



Social Data Intelligence

A white paper by Scalable Systems

Introduction

As social networking continues to grow so does the vast amounts of personal information being shared through various channels such as: Facebook, Twitter, blogs and online forums. The collection and mining of this social data has brought forth a social data revolution, where organizations are able to develop a more accurate customer-centric approach to business by leveraging public social data. There has been a shift in human communication with the advent of social networking as people are increasingly sharing personal information, thoughts, ideas and criticism of the world around them. Social networking has exploded over the last decade and has established a flowing river of communication and social data. Just last year Twitter generated over 25 billion tweets and currently has over 200 million users.¹ Facebook has 955 million users with over 30 billion pieces of data shared per month.^{2,3} Overall, the Internet has grown to over 2 billion users with Smartphone users expect to cross the 2 billion mark in 2015.^{4,5}

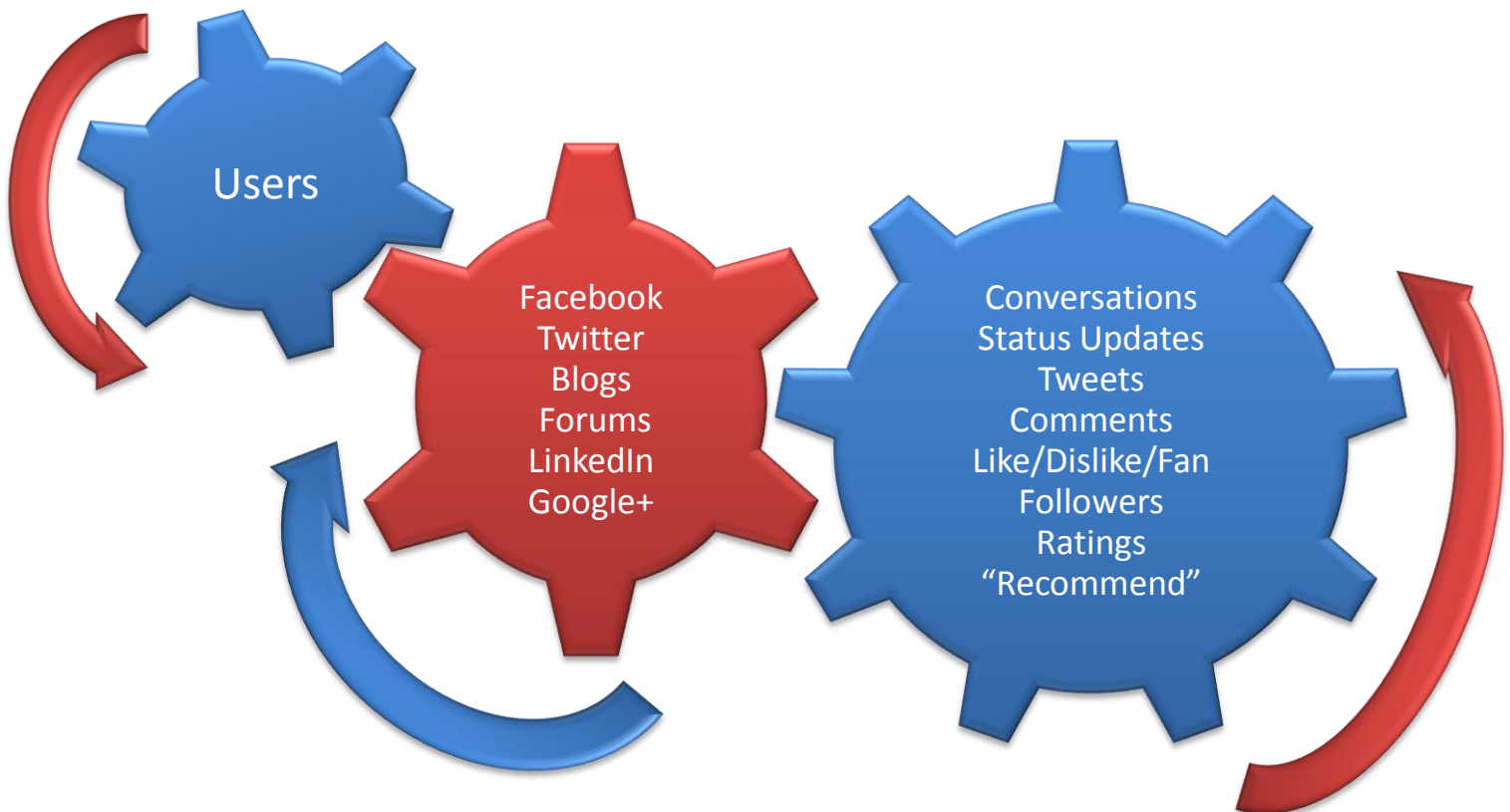
As more and more organizations realize how to turn data into intelligence, new sources of data are beginning to be explored and intergraded into traditional business intelligence platforms. Social Business Intelligence utilizes data analytics and analysis of social networking feeds to provide immediate insight of customer/user response of products and services rendered. Online conversations, tweets, blogs, status updates and comment posts are utilized to close the gap and move organizations closer to the customer's needs and wants. By combing social data with traditional business data management, organizations will more accurately predict trends amongst its users by possessing a real-time, pervasive view of customer behavior. Organizations can increase their insights by augmenting a variety of customer data sources with different channels of social networking.



Social data analysis, analytics and mining can bring forth real-time-use measurement of products and services that can be integrated with traditional business metrics, KPIs and reporting. Having this ability allows for more accurate and immediate feedback as opposed to traditional timely reports such as surveys or customer service responses. In today's society it is more common to express ones frustration or enjoyment through a status update or 140 character tweet. With automated social business intelligence, time and resources spent on seeking out and reviewing customer inquires or analyzing survey results will be greatly reduced. People are now volunteering this information, "social data", at a phenomenal rate of 140 million tweets per day and 45 million Facebook status updates per day.^{1,6}

Social Business Intelligence

Social business intelligence is the capturing of social networking feeds and social media monitoring, combined within a business intelligence environment. While traditional business intelligence is driven from data warehouses and databases, social business intelligence is driven from users of social networking. Social networking offers an inexpensive feed of automatically produced and analyzed social data that can be used to generate new leads, trends, recruits and prospects. Social business intelligence brings a real-time view of one of the biggest decision making insight sources, the consumer. Sales are influenced by what the consumer likes or dislikes, what they and others think about your organization, products or services, their reaction to an event and the relationships they have. All of this “consumer intelligence” is available online for free, and is continually updated bringing a competitive advantage for those that harness it.



For instance, look at the recent coverage that has been given to Apple and Google over their mobile device tracking. This event has generated a lot of buzz throughout the Internet and social media sites with thousands of users’ blogging, tweeting and sharing their opinions. This social data can be mined and analyzed to provide actionable insight about the consumer wants and needs. What happens if users tweeted that their switching to another product or a facebook group was started to boycott their service. Would your organization know about it? Would they know the details of consumer sentiment; positive or negative, likes or dislikes, if they are a “fan” and what is being said; “I’m switching to product X”. If social business intelligence is utilized organizations can harness the ability to spot trends and utilize up to the minute information for making decisions.

Unlike traditional BI data, social business intelligence data relies more on unstructured and semi-structured information as consumer intelligence is collected from an expanding market of social networking sites and media sources. By combining social data with traditional business intelligence, new data models will be created and used to generate a comprehensive head-to-toe image of your consumer's demographics and psychographics. Social business intelligence moves organizations closer to consumers through the use of new data model analysis and analytics that can lead to more accurately predicted consumer behavior and better understanding of consumer initiatives.

Social Data

With business intelligence, organizations are able to view what products and services are selling more than others within a certain geographic region; but it is unable to give insight as to why. By combining social data with an established business intelligence system, a comprehensive view of that regions demographic and psychographics can be visualized. Providing organizations with the ability to reach out and deliver a custom marketing and advertising campaign to specific customers with known quantified factors. Having this ability helps tailor product development and delivery to a diverse consumer base leading to the development of new markets and an expanding customer base. This will also allow organizations to adapt to change as fast as consumer trends are spotted.

IDC predicts that 2011 will be the year where major software vendors will invest heavily into social business intelligence with a compound annual growth rate of 38% through 2014. Small and medium-sized businesses are taking the lead with more than 40% using social networks for promotion.⁹

Traditional sources of "consumer intelligence" data came from corporate research, surveys, focus groups, customer service and point of sales; all sharing a varying time delay, analysis expenditures and value of insight. Social data is available the second the user transmits it, is continually updated with new information, and is more relevant because of its instantaneous nature. This allows organizations to continuously monitor their initiative on target audiences, the ability to react at a moment's notice and accurately predict future consumer trends. The value that social data brings is unprecedented; in March of 2011 facebook was valued at 85 billion dollars, with some analysts projecting it to rise to 224 billion by 2013.⁷ At the same time, Twitter was also valued at 7.7 billion dollars.⁸ Having a social presence and collecting social data that customers volunteer is vital for today changing business model.

Social Data

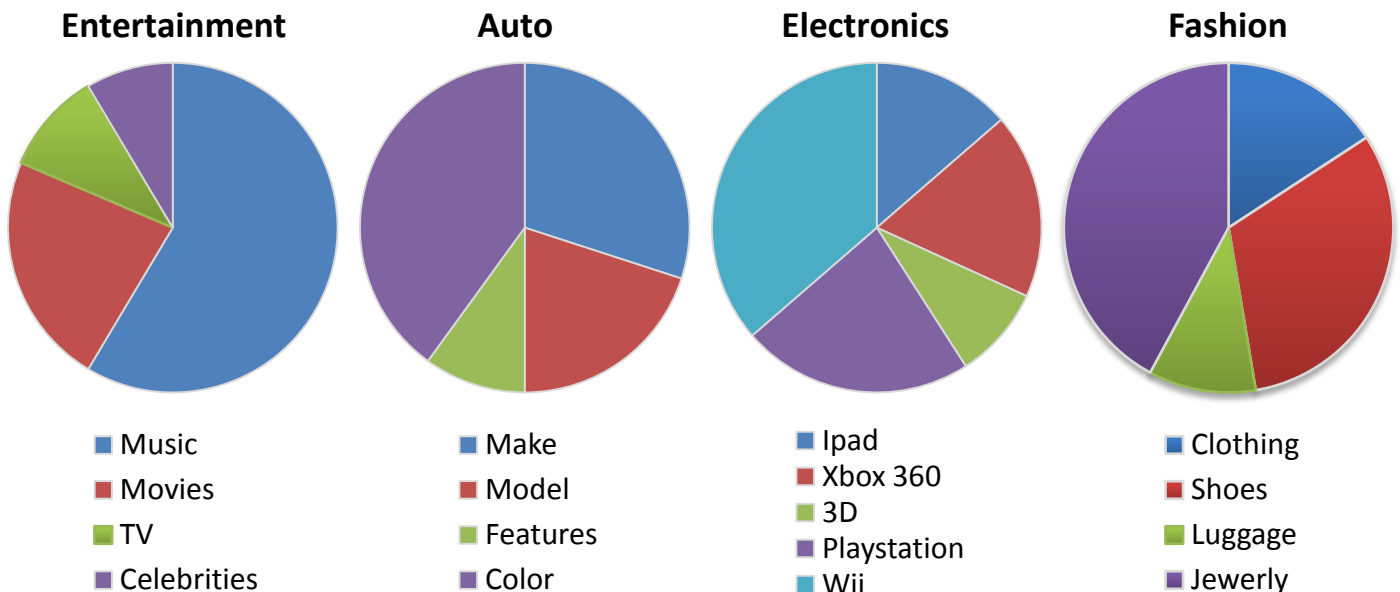
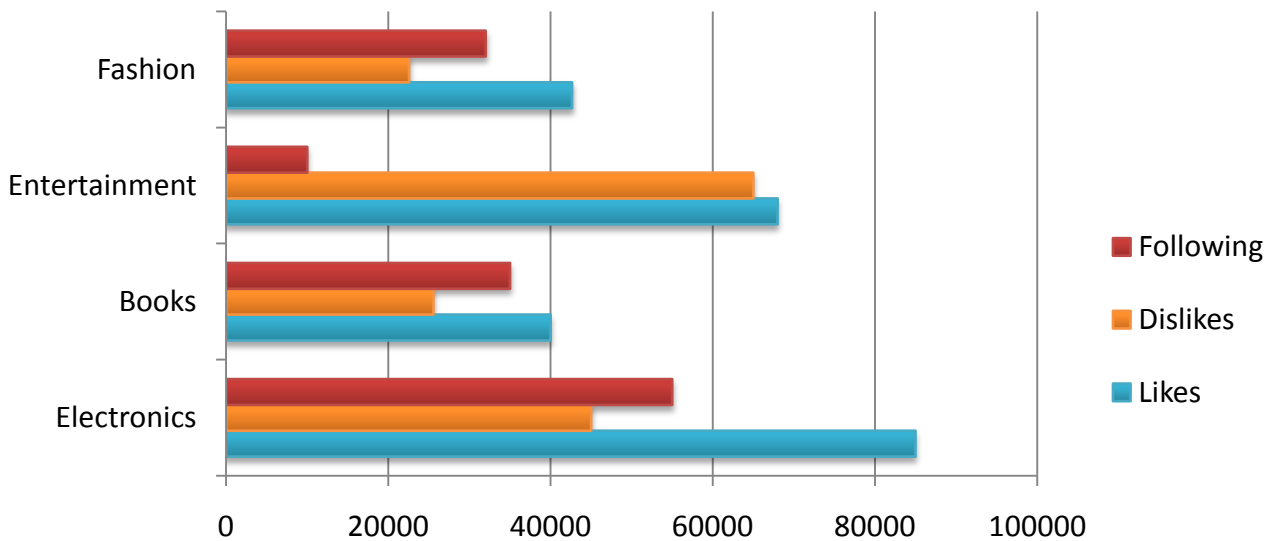
In today's increasingly competitive market, information is vital to making informed, intelligent decisions. The top performing companies are heavily investing into turning, what was just once ordinary data into predictive intelligence. This thought process is continuing to expand into social data collection. Social data travels through these public social networking sites containing various types of valuable information that can be extracted and analyzed to give cutting edge insights on: the success of a product, marketing campaign, size of your consumer base, what customers are saying and a competitor's actions. Information that can be obtained is not limited to a single site or spectrum, and is expanding as social networking continues to grow in use and presence. From social data, a vast amount of valuable information can be identified, such as:

Extractable Values from Social Data	
Online Handle <ul style="list-style-type: none"> • Pseudonym • Real Name 	Competitors <ul style="list-style-type: none"> • Activities / Buzz • Consumer base • Relationships • Size of "online impact"
Site Specific <ul style="list-style-type: none"> • Like / Dislike / Fan • Followers / Following • Ratings / Reviews • Community Member Size 	Keywords <ul style="list-style-type: none"> • Company • Product / Services • Marketing / Advertisement • Topics
Location	Subjectivity
Gender	Objectivity

Social data is truly a unique forum of intelligence as users who create this data, do-so on a continually evolving platform that is always on, accessible and updated with new forms of data that can be extracted. Social networking has aided in the development of its own unique lingo that consumers are using to describe their feelings towards products and services. Just like different generations have their own lingo so does social networking communities. Being able to capture and analyze not only what is said but how it is vital. These key/buzz words can be incorporated into marketing campaigns and used for search optimization to align and increase consumer base. With the use of sentiment analysis, businesses will be able to listen in on what is being said about an organization's products, services and industry.

Social Data

Organizations that assemble and monitor social networking widgets will be able to analyze their consumer base for popularity, credibility, expertise and relevancy within a wide range of settings. This statistical collection of likes/dislikes, fans, followers and etc; combined with sentiment analysis, offers an in depth look of how many users feel a certain way towards an event, organization, person, product, service or any other entity that wishes to be quantified. For example social networking contributors can be analyzed to see the impact they have within their social community. Organizations will be able to utilize these contributors within demographic and psychographic marketing campaigns or allow for product reviews by these trusted contributors within the social networking community. When a new product, service or marketing campaign is launched, organizations will be able to directly measure the impact of their efforts, how it is resonating with their target consumer base and how receptive they are. Organizations will be able to perform real-time accurate analysis of consumer initiatives or an event's impact on awareness, support, approval or disapproval for a range of attributes with sentiment analysis.



Sentiment Analysis

Sentiment analysis is the extraction of opinion through text analytics in the attempt to identify and classify the polarity of a given text. Text can be quantified on tone, (positive, negative, or neutral) emotional state, (angry, happy, or sad) and with more advanced features, objectivity, subjectivity, and feature/aspect-based analysis can be conducted. Research Company Forrester predicts by 2014, the text analytics market is expected to reach \$978 million. Companies like Kia motors, Best Buy, Paramount Pictures, Cisco Systems and Intuit are all using sentiment analysis to gain insight as to how their clients, employees and users are feeling.¹⁰ With the rise of social networking communities, there has been an explosion of reviews, ratings, recommendations, complements and complaints about products, services and the actions of organizations.

By collecting, extracting and analyzing this data, organizations will be able to see how they make their consumers feel, think and act in regards to marketing campaigns, events, or products and services sold. Consumers are learning from others about how they like or dislike a product, how it stacks up against a competitor's product and most importantly, why they should or shouldn't buy it. This abundance of free information can lead to more successful marketing campaigns by: increasing the return from advertising, using the ability to tailor products and services to select groups, provide aid in product development and respond to consumer's needs and wants. Sentiment analysis has turned into a virtual currency for business as personal opinion, reviews, ratings and recommendations can make or break a product or an organizations reputation. Complaints and compliments, likes and dislikes, thumbs up/down; now flood and intertwine around an organization operations.

Sentiment analysis does not cost a significant investment as organizations can narrow in on collecting easily obtainable statistics such as, how many times a keyword or phrase is used. When combined with keywords, the use of emoticons can easily suggest the feeling of a statement regarding your organizations product or service. Another approach is to combine keywords and rate descriptive words or lingo on a negative to positive sliding scale to approximant the user's sentiment. Research suggests that online purchases are significantly impacted by ratings and reviews. By capturing and analyzing negative comments and ratings, organizations can quickly rectify and mitigate consumer concerns that may prevent other potential customers.

In order to maximize the benefits of sentiment analysis, the information that is collected and analyzed must be put to work. Consumer reviews, ratings, complaints, complements and lingo needs to be applied to current marketing strategies for managing online reputations. Organizations need to listen to what consumers are saying by reacting and responding to their comments, which could entail changing product design and developing new ones. By doing this, an organization's products and services will directly reflect the needs and wants of the consumer. Sentiment analysis can be used as an action or response feedback mechanism, as the opinion of consumers can be measured against the actions of an organization, leading to predictive intelligence.

Conclusion

Social Business Intelligence is continually being developed, tested, implemented, and improved as more tools and services are integrated into traditional business intelligence. Social business intelligence brings about a new paradigm shift and changes the way businesses operate and use information. We strongly believe that social data is a critical, real-time, accurate voice of customers and should be integrated with traditional data. This is all possible by focusing on a customer-centric approach while working with existing metrics, KPIs, dashboards, data and applications. By infusing social data with traditional business intelligence new reports and data models can be generated that provide an immediate synopsis of products, services and marketing effectiveness while delivering exceedingly accurate and intelligent decision making capabilities.

We at Scalable Systems view our approach to social data as an art form - because it is both a creative and constantly evolving process. Rather than merely collecting and organizing your database, our preference is to continually nurture, organize, cherish, and maintain your data to ensure it does not become toxic at any point now or in the future. With our expertise in data model architecture, database administration, data migration, sound database development, data quality framework, and master data management, we provide holistic and long-term solutions for the most important asset of your organization – Data. With our established history of expertise in data manipulation and integration it should be of no surprise that Scalable Systems can assist in all of your data based initiatives. Whether you are looking for business intelligence, master data management, data quality control, data analytics and reporting or a complete custom solutions, our engineers can provide an unmatched solution that will drive your organization to the next level. Our solution can transform your data into intelligence that can be custom tailored and delivered to everyone at anytime, regardless of location.



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About Scalable Systems:.

Scalable Systems is a global software consulting, development and IT outsourcing company providing both onshore and offshore software solutions and integration services to business enterprises around the globe. Scalable Systems has proven expertise in encompassing low cost, but high quality and reliable software solutions and services in areas like Data Management, Business Intelligence, Content Management and Application Development.

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