



Workshop on Improving Access - Financial Data on the Web

Co-organized by W3C and XBRL International, Inc, and hosted by FDIC, Arlington, Virginia USA

5 - 6 October 2009



XBRL Taxonomy Extension Comparability Issues And Potential Semantic Web Solutions

Ashu Bhatnagar

Good Morning Research – a Softpark Service

Beta

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Research.com

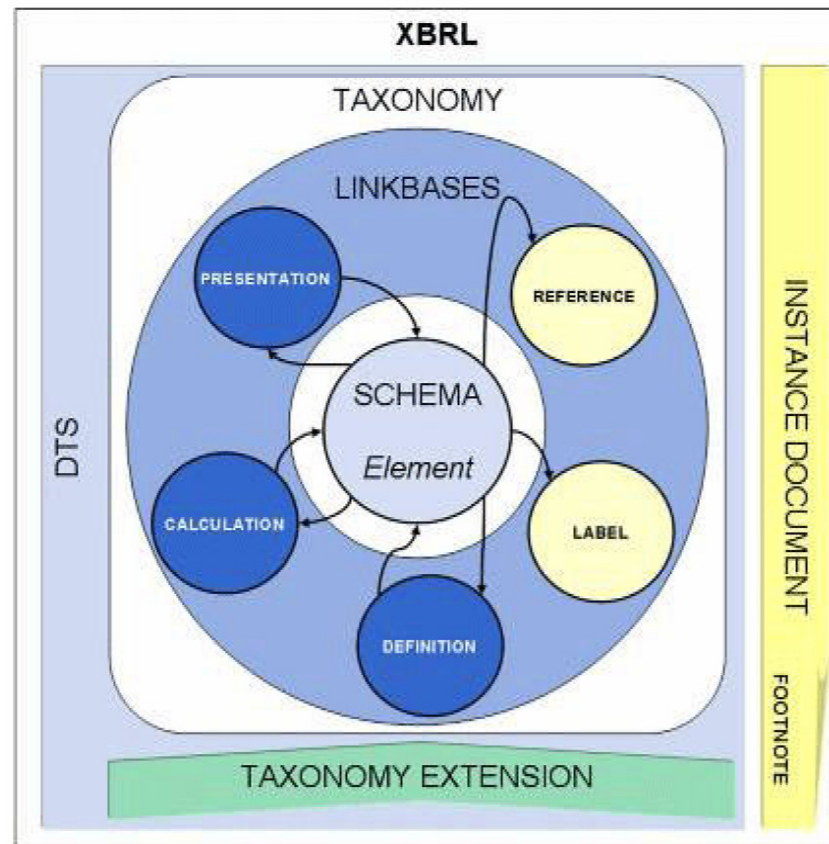
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- ❖ Taxonomy Extensions Architecture and Data Organization
- ❖ Comparability Issues due to Extensions for
 - Filers
 - Regulators
 - Technology Vendors
 - Data Aggregators and Distributors
 - Institutional Investors (Sell-Side)
 - Wall Street experience
 - Institutional Investors (Buy-Side)
 - Australian Hedge Fund experience
 - Retail Investors
 - Bombay Stock Exchange experience
- ❖ Comparability Issue due to Trust Considerations
- ❖ Potential Semantic Web Solutions



Source: IFRS Taxonomy Guide 2009

Expert View



Sanjiv Das

Former Managing Director
Morgan Stanley

“Data will be a commodity,
but
organization of data
may not be a commodity”

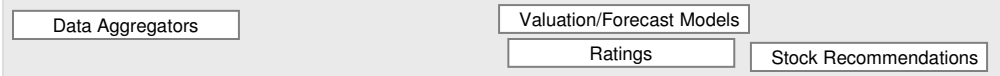
Strategic View



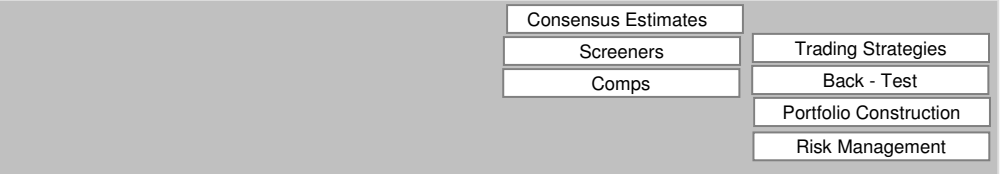
Filers/Companies



Data Providers/ Sell-side Analysts



Buy-side Analysts



GoodMorning Research

Long Tail of Data Organization

	World of Accounting (GAAP)	World of Analysts (Industry Specific Taxonomies)	World of Investors (Folksonomy)
LongTail View	50 to 100 common Financial Metrics for	Additional 2,000 + unique Financial Metrics for	Additional Unlimited, unstructured 'localized' synonyms for many Financial Metrics for
Wiki-Tagged Data Organization Process	<ul style="list-style-type: none"> Income Statement Balance Sheet Cash-flow 	<ul style="list-style-type: none"> Financial Modeling Valuation Forecasts, Trading Strategies 	<ul style="list-style-type: none"> compliance with country-specific regulators proprietary financial modeling frameworks lack of any appropriate metrics in GAAP or readily available taxonomies, resulting in – Line 6 Items on 10-K, MDAs, and Footnotes



XBRL Taxonomy Extension Comparability Issues

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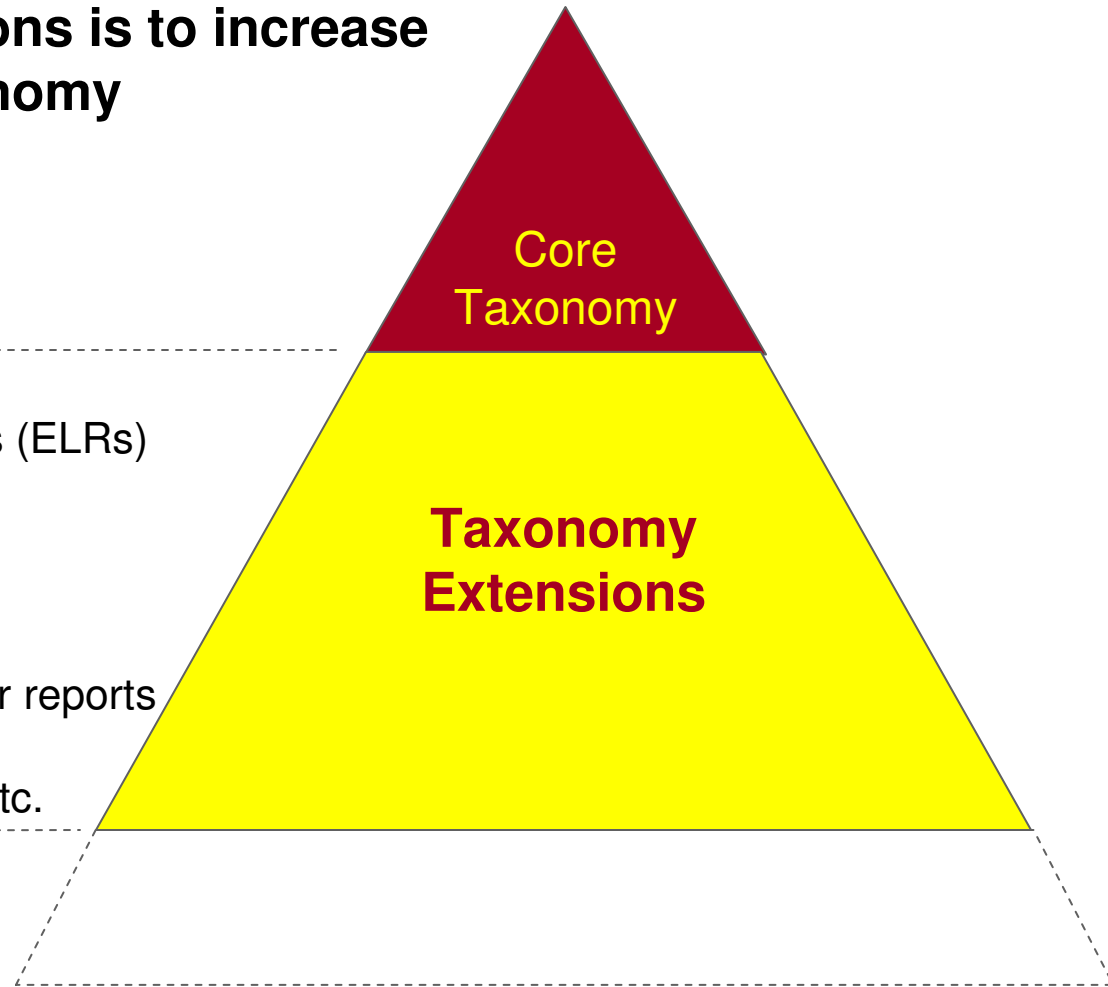
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Main objective for extensions is to increase the usability of Core Taxonomy

Types:

1. Entity-Specific Extensions
 - i. Adding extended link roles (ELRs)
 - ii. Adding concepts
 - iii. Adding links hierarchies
 - iv. Adding links dimensions
2. Receiving FIs Extensions
 - i. Reuse of concepts in other reports
 - ii. Creating new hierarchies
 - iii. Adding new disclosures, etc.



Reference: IFRS Taxonomy Guide 2009



XBRL Cloud

EDGAR Dashboard

This Dashboard ([View as XML](#)) represents the [most recent SEC Filings](#), and was run Tue Sep 29 21:01:04 UTC 2009

NEW! [See Report on all EDGAR filings](#)

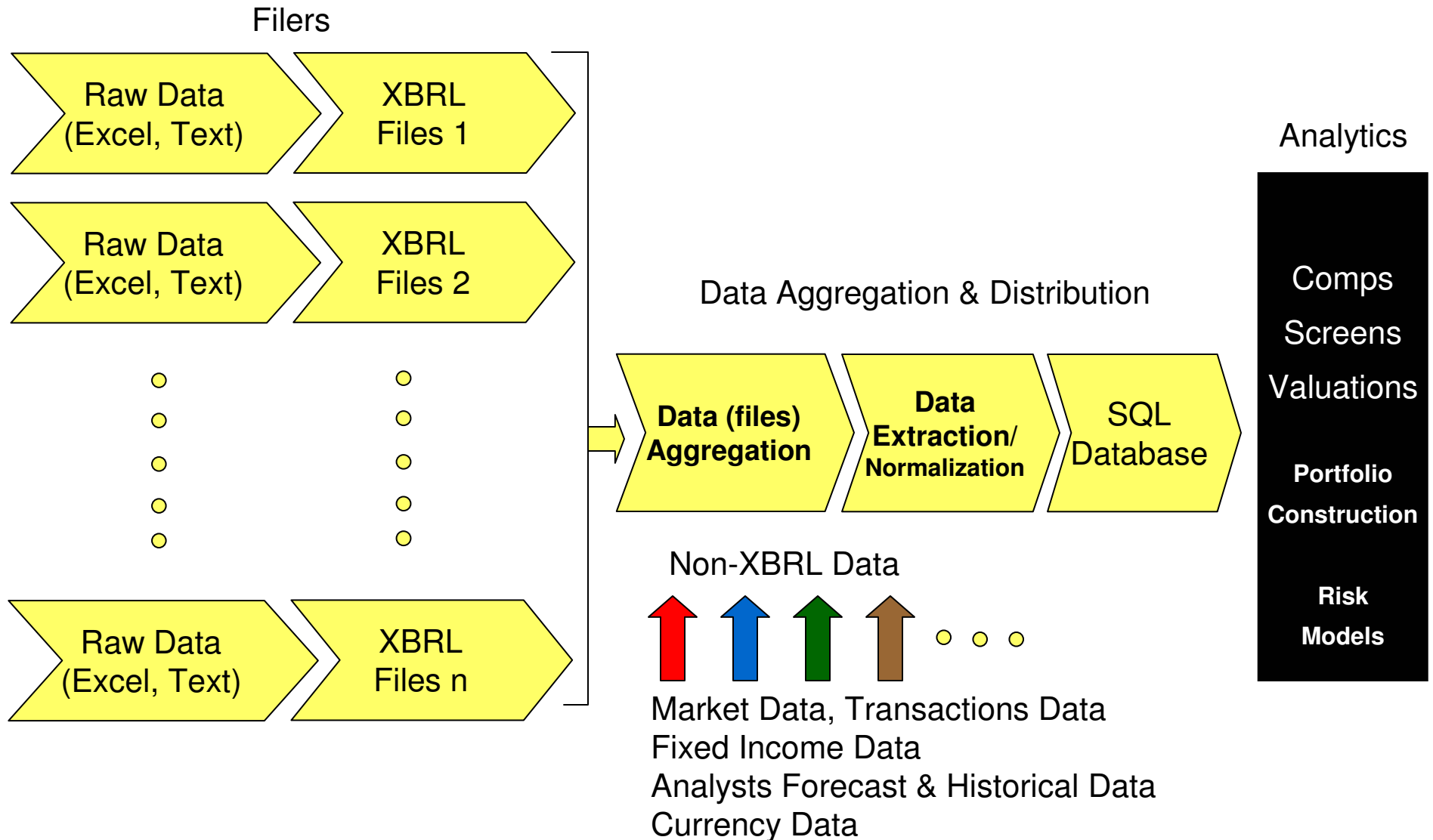
For more information e-mail us [sales@xbrlcloud.com] or call us [+1 425.341.1203]

- If you are a filer, and would like to improve the quality of your next submission, please sign up for [XBRL Cloud](#) services
- If you are a software vendor and you would like to improve the quality of your software product, call us!
- If you are interested in more detailed data analysis, please let us know

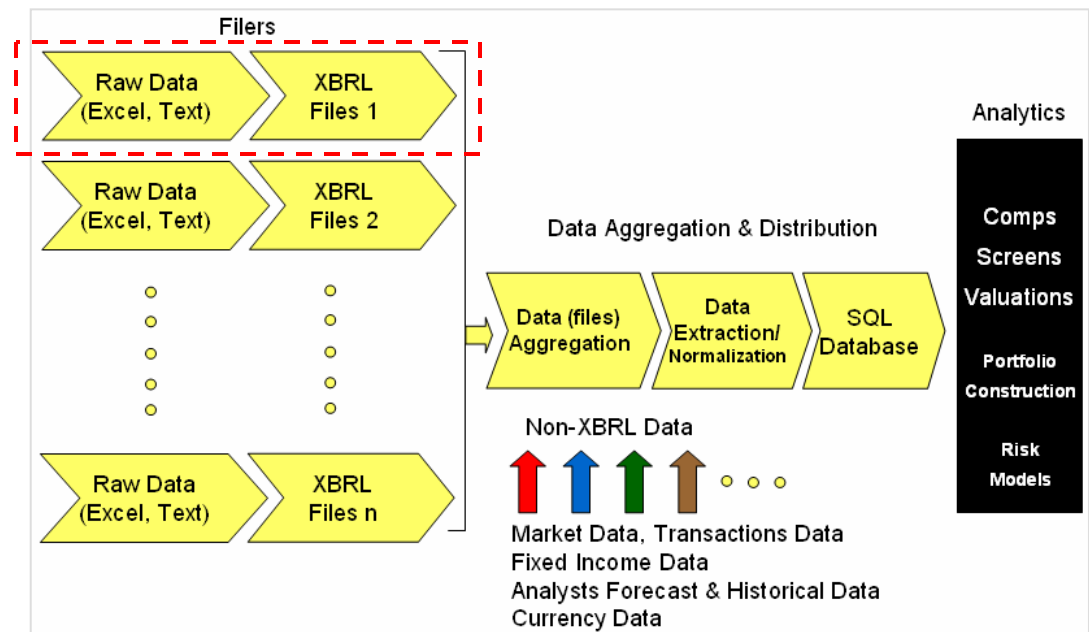
Disclaimer: The information provided in this report should not be used to evaluate the quality of the XBRL filings or the effectiveness of XBRL software, filers, filing agents, printers, or other service providers.

#	Company Name	CIK	SIC	Form Type	Filing Date	EDGAR Filing Detail	XBRL Document	Validation Report						Extension Detail		Creation Software	
								Error	Warning	Inconsistency	Best Practice	Information	Total	XML	Percent Extended		XML
1	General Mills, Inc.	0000040704	2040	10-Q	2009-09-24	EDGAR Filing Detail	XBRL Document	0	0	0	0	13	13	(XML)	4%	(XML)	Generated By Clarity FSR v6.5.0.250
2	PAYCHEX, INC.	0000723531	8700	10-Q	2009-09-23	EDGAR Filing Detail	XBRL Document	0	0	0	0	0	0	(XML)	9%	(XML)	XBRL document created with XMark (C) by Bowne Inc.
3	THE KROGER CO.	0000056873	5411	10-Q	2009-09-23	EDGAR Filing Detail	XBRL Document	0	0	0	0	3	3	(XML)	13%	(XML)	Generated by Fujitsu XWand B0126
4	Oracle Corporation	0001341439	7372	10-Q	2009-09-21	EDGAR Filing Detail	XBRL Document	28	2	0	0	0	37	(XML)	6%	(XML)	Created with UBmatrix(tm) Report Builder http://www.ubmatrix.com
5	FedEx Corporation	0001048911	4513	10-Q	2009-09-18	EDGAR Filing Detail	XBRL Document	1	0	0	0	0	1	(XML)	12%	(XML)	EDGARizerX: Instance document generated by EDGARizerX, version 3.1.0.0
6	International Game Technology	0000353944	3990	10-Q	2009-09-14	EDGAR Filing Detail	XBRL Document	12	1	2	0	6	21	(XML)	2%	(XML)	XBRL document created with CrossTag XBRL Enabler by Rivet Software version 2.0.3481.22143
7	Dell Inc.	0000826083	3571	10-Q	2009-09-11	EDGAR Filing Detail	XBRL Document	0	0	0	0	0	0	(XML)	3%	(XML)	XBRL document created with XMark (C) by Bowne Inc.

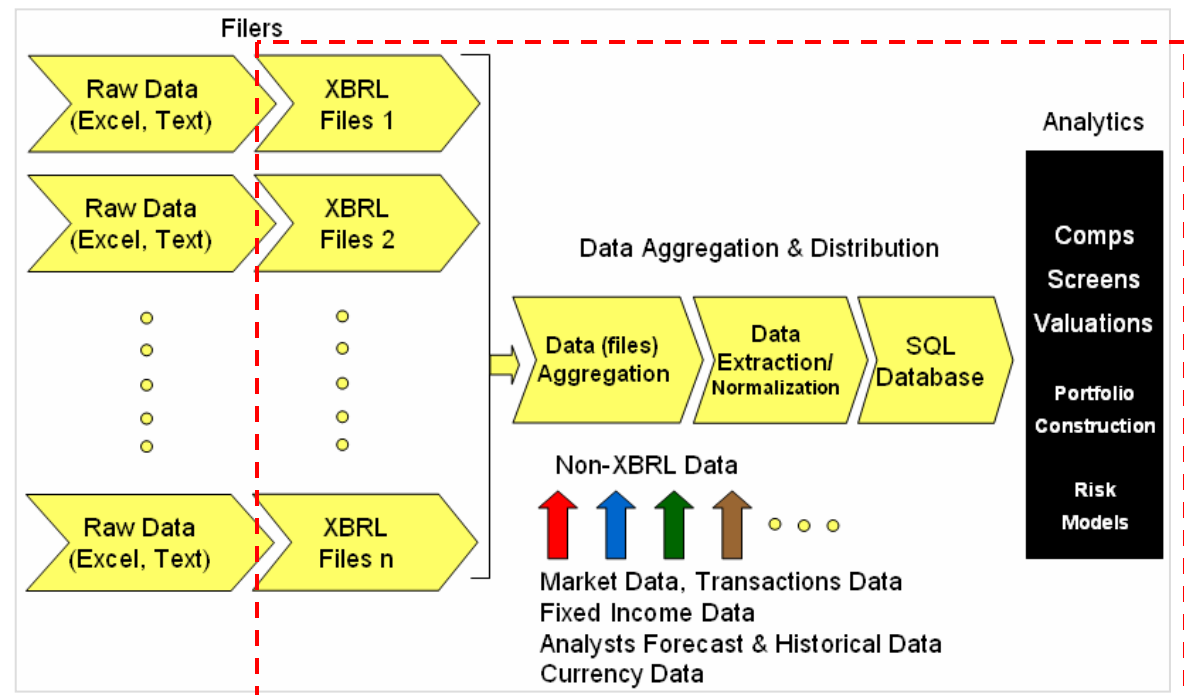
Source:Cliff Binstock, XBRL Cloud, <http://edgardashboard.xbrlcloud.com/edgar-rss-index.html>



- Filers are driven by regulatory compliance and meeting deadlines with error free filings
- Comparability issues are primarily with their own previous filings
- Taxonomy extension is onerous work, but preferred for legally precise disclosures



- Taxonomy extensions -
 - Help with more precise and detailed/transparent data, for better analytics *(such as banking regulations, capital to risk weighted asset ratio, Tier I capital ratio, compliance with Basel II, etc.)*
 - Makes it more difficult to compare apples-to-apples



- Taxonomy extensions reduce standardization and make interoperability more difficult
- Comparing same company data from quarter to quarter and analyzing re-statements is more difficult.
- Adopting a maintenance program to update the existing taxonomy on demand and managed by the XBRL jurisdiction amounts to increased work for the taxonomy management (definition of acceptance criteria, editing, testing etc.)
- Countries like India prohibit XBRL Extensions and use a pre-tagged XBRL blank form to be filled by the filers
- Italy uses a similar approach with an option to submit an additional PDF file for more detailed financials with taxonomy extensions

Before (HTML, PDF)

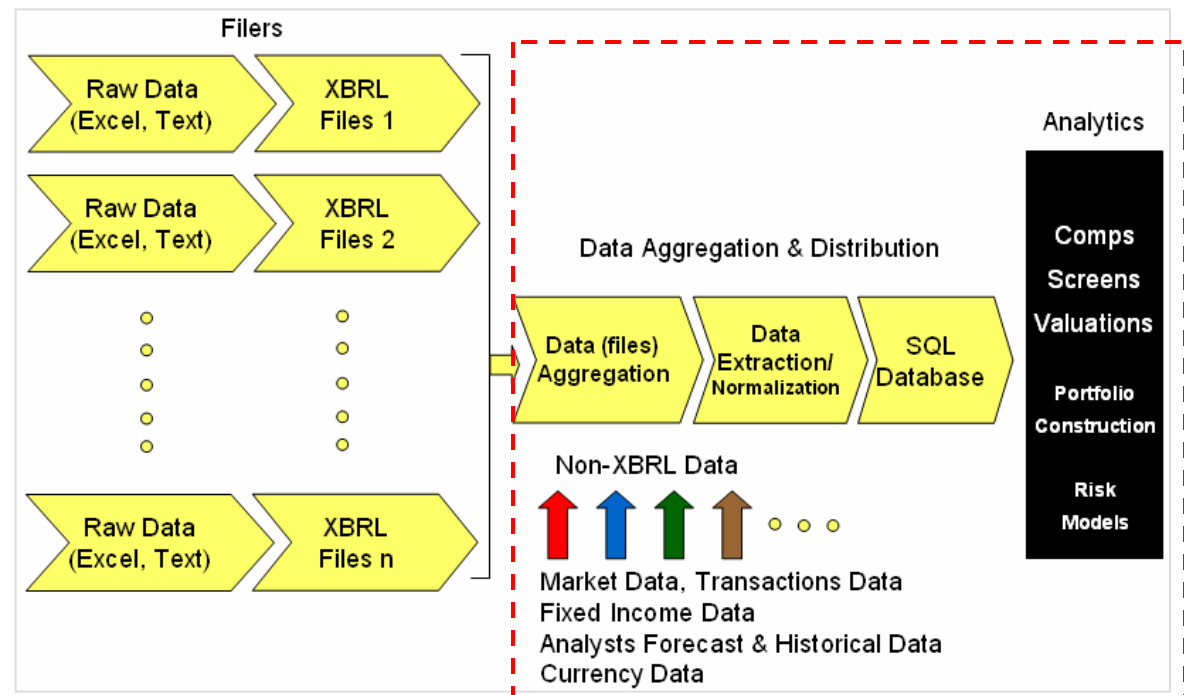


After (XBRL ZIP)



- XBRL Taxonomy extension is a manual process requiring accounting skills
- Few technologists on XBRL projects have accounting domain knowledge
- Few Accounting experts have technology domain knowledge
- Communication of accounting terms, adjustments, and technology options between two expert areas is generally challenging

- Data aggregators and distributors have not embraced XBRL in any significant way
- When they do, taxonomy extensions will help them in extracting deep and transparent insights for Alpha driven analytic tools
- Taxonomy extensions will amount to more complex and expensive technology development





Wall Street Sell-Side Experience:

- XBRL is still early in its adoption on Wall Street
- Sell-side research analysts would prefer XBRL taxonomy extensions for deeper insights and increased transparency reasons
- Comparability Issues due to proprietary Accounting and Valuation frameworks and taxonomies (not XBRL)
 - Proprietary accounting adjustments for Pensions, Leases, Valuations
 - Business rules for differences in fiscal period end dates
 - Adjustments for hyper-inflationary economies
- Comps analysis requires co-mingling reported data with historical data, forecast data, index data, currency rates and live price data

Australian Hedge Fund Experience:

- Trading on multiple exchanges – Australia, Hong Kong and Singapore
- Hardly any tools available for consuming XBRL data for Portfolio Construction and Risk management
- Sell-side research lacks sufficient coverage in emerging markets, waiting for XBRL data for Buy-side Research
- Limited data for back testing investment strategies for BRIC
- Custom buy-side projects slowly under way, with an eye to acquire XBRL data for free or at commodity pricing
- Taxonomy extensions needed to support global focus

POC: Bombay Stock Exchange Filing Data in RDF with ICAI/IFRS Taxonomy XBRL Tags

The screenshot displays the Research.com interface for Reliance Capital Ltd. It features a data table, a property box, and a chart.

Item	2008	2007	2006	2005	2004
99 Equity Dividend	135.1	85.97	71.32	38.19	36.92
100 Preference Dividend	0	0	0	0	0
101 Dividend Tax	22.94	14.61	10	5.45	4.73
102 Retained Earnings	1737.36	1067.22	660.99	236.61	230.95
103					
104 CASH FLOW STATEMENT					
105 Profit Before Tax	1169	733.18	550.61	111.21	105.79
106 Net CashFlow-Operating Activity	1492.66	-725.95	-2302.5	418.07	-200.68
107 Net Cash Used In Investing Activity	-1168.27	338.25	123.65	-66.17	409.22
108 NetCash Used in Fin. Activity	-100.43	385.55	2185.35	-371.81	-193.6
109 Net Inc/Dec In Cash And Equivlnt	223.96	-2.15	6.5	-19.91	14.94
110 Cash And Equivlnt Begin Of Year	9.8	11.95	5.45	25.36	10.42
111 Cash And Equivlnt End Of Year	233.76	9.8	11.95	5.45	25.36

Property Box - Mozilla Firefox

Cell Semantic Data Quality Score: Unra

File Name: Reliance Capital Ltd..xls
Sheet Name: Sheet1
Company Name: RELIANCE CAPITAL LIMITED
Language: English
Parent Metric: Profit Before Tax
Currency: Rupee: Indian
Taxonomy Label: Profit (Loss) Before Tax
Taxonomy Id: ifrs-gp_ProfitLossBeforeTax
Wiki Tags: CustomTags
Notes: Some text here...

Chart: FusionCharts Evaluation - An InfoSoft Global Creation (INR In Crores) Reliance Capital Lt

Metric	2008	2007	2006
Sales	INR2K	INR384	INR652
Admin And Selling Expenses	INR0	INR0	INR0
Operating Profit	INR2K	INR783	INR619
Net Profit / Loss	INR1K	INR416	INR38
Operating Income	INR2K	INR374	INR647

➤ No direct impact to Retail investors

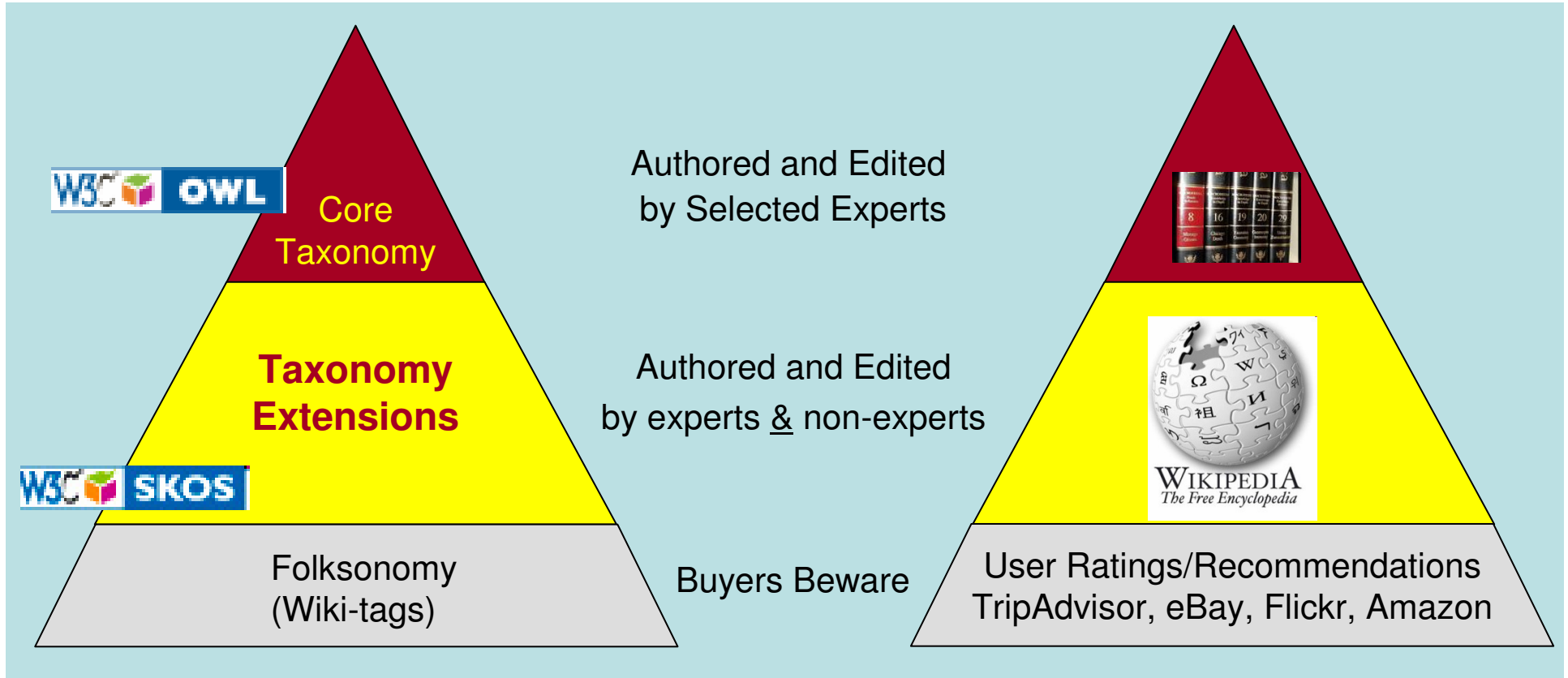
➤ Most commonly they rely on their financial advisors, online services such as Yahoo! Finance, or their broker web site for their investment Research.

➤ XBRL taxonomy extensions, for most part, are invisible to retail investors.



Comparability Issue Due to Trust Consideration

Comparability Issue: Trust



Potential Semantic Web Solutions:



Potential Semantic Web Solutions

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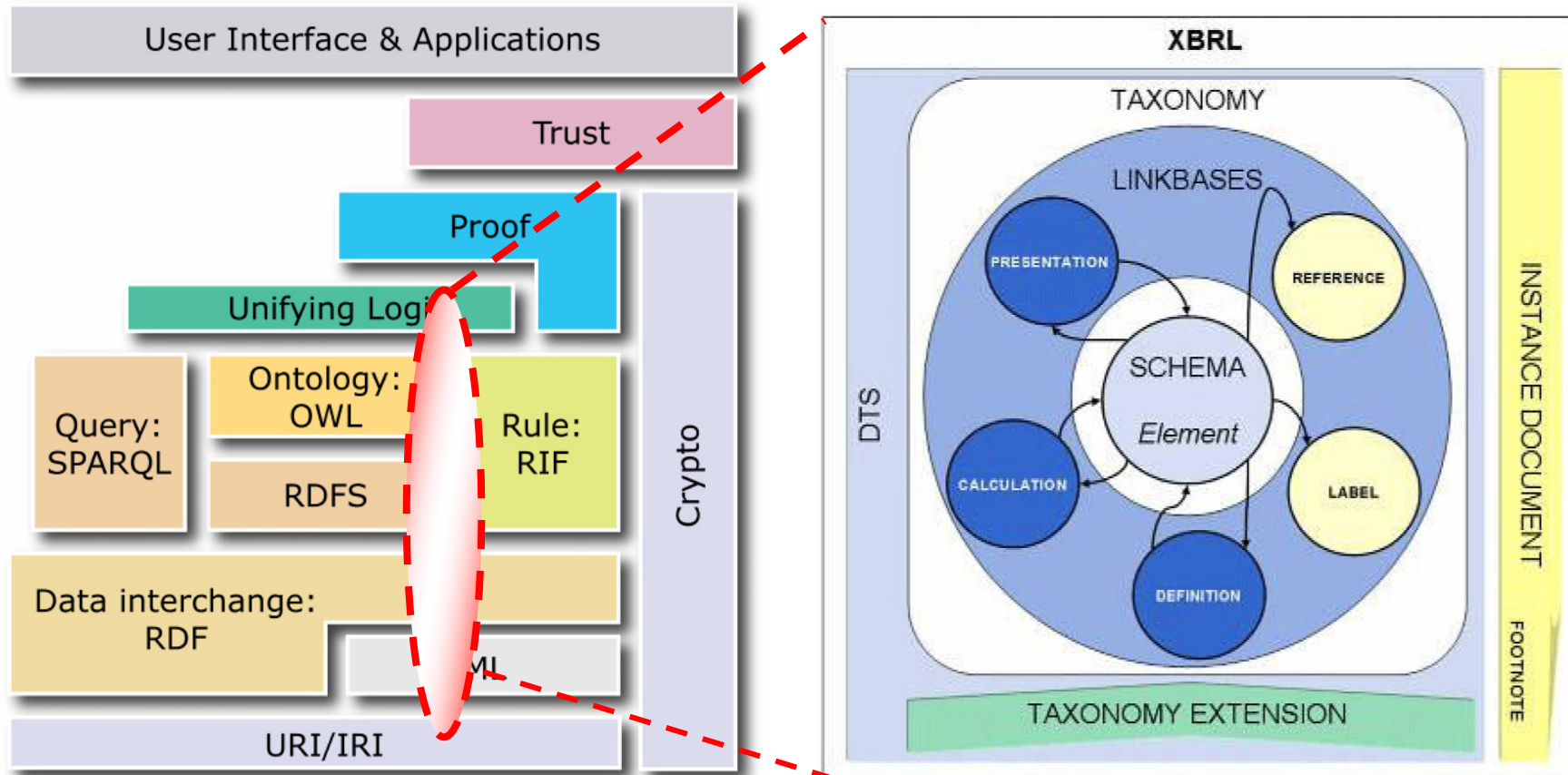
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Semantic Web (Layered Cake Diagram)



Man-Machine-Man
Expert System

Human
Process

Machine
Technology

Human
Process

Text

WIKIgooglePEDIA

Data

XB W3C Semantic Web RL

Linked Data
Semantic XBRL



Proof of Concept: Data Quality Heat Map

- RDF metadata
- XBRL Taxonomy
- Sparql Search

The screenshot displays the ResearchPoint-XBRL web application. The main interface shows a 'Heat Maps' section with a legend for 'Avg. Semantic Data Quality Score' ranging from 1 star (red) to 5 stars (green). A table of financial data is shown with cells colored according to their quality score. A red arrow points from a cell in the table to a detailed 'Property Box' window.

S.No	A	B	C	D	E	F	G
1	Dow Chemical Balance Sheet						
2	Year-end, \$mn (unless otherwise notes)	1998	1999	2000	2001	2002	2003
3	Assets:						
4	Cash & equivalents	2839	1903	235	123	506	215
5	Marketable securities	611	399	302	267	706	89
6	Accounts receivable, net	4109	4396	4958	4537	4614	5385
7	Inventories	2748	2815	2921	2810	2786	3463
8	Deferred taxes	247	317	224	303	235	108
9	Total current assets	10554	9830	8640	8040	8847	9260

The detailed view for cell G4 shows the following information:

- Cell Semantic Data Quality Score:** 900
- File Name:** DOWforXBRL.xls
- Sheet Name:** Sheet1
- Company Name:** Demo XBRL
- Language:** English
- Parent Metric:** Cash & equivalents
- Currency:** Dollar: United States
- Taxonomy Label:** Cash and Cash Equivalents
- Taxonomy Id:** ifrs-gp_CashAndCashEquivalents
- Wiki Tags:** Demo for XBRL Conversion
- Notes:** Demo for XBRL Conversion



Questions?
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Thank You

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