

Beyond Watson— IBM Content Analytics Today

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Beyond Watson— IBM Content Analytics Today



- Introduction to Content Analytics
 - Traditional analytics vs. unstructured analytics
 - The value-add of unstructured insights
- The “Watson” Secret Sauce
 - Natural language processing as the engine for unstructured insight discovery
 - Content analytics basics / how it works
- Use-Case Examples
- Demonstration
- Q&A



What Is Content Analytics?

Mining unstructured content to get a holistic understanding of the world around you.

80% of enterprise content is unstructured
100% of social content is unstructured

Why do Content Analytics?

Analytics gives you the
WHO, WHAT, WHERE, and **WHEN** of a subject

Content Analytics uniquely adds the
WHY and the **HOW**

Analytics is adapting from the Quantitative to Experiences, Behaviors, and Context

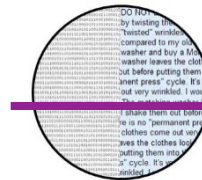
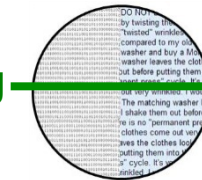
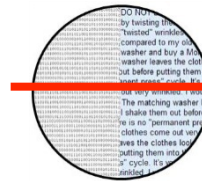
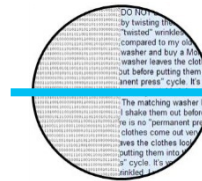
What

Sales missed due to out of stock inventory

20% customer attrition in the past year

Same store sales revenue decreasing by 8%

Decrease in gift card sales over the past 6 months



Why

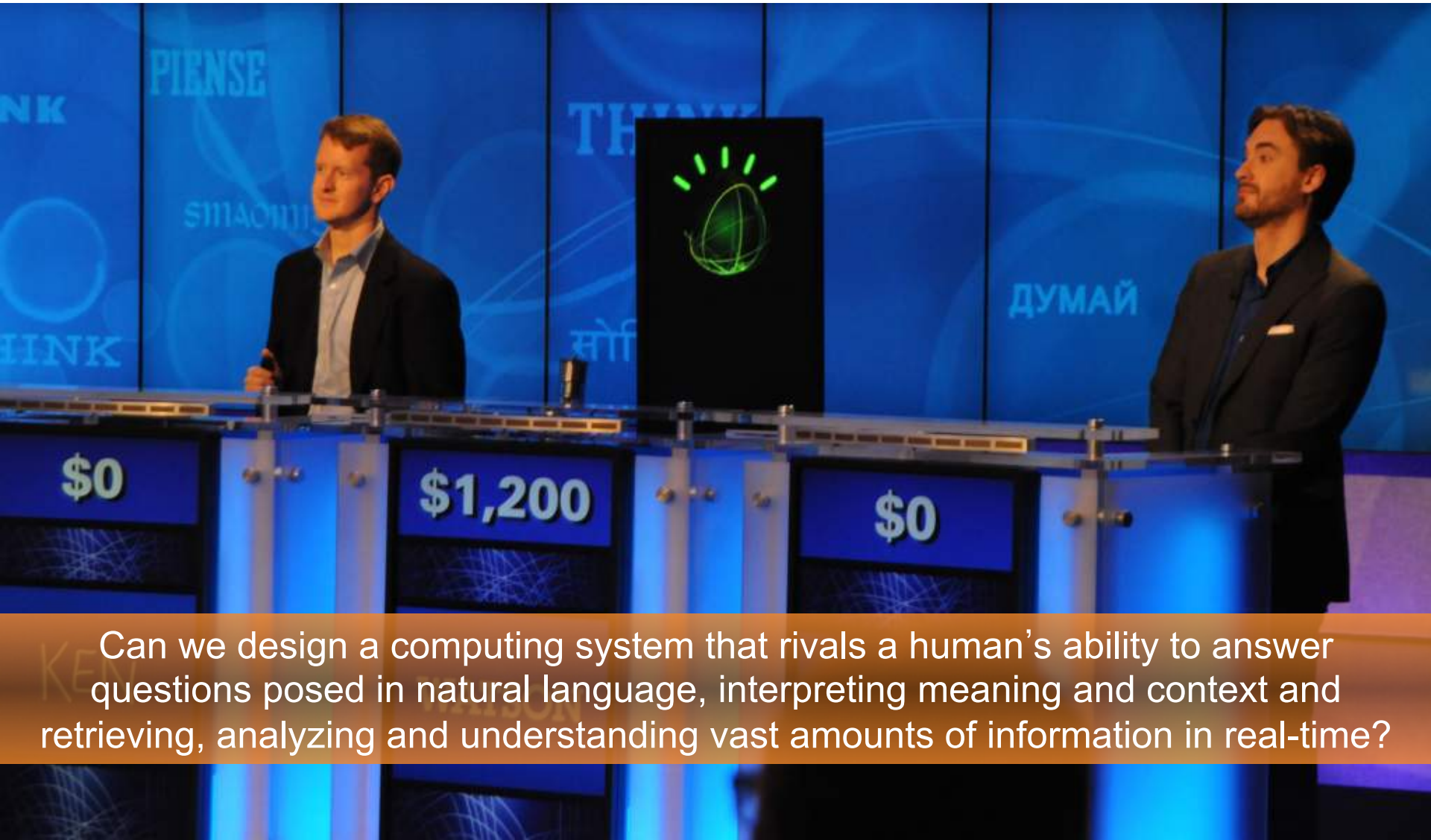
Early indicators of negative sentiment when product is out of stock

Increased dissatisfaction with Smart phone plans and devices because overcharging for data access and “poor” battery life

Missed social media feedback that described problems with store cleanliness and staff attitude

Gift Card expiration policy angered customers

The “Watson” Secret Sauce



Can we design a computing system that rivals a human’s ability to answer questions posed in natural language, interpreting meaning and context and retrieving, analyzing and understanding vast amounts of information in real-time?

Text Analytics is the basis for Content Analytics

What is Text Analytics?

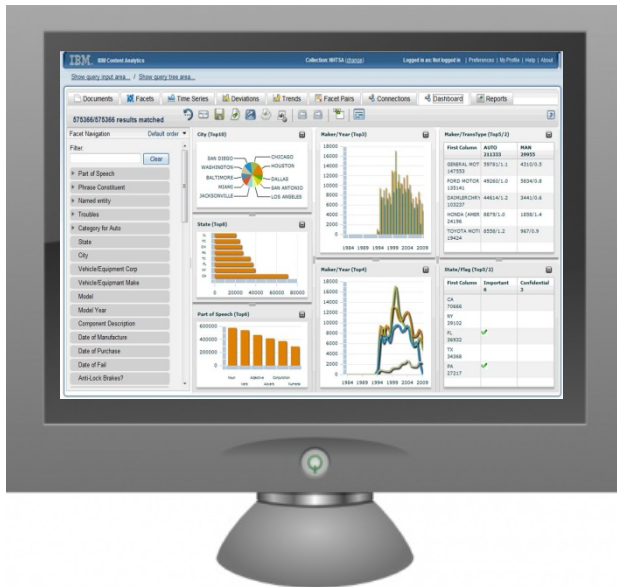
Text Analytics (NLP*) describes a set of linguistic, statistical, and machine learning techniques that allow text to be analyzed and key information **extraction for business integration**

EC 4.0 Cu. Ft. 26-Cycle King-Size Washer – White. I hate this machine. Have had 3 calls on machine. You can't wash **large items**, Won't clean in the middle. **Leaves dry spots** through the clothes, I can only do **1/2 basket** of clothes. Will **not clean** or **mix bleach** in with the water.....

Product	EC
Category	washer
Size	4.0 Cu. Ft
Model	26-Cycle King Size
Color	white
Issue	large items
Issue	leaves dry spots
Issue	1/2 basket
Issue	not clean
Issue	mix bleach

What is Content Analytics?

Content Analytics (Text Analytics + Mining) refers to the text analytics process plus the ability to **visually identify and explore trends, patterns, and statistically relevant facts** found in various types of content spread across internal and external content sources



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.

Pickup/Delivery

Attitude/Helpful/Friendly

Body Damage

Speed of Service

Odor

Fuel Level

Counter

Interior Cleanliness

Content Analytics Basics

Aggregate and extract from multiple sources



... to form large **text-**based collections from multiple internal and external sources (and types), including ECM repositories, structured data, social media and more.

Content Analytics Basics



Organize, analyze and visualize

... enterprise **content** (and data) by identifying trends, patterns, correlations, anomalies and business context from collections.

Content Analytics Basics



Search and explore to derive insight

... from collections to confirm what is suspected or uncover something new - before customizing models and integrating with other systems and processes



Uncover business insight through unique visual-based approach

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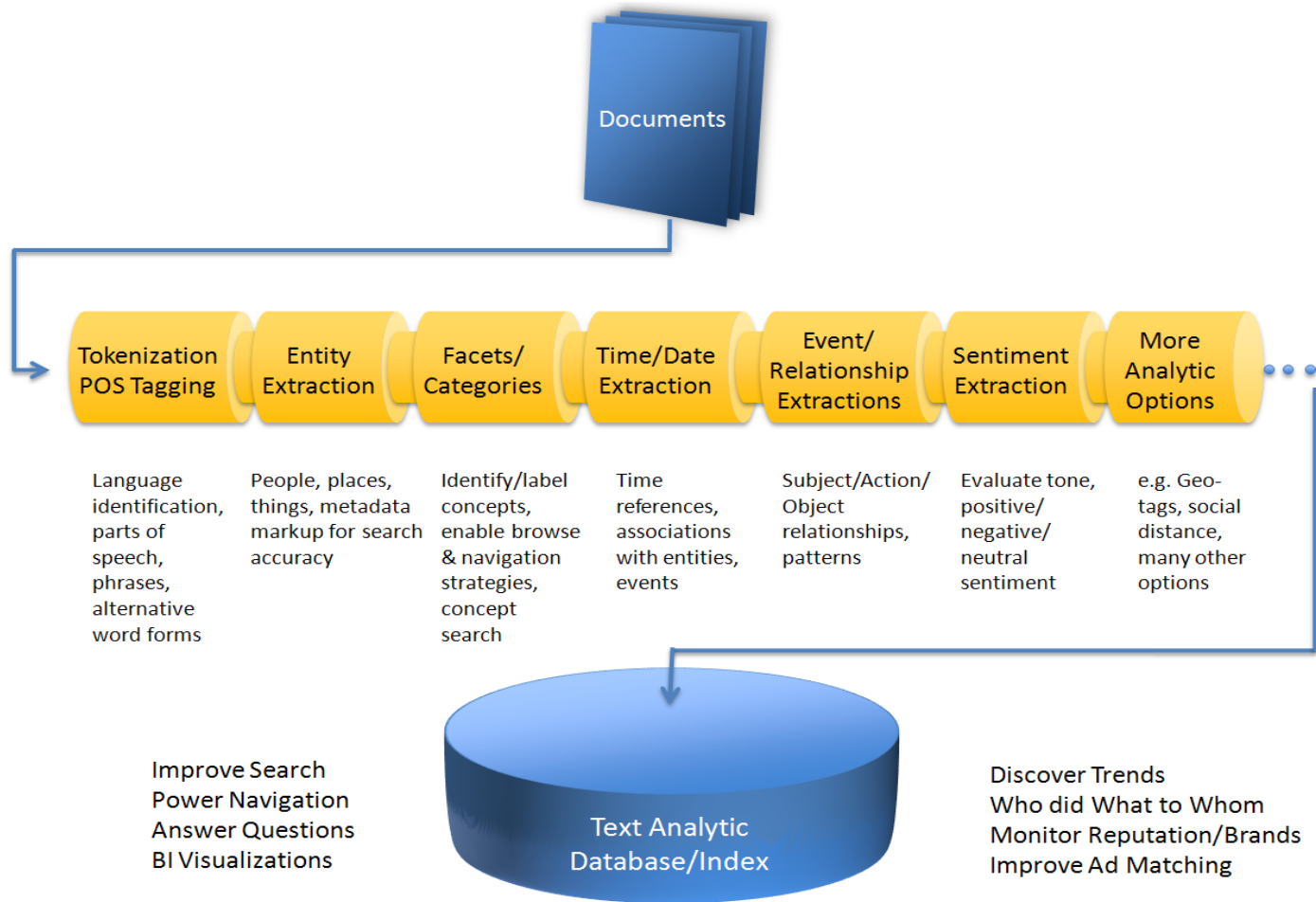
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Overview to Text Analysis



Dynamic Applications

- **Search and Visually Explore**
 - Automatic Visualization for Interactive Exploration and dynamic analysis to derive insights
 - Dynamic highlighting of interesting anomalies and correlations in the content
 - Support for analysis of over 30 content sources and over 150 content formats
 - Multiple annotators provided to automatically extract meaningful concepts and entities without customization
- **Monitor, Dashboard and Report**
 - User-friendly, graphical views to intuitively uncover new insight
 - Extend content insight into IBM Cognos 8 BI and its reports and dashboards
- **Custom Search & Analytic Solutions**
 - Open, standard UIMA-based text analysis pipeline for flexibility and growth
 - Highly scalable and extensible
 - Integrate into any application environment – from desktop to mainframe – via web services or native Java APIs
 - Easy to use, flexible tooling to tailor annotators, rules and dictionaries

Business Integration

- **IBM Cognos**
 - Dynamically search and explore content for new business insight
 - Quickly generate Cognos BI reports
 - Integrate social media content with enterprise content to deliver key insight into customers and products
- **SPSS Analytics Systems**
 - Combines the power of analyzing the past and present with the predictive analysis capabilities of SPSS
- **IBM InfoSphere Warehouse**
 - Combines structured and unstructured content analysis to provide complete insight
- **IBM Netezza**
 - Export analyzed content for use by Netezza Appliance
 - Query integration for structured and unstructured content
- **Advanced Case Management**
 - Performs full text index unstructured analytics on Content objects
 - Provides a connector that “crawls” Case folders indexing their metadata and document contents

The Solution and Benefits

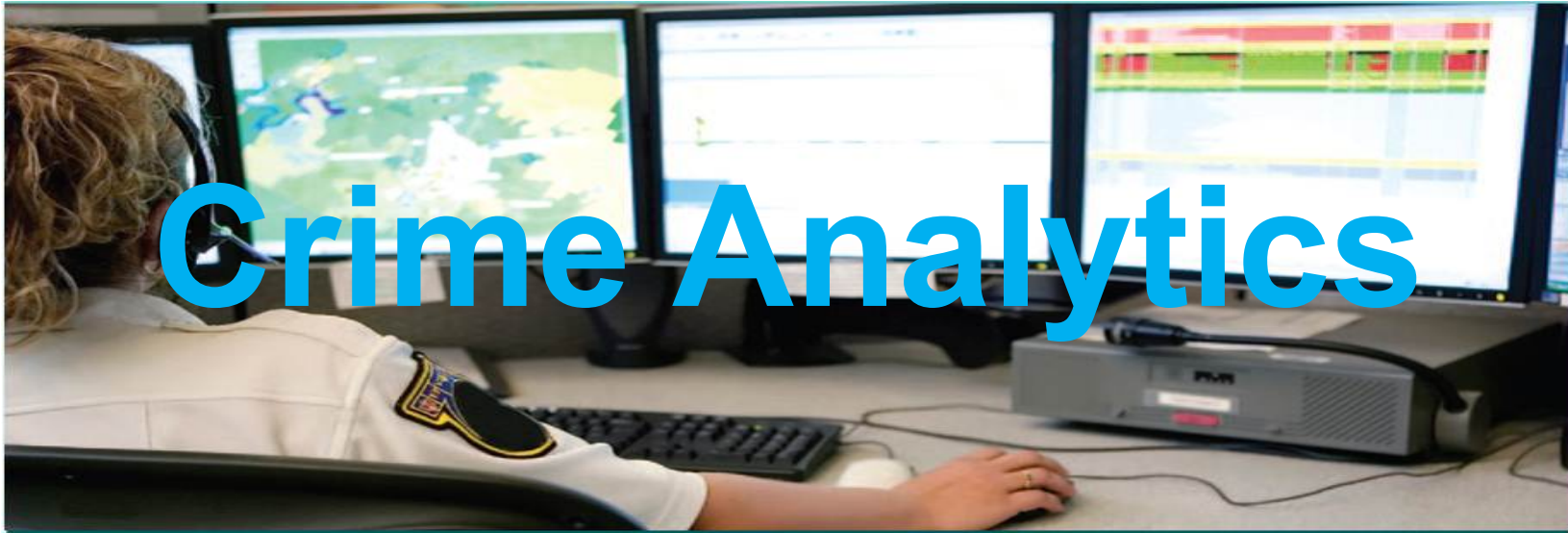
- Discover new insights from unstructured content
- Powerful search and analysis to for keyword & semantic search, facet navigation, trend analysis, correlations, regardless of source or format
- Early detection of industry trends
- Insight into customer sentiment about your company and products
- Better identification of new revenue opportunities, customer satisfaction issues, early problem detection, product modification requirements
- Deep analysis of call centers and social media outlets
- Integration with existing content repositories, BI tools, and more to augment existing analytics environments
- Reduced customer cost to serve
- Improved customer satisfaction and retention
- Grows lifetime value of customer
- Increase in new customers with superior products and services
- Beat the competition based on knowing what your customers want
- Reduced manual analysis cost & effort for content like call center logs, website blogs, and documents





Healthcare Analytics Solutions

- *Diagnostic Assistance*
 - *Clinical Treatment*
 - *Critical Care Intervention*
- *Research for Improved Disease Management*
 - *Fraud Detection and Prevention*
 - *Voice of the Patient*
 - *Claims Management*
 - *Prevention of Readmissions*
- *Patient Discharge and Follow-up Care*



Crime Analytics

Crime Analysis & Public Safety Solutions

- *Community Policing*
- *Investigation Analytics*
- *Incident Management*
 - *Anti-gang initiative*
- *Anti-terrorism initiatives*
- *Cybercrime investigation*



Insurance

Insurance Solutions

- *Risk Assessment*
- *Fraud Detection*
- *Policy/Underwriting Analysis*
- *Claims analysis, payment validation, loss review*
 - *Reserve trending and optimization*
 - *360-degree view of customer*



Financial Services Solutions

- *Anti-money laundering*
- *Internet banking fraud*
- *Operational efficiency*
- *Risk management and compliance*



Manufacturing

Manufacturing Solutions

- *Quality Insight*
- *Product Development*
- *Warranty Analysis*



Customer Care

Customer Care Solutions

- *Customer Experience*
- *Customer satisfaction and survey analysis*
 - *Product and Service Quality*
 - *Churn prediction*
- *Marketing campaign development and execution*
 - *New revenue opportunities*
 - *Product enhancements*

Demonstration

Questions?

Thank You

