetical explanations visualization shows the parenthetical explanations related to a particular fact.



Parenthetical Explanation ✕

Proin elit sem, ornare non, ullamcorper vel, sollicitudin a, lacus. Mauris tincidunt cursus est. Nulla sit amet nibh. Sed elementum feugiat augue. Nam non tortor non leo porta bibendum. Morbi eu pede. In eu erat et est feugiat fermentum. Praesent accumsan. Nulla convallis, lorem nec aliquet dapibus, libero felis sagittis augue, ut adipiscing nisl eros in quam. Fusce eleifend. Sed justo nibh, placerat a, malesuada nec, condimentum ac, magna.

HINT: Parenthetical explanations make more sense when viewed from the perspective of the component.

10.9.25. Component semantic rendering (for each component)

The component semantic rendering visualization provides information about the facts, characteristics of the facts, traits of the fact, and parenthetical explanations which further explain the facts of a component.

Component: (Network and Table)	
Network	5040 - Disclosure - Inventory Components (http://www.abc.com/role/InventoryComponents)
Table	Inventory Components [Table]

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

Reporting Entity	0000000001 (http://www.sec.gov/CIK)
Legal Entity [Axis]	Consolidated Entity [Domain]

Inventory Components [Line Items]	Period	
	2012-12-31	2011-12-31
Inventory, Net [Roll Up]		
Finished Goods	1,000,000	1,000,000
Work in progress	1,000,000	1,000,000
Raw materials	1,000,000	1,000,000
Other	1,000,000	1,000,000
Total inventories, net	4,000,000	4,000,000

HINT: The semantic rendering provides all the information of the structural relations and all the information of the fact table combined with other knowledge of how to properly render information models and member aggregation models into a properly formatted, human readable, semantic rendering.

10.9.26. Component fact or characteristic properties (for any fact or characteristic of component)

The component fact properties visualization shows the properties of a selected fact (when a fact is selected). The characteristic properties show the properties for the selected report element (when a report element is selected).



Here you see the fact which expresses total inventories for 2012 for the consolidated entity expressed in US dollars for the reporting entity shown:

Fact Properties	
Characteristic, trait or fact	Value of characteristic, trait, or fact
Reporting Entity	0000000001 (http://www.sec.gov/CIK)
Period	2012-12-31
Legal Entity [Axis]	Consolidated Entity [Domain]
Concept	Inventories
Fact value	4000000
Units	USD
Decimals (rounding)	-3
Parenthetical explanation (i.e. footnote)	(None)

Here you see the properties of the characteristic "Concept" which has the value of "Inventories":

Report Element Properties	
Report Standard Label	Inventories
Base Taxonomy Standard Label	Inventory, Net
Documentation	Carrying amount (lower of cost or market) as of the balance sheet date of inventories less all valuation and other allowances. Excludes noncurrent inventory balances (expected to remain on hand past one year or one operating cycle, if longer).
Report Element Class	Concept
Prefix (From Taxonomy)	us-gaap
Balance Type	Debit
Period Type	As Of (instant)
Data Type	Monetary (xbrli:monetaryItemType)
Name	us-gaap:InventoryNet
ID	us-gaap_InventoryNet

Labels of Report Element			
From	Role	Label	Lang
Filer	Standard label	Inventories	en-US
Base	Standard label	Inventory, Net	en-US
Filer	Total label	Total inventories, net	en-US
Base	Total label	Inventory, Net, Total	en-US

References of Report Element		
Publisher	Reference Name	Reference Information

Another characteristic of fact, the legal entity:



Report Element Properties ✕

Report Standard Label	Legal Entity [Axis]
Base Taxonomy Standard Label	Legal Entity [Axis]
Documentation	The set of legal entities associated with a report.
Report Element Class	Axis
Prefix (From Taxonomy)	dei
Name	dei:LegalEntityAxis
ID	dei_LegalEntityAxis

Labels of Report Element

From	Role	Label	Lang
Filer	Standard label	Legal Entity [Axis]	en-US
Base	Standard label	Legal Entity [Axis]	en-US

References of Report Element

Publisher	Reference Name	Reference Information
-----------	----------------	-----------------------

Characteristic value, member of legal entity characteristic, consolidated entity:

Report Element Properties ✕

Report Standard Label	Consolidated Entity [Domain]
Base Taxonomy Standard Label	Entity [Domain]
Documentation	All the names of the entities being reported upon in a document. Any legal structure used to conduct activities or to hold assets. Some examples of such structures are corporations, partnerships, limited liability companies, grantor trusts, and other trusts. This item does not include business and geographical segments which are included in the geographical or business segments domains.
Report Element Class	Domain
Prefix (From Taxonomy)	dei
Name	dei:EntityDomain
ID	dei_EntityDomain

Labels of Report Element

From	Role	Label	Lang
Filer	Standard label	Consolidated Entity [Domain]	en-US
Base	Standard label	Entity [Domain]	en-US

References of Report Element

Publisher	Reference Name	Reference Information
-----------	----------------	-----------------------

10.9.27. Component business rule relations (for each component)

The business rules relations visualization shows the business rules for a component.



Business Rules

Component: (Network and Table)	
Network	2001 - Statement - Balance Sheet (http://www.abc.com/role/BalanceSheet)
Table	Balance Sheet [Table]

Assertion Report

Existence Assertions

ID	Satisfied
ASSERTION_Exists_Assets2 (evaluations 1)	Satisfied
ASSERTION_Exists_LiabilitiesAndEquity (evaluations 1)	Satisfied
ASSERTION_Exists_CurrentAssets (evaluations 1)	Satisfied
ASSERTION_Exists_Equity (evaluations 1)	Satisfied
ASSERTION_Exists_CurrentLiabilities (evaluations 1)	Satisfied

Value Assertions

ID	Satisfied
ASSERTION_Balances_BalanceSheet (evaluations 2)	Satisfied

XBRL Calculations

Reporting Entity	000000001 (http://www.sec.gov/CIK)
Period	2012-12-31
Measure	USD
Legal Entity [Axis]	Consolidated Entity [Domain]

Label	Rendered	Reported	Calculated	Balance	Decimals	Message
Assets [Roll Up]						
Current assets [Roll Up]						
Cash, Cash Equivalents, and Short-term Investments [Roll Up]						
Cash and cash equivalents	11,000,000 +	11,000,000	11,000,000	DR	-3	
Marketable securities	9,000,000 +	9,000,000	9,000,000	DR	-3	
Cash, Cash Equivalents, and Short-term Investments	20,000,000 +	20,000,000	20,000,000	DR	-3	OK
Accounts receivable, net of allowance for doubtful accounts of \$1,000 and \$1,000	29,000,000 +	29,000,000	29,000,000	DR	-3	
Inventories	4,000,000 +	4,000,000	4,000,000	DR	-3	
Prepaid expenses	3,000,000 +	3,000,000	3,000,000	DR	-3	
Current assets	56,000,000 +	56,000,000	56,000,000	DR	-3	OK
Noncurrent assets [Roll Up]						
Property, plant and equipment, net	82,000,000 +	82,000,000	82,000,000	DR	-3	
Deferred costs	9,000,000 +	9,000,000	9,000,000	DR	-3	
Noncurrent assets	91,000,000 +	91,000,000	91,000,000	DR	-3	OK
Assets	147,000,000	147,000,000	147,000,000	DR	-3	OK

10.10. Business rule relations properties

The business rules relations have properties which depend on the class of business rule. This is the important information for determining the properties of business rule type relations for the different classes of business rules. Business rules can be broken down into the following categories:

- Roll up



- Roll forward
- Adjustment
- Variance
- Member aggregation
- Complex computation
- Existence of a fact
- Equality of two facts
- Fact greater than or less than another fact
- Dependency of a fact (if Fact A exists, than Fact B must exist)
- Free form (i.e. any other supported business rule)

The following is an example of the properties of a roll forward type business rule:

Business rule information:	
ID	Assertion_RollForward_PropertyPlantAndEquipmentNet
Type	Roll forward
Business rule label:	Property, plant and equipment roll forward must reconcile.
Formula/Function: (semantic, not syntax)	Beginning balance (Property, Plant and Equipment, Net) + Additions - Disposals - Depreciation + Other Changes = Ending balance (Property, plant and equipment, net)
Concept which rolls forward:	
Fact with this concept rolls forward: (beginning and ending)	Property, Plant and Equipment, Net (us-gaap:PropertyPlantAndEquipmentNet)
Set of changes to balance:	
Change 1 with this concept:	Additions (us-gaap:Additions)
Change 2 with this concept:	Disposals (us-gaap:Disposals)
Change 3 with this concept:	Depreciation (us-gaap:Depreciation)
Change 4 with this concept:	Other Changes (us-gaap:OtherChanges)

10.11. Verification risks and categories

The following is a summary of verification tasks and steps. We start first by identifying the risk which might cause a financial report to be invalid and ways to mitigate that risk.

10.11.1. Risks and risk mitigation

Below is a summary of the risks which could lead to a financial report being invalid and the risk mitigation assertion or verification task which would assure that the risk goes unrealized. Terminology of the *Financial Report Semantics and Dynamics Theory* (described above) is used to clearly state the report objects, relations, and properties which must be examined either using automated processes or manual processes to verify that object property. The risk and mitigation is independent of whether the verification task is performed by a party which is or is not independent.

Risk	Risk Mitigation Assertion (Verification task)
Full inclusion: All relevant facts, characteristics which describe facts, parenthetical explanations of facts, and relations between facts/characteristics are not included in the financial report.	Completeness: All relevant facts, characteristics of facts, parenthetical explanations of facts, and relations between facts/characteristics have been included.



Risk	Risk Mitigation Assertion (Verification task)
False inclusion: No facts, characteristics which describe facts, parenthetical explanations of facts, or relations between facts/characteristics which should not be included have been included.	Existence: No facts, characteristics which describe facts, parenthetical explanations of facts, relations between facts/characteristics are included within financial report which should not be included.
Inaccuracy: Property of a fact, characteristic, component, or relation is inaccurate. <i>(For example, mathematical relations and model logical structure relations.)</i>	Accuracy: The properties of all facts, characteristics, components, parenthetical explanations, relations between facts/characteristics which are included in the financial report are accurate, correct, and complete.
Infidelity: All facts, characteristics, parenthetical explanations, and relations considered as a whole do not possess the required fidelity when considered as a whole.	Fidelity: Considered as a whole; the facts, characteristics, parenthetical explanations, and relations between facts/characteristics properly reproduces the financial and nonfinancial facts, characteristics, and relations of the reporting entity and provide a true and fair representation of such financial information.
Integrity not intact: Integrity between facts/characteristics is inappropriate.	Integrity: Considered as a whole, the facts and characteristics of those facts reflect the true and proper relations between such facts and characteristics.
Inconsistency: The facts, characteristics, parenthetical explanations, relations and their properties expressed are inconsistent with prior reporting periods or with peers of the reporting entity.	Consistency: The facts, characteristics, parenthetical explanations, relations between facts/characteristics, and their properties are consistent with prior periods and with the reporting entities peers, as is deemed appropriate.
Not presented fairly: The financial report is not presented fairly, in all material respects, and are not a true and fair representation in accordance with the financial reporting framework applied.	True and fair representation: The financial report is a true and fair representation of the information of the reporting entity. An auditor might say presented fairly, in all material respects, and provide a true and fair representation in accordance with the financial reporting framework applied (US GAAP, IFRS, etc.).

10.11.2. Categories of Verification

Verification can be broken down in a number of different ways forming what might be seen as sets or groups of verification. These categories are important to understand as they determine how verification can be performed and who or how verification rules would be created.

The first important aspect of verification relates to how the process by which the risk mitigation task is carried out. There are two approaches:

- **Automated process:** Some verification can be automated using computer software applications.
- **Manual process:** Some verification must be carried out by humans manually. There are two reasons verification might need to be carried out manually by humans:
 - Verification step is not automatable.
 - Verification step is automatable; however the automatable verification rules necessary to achieve automated verification have not been created.



Basically, any verification task which is not or may not be automated must be verified manually.

Another aspect of verification is whether it relates to syntax or semantics. These are the categories for this aspect:

- **XBRL technical syntax:** SEC XBRL financial filings are of the XBRL technical syntax and thus XBRL technical validation would apply. XBRL technical syntax validation is 100% automatable because of the nature of the XBRL specification. XBRL technical syntax restrictions will generally be automatable, but it cannot be said at this time that syntax restrictions are 100% automated.
- **SEC EFM rules:** The SEC Edgar system defines certain rules digital financial reports must follow. These rules are broken down into two categories within the Edgar Filer Manual (EFM): syntax and semantics. For example, the EFM specifies how to identify the consolidated entity information within an SEC XBRL financial filing. SEC semantics rules are sometimes automatable and other times not automatable.
- **XBRL US consistency checks:** XBRL US provides a number of consistency checks to be sure information reported is correct. For example, certain facts should never be less than zero. Consistency checks automate the process of detecting these sorts of inconsistencies.
- **Report logical structure:** Report structure is defined by the US GAAP Taxonomy Architecture which expresses what a [Table] is, how a [Table] relates to an [Axis] and to a [Member], etc. These report elements can be organized logically or illogically and incorrectly. Any illogical, inconsistent, or ambiguous organization of these report elements is detected by automated report logical structure verification testing.
- **US GAAP Domain level rules:** US GAAP defines certain specific rules which are applicable to all reporting entities. For example, balance sheets report assets; balance sheets report liabilities and equity; balance sheets balance (assets = liabilities and equity); balance sheets foot; etc. These rules are the same for every reporting entity and therefore are considered domain level business rules.
- **Industry/Activity level rules:** All reporting entities for some specific industry or activity have the same business rules. For example, all commercial and industrial companies have classified balance sheets and therefore report current assets and current liabilities; whereas depository institutions report unclassified balance sheets.
- **Reporting entity specific rules:** All other US GAAP related business rules which are not the same for each reporting entity or are cannot be categorized into some specific industry/activity fall into the category of reporting entity specific rules. For example, aspects of how the cash flow statement foots is unique to a reporting entity.
- **Reportability rules:** A disclosure checklist is used by accountants to be sure all required disclosures are provided by a reporting entity and each disclosure provides the appropriate individual disclosure items. Many of these rules can be checked by a computer software application using "if-then" type reasoning. For example, if the line item property, plant, and equipment exists on the balance sheet one would expect certain specific policies and disclosures to be provided. Many reportability type rules must be manually checked as they are impossible to automate.



- **Other rules and best practices:** This category is simply a summary category for any other rules or best practices which a reporting entity chooses to follow. For example, checking the spelling of a report is a type of rule which can be automated using software. Other rules and best practices must be checked manually.



10.12. Verification tasks and steps

The following is a set of verification tasks which must be performed in order to verify that a digital financial report expresses information correctly and appropriately as determined by a reporting entity. A digital financial report is a discrete set of discrete pieces. Each of these pieces must be checked. All properties of these pieces must be checked. Relations between the pieces must be checked and verified to be appropriate. Properties of the relations must be checked and verified to be appropriate.

Given that a digital financial report is a definitive, discrete, finite set of objects and their relations and properties and therefore verification of those pieces is likewise a set of definitive, discrete, and finite set of verification tests and tasks. This provides 100% coverage of the report objects. Again, verification may be manual or automated.

Financial report object	Verification task/steps
Financial report properties	<ol style="list-style-type: none"> 1. Verify <i>financial report</i> object. <ol style="list-style-type: none"> a. Verify financial report object properties. <ol style="list-style-type: none"> i. Financial report document identifier property correct (target namespace). ii. Financial report dictionaries (taxonomies) correct. b. Verify full inclusion of financial report components. c. Verify false inclusion of financial report components.
Components	<ol style="list-style-type: none"> 2. Verify financial report <i>components</i>. (For each component) <ol style="list-style-type: none"> a. Verify component properties correct. <ol style="list-style-type: none"> i. Sort code. ii. Type. iii. Title. iv. Identifier b. Verify full inclusion of component facts. c. Verify false inclusion of component facts. d. Correctness of component facts. e. Correctness integrity between components.
Fact characteristics and fact characteristic properties	<ol style="list-style-type: none"> 3. Verify fact <i>characteristics</i>. (For each fact) <ol style="list-style-type: none"> a. Characteristics properties correct. <ol style="list-style-type: none"> i. Characteristic (i.e. [Axis], Reporting entity, Period, [Line Items], or other characteristic defined and added by reporting entity). ii. Characteristic value. iii. Characteristic properties (for Concepts only). <ol style="list-style-type: none"> 1. Data type. 2. Period type. 3. Balance type. b. Verify full inclusion of fact characteristics. c. Verify false inclusion of fact characteristics. d. Correctness of ordering of fact characteristics



Financial report object	Verification task/steps
Fact properties	4. Verify <i>fact</i> properties. (For each fact) <ol style="list-style-type: none"> a. Verify full inclusion of characteristics. b. Verify false inclusion of characteristics. c. Fact value accuracy. d. Fact value traits. <ol style="list-style-type: none"> i. Units. ii. Rounding (decimals). e. Verify full inclusion of parenthetical explanations. f. Verify false inclusion of parenthetical explanations.
Parenthetical explanations	5. Verify <i>parenthetical explanation</i> properties. (For each parenthetical explanation)
Model structural relations	6. Verify model structural <i>relations</i> . (For each model structural relationship) <ol style="list-style-type: none"> a. Correctness of report element model structural relationships. b. Verify full inclusion of model structural relations. c. Verify false inclusion of model structural relationship. d. Correctness or logic of model structural relationship properties. (For each property) e. Correctness or logic of report element properties. (For each report element involved in a model structural relationship)
Business rules relations	7. Verify business rules <i>relations</i> . (For each business rule type relationship) <ol style="list-style-type: none"> a. Correctness or logic of business rule relationship between report elements. (For each relationship) b. Verify full inclusion of business rule relationships. c. Verify false inclusion of business rule relationships.
Flow relations	8. Verify flow <i>relations</i> (ordering, sequence of components). <ol style="list-style-type: none"> a. Correctness or logic of component ordering, sequencing.
Report elements	9. Verify report element properties. (For each property) <ol style="list-style-type: none"> a. Report element properties are correct.

Note that the terms used above to describe financial report objects are from the *Financial Report Semantics and Dynamics Theory* which provides a precise definition of each object.

10.13. Role of software in verification process

Computer software will play a major role in the verification of the information expressed by a digital financial report, helping its creator know that the story they are telling with their financial report is verifiably a true and fair representation of the reporting entities information and the financial story the creator intended to tell.

The best software will be both invisible to the user of the software but assist the user understand exactly what they are responsible for. Creation of a digital financial report cannot be a “black box” or where a business user does his or her best and hopes it will fulfil their obligation and meet their legal responsibility. No paper-based financial report would ever have been released under those terms.



The best digital financial report creation software will both assist the creator of the report verify all aspects of the financial report during the creation process within the creation software used to create the financial report. The business user will have complete transparency into what the software is doing using automated processes and integrated processes for managing the manual verification tasks.

Other verification software will be stand-alone and be independent of the actual creation process. For example, it is likely that internal and external auditors will use software which is not integrated with the creation process.

The following is a summary of functionality which is necessary within software designed to assist a business user in the process of verification of a digital financial report such as an SEC XBRL-based financial filing:

- **Technical syntax validation.** Digital financial reports are ultimately expressed using some technical syntax. For example, SEC XBRL-based financial reports are formatted in the XBRL technical syntax which uses XBRL 2.1 and XBRL Dimensions. Filers might also choose to use XBRL Formula to express and test business rules. As such, verification software clearly needs to be able to provide feedback to the user that XBRL which has been created complies with the XBRL technical specifications. Such software should be shown to pass the XBRL 2.1, XBRL Dimensions 1.0, and the XBRL Formula conformance suite tests. As 100% of technical syntax verification can be automated, the business user really should never need to manually verify technical syntax. Creation software should simply create nothing other than proper XBRL.
- **SEC Edgar Filer Manual (EFM) rules validation.** The SEC EFM places specific additional technical syntax restrictions on how you are allowed to use XBRL. The EFM also has a number of semantic rules and restrictions. Business users will need to verify that their SEC XBRL-based financial report against these rules. Many EFM rules can be automatically verified but others need to be manually verified.
- **Report logical structure verification.** The US GAAP taxonomy specifies how to construct the model you use to represent your financial report. It uses report elements such as [Table]s, [Axis], [Member]s, [Line Items], networks, concepts, and abstracts in specific, logical ways. (See section 4.5 of the US GAAP Taxonomy Architecture.) Software must be able to help business user not create illogical, inconsistent, or ambiguous models which cause misinterpretation of their digital financial report. For example, inconsistencies between the XBRL definition relations, calculation relations, and presentation relations can cause illogical and misinterpret relations. Software can easily verify that you are creating logical, consistent, and unambiguous information using automated testing.
- **Business rules engine for processing business rules.** XBRL Formula is one type of global standard rules engine which can be used to express business rules which can be used to verify both mathematical type relations and other types of relations expressed in your digital financial reports. A business rules engine of some type is necessary because the relations expressed in digital financial reports go beyond the simplistic relations verified by XBRL calculations. As such, digital financial report creation and verification software needs to provide this functionality. Alternatively, creation software might take the approach of generating business rules from the actual model which is created.



- **US GAAP domain level and industry/activity level rules validation.** US GAAP had both domain level business rules which every digital financial report must follow, such as assets = liabilities and equity, and industry/activity level business rules, such as commercial and industrial companies must provide classified balance sheets which report current assets and current liabilities. Verification software and creation software should support these business rule groups.
- **Creation of business rules by business users.** Every digital financial report will have its own reporting entity specific business rules. As such, creation software and/or verification software must enable the business users creating these digital financial reports to create and otherwise manage their unique business rules. Alternatively, creation software could auto-generate these business rules. Complex and difficult to use technical tools will not meet the needs of business users.
- **Understandable and otherwise appropriate views of financial report semantic objects, relations, properties.** Software needs to provide views of report element and their properties in ways that are understandable to business users. XBRL technical syntax oriented views of report objects is not appropriate and unnecessary. Business meaning is what is important to business users, not technical syntax which they will never understand, nor should they need to understand. Semantic views, as outlined in this document, are what is necessary. The many views necessary must support both automated and manual verification of information within the SEC XBRL financial report.
- **Understandable and well organized navigation between financial report objects, relevant properties, and relevant relations.** Financial report objects are related to other objects and have properties which business users need to examine. As such, appropriate navigation between the sometimes thousands of report objects, their relations and their properties is necessary. Again, the report objects necessary are the ones which provide meaning to business users, not the technical syntax objects. Mixing semantic type objects and syntax type objects is likewise inappropriate. A well-organized interface both exposes and leverages the intersections between the many financial report objects.
- **Understandable semantic renderings.** For renderings of the information to be understandable, they must be shown correctly to the business user. There are exactly two reasons for bad renderings: (1) bad models, (2) bad rendering engines. If the rendering engine is good, then the only reason for a bad rendering is a bad model which can be both identified and then fixed. One thing most rendering engines do not do well at this time is leverage the information models of the information being modeled. Roll ups, roll forwards, adjustments, variances, hierarchies, and other information models have characteristics which software vendors could leverage in their rendering software to improve what business users see and have to therefore work with. Also, all information should be shown by software, not just some information. Appropriate semantic renderings are a basis for appropriate views of information, appropriate navigation between components, and the ability to effectively verify a digital financial report.
- **SEC interactive data rendering.** While it is much more likely that an SEC XBRL financial filing will be viewed within software other than the SEC interactive data viewer; business users still want to understand how their



- filing will look on the SEC web site. As such, verification software should include an SEC interactive data rendering within the verification software.
- **Support for tracking/managing both automated and manual validation tasks and steps.** Not all verification tasks or steps can be automated. As such, verification of a digital financial report, such as an SEC XBRL-based financial filing, will always be a combination of automated and manual tasks/steps. As such, software supporting a business user in the verification process needs to help the business user manage both automated and manual verification tasks/steps.
 - **Comprehensive and useful set of verification reports and appropriate verification evidence package.** Business users need to be able to print many of the same views provided by software applications used to visualize a digital financial report. Quantity of reports is not what is important, quality is what is important. Well thought out and well organized reports which can be used both for verification of digital financial reports and for providing a historical archive, or evidence package, for a financial filing.
 - **Transparency into what the software is automatically verifying so manual verification work can be properly planned.** Verification of a digital financial report such as an SEC XBRL-based financial report should not be a "black box". At the very least, business users need to understand exactly what automated verification steps software performs so that they can properly plan their manual tasks/steps required to supplement automated verification. As such, business users need to be able to see the specific automated verification rules software is performing. Today this is of particular importance as software may perform different sets of validation rules.
 - **Comparison between multiple versions of a report in order to understand differences.** A necessary feature of a digital financial report creation or verification application is to manage last minute changes safely. The ability to perform automated comparisons between different versions of an SEC XBRL financial report to understand changes between the two versions of the same report is crucial. For example, if you did extensive work in verifying your SEC XBRL financial report and then there are a few last minute changes which need to be made, how can you be sure some other change was not unintentionally or maliciously introduced?
 - **Managing workflow.** Creation of a financial report is a set of tasks which could involve a specific workflow. Managing the workflow of creating a financial report can be beneficial to users, but is not absolutely required from a software application.
 - **Collaborative, multi-user.** Creation of a financial report is a collaboration. Verification is likewise a collaboration. Although not required by everyone; the ability to effectively collaborate with others during the verification process can be a desirable feature to some, a required feature for others.

10.14. Unanswered verification related questions

The following is a summary of unanswered questions which exist relating to verification of digital financial reports which will eventually need to be addressed but which have yet to be adequately addressed:

- **Should software be certified and if so, then how:** Having software work consistently and predictably across the many different software vendors



implementing such software is crucial. Today it is extremely difficult to understand what a software application is doing and what it is not doing in terms of verification of an SEC XBRL financial filing. Further, different software applications work in different ways (i.e. there is no one standard way) and even worse, interoperability issue sometimes exist. Sometimes accountants feel XBRL is a like a “black box”.

- **Software interoperability:** Having different software provide different results is less than optimal. For example, SEC EFM validation is different per the SEC, the XBRL Cloud EDGAR Dashboard, and other software vendors which obviously pass SEC EFM validation because their filings were accepted by the SEC; but XBRL Cloud reports what they believe is an error but clearly the people creating the filing do not agree is an error or they do agree that it is an error but they just missed that specific item.
- **SEC validation criteria:** Few people would dispute that the SEC is not specifying all that is needed to be specified for SEC XBRL financial filings. If they were, the software interoperability issues mentioned above would not exist. We are still in the early years of the SEC’s use of XBRL, the SEC does not want to overwhelm filers in these early years; but they have sent messages that they would crack down eventually. Further, what is the scope of validation rules expected of the SEC? Is it appropriate or does the SEC have rules today that say “make sure your balance sheet balances”? Are rules of that level appropriate to be specified? What about other disclosure rules.
- **US GAAP taxonomy is incomplete:** The US GAAP taxonomy is obviously incomplete in the area of business rules and disclosure rules which exist in US GAAP. It should not be a guessing game to figure out information such as what XBRL US is publishing as their “consistency suite”. It seems that this information should exist in the taxonomy. At the other end of the spectrum; what is necessary from the FASB is more like an ontology as opposed to a taxonomy. US GAAP is a far richer than what is being articulated in the current instantiation of the US GAAP taxonomy. Exactly how far should the US GAAP taxonomy go? Should a complete computer readable disclosure checklist be provided by the SEC or FASB? Or, should the market provide this useful resource? If different vendors in the market provide different rules, how will that impact interoperability?

