



IBM Software

Information Management & Analytics Forum **2013**

Return on Information: The New ROI

**Analyze, search, and classify content
for better business outcomes**

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Enterprise Content Management
Asia-Pacific



Agenda

- Why IBM Content Analytics
- How does IBM Content Analytics work?
- Analysing Social Media Comments (Web and Twitter)
- Content Analytics Case Study
- Why organizations need Content Classification?
- Content Classification – How does it work?
- Content Analytics / Classification – Case Studies

A Content Big Bang (not a Theory)

Every day, we create 2.5 quintillion bytes of information

90% of the information in the world today has been created in the last two years alone

80% of the information is unstructured content

Source: IBM market information

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Return on Information: The New ROI

IBM Solutions are Built on our Core Capabilities

CAPTURE



and gain control of the content to determine the value

ACTIVATE



and put the content in context

SOCIALIZE



for better collaboration and access

ANALYZE



and identify patterns to gain insights

GOVERN



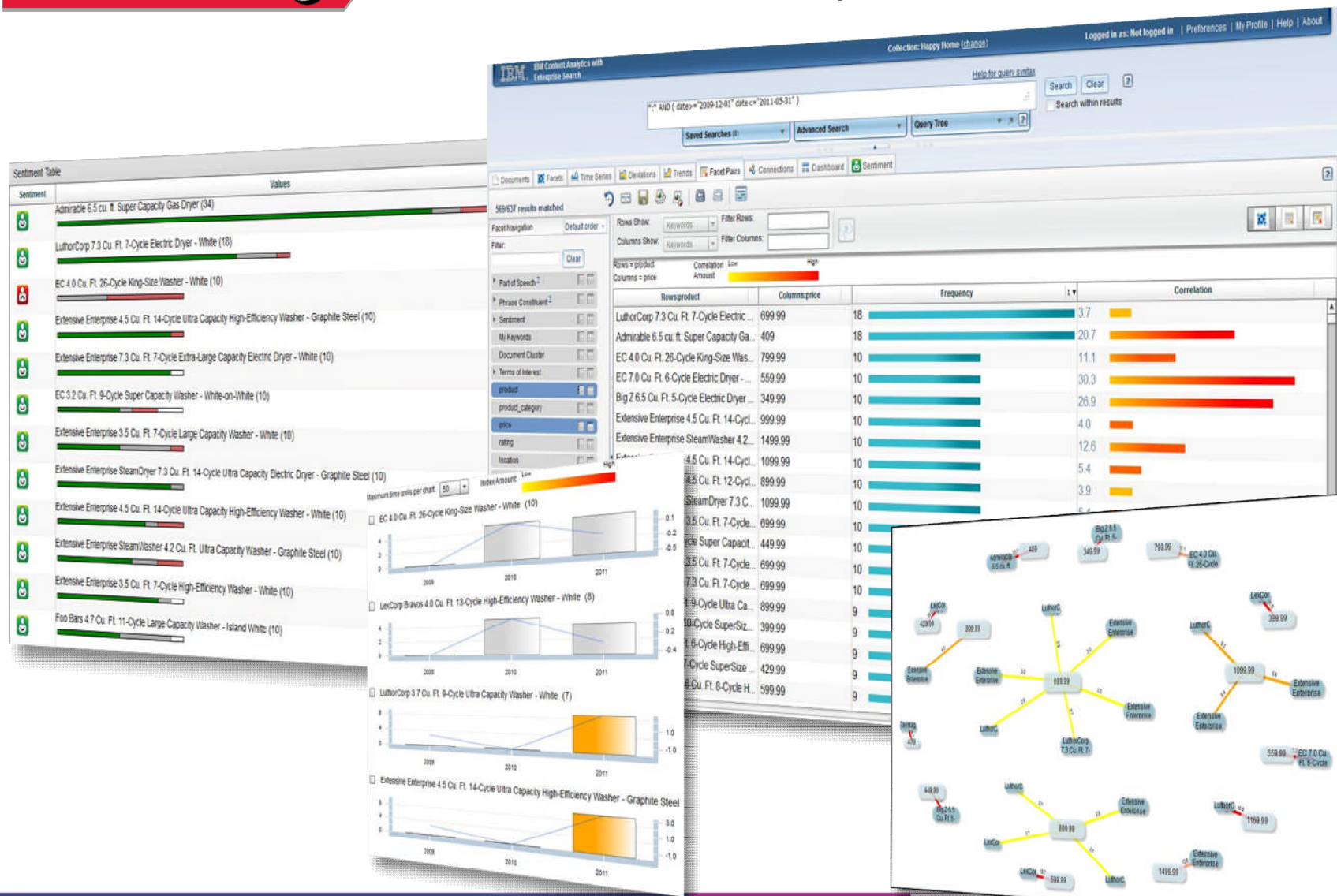
for reduced cost and risk

**Smarter
Content
Solutions**

ANALYZE



IBM Content Analytics 3.0



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Return on Information: The New ROI

The Need



“How can I understand why my customer satisfaction is decreasing?”

“How do I know what my customers want?”

“How can I decipher customer complaints?”

“How can I get flexible & robust reporting, including ad-hoc and exceptions?”

“How do I know what my customers are saying about me?”

“How can I identify product failures or failure patterns?”

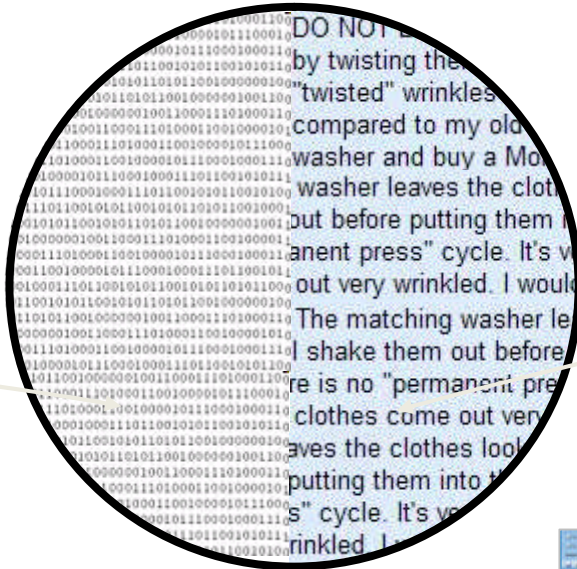
Introduction to IBM Content Analytics

Challenge: 80% of today's Information is Unstructured

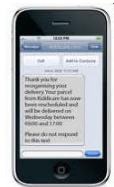
Analytics is changing from transactional, structured data to interactive, unstructured content



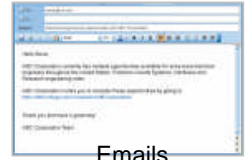
WHAT THEY DO



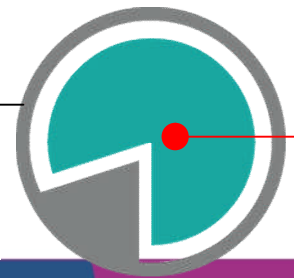
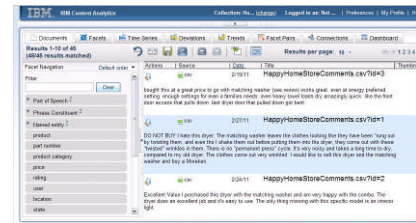
WHAT THEY THINK



Text Messages



Emails



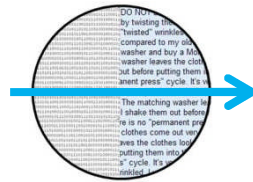
Over 80% of stored information is unstructured*

* AIIM website, accepted industry percentage

Data tells you **what** happened, Content Analytics tells you **why** it happened

What

Sales missed due to out of stock inventory



Why

Early indicators of **negative sentiment** when product is out of stock

IBM Content Analytics: Sample Customers



Why should you care?

Target Australia | Facebook - Windows Internet Explorer provided by IBM

https://www.facebook.com/targetaus?lsm

View Favorites Tools Help

Target Australia | Facebook

Target Australia
Sunday

Love is... (438 photos)
It's nearly Valentine's Day! Here are the photos from Target's 'Love is...' photo booth that was in Westfield Bondi Junction on the weekend. If you spot yourself be sure to share it with your loved ones! If you haven't already purchased a gift for your special someone, check out our handpicked Valentine's Day gifts at <http://bit.ly/WYHjMe>.



Diane Jarvis would be nice if you stocked my size
Yesterday at 1:39am · 1

Kelly Ash Yeah i am hearing u Diane, neca hav my large size either
Yesterday at 1:43am via mobile

Jaye Carah Bathurst has up to a size 11.:)
Yesterday at 1:56am

Sally Nunn true
Yesterday at 2:11am

Nancy Stefanek Someone tell me if they have seen the purple shoes. I live in port Lincoln. Not sure if my store has them. Will look tomorrow but anyone let me know if they seen them. I love purple.
Yesterday at 2:51am · Edited · 1

Janene Brown Yes I've seen them
Yesterday at 2:52am

Elizabeth Connolly me too my size is a ladies 5 too small
Yesterday at 3:47am · 3

Rebecca McCullan They are solo comfy have in all colours
Yesterday at 1:07pm via mobile

Demi Spehar I don't know why you're advertising these things when you have the most amazing, high quality, GENUINE LEATHER flats on sale for like \$10 more. I've never worn a pair of flats as comfortable as those ones I bought from you guys. They're so amazing that my family bought a whole stack of them and I wrote a review on my blog here:
carbonchic.com.au/2013/02/flat-out-at-target/
PLEASE come out with more leather shoes!
23 hours ago

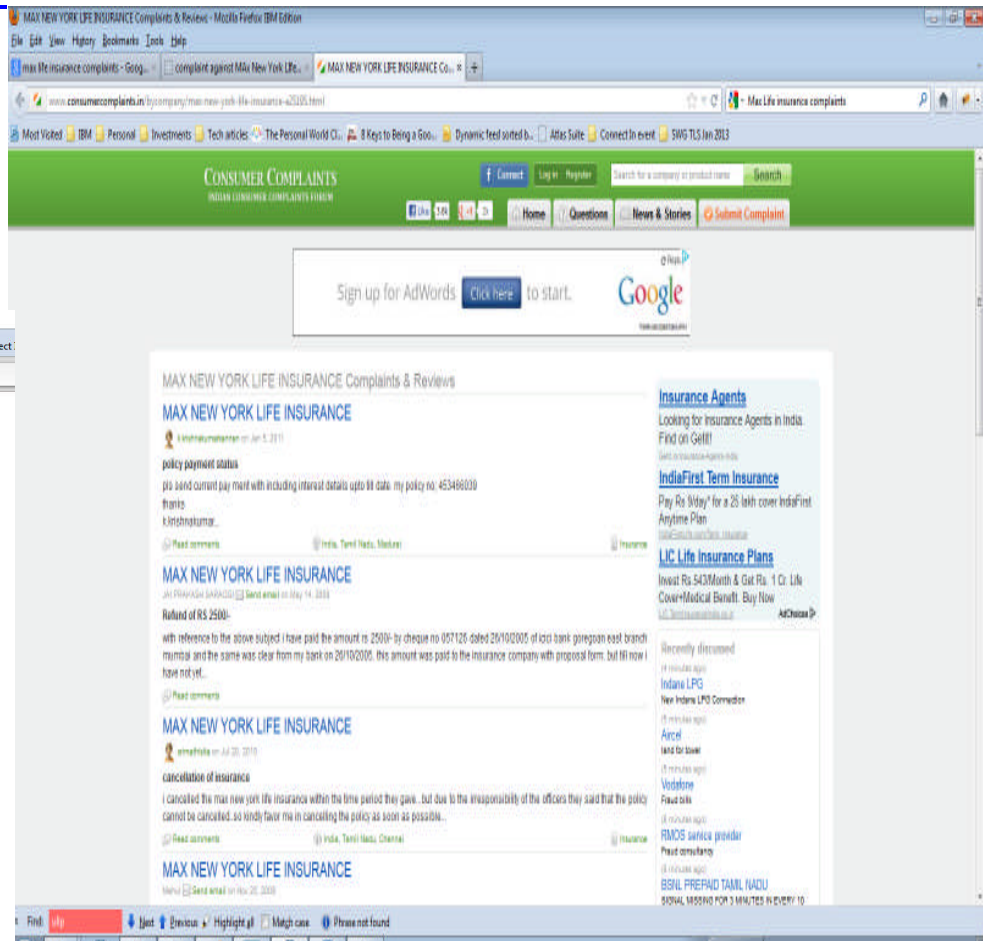
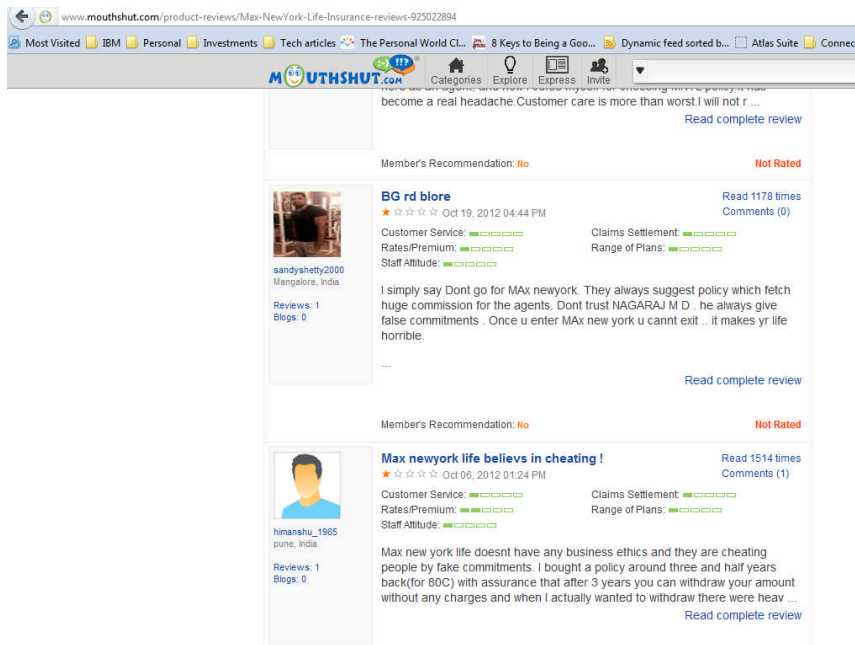
Diane Jarvis I am a size and NO-ONE stocks am I supposed to go barefoot and no a kids size 3 is just that a kids shoe
7 hours ago

Diane Jarvis come on Target, Hear us large and small feet ladies

Example: Analysing Websites for Consumer Comments

Identified the following blogging websites:

- <http://www.consumercomplaints.in>
- <http://www.consumercourt.in>
- <http://www.mouthshut.com>



Crawl and collect data from websites

- OOTB Content Analytics can crawl web sites and some, but not all Blogs.
- Custom Developed Crawler plug-ins are required for certain Webpages
- Developed custom Web Scrapper to crawl web sites and store the data into CSV files.

The screenshot shows a Microsoft Excel spreadsheet with the following columns: A1 (bDate), B (Author), C (Subject), D (Body), E (Company), F (LOB), G (title), H, I, J, K, L, M, N, O, P, Q, R, S. The data rows contain details of insurance complaints, such as 'Complaint against Max New Y Dear Sir', 'Fraud by Max New York Life Dear Sir', and 'Misselling by max new york li FRAUD AND MISSELLING'.

CSV File Import History

[Learn more](#)
 Last refreshed: Friday, December 7, 2012 10:36:05 AM IST Refresh

CSV document import history

Page 1 of 2 | Results per page: 10

Import Space ID	Request time	Start time	Stop time	Number of records	Status	Delete
127.0.0.1/Complaint against Birla Sunlife Insurance company.tab	11/29/12 11:45:21 PM IST	11/29/12 11:45:21 PM IST	11/29/12 11:45:22 PM IST	21 of 21	✓	🗑️
127.0.0.1/Complaint Against Kotak Life Insurance - Policy No (1).tab	11/29/12 11:44:00 PM IST	11/29/12 11:44:00 PM IST	11/29/12 11:44:01 PM IST	6 of 6	✓	🗑️
127.0.0.1/Complaint Against Kotak Life Insurance - Policy No.tab	11/29/12 11:42:44 PM IST	11/29/12 11:42:44 PM IST	11/29/12 11:42:46 PM IST	15 of 15	✓	🗑️
127.0.0.1/Complaint against Max New York Life Insurance - Page 2.tab	11/29/12 11:39:32 PM IST	11/29/12 11:39:32 PM IST	11/29/12 11:39:34 PM IST	15 of 15	✓	🗑️
127.0.0.1/Complaint against Max New York Life Insurance - Page 3.tab	11/29/12 11:37:26 PM IST	11/29/12 11:37:26 PM IST	11/29/12 11:37:28 PM IST	15 of 15	✓	🗑️
127.0.0.1/Complaint against Max New York Life Insurance - Page 4.tab	11/29/12 11:35:40 PM IST	11/29/12 11:35:40 PM IST	11/29/12 11:35:44 PM IST	15 of 15	✓	🗑️
127.0.0.1/Consumer court Bajaj 1.tab	11/29/12 11:33:40 PM IST	11/29/12 11:33:40 PM IST	11/29/12 11:33:41 PM IST	15 of 15	✓	🗑️
127.0.0.1/Consumer court Bajaj 2.tab	11/29/12 11:29:24 PM IST	11/29/12 11:29:24 PM IST	11/29/12 11:29:26 PM IST	15 of 15	✓	🗑️
127.0.0.1/Consumer Bajaj Allianz	11/29/12 11:25:43 PM IST	11/29/12 11:25:43 PM IST	11/29/12 11:25:45 PM IST	10 of 10	✓	🗑️
127.0.0.1/ConsumerCompalints 2.tab	11/29/12 11:23:56 PM IST	11/29/12 11:23:56 PM IST	11/29/12 11:23:59 PM IST	10 of 10	✓	🗑️

Return

Content Analytics and Blogs

- A blog has Structured and Unstructured data.
- Structured data such as Author, Subject and Date
- Unstructured could be Policy numbers, Amount, Address, phone numbers, sentiments and nature of comment

11-27-2012, 01:25 PM #7

Unregistered Guest

Dis-satisfaction insurance +1 0

My policy No. 468318597 Name : PALLAMKURTHI PADMA RAO

I have paid insurance premium @ Rs. 10000/- per year for four years. Total sum o Rs. 40000/- paid to Max life insurance company.

I have surrendered the policy on 06.11.2012. But, they have not arranged the payment till date 28.11.2012. I have phone to the customer care toll free No. 18002005577 and they have simply stated that the amount of Rs. 22,700/- will be arranged by 01-12-2012. It is very much great loss to the customer even though paying amount Rs. 40000/- of every year since 4 years and occurred loss Rs. 18000/- without interest. So requested your goodselves, to take appropriate action against the company to make loss to my self. Please arrange paid amount of Rs. 40000/- together with interest as per law and take appropriate action in delay for arranging payment to my self.

Thanking you sir,

Yours Sincerely

PADMA RAO PALLAMKURTHI
12-37, MOSQUE STREET, DOWLAI SWARAM
RAJAHMUNDRY RURAL, EAST GODAVARI DISTRICT ANDHRA PRADESH 533125
CELL NO. 9000254684, 7396490002

Submit Complaint.

Content Analytics – Insurance Website Categories

- ✓ **Loss of Business:** Identify customers expressing churn.
- ✓ **Bad Communication:** Identify interaction issues with CSRs and customers.
- ✓ **Opportunities:** Identify new opportunities like person getting married and calling to add wife, teenage kid getting into college, retirement in next 3 years etc..
- ✓ **Internet Services:** Learn corporate website and internet related interactions like reset password, access to accounts, online help etc.
- ✓ **Loyal Customer:** Identify loyal customers to retain business.
- ✓ **Payment:** Identify issues related to late payments or refunds.
- ✓ **Mis Sale:** Identify fraud and mis sale of policies by agents.
- ✓ **Renew:** Identify issues and opportunities related to renewal of policies.
- ✓ **Rupees:** Identify money transactions.
- ✓ **Term Durations:** Identify duration of policies

280/280 results matched

Facet Navigation Default order Show: Keywords

Insurance Category Sentences

Blog Details

Insurance Categories

- Loss of Business
- Bad Communication
- Opportunities**
- Internet Services
- Loyal Customer
- Payment
- MisSales
- Renew
- Role
- Rupees
- Term Durations

Blogger Details

Search type: Subfacet search

Facet Path: /"Insurance Categories"/"Opportunities"

<input type="checkbox"/>	
<input type="checkbox"/>	family
<input checked="" type="checkbox"/>	wife
<input type="checkbox"/>	father
<input type="checkbox"/>	son
<input type="checkbox"/>	servant
<input type="checkbox"/>	parents
<input type="checkbox"/>	mother
<input type="checkbox"/>	sons
<input type="checkbox"/>	SON
<input type="checkbox"/>	retirement
<input checked="" type="checkbox"/>	college
<input type="checkbox"/>	retire
<input type="checkbox"/>	brother
<input type="checkbox"/>	College
<input type="checkbox"/>	Mother

Insurance Categories and Sentences

280/280 results matched

Facet Navigation: Default order

Filter:

Keywords

Keywords	Frequency
<input type="checkbox"/> Sadly, this is the money my father gave me as share f...	3
<input checked="" type="checkbox"/> I called Max Life to renew my parents existing Max Lif...	1
<input type="checkbox"/> I had been sold an life insurance policy by Max new y...	1
<input checked="" type="checkbox"/> My parents retired last year and I would like to purcha...	1
<input type="checkbox"/> I called Max Life to enquire about their retirement plan...	1
<input checked="" type="checkbox"/> I will be retiring in the next 5 years.	1
<input type="checkbox"/> I am Sarat.S/o late Udaya Nath Rout A/c Holder of Un...	1
<input type="checkbox"/> with other bonus which pay by BSLi time to time and t...	1
<input type="checkbox"/> : 01368898 I had taken Kotak Smart Advantage Plan ...	1
<input type="checkbox"/> So I transferred the same amount as my last premium...	1
<input type="checkbox"/> so many agents are many more fake claim issued 5la...	1
<input type="checkbox"/> 25,000/- WHICH I WOULD HAVE USED IT FOR MY ...	1
<input type="checkbox"/> We must alert all the Clients of the company to ensure...	1
<input type="checkbox"/> The company is denying claim settlement to 63 years ...	1

Identify sentences around the keywords for rapid discovery.

280/280 results matched

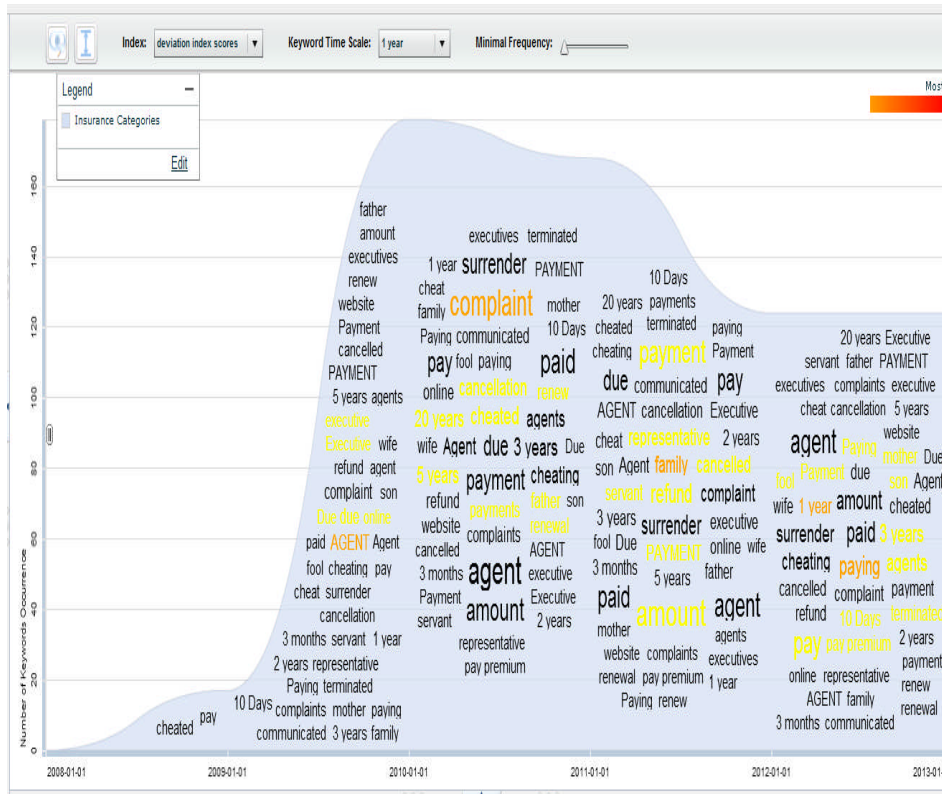
Facet Navigation: Default order

Filter:

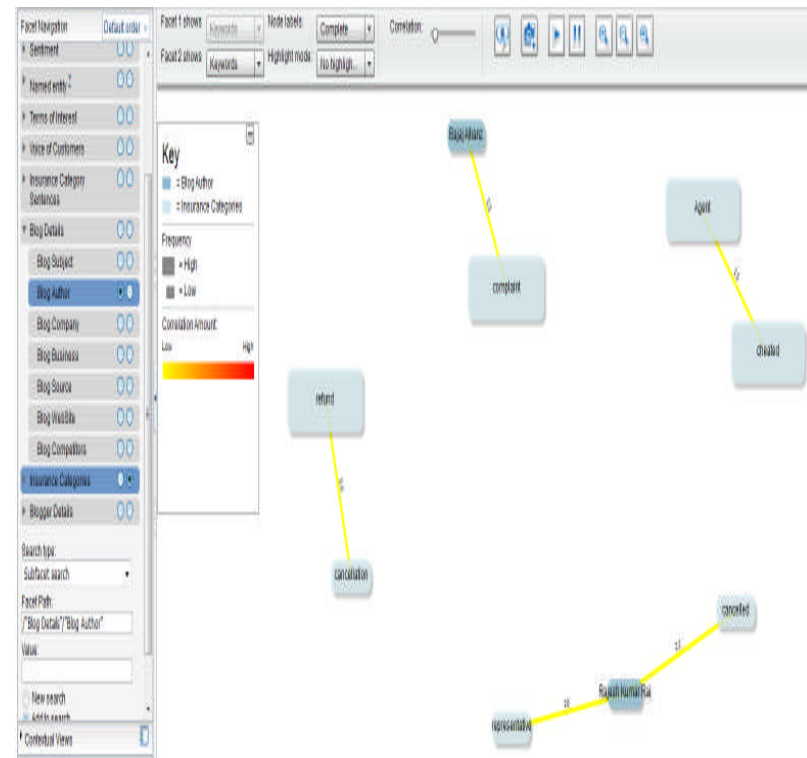
Keywords	Frequency
<input type="checkbox"/> family	9
<input checked="" type="checkbox"/> wife	7
<input type="checkbox"/> father	6
<input type="checkbox"/> son	6
<input type="checkbox"/> servant	3
<input type="checkbox"/> parents	3
<input type="checkbox"/> mother	3
<input type="checkbox"/> sons	1
<input type="checkbox"/> SON	1
<input type="checkbox"/> retirement	1
<input checked="" type="checkbox"/> college	1
<input type="checkbox"/> retire	1
<input type="checkbox"/> brother	1
<input type="checkbox"/> College	1

Use keywords to identify categories.

Two views of Content Analytics Website Analysis



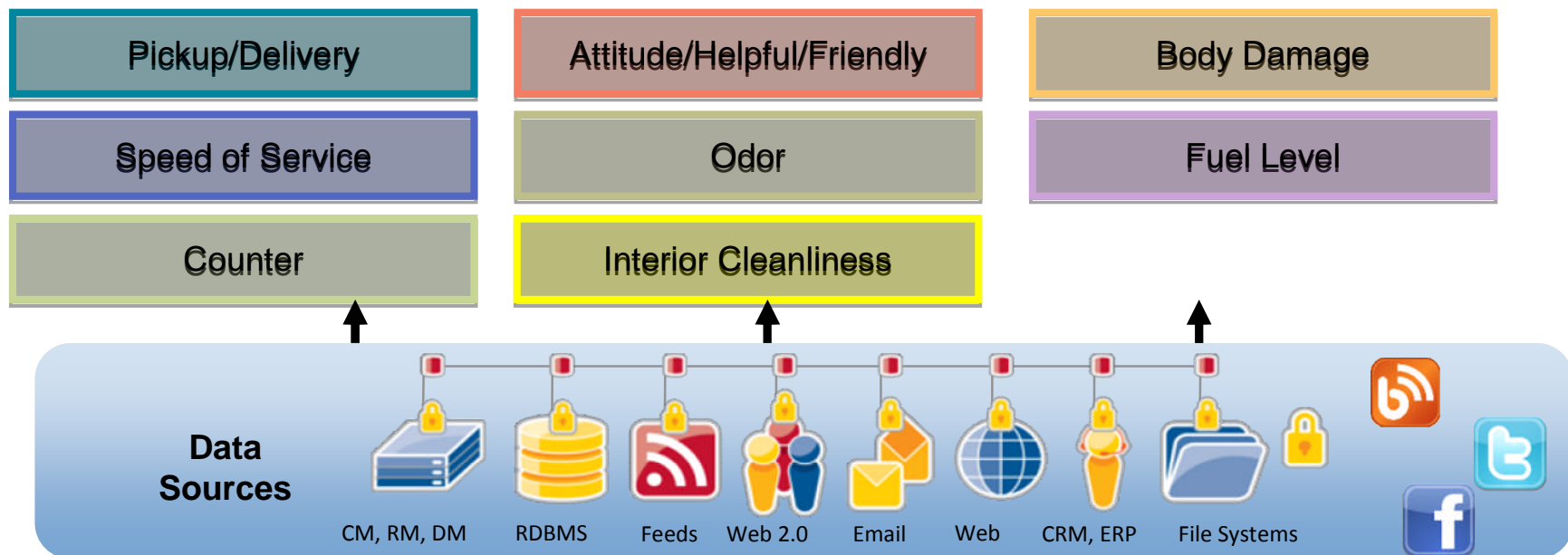
Identify Evolving Topics



Connect people and issues

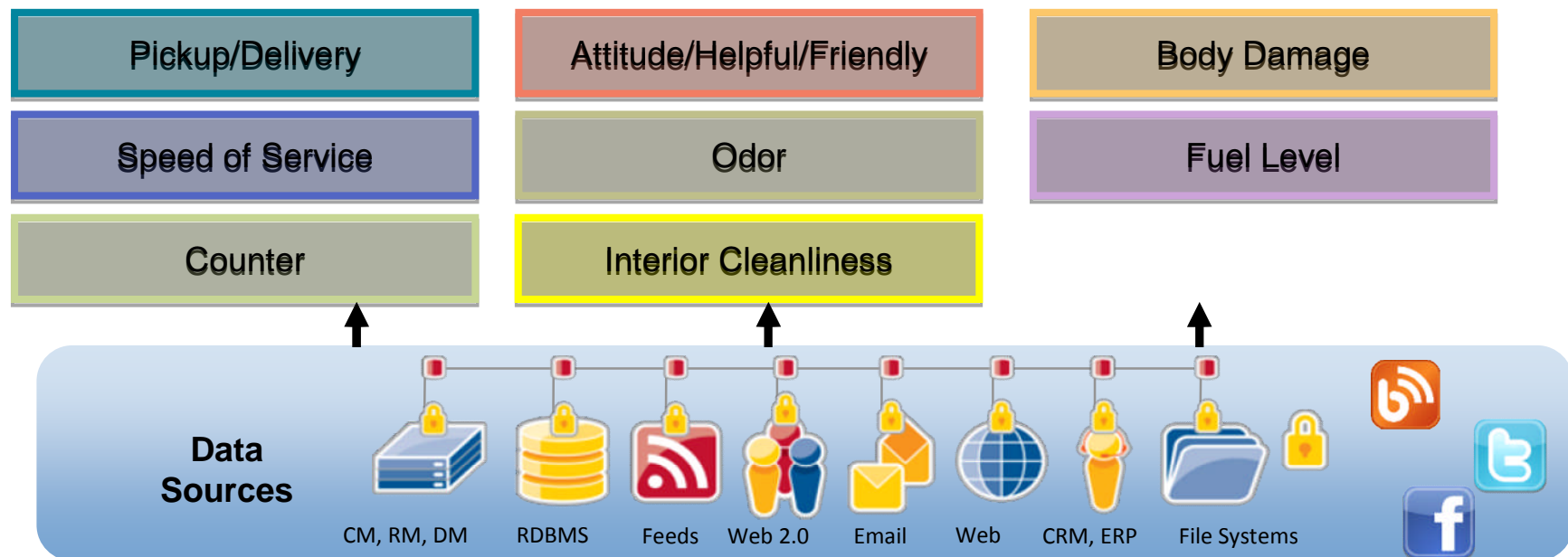
IBM Content Analytics: Analysing customer sentiment

Not only was the **pick-up line** at the **counter** **very long**, but I **waited 30 minutes** just to talk to a **rude representative** who gave me a **car** that **smelled like smoke**, had **stained floor mats**, a **dented fender**, and only **half** a **tank of gas**.



Deeper contextual analysis with IBM Content Analytics

Not only was the **pick-up line** at the **counter** **very long**, but I **waited 30 minutes** just to talk to a **rude representative** who gave me a **car** that **smelled like smoke**, had **stained floor mats**, a **dented fender**, and only **half** a **tank of gas**.



Quickly identify Customer Service and Brand problems

	% Condition of vehicle & equipment (0 - 5)	% Interior Not Clean	% Exterior Not Clean	% Vehicle Odor	% Fuel Tank Not Full	% Extra Equipment Missing or Not Working	% Fluids, Tires, Wipers, Accessories	% Engine-Related Problems
Totals	17.5	4.9	2.2	4.4	0.9	1.7	1.3	1.3
Location #1	21.1	3.5	2.8	5.6	1.4	2.1	0.7	2.1
Location #2	20.0	8.1	4.1	4.1	0.0	0.0	2.7	1.4
Location #3	20.0	6.5	2.2	4.3	4.3	4.3	4.3	0.0
Location #4	17.9	5.1	2.0	4.5	0.6	1.8	1.2	1.4
Location #5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Beijing 2008™



83x

6,000,000 users on Twitter

pushing out 300,000

tweets per day

500,000,000 users on Twitter

pushing out 400,000,000

tweets per day

1333x

Content Analytics: Analysis of Twitter comments



Document Analysis

Title: bobzerof9bd9a7ae60f03cfa28fd415ef11ed4b9baa...

Analytics Facet		Metadata Facet	
Name	Value	Name	Value
Adverb	only	fromuser	bobzero
Preposition with Noun	in ... vegas	language	en
Others	vegas	source	UberTwitter
Verb	walk	Duplicate Tweets	f9bd9a7ae60f03cfa28fd415ef11ed4b9baaac2f
Event Facilities	walk		
Event Category	facilities		
Preposition with Noun	for ... mile		
General Noun	mile		
Preposition with Noun	for ... day		
General Noun	day		
Conjunction	and		
Adverb	still		
Adverb	never		
Verb - Noun	go ... outside		
Verb	go		
General Noun	outside		
Twitter communities	#iodgc		
Others	iodgc		

Only in vegas can you walk for miles for days and still never go outside #iodgc

1. Put on your best shoes.
Lots of walking at Trade Show

Document Analysis

Title: datahick7aaf49ed9397db131431b83df1b3dcbb1...
Date: 10/25/10

Analytics Facet		Metadata Facet	
Name	Value	Name	Value
Others	RT	fromuser	datahick
twitterid	@sandy	language	en
Adjective	sandy	source	TweetDeck
Others	carter	Duplicate Tweets	7aaf49ed9397db131431b83df1b3dcbb13d18f76
Twitter communities	#iodgc		
Others	iodgc		
Question pattern	where be woman ?		
questions	Where		
Verb - Noun	be ... woman		
Verb	be		
General Noun	woman		
Preposition with Noun	of ... information		
General Noun	information		
Verb	want		
Requirement predicate	want		
Requirement pattern	want to see		
Verb	see		
Preposition with Noun	on ... stage		
General Noun	stage		
Others	It		
Verb	be		
Verb	wonder		
Modified Noun	same ... thing		
Adjective	same		
General Noun	thing		
Twitter communities	#WIT		
General Noun	wit		

RT @sandy_carter: At #iodgc .. Where are the women of Information? I want to see them on stage! < < Was wondering the same thing #WIT

2. Women in technology.
Missing from the stages.

IBM Content Analytics: Analysis of Twitter



Document Analysis

Title: AlexBAustin8121fa897487ac1af9082eda94a4a26...
Date: 10/25/10

Analytics Facet		Metadata Facet	Categories
Name	Value	Name	Value
Twitter communities	#iodgc	fromuser	AlexBAustin
Noun Sequence	iodgc line	language	en
Others	iodgc	source	Twitter for iPhone
General Noun	line	Duplicate Tweets	8121fa897487ac1af9082eda94a4a2665b51ef42
Preposition with Noun	for ... Starbucks		
Organization	Starbucks		
Others	Starbucks		
Verb	be		
Numeral	30		
General Noun	deep		
Noun - Predicate	company ... have		
General Noun	company		
Verb - Noun	have ... mindshare		
Verb	have		
Others	mindshare		
positive terms	like		
com_ibm_positiveindicator_sentimenttype	positive		
Adverb	not		
Unfavorable pattern	unable to believe		
Verb	believe		
Others	apos		
Others	d		
Modified Noun	think ... coffee		
Adjective	think		
General Noun	coffee		
Verb	have		
Adverb	much		
Modified Noun	economic ...		
	substitute		
com_ibm_positiveindicator_sentimenttype	positive		
positive terms	economic		
Adjective	economic		

Metadata Facet Categories

Name	Value
fromuser	AlexBAustin
language	en
source	Twitter for iPhone
Duplicate Tweets	8121fa897487ac1af9082eda94a4a2665b51ef42

#iodgc line for Starbucks is 30 deep. company has mindshare like I cannot believe. You'd think coffee would have more economic substitutes

3. Long line at Starbucks .

Document Analysis

Title: ericvonheim26c108d095d0f88c0fb01ec0f0bd9165...
Date: 10/26/10

Analytics Facet		Metadata Facet	Categories
Name	Value	Name	Value
Twitter communities	#iodgc	fromuser	ericvonheim
Others	iodgc	language	en
Twitter communities	#ibmecm	source	HootSuite
Technologies and Products	ibmecm	Duplicate Tweets	26c108d095d0f88c0fb01ec0f0bd9165f66aedb7
Others	ibmecm		
Event Category	Technology		
Noun Sequence	credit card dispute management		
General Noun	credit		
Noun Sequence	card dispute management product		
General Noun	card		
Noun Sequence	dispute management product demo		
General Noun	dispute		
General Noun	management		
General Noun	product		
General Noun	demo		
Preposition with Noun	by ... Carl Kessler		
Noun Sequence	Carl Kessler		
Person	Carl Kessler		
Others	Carl		
Others	Kessler		
Verb	be		
Adverb	really		
com_ibm_positiveindicator_sentimenttype	positive		
positive terms	cool		
General Noun	cool		
Noun Sequence	user interface		
General Noun	user		

Metadata Facet Categories

Name	Value
fromuser	ericvonheim
language	en
source	HootSuite
Duplicate Tweets	26c108d095d0f88c0fb01ec0f0bd9165f66aedb7

#iodgc #ibmecm - Credit Card Dispute Management product demo by Carl Kessler is really cool. The user interface looks sharp!

4. Attendees excited to watch live demo by Carl on Advance case management (credit card dispute). Execs got to do more of these.



IBM Content Analytics – Analysis of Customer Tweets

41.5 % Favorable

9.1% Unfavorable.

