Introduction to the U.S. Public Company Financial Information Repository

The secxbrl.info Team <hello@secxbrl.info>

Abstract

This document introduces both business users and technical engineers to the business-value adding features of the US Public Company Financial Information Repository, or SECXBRL.info for short, its architecture, and the various possibilities of how to access it. It is meant for users of the SECXBRL.info website who want to understand more about what is happening inside and as a starting point for users of the software interface and the software development platform, describing the general concepts, and from which to explore the more technical documentation.

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Overview

The *US Public Company Financial Information Repository*(SECXBRL.info) provides the ability to analyze the financial information of US public companies. US public companies are now required to submit reports, such as yearly (10-K) and quarterly financial reports (10-Q), to the US Securities and Exchange Commission (SEC) using the globally standardized XBRL interactive data format. The SEC's purpose of this adoption is to carry "out the Commission's commitment to make financial disclosure accessible and easy to use through the application of interactive data." [http://www.sec.gov/spotlight/xbrl/what-oid-does.shtml]. However, such data itself is not interactive, it only becomes valuable if it can be analyzed in a flexible, ad-hoc, real-time manner. The US Public Company Financial Information Repository SECXBRL.info, powered by 28.io, has been built to deliver on this promise. On the one hand, it is an out-of-the-box solution, complete with all the features needed from an analytical user interface to the real-time, simultaneous access to all the SEC 10-K and 10-Q filings since 2010. On the other hand, it is a fully customizable platform in which every component can be adapted to the specific requirements of a different data set or different analytical needs.

The general approach was the following:

- Preserve all the details of the original filing in order to provide a complete audit trail of all presented figures.
- Add several layers of functionality in order to provide maximum ease-of-use (highest layer), maximum flexibility (lowest layer), or a well-balanced mix of the two (intermediate layer).

- Add domain-specific knowledge in order to help answer commonly asked questions.
- Chose a system architecture that can deliver real-time performance.
- Generalize the requirements such that private XBRL data can be analyzed confidentially or that other repositories for public non-SEC data can be built.

Business-Value Adding Features

This section highlights some of the features of the SECXBRL.info service and platform that demonstrate how the business value that the XBRL community and the SEC had in mind can be reaped. These features address the requirements of sophisticated analytical capabilities, extensibility through further domain knowledge and data, and real-time ad-hoc performance.

Feature #1: Sophisticated Semantic Analytics

The value of analyzing the SEC XBRL data does not come from finding out about an individual number. Or from extracting all the numbers from an individual filing. The most value comes from comparing reported figures of a single entity over time, from comparing the same figures across reporting entities, or from being able to look at a table of numbers exactly the way the company intended it to be. To realize these benefits requires a certain level of semantic analytical capability.

Some of this sophisticated processing happens quietly in the background. The repository deals with situations like amended filings and the fact that information is duplicated in SEC filings. Filers typically report numbers not only for the current period but also for prior periods. The repository therefore has to determine which is the most up-to-date information for a given fiscal period. However, there is always a way to get to all the information using the 28.io development platform, for instance if someone wanted to find out if the numbers for one and the same fiscal period has been changed.

Likewise, filers report figures for the same concept at various levels, e.g. business segments and consolidated entity. Most of the time, what is asked for is the information for the entity of focus of the public company filing, that means the consolidated entity. Again, this is automatically taken care of by way of how the data is represented and the semantic analytical intelligence that is applied to it.

Another important issue when querying SEC XBRL financial filings is that public companies can use many different US GAAP XBRL taxonomy concepts to label reported information. This does make sense for an individual company but makes it impossible to compare figures across entities. In order to deal with this situation, the capability of establishing semantic mappings was built in such a way that these can be applied for these kinds of analyses. If you consider that SEC XBRL financial filers use more than 45 different concepts to report “Revenues” you begin see the benefits of a built-in mapping. One such synonyms mapping that is available for everyone using the repository are the 51 Fundamental Accounting Concepts (see http://www.secxbrl.info/concept-map/FundamentalAccountingConcepts).

Example #1 - R&D Expenses

For example, these are the concepts used within SEC XBRL financial filings to report on R&D expenses, and that have been mapped to the Fundamental Accounting Concept fac:ResearchAndDevelopment:

- us-gaap:ResearchAndDevelopmentExpense
- us-gaap:ResearchAndDevelopmentExpenseExcludingAcquiredInProcessCost
- us-gaap:ResearchAndDevelopmentExpenseSoftwareExcludingAcquiredInProcessCost
- us-gaap:ResearchAndDevelopmentInProcess

- us-gaap:ResearchAndDevelopmentAssetAcquiredOtherThanThroughBusinessCombinationWrittenOff

Using the semantic mapping for fac:ResearchAndDevelopment, one is now able to retrieve all figures representing R&D expense for all DOW30 entities for the fiscal period FY and the fiscal year 2012. Retrieve the results as XML.

This is how the result looks like in the SECXBRL.info website (see http://www.secxbrl.info/example/ResearchAndDevelopment):

#	xbrl:Concept	xbrl:Entity	xbrl:Period	dei:LegalEntityAxis	bizql:FiscalPeriod	bizql:FiscalYear	Value	Unit	Decimals
1	fac:ResearchAndDevelopment	http://www.sec.gov/CIK 0000012927	2012-01-01/2012-12-31	sec:DefaultLegalEntity	FY	2012	3298000000	iso4217:USD	-6
2	fac:ResearchAndDevelopment	http://www.sec.gov/CIK 0000018230	2012-01-01/2012-12-31	sec:DefaultLegalEntity	FY	2012	2466000000	iso4217:USD	-6
3	fac:ResearchAndDevelopment	http://www.sec.gov/CIK 0000030554	2012-01-01/2012-12-31	sec:DefaultLegalEntity	FY	2012	2067000000	iso4217:USD	-6
4	fac:ResearchAndDevelopment	http://www.sec.gov/CIK 0000034088	2012-01-01/2012-12-31	sec:DefaultLegalEntity	FY	2012	1042000000	iso4217:USD	INF
5	fac:ResearchAndDevelopment	http://www.sec.gov/CIK 0000040545	2012-01-01/2012-12-31	sec:DefaultLegalEntity	FY	2012	4520000000	iso4217:USD	-6
6	fac:ResearchAndDevelopment	http://www.sec.gov/CIK 0000050863	2012-01-01/2012-12-29	sec:DefaultLegalEntity	FY	2012	10148000000	iso4217:USD	-6
7	fac:ResearchAndDevelopment	http://www.sec.gov/CIK 0000051143	2012-01-01/2012-12-31	sec:DefaultLegalEntity	FY	2012	6302000000	iso4217:USD	-6
8	fac:ResearchAndDevelopment	http://www.sec.gov/CIK 0000066740	2012-01-01/2012-12-31	sec:DefaultLegalEntity	FY	2012	1079000000	iso4217:USD	-6
9	fac:ResearchAndDevelopment	http://www.sec.gov/CIK 0000078003	2012-01-01/2012-12-31	sec:DefaultLegalEntity	FY	2012	7870000000	iso4217:USD	-6
10	fac:ResearchAndDevelopment	http://www.sec.gov/CIK 0000093410	2012-01-01/2012-12-31	sec:DefaultLegalEntity	FY	2012	648000000	iso4217:USD	-6
11	fac:ResearchAndDevelopment	http://www.sec.gov/CIK 0000101829	2012-01-01/2012-12-31	sec:DefaultLegalEntity	FY	2012	2371000000	iso4217:USD	-6
12	fac:ResearchAndDevelopment	http://www.sec.gov/CIK 0000200406	2012-01-02/2012-12-30	sec:DefaultLegalEntity	FY	2012	7665000000	iso4217:USD	-6
13	fac:ResearchAndDevelopment	http://www.sec.gov/CIK 0000310158	2012-01-01/2012-12-31	sec:DefaultLegalEntity	FY	2012	8168000000	iso4217:USD	-6
14	fac:ResearchAndDevelopment	http://www.sec.gov/CIK 0000789019	2011-07-01/2012-06-30	sec:DefaultLegalEntity	FY	2012	9811000000	iso4217:USD	-6

The data for every analysis that can be performed on the SECXBRL.info website is also accessible through a web service API. In fact, the SECXBRL.info website uses exactly this API to retrieve the data from the repository. For this example, the API call would be

http://secxbrl.xbrl.io/v1/_queries/public/api/facts.jq?_method=POST&format=xml&

- concept=fac:ResearchAndDevelopment&
- map=FundamentalAccountingConcepts&
- fiscalPeriod=FY&
- fiscalPeriod=FY&
- fiscalYear=2012&
- tag=dow30

This query is more generic than the website as it additionally allows to simultaneously select multiple concepts, multiple entities, and even multiple fiscal periods and fiscal years. Furthermore, the facts retrieved by this query can be explicitly filtered by any dimension that is included in the repository.

Example #2 - Fact Table for Balance Sheet

The XBRL filing, however, does not only contain individual facts, but also complete financial statements like balance sheets, income statements, cash flow statements, significant accounting policies, long-term debt maturities, subsequent events, and so on, so-called components. There are three parts to a financial statement: (1) its fact table, (2) its model structure, and (3) its visual rendering. The fact table contains the individual facts. The model structure puts these facts into dimensions and hierarchies. The visual rendering describes how the statement looks like when printed in a report. Right now, SECXBRL.info does not provide renderings of these statements, but it is thought that this will be added in the future.

This is how the fact table of Coca Cola's 10-K balance sheet of 2013 looks like in the SECXBRL.info website (see http://www.secxbrl.info/facttable/0000093410-14-000011/http://www.chevron.com/role/ConsolidatedBalanceSheet):

#	xbrl:Entity	dei:LegalEntityAxis	xbrl:Period	xbrl:Concept	us-gaap:StatementScenarioAxis	Value	Unit	Decimals
1	http://www.sec.gov/CIK0000021344	sec:DefaultLegalEntity	2013-12-31	ko:AvailableForSaleSecuritiesAndCostMethodInvestments	us-gaap:ScenarioUnspecifiedDomain	1,119,000,000	iso4217:USD	-6
2	http://www.sec.gov/CIK0000021344	sec:DefaultLegalEntity	2013-12-31	ko:LiabilitiesHeldForSaleAtCarryingValue	us-gaap:ScenarioUnspecifiedDomain	0	iso4217:USD	-6
3	http://www.sec.gov/CIK0000021344	sec:DefaultLegalEntity	2013-12-31	ko:LoansAndNotesPayable	us-gaap:ScenarioUnspecifiedDomain	16,901,000,000	iso4217:USD	-6
4	http://www.sec.gov/CIK0000021344	sec:DefaultLegalEntity	2013-12-31	ko:OtherIndefiniteLivedAndFiniteLivedIntangibleAssets	us-gaap:ScenarioUnspecifiedDomain	1,140,000,000	iso4217:USD	-6
5	http://www.sec.gov/CIK0000021344	sec:DefaultLegalEntity	2013-12-31	us-gaap:AccountsPayableAndAccruedLiabilitiesCurrent	us-gaap:ScenarioUnspecifiedDomain	9,577,000,000	iso4217:USD	-6
6	http://www.sec.gov/CIK0000021344	sec:DefaultLegalEntity	2013-12-31	us-gaap:AccountsReceivableNetCurrent	us-gaap:ScenarioUnspecifiedDomain	4,873,000,000	iso4217:USD	-6
7	http://www.sec.gov/CIK0000021344	sec:DefaultLegalEntity	2013-12-31	us-gaap:AccruedIncomeTaxesCurrent	us-gaap:ScenarioUnspecifiedDomain	309,000,000	iso4217:USD	-6
8	http://www.sec.gov/CIK0000021344	sec:DefaultLegalEntity	2013-12-31	us-gaap:AccumulatedOtherComprehensiveIncomeLossNetOfTax	us-gaap:ScenarioUnspecifiedDomain	-3,432,000,000	iso4217:USD	-6
9	http://www.sec.gov/CIK0000021344	sec:DefaultLegalEntity	2013-12-31	us-gaap:AdditionalPaidInCapitalCommonStock	us-gaap:ScenarioUnspecifiedDomain	12,276,000,000	iso4217:USD	-6
10	http://www.sec.gov/CIK0000021344	sec:DefaultLegalEntity	2013-12-31	us-gaap:Assets	us-gaap:ScenarioUnspecifiedDomain	90,055,000,000	iso4217:USD	-6
11	http://www.sec.gov/CIK0000021344	sec:DefaultLegalEntity	2013-12-31	us-gaap:AssetsCurrent	us-gaap:ScenarioUnspecifiedDomain	31,304,000,000	iso4217:USD	-6
12	http://www.sec.gov/CIK0000021344	sec:DefaultLegalEntity	2013-12-31	us-gaap:AssetsHeldForSaleCurrent	us-gaap:ScenarioUnspecifiedDomain	0	iso4217:USD	-6
13	http://www.sec.gov/CIK0000021344	sec:DefaultLegalEntity	2013-12-31	us-gaap:CashAndCashEquivalentsAtCarryingValue	us-gaap:ScenarioUnspecifiedDomain	10,414,000,000	iso4217:USD	-6

The API call for this example would be

http://secxbrl.xbrl.io/v1/_queries/public/api/facttable-for-component.jq?_method=POST&format=xml&

- ticker=ko&
- fiscalYear=2013&
- fiscalPeriod=FY&
- disclosure=BalanceSheet

Example #3 - Model Structure for Balance Sheet

Similarly, this is how the model structure of Coca Cola's 10-K balance sheet of 2013 looks like in the SECXBRL.info website (see http://www.secxbrl.info/modelstructure/0000093410-14-000011/http://www.chevron.com/role/ConsolidatedBalanceSheet).

#	Label	Object Class	Data Type	Period	Balance	Report ElementName
1	**Statement [Table]**	Table				us-gaap:StatementTable
2	**Scenario [Axis]**	Axis				us-gaap:StatementScenarioAxis
3	Scenario, Unspecified [Domain]	Member				us-gaap:ScenarioUnspecifiedDomain
4	**Statement [Line Items]**	LineItems				us-gaap:StatementLineItems
5	Assets [Abstract]	Abstract				us-gaap:AssetsAbstract
6	Property, Plant and Equipment, Net	Concept	Monetary	As Of	Debit	us-gaap:PropertyPlantAndEquipmentNe...
7	Assets	Concept	Monetary	As Of	Debit	us-gaap:Assets
8	Goodwill	Concept	Monetary	As Of	Debit	us-gaap:Goodwill
9	Indefinite-Lived Franchise Rights	Concept	Monetary	As Of	Debit	us-gaap:IndefiniteLivedFranchiseRig...
10	Indefinite-Lived Trademarks	Concept	Monetary	As Of	Debit	us-gaap:IndefiniteLivedTrademarks
11	Other Assets, Noncurrent	Concept	Monetary	As Of	Debit	us-gaap:OtherAssetsNoncurrent
12	Other Indefinite-Lived and Finite-Lived Intangible Assets	Concept	Monetary	As Of	Debit	ko:OtherIndefiniteLivedAndFiniteLiv...
13	Available-for-sale Securities and Cost Method Investments	Concept	Monetary	As Of	Debit	ko:AvailableForSaleSecuritiesAndCos...
14	Equity Method Investments	Concept	Monetary	As Of	Debit	us-gaap:EquityMethodInvestments
15	Assets, Current [Abstract]	Abstract				us-gaap:AssetsCurrentAbstract
16	Accounts Receivable, Net, Current	Concept	Monetary	As Of	Debit	us-gaap:AccountsReceivableNetCurren...
17	Assets, Current	Concept	Monetary	As Of	Debit	us-gaap:AssetsCurrent
18	Prepaid Expense and Other Assets, Current	Concept	Monetary	As Of	Debit	us-gaap:PrepaidExpenseAndOtherAsset...
19	Cash, Cash Equivalents, and Short-term Investments	Concept	Monetary	As Of	Debit	us-gaap:CashCashEquivalentsAndShort...
20	Cash and Cash Equivalents, at Carrying Value	Concept	Monetary	As Of	Debit	us-gaap:CashAndCashEquivalentsAtCar...
21	Assets Held-for-sale, Current	Concept	Monetary	As Of	Debit	us-gaap:AssetsHeldForSaleCurrent
22	Other Short-term Investments	Concept	Monetary	As Of	Debit	us-gaap:OtherShortTermInvestments

The API call for this example would be

http://secxbrl.xbrl.io/v1/_queries/public/api/modestructure-for-component.jq?
_method=POST&format=xml&

- ticker=ko&
- fiscalYear=2013&
- fiscalPeriod=FY&
- disclosure=BalanceSheet

Feature #2: Custom Reports

The aim of SECXBRL.info is to provide functionality that goes above and beyond merely accessing the information that is contained in the filings. The filings provide a view of the business situation of a company in the way the management of this company wants to portray it. Analysts, on the other hand, want to be able to define a view of the same business situation in a way that corresponds with how they evaluate companies. It is therefore important for the usefulness of such an analytics platform to allow for the definition of custom reports.

Such requirement would most likely consist of (i) accessing information from across multiple fact tables and (ii) combining this information into one report. One example of such a report are the Fundamental Accounting Concepts (see http://fundamentalaccountingconcepts.wikispaces.com/ [http://fundamentalaccountingconcepts.wikispaces.com/]). Because this report is considered so fundamental, it has already been implemented in SECXBRL.info.

In order to define such a report, one would have to consider:

- **Map facts:** Understand which US GAAP and XBRL extension concepts the filer has used in order to report the relevant facts. This inquiry can be performed by retrieving the fact tables (see Example #2 - Fact Table for Balance Sheet) and model structures (see Example #3 - Model Structure for Balance Sheet) from the filings.
- **Impute facts:** If a fact is not reported, define the formula to impute the value of the required fact based on the values of other facts that were included in the filing.
- **Validate facts:** Create rules (e.g. formulas that need to produce a certain result) that help to assess the quality and consistency of the facts that are to be included in the custom report.

The approach for defining a custom report consists of three steps:

- **Identify the concepts:** Specify the concepts that are to be included in the report. This specification needs to be in the XBRL Infoset format. This website contains the specification of the Fundamental Accounting Concepts, which can be used as an example: http://www.xbrlsite.com/2013/fac/.
- **Map the concepts:** Provide a mapping file between the requested concepts and the US GAAP XBRL Taxonomy concepts filers have used. An example of such a mapping for fac:ResearchAndDevelopment was already given in the section Example #1 - R&D Expense.
- **Specify the rules to impute non-reported facts:** Third, the business rules between the concepts need to be specified. Again, a standard format is available which articulates these relations, XBRL Formula: http://www.xbrlsite.com/2013/fac/FundamentalAccountingConcepts_Formulas.xml [http://www.xbrlsite.com/2013/fac/FundamentalAccountingConcepts_Formulas.xml]. Currently, SECXBRL.info does not support XBRL Formulas, but it is thought that this will be added in the future.

Example #4 - Fundamental Accounting Concepts Report

As mentioned, one such custom report is included in SECXBRL.info: Fundamental Accounting Concepts.

This is how the part on the cash flow statement of the Fundamental Accounting Concepts report for Coca Cola's 2013 10-K filing looks like in the SECXBRL.info website (see http://www.secxbrl.info/information/0000021344/2013/FY).

▼ Cash Flow Statement

Label	Value	Audit Trail
Net Cash Flows from Operating Activities, Continuing		Not Reported (Coming Soon)
Net Cash Flows from Operating Activities, Discontinued		Not Reported (Coming Soon)
Net Cash Flows from Operating Activities	10,542,000,000	us-gaap:NetCashProvidedByUsedI...
Net Cash Flows from Investing Activities, Continuing		Not Reported (Coming Soon)
Net Cash Flows from Investing Activities, Discontinued		Not Reported (Coming Soon)
Net Cash Flows from Investing Activities	-4,214,000,000	us-gaap:NetCashProvidedByUsedI...
Net Cash Flows from Financing Activities, Continuing		Not Reported (Coming Soon)
Net Cash Flows from Financing Activities, Discontinued		Not Reported (Coming Soon)
Net Cash Flows from Financing Activities	-3,745,000,000	us-gaap:NetCashProvidedByUsedI...
Exchange Gains (Losses)	-611,000,000	us-gaap:EffectOfExchangeRateOn...
Net Cash Flows	1,972,000,000	us-gaap:CashAndCashEquivalents...
Net Cash Flows, Continuing		Not Reported (Coming Soon)
Net Cash Flows, Discontinued		Not Reported (Coming Soon)

This API call returns the fact table for the report named FundamentalAccountingConcepts for Coca Cola's 2013 10-K:

http://secxbrl.xbrl.io/v1/_queries/public/api/facttable-for-report.jq?_method=POST&format=xml&

- report=FundamentalAccountingConcepts&
- ticker=ko&
- fiscalYear=2012&
- fiscalPeriod=FY

Feature #3: Real-Time

Most analyses are ad-hoc and therefore have to be interactive. The answer of one question leads to another question. The goal of SECXBRL.info, hence, was to provide a real-time analytics platform. While it is relatively easy to bring back an individual fact in real-time, the proof of performance would be an analysis that would require data from all the filings in the repository.

Example #5 - Assets and Liabilites & Equity Across the Whole Repository

The first such example is to compute the sum of all values reported against the concept 'us-gaap:Assets' across all 10-K SEC XBRL financial filings aggregated by fiscal period.

This is how the result looks like in the SECXBRL.info website (see http://www.secxbrl.info/example/TotalAssets):

#	xbrl:Entity	dei:LegalEntityAxis	xbrl:Concept	bizql:FiscalYear	bizql:FiscalPeriod	Value	Unit	Decimals
1	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	us-gaap:Assets	2001	FY	280	iso4217:USD	INF
2	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	us-gaap:Assets	2009	FY	31586555000	iso4217:USD	INF
3	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	us-gaap:Assets	2010	FY	23061516000	iso4217:CAD	INF
4	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	us-gaap:Assets	2010	FY	8833200000	iso4217:GBP	INF
5	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	us-gaap:Assets	2010	FY	31920299639970	iso4217:USD	INF
6	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	us-gaap:Assets	2011	FY	1565000	iso4217:ILS	INF
7	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	us-gaap:Assets	2011	FY	1226733000	iso4217:EUR	INF
8	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	us-gaap:Assets	2011	FY	45159900400069.92	iso4217:USD	INF
9	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	us-gaap:Assets	2011	FY	28708716218	iso4217:CAD	INF
10	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	us-gaap:Assets	2011	FY	7938800000	iso4217:GBP	INF
11	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	us-gaap:Assets	2011	FY	110885000	iso4217:BRL	INF
12	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	us-gaap:Assets	2011	FY	45216467	iso4217:AUD	INF
13	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	us-gaap:Assets	2012	FY	45987835392278	iso4217:USD	INF
14	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	us-gaap:Assets	2012	FY	1303349000	iso4217:EUR	INF
15	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	us-gaap:Assets	2012	FY	32470161238	iso4217:CAD	INF
16	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	us-gaap:Assets	2012	FY	10504300000	iso4217:GBP	INF
17	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	us-gaap:Assets	2012	FY	49066850	iso4217:AUD	INF
18	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	us-gaap:Assets	2013	FY	40779087351335	iso4217:USD	INF
19	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	us-gaap:Assets	2013	FY	39688319191	iso4217:CAD	INF
20	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	us-gaap:Assets	2014	FY	61297657399	iso4217:USD	INF

The second such example is to compute the sum of all values reported against the concept ‘fac:LiabilitiesAndEquity’ across all 10-K SEC XBRL financial filings aggregated by fiscal period. This example is more computationally intensive because it includes a mapping from the reported concepts to the fundamental accounting concepts.

This is how the result looks like in the SECXBRL.info website (see http://www.secxbrl.info/example/TotalLiabilitiesAndEquity):

#	xbrl:Entity	dei:LegalEntityAxis	xbrl:Concept	bizql:FiscalYear	bizql:FiscalPeriod	Value	Unit	Decimals
1	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	fac:LiabilitiesAndEquity	2001	FY	280	iso4217:USD	INF
2	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	fac:LiabilitiesAndEquity	2009	FY	31586555000	iso4217:USD	INF
3	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	fac:LiabilitiesAndEquity	2010	FY	23061516000	iso4217:CAD	INF
4	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	fac:LiabilitiesAndEquity	2010	FY	8833200000	iso4217:GBP	INF
5	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	fac:LiabilitiesAndEquity	2010	FY	31950398547846	iso4217:USD	INF
6	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	fac:LiabilitiesAndEquity	2011	FY	1565000	iso4217:ILS	INF
7	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	fac:LiabilitiesAndEquity	2011	FY	1226733000	iso4217:EUR	INF
8	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	fac:LiabilitiesAndEquity	2011	FY	44929624097130.92	iso4217:USD	INF
9	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	fac:LiabilitiesAndEquity	2011	FY	28708716218	iso4217:CAD	INF
10	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	fac:LiabilitiesAndEquity	2011	FY	7938800000	iso4217:GBP	INF
11	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	fac:LiabilitiesAndEquity	2011	FY	110885000	iso4217:BRL	INF
12	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	fac:LiabilitiesAndEquity	2011	FY	45216467	iso4217:AUD	INF
13	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	fac:LiabilitiesAndEquity	2012	FY	45801367830192	iso4217:USD	INF
14	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	fac:LiabilitiesAndEquity	2012	FY	1303349000	iso4217:EUR	INF
15	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	fac:LiabilitiesAndEquity	2012	FY	32470161238	iso4217:CAD	INF
16	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	fac:LiabilitiesAndEquity	2012	FY	10504300000	iso4217:GBP	INF
17	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	fac:LiabilitiesAndEquity	2012	FY	49066850	iso4217:AUD	INF
18	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	fac:LiabilitiesAndEquity	2013	FY	40643981114050.89	iso4217:USD	INF
19	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	fac:LiabilitiesAndEquity	2013	FY	39688241995	iso4217:CAD	INF
20	bizql:AllReportingEntitiesMember	sec:DefaultLegalEntity	fac:LiabilitiesAndEquity	2014	FY	61297657399	iso4217:USD	INF

This query takes 4.6 seconds to execute, which is absolutely acceptable for such an analysis. The reasons for this exceptional performance lie in the choice of the underlying technology: from the 28.io unified information access platform to the MongoDB NoSQL data store.

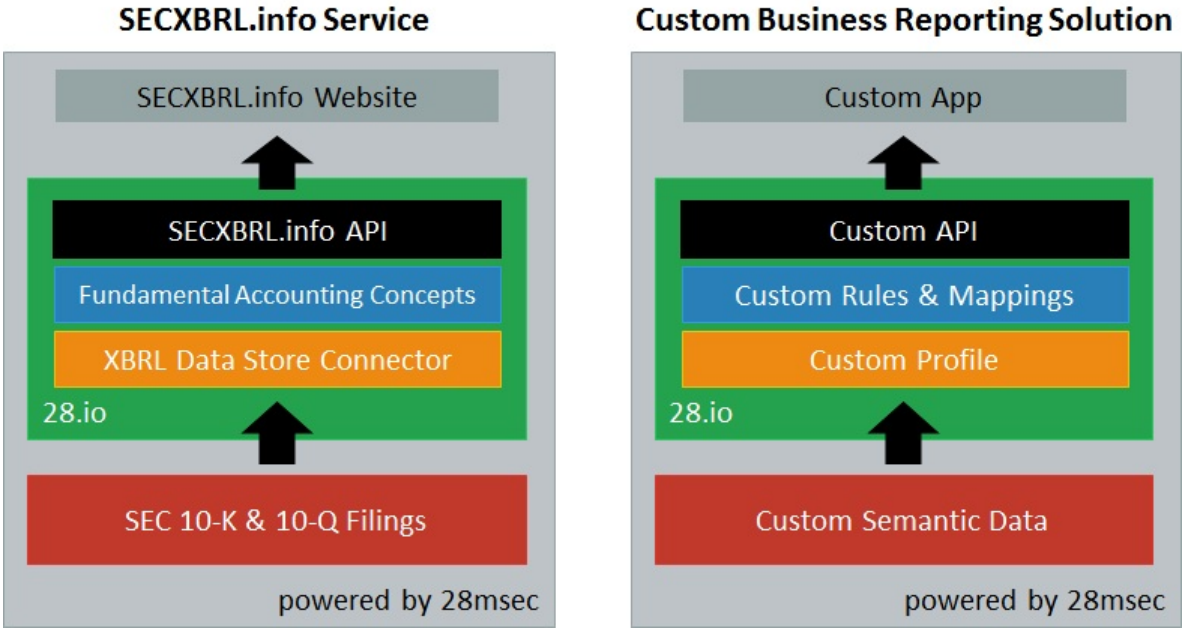
Feature #4: Bring Your Own Filings

SECXBRL.info builds upon the 28.io platform and the generic semantic business reporting architecture and customizes it by (1) populating the XBRL data store with the SEC 10-K and 10-Q filings and (2) defining an SEC profile. It was specifically designed with extensibility in mind. This extensibility can go into two directions: (1) to include user-specific non-public filings and (2) to be used for non-SEC data sets. Users will be able to bring their own filings using the SEC profile,

which will be visible only to them and which they can then analyze by themselves or compare with the public filing data set. It is also possible to create a whole new XBRL profile by replacing the SEC specific configuration with another XBRL-compliant one, i.e. FDIC, IFRS, FinRep, CoRep, or Environmental, Social and Governance (ESG) reporting. The effort to develop a new XBRL profile is small compared to all the functionality that has already been put in place to implement a generic XBRL analytics platform.

Two Ways to Use the Repository - and Any Way in Between

The SECXBRL.info US Public Company Financial Information Repository has been built as a specific implementation of a more generic business reporting platform.



This leads to the two extreme opposite ways of using the repository: (1) take everything out of the box, without any specific customization, or (2) use the generic platform and build your own repository. Since the platform is fully flexible, the SECXBRL.info service can be used as a starting point for custom usage for which every component can be extended or completely replaced, this leads to a virtually unlimited number of ways of how to use the repository.

SECXBRL.info Service

The SECXBRL.info service is an out-of-the-box offering, complete with all the necessary components from a data analytics website http://secxbrl.info/, a web service-based API (a full documentation can be found here: http://secxbrl.info/api), a pre-defined report for the most commonly used fundamental accounting concepts, a specific SEC data profile, and all the SEC 10-K and 10-Q filings since 2010. More details about the Fundamental Accounting Concepts report and the SEC profile can be found on the SECXBRL.info support website (see https://secxbrl.zendesk.com/).

Custom Business Reporting Solution

Everything in the SECXBRL.info service can be replace, extended, or taken as a starting point for creating a custom solution. The custom app implements the user interface as a mobile, client-based or web-based application. The API can be built to the requirements of the front-end application or any other information consumer. There are plenty of ways to add domain or application specific

knowledge through rules, mappings, and reports. Great care was used to separate out any SEC-specific functionality into an SEC profile. This allows to easily switch the SEC profile with any other XBRL-based profile. Finally, other XBRL-formatted data can be loaded into the data store and accessed through the XBRL connector, or other private data can be joined through any of the many other 28.io connectors.