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SocialCRM

Executive Summary

Increasing use of smart phones, tablets, and portable computers are reshaping the management of customer value. Understanding the digitally-oriented, multichannel-communicating and socially-empowered consumer is gaining importance for operators and their customers. Customer Experience Management is the way to make use of big data streaming instantly into databases of operators noted that they want to enhance their products and services.

Software solutions that harvest data to identify new revenue opportunities are becoming essential. The SocialCRM platform addresses this issue and collects unstructured social media data to convert into meaningful insights for better customer experience.

In the era of social media, word-of-mouth effect of any negative experience with the brand spreads in acceleration with a status update of a strong influencer. Responsiveness to the voice of dissatisfaction is more important as it waves out much faster. SocialCRM provides a proactive, real-time, sustainable and interactive service model for businesses to facilitate customer experiences.

SocialCRM also supports extraction and management of knowledge in social transactions and identification of patterns based on consumer demographics and behavior. It handles multiple social networks at a time and works with different languages for taking real-time actions in any identified problem or unfavorable trend to make corrections with communication. The SocialCRM platform is capable of seamless integration to legacy software systems already existing in the operator.

Social CRM: Software Solution Based on Real-Time Semantic Analysis of Customer Behavior through Social Media

April, 2012

Social media blends all about people with technology and mobility by creating new forms of communication. Consumers have stronger power on brands through their increasing capability to share good or bad experiences. SocialCRM is an innovative software platform for operators and their customers to face the challenges that will shape the future.

The Internet has set a platform for any individual to broadcast views and opinions that are capable of influencing the decisions of many people. Understanding this digitally-oriented, multichannel-communicating and socially-empowered consumer is gaining importance for operators and their customers. This type of consumer expects businesses to engage with new ways considering that mobility and social networks are more into their daily communication.

Increasing use of smart phones, tablets, portable computers, and evaluation of the networked society are reshaping the management of customer value. In the era of social media, word-of-mouth effect of any negative experience with the brand spreads in acceleration with a status update of a strong influencer. Responsiveness to the voice of dissatisfaction is more important as it waves out much faster.

Customer Experience Management (CEM) is the way to make use of big data streaming instantly into databases of operators noted that they want to enhance their products and services. Software platforms that harvest data to identify new revenue opportunities are becoming essential. Collection of discrete information, mining that data, and building predictive behavioral analytics are examples of several key achievements which SocialCRM Platform brings.

Hans Vestberg underlined that “Users want to access social network websites, news, games, applications and similar contents from everywhere” [1] at Mobile World Congress 2012. Smartphone Network Optimization (SNO) sets the requirements for such an advanced infrastructure and SocialCRM, a significant addition of research and development to OSS/BSS portfolio, takes off from there and paves the way to the end user to convert data into meaningful insights for better customer experience with brands, products and services as a part of the Networked Society. It offers a prominent systematic way to understand human signals about a social issue, a marketing campaign, a problem, a solution, and the presence of the brand in the connected world.

2 The “SocialCRM” Platform

Today, it is easy to start-up blog sites in a couple of clicks where many people generate contents about their use of everyday products and services. Microblogging allows a stream of real-time commentary, complaints, and recommendations. Social network sites bring together friends and fans where collective intelligence about social issues and people rapidly emerges. Wikis and social news sites spread links and ideas around in a viral mode.

People use the Internet as an enabler of social connection, instant search for any social arrangement, finding answers to questions about products and services. They make purchase decisions based on customer review sites. They use multimedia sites for on demand videos. The growth of these channels is proportional to the growth of broadband and connectivity.

According to the numbers presented in Table 1, huge numbers of people are getting connected. Though, the momentum of increase in these users may slow down in the following years, the total amount of the people using social networks, microblogging sites, wikis, news and multimedia sites will not decrease if we project that LTE, IPTV, M2M applications and other technological capabilities for converging social life with the Internet, mobility and connectivity will take place.

Table 1: The growth of users in major social media platforms (approximate values in millions)

	Feb. 2010[2,3]	Sep. 2011[2,3]	Mar. 2012 [2,3]
Twitter	75	100	140
Facebook	400	800	845
Linkedin	50	100	150
Google+	0	22	115

In 1967, the psychologist Stanley Milgram ran a research about how people were socially connected and found that in sixth friend of friend anyone could reach anyone on this earth, and called this “six degrees”. Recently, The University of Milan reported that “the average number of acquaintances separating any two people in the world was not six but 4.74” [4] based on a research covering millions of Facebook users.

Most of microblogging messages related with customer experience are found being negative or critical. Additionally, a message about bad experience has a broader impact on customer and shared more often. According to a report [5], “68% of consumers who posted a complaint

or negative review on a social networking site got a response from the retailer. Of those, 18% turned into loyal customers and bought more.”

Therefore, it is important to capture a message of bad experience and engagement with it fast, accurate and intelligent way to turn it a good conversation, not to lose customer and even improve current products and services by the insight of this information.

On the other hand, employee buy-in is one of the difficult problems of organizations depending on the nature of workforce and the rate of turnover. In this perspective, social collaboration applications play key roles in redefining the change management program. Acceptance of change can be accelerated through sharing experiences, knowledge about markets and contacts, learning from specialized communities within the organization. For the organization that makes use of SocialCRM platform, “Collaborator” application provides the solution of several critical problems such as; better management of organizational change, collaborative planning, taking faster business decisions, practical unification of reaction against customer-facing issues, establishment of two-ways communication, and sharing information over a deeper knowledge network by internal social networks and communities to share information about the organization itself.

SocialCRM is a comprehensive software solution platform that provides multiple ways to get instant access to what’s being said about the brand, products and services; what’s shared in conversations with customers, brand communities, the industry and selected social networks.

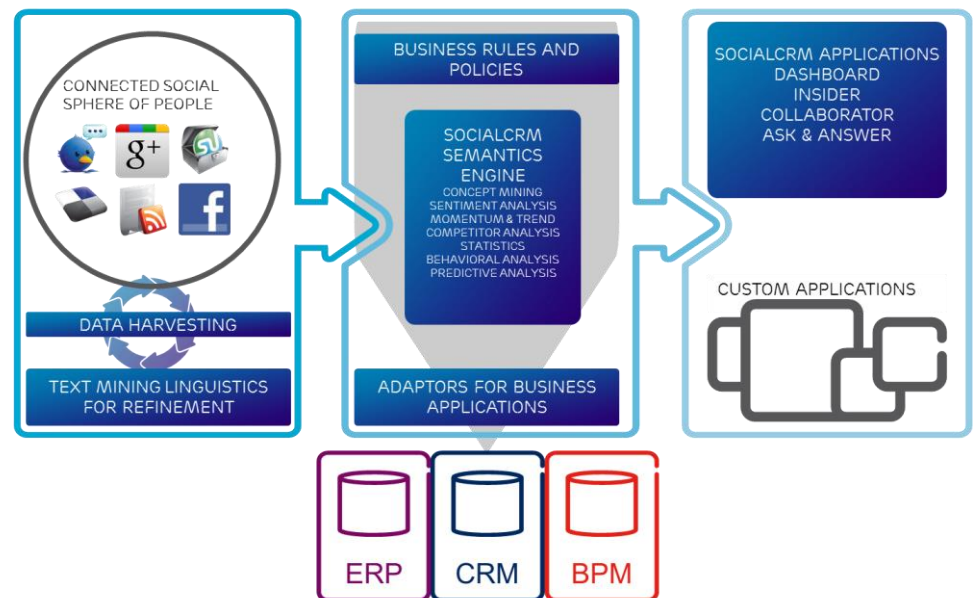
The platform is extensible to collect a steady stream of ideas, resources, and tips focused on specific areas of interest. As a result, it allows operators and their customers to identify and measure effectiveness of their marketing campaigns, manage interactivity in the consumer community, understand dynamics and interdependencies in the market, and react instantly response to critical problems in their services.

Moreover, SocialCRM opens the way of emotionally engaging customer to make them become advocate of the brand, is also a supportive action for building a long-term relationship with customers and keeping them loyal to offerings.

Predictive analysis about the needs of customers based on their views is a game changer. Depending on trends and pace of changes in views, SocialCRM brings out taking possible actions beforehand as the customer starts to change mind and sends a signal of this change. If such customers are profitable then businesses should reach them with individually targeted campaigns and recommendations not to lose their ongoing relationships.

Ericsson's vision of "The Networked Society", which is defined as "People, knowledge, devices, and information are networked for the growth of society, life, and business"[6], encompasses several important aspects also addressed by SocialCRM: collaboration, interacting, integrity, trust, competence, innovation, socializing, and learning using the same interaction infrastructure for a number of industries. In Figure 1, the way of how SocialCRM works to make this happen is briefly explained.

Figure 1: The "SocialCRM" Platform



As indicated in Figure 1, SocialCRM is capable of collecting unstructured data about brands and people from resources to put into its semantic engine which serves for various applications running on its platform. The general way of its working is, as follows:

1. The scope of the context for listening to these resources is determined by the user.
2. The selection of available data resources is made.
3. Selected resources start to feed the system with real-time data simultaneously.
4. Text mining is used for refinement of linguistics in collection. It restructures the data more meaningful terms.
5. Business rules and policies are defined by the user.
6. Semantics Engine (SE) converts data into information. SE proceeds with analysis of data to get sentiments, concepts, trends and socio-informational outputs depending on rules and policies.

7. If needed, the information about business transactions extracted from data processing is posted to integrated systems like ERP, CRM, BPM, etc.
8. Applications convert information to different forms of knowledge. For example, “Executive Dashboard” application provides high level results about brand and people; “Insider” application provides the tools for communication with people, “Collaborator” application supports employee buy-in through sharing experiences and knowledge in a user-friendly interface.
9. Platform is also open to support additional applications and integration with external systems.

2.1 Problem: A new consumer era is being evolved.

Businesses are able to collect and analyze structured data in many ways. However, they are not so successful in managing and understanding big unstructured data which is increasing in accelerated amounts.

As the power shifted to consumers by the 1990s, the tools for making and keeping them loyal are getting more essential. According to HBR Analytics Services [7], more than 50% of the businesses are using social media, only 25% of them are capable of identifying what their most valuable customers are saying about the brand, and only 5% of them are using sentiment analytics.

The value in the structured data is obvious but it is not comprehensive. People “talk” about the brands in an unstructured manner with discrete conversations everywhere. They disseminate the information about their experience with the brand to their “followers” and “friends” much faster. They use different conventional languages but also they invent new forms of expressions.

The real insight is between the lines of unstructured data: tweets, messages on the digital walls, blog posts, reviews about products, discussions in electronic forums, reactions to upcoming news, articles of opinion leaders and remarks from the most influencers. These sources of information are goldmines for untapped knowledge about consumers. However, the extraction of information out of unstructured data, that is estimated more than 80% of the world’s total, is highly labor-intensive and time-consuming.

As analytics wise-guy Thomas Davenport puts it, if businesses are not “monitoring conversations” on the digital space, they won’t know “who’s talking” about the brand, products or services, and “what are the positive and negative sentiments” about them. They won’t be able to identify “how influential a particular praising or criticizing customer is”. And, they will be “missing a lot of marketing opportunity.” [7]

It is apparent that many businesses are under pressure of challenges with social media by understanding the potential of it, measuring effectiveness, aligning with CEM activities, making innovation through insights from the customers, and integrating superior customer value with superior financial performance.

2.2 Solution: Listen, Make Influence and Change the Game.

SocialCRM is intended to provide a proactive, real-time, sustainable and interactive service model for businesses to facilitate customer experiences, by extraction and management of insights in social transactions, identification of patterns based on consumer demographics and behavior, taking real-time actions for any identified problem or unfavorable trend to make corrections in communication as to revert the “talks” about bad experience, to capture the momentum of consumer behavior, to act by integrated internal business processes. SocialCRM aims to solve the problems stated in the previous section, as follows:

- Sentiment analysis from mainly unstructured textual “signals” of people from different communication channels using Natural Language Processing (NLP) tools and techniques for the analysis of attitudes in customer content mainly, but not limited to, to the social media.
- Statistical analysis from collecting various data sources and huge amounts of structured data of customers about the operator and its competitors.
- Behavioral analysis from the patterns of choices made in different segments of customers affected by individual reactions. Opinion mining for understanding the value of the brand and how it is being affected by various marketing communication activities.
- Predictive analysis for identification of trends and momentum of what people are willing to do with the brand, products or services
- Data harvesting and text mining for refinement of data
- Implementation of machine learning algorithms for understanding the facts, feelings and information in the text starting with Turkish, English and followed by Arabic.
- Using concept mining techniques for large texts to extract meanings from user experiences.
- Making use of collaborative filtering, clustering and categorization techniques for recommendation.
- Analysis of big data for determination of the sentiment in different segments of customers.
- Enabling semantic understanding technologies for a combined use of structured and unstructured data to increase the quality of analysis and the success in predictions.

- Using Unstructured Information Management Architecture (UIMA) for management of big data.
- Integration of corporate social media communication and monitoring with existing CRM, ERP, BPM or other solutions.
- Centralization of social media communication activities.

Some examples of the most critical outcomes and functionalities of SocialCRM for its customers can be listed, such as:

- Brand, Product and Service Management
 - Capturing and monitoring the conversations about the brand, products and services
 - Measurement of effectiveness of the brand in social media
 - Systemization of social media insights with innovative product or service development
 - A repository of social media conversations about the brand
 - Alarms for potential issues about products and services
- Customer Relationship Management
 - Finding out which customers are getting positive / negative
 - Finding out the likelihood to churn from the social interactivity of the customer
 - Higher responsiveness to customer problems
 - Identification of customer's influence in social media and networking with influencers in customer base
 - Better targeted marketing by micro segmentation
 - Acquisition of information about customers is permission based. All information sources about the brand, products and services that are open to public are used by default. Additionally, if the customer permits providing data or joins the community by accepting related social media offerings, those are also taken into account.
- Analytics
 - Impact analysis of campaigns with ROI and iterative calibration of following campaigns
 - Analysis of competitors in the same market
 - Customer relationship with the brand in a timeline and analysis of the changes in loyalty behavior
- Organizational Collaboration and Idea Management
 - Improvement of organizational culture with internal collaborative applications on the platform
 - Following opinion leaders of the industry

- Setting up a steady stream of ideas and content focused on area of expertise
- Integration
 - Integration of social media analytics to existing systems in the organization
 - Integration with Ericsson Social Media Portal (SMP)

2.3 **Market: Business Models and Our Offerings**

SocialCRM platform offers services like brand and social monitoring, behavioral and predictive analytics for the market in different business models, where all can be applied in combination or standalone:

- System Sale for large industrial accounts, enterprise customers, governmental organizations
- Software as a Service for SMEs, businesses with no IT services, or even individuals like celebrities
- Platform as a Service for operators to use for themselves and for their corporate customers that is managed by Ericsson
- Consultancy Services for classification of data, implementation for the business and management throughout the lifecycle of the application

The most significant advantage of making effective use of social media sources is ensuring continuous dialogue between businesses and their stakeholders at large [8] including customers, employees, communities, suppliers, distributors, the media, partners, competitors, non-governmental organizations, regulators and the public in general. This process brings in a reciprocal gain for the parties involving in the dialogue to get better level of understanding about the products and services offered, the knowledge shared, and the brand messages exposed.

The platform enables different analysis algorithms to be executed standalone and in parallel over big data, provides portability in addition of new social media resources instantly, accessing to information in different languages, connectivity to numerous back-end legacy software solutions, and unlimited numbers of applications to run on its foundational infrastructure.

2.4 **Actions: Measure, Map, Manage, Motivate.**

SocialCRM has a roadmap of business innovations considering that the technology is getting integrated to social life with many applications. Our perceptions about some of these are, as follows: handling new ideas and trends, evolution of opinions, management of trust with the brand, detailed observation of socio-informational networks for market analysis, innovative viral marketing tools for businesses as a part of “The Networked Society”.

On this perspective, SocialCRM aims to advance more in:

- Measurement of the influence of people and their “talks” about any brand, product or service with an increasing effectiveness.

Better crowdsourcing and engagement are important issues for the next generation of Customer Relationship Management (CRM) in the downstream is a necessity, where as eXtended Relationship Management (xRM) systems are going to take stage with higher level of collaboration in the upstream of supply chain. CRM systems require addressing such functionalities of crowdsourcing, engagement, lifetime analysis, dynamic profiling and segmentation, offering predictions and customer insight for effective CEM.

- Mapping places and contents that are “talked” about to identify problems and provide better customized solutions

Current mathematical models for the analysis of social networks and algorithms with NLP are subjects to be developed further for better mapping of locations and contents as well as extraction of topics and concepts from texts. SocialCRM aims to improve in the application of location based tools and techniques, advanced analysis algorithms, new languages in its domain of work.

- Management of consumer behavior, employee collaboration and social trends with quick response

Real-time understanding the voice of customer, analysis of behavior patterns, looking up instantly from the history of relationship, capsulation of the influence of each customer across multiple channels are important.

As a matter of fact, real-time social media dependent predictive analysis for additional sales is one of the emerging issues in CEM area. For example, a contact center agent receives the predictions about the customer that is calling at that moment, and offers a new product or service based on customer’s “talks” in the social media and patterns of similar customers, that the customer is going to discover the need in the near future.

- Motivation of brand community, building brand momentum and trends, supporting partners and suppliers

SocialCRM plans to extend its capability to recognize social alerts and situations with employees, partners, suppliers and other parties for quicker and quality response. Additionally, spotting trends to build brand momentum is possible based on personas which are created from demographic details, social network analysis, and usage patterns weighted with most recent activities. It is also possible to build virtual personas from big data to make simulations of behavior.

The benefits of SocialCRM for businesses and people are obvious. People will get more customized and fulfilling offerings from businesses. Businesses will develop more sophisticated predictions and increasingly better real-time analytics of social media.

On having SocialCRM, businesses are not only more capable of increasing satisfaction of their customers to keep them away from competitive attacks and the risk of churn, but also leverage the understanding about many stakeholders to make seamless integrated marketing communication.

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Glossary

CEM: Customer Experience Management

CRM: Customer Relationship Management

HBR: Harvard Business Review

NLP: Natural Language Processing

SE: Semantics Engine

SMP: Social Media Portal

SNO: Smartphone Network Optimization

UIMA: Unstructured Information Management Architecture

xRM: Extended Relationship Management

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