

IBM Researchers Develop Analytics Technology For Telecommunications Industry

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IBM today announced two analytics-focused research projects that will help telecom service providers and e-retailers improve customer service and new-customer acquisitions.

Scientists at [IBM](#) Research labs in India and Israel have made advancements in analytics to examine the way customers communicate, make purchasing decision, and download applications. Both projects enable communication providers to quickly find actionable insights in huge volumes of data -- all while learning how their customers' preferences change.

IBM Social Network Analysis

Operating like a social barometer, IBM's Social Network Analysis technology is being developed by scientists at IBM Research - India to map the social networks and calling patterns of telco subscribers. By sorting through the anonymous calling data, the technology is able to analyze people's social behavior with uncanny accuracy. This type of insight will enable service providers to improve the overall mobile telco experience.

IBM Research - India is conducting a pilot projects with telco customers, enabling them to map their subscribers' social network, with the goal of reducing customer turnover and increasing [customer satisfaction](#). By

analyzing calling patterns, service providers can now develop more attractive and useful subscriber plans -- particularly for those high-volume, highly social subscribers who seem to heavily influence their friends' calling plan decisions. Mapping relationships between individuals, groups and organizations enable services providers to better identify target markets and develop more effective customer retention programs.

To preserve complete privacy, the technology doesn't capture the conversation held during telephone calls. Instead, the algorithms examine enormous amounts of existing quantitative data such as call duration, volume, and time of day, as well as frequency and points of origination. These projects do not require additional information to be collected. IBM has applied for multiple patents on this technology.

IBM Customer Analyst

Meanwhile. IBM Customer Analyst technology, under development by IBM Research -- Haifa, focuses on better understanding Internet users -- particularly mobile telephone subscribers. The proof-of-concept technology employs sophisticated algorithms to create a detailed profile of existing and potential customers by analyzing purchasing and download habits. This can help carriers and retailers predict what products and services -- and what combinations of these offerings -- will appeal to particular consumers.

IBM Customer Analyst proof-of-concept is currently being piloted by Taiwan Mobile, a leading telecommunication company in Taiwan. This technology will allow the service provider to tailor the offering to "right" products to existing customers, as well as identify the exact customers to pursue with particular products and/or offerings.

For example, IBM Customer Analyst might determine from online

purchasing habits that a segment of urban, male Taiwanese consumers between the ages of 20 and 30 likes both jazz and science fiction. It can then recommend telco products that are likely to appeal to those interests. By using algorithms to make unobvious correlations between demographics and online activity, telcos can tailor more customized offerings to customers and provide invaluable data to marketing managers.

"IBM's Social Network Analysis and Customer Analyst technologies will provide telecom companies and retailers with significant insights about their consumers," said Dr. Guruduth Banavar, director of IBM Research - India and the global leader of IBM Research's Mobile Web initiative. "The use of analytics is enabling IBM to help its clients deeply understand consumer preferences and patterns, so that they can ultimately be better served. Enterprises can now also make better decisions and customize their offerings to particular consumer segments."

These projects are part of IBM's five-year, US \$100 million investment to advance mobile services and capabilities for businesses and consumers worldwide. Through this effort, IBM is aiming to drive new intelligence into the underpinnings of the mobile Web to create new efficiencies in business operations and people's daily lives. Analytics, security, privacy, and user interface are particular focuses.

IBM has already made tools commercially available which map and analyze social networks within companies. Called Lotus Connections Atlas, the offering spots important connections and the relationships between teams and in-house subject-matter experts.

Source: IBM

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