

Putting big data to work in telecoms

by Juhani Hintikka, CEO, Comptel

Analysis of 'Big Data' requires data storage architecture that allows linking information from any source. The concerns of privacy are unjustified when data is not associated with personal details. This aggregate data can reveal consumer potential behaviour and shifts from using data retroactively to looking into the future and indicating what targeted strategies should be immediately adopted. With real-time feeds from the network and back-office systems, and analysed predictions of customers' spending patterns and service usage, actions can be taken to pre-empt a crisis or avoid disappointing customers. This can not only prevent churn of valued individuals, but also their entire social groups, where social network knowledge is analysed too.



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Prior to joining Comptel, Mr Hintikka spent more than a decade at Nokia and Nokia Siemens Networks, where he served in management and executive positions within the company's research and development, services and sales functions. He is currently on the Board of Directors of Finnair Technical Services Ltd.

In Latin America, like all over the world, companies across all sectors are asking the question - how can big data turn into big opportunities? For the telecoms sector, however, big data has traditionally presented some major obstacles. For instance, Communication Service Providers (CSPs) sometimes equate big data with privacy challenges and operational inefficiencies, such as issues with collecting and storing the information. However, CSPs that can better tap into all of the data at their fingertips will extract critical insight into their subscribers' behaviour, and in turn, realize more business opportunities.

Yet, too often those who are unfamiliar with how CSPs implement data storage

are apprehensive about personal data being collected and analyzed. Fortunately, in Latin America, most of the recent and upcoming data protection laws follow the European model, hence focus on regulating the processing and distribution of personal information. In fact, these laws aim to enforce more transparency in the way information is handled, but shouldn't affect internal analytics solutions targeted to provide insight to organizations, without distribution or use of personal details.

Moreover, big data and analytics enable CSPs to organize large pools of aggregate data to gain insight and fully understand subscribers' behaviours. This is different from analyzing personal details and then

distributing the information to third parties. Rather, data analytics focuses on huge amount of information already processed by operators, providing usage and market insight, so actions can be applied in a contextual and timely manner. Although individual usage data is collected and processed, it doesn't need to be correlated to personal details to provide the visibility to the operators, and all of the information is used solely by the service providers.

It's worth noting that in Latin America there is no pan-regional legal framework that binds both Internet Service Providers (ISPs) and CSPs in a similar way to Europe's Data Retention Directive, so some countries apply different sets of rules

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to operators and ISPs, leaving loopholes that can be exploited by both sides. Generally speaking, CSPs are bound by a more stringent set of rules that require that subscriber information, call data and message information (SMS, MMS) are maintained for a significant period of time (five to 10 years in some cases), while ISPs are not required to hold email data, web activity logs and ISP specific data (such as IP/MAD address, session times, usernames, etc) unless specifically required by the local Justice Department.

New opportunities

Beyond privacy concerns, however, to make truly meaningful data a reality, CSPs need to abandon the traditional ways they’ve dealt with large amounts of information. Conventionally, CSPs have stored customer data across complex and disparate silos, without proper standardization or sharing of information. We advocate, however, a move towards advanced analytics, which calls for creating an architecture that pulls and integrates data from across CSPs’ organizations, no matter what departments and systems are involved. After all, only when data is put into context does it provide a panoramic view into the network and the subscriber base, and allows for pattern matching, predictive modelling and other forms of data analysis that can be acted upon. Altogether, this is what can be called - contextual intelligence.

Because its potential is astounding, it’s worth taking a step back to consider the practical implications for contextual intelligence. Ultimately, the motivation for taking the leap into the world of predictive and contextual analytics is to increase customers’ lifetime values. Analytics enables CSPs to better retain the customers they have. For example, with predictive modelling, CSPs can identify not only which customers have a higher propensity to churn, but also those within their subscribers’ social networks that are likely to follow suit. Armed with this unique customer insight, CSPs can automate customized offers for customers deemed ‘high risk’ for churn, which is

triggered by-or even before-a service quality problem occurs. The beauty of this approach is its shift from using data retroactively to using it to look into the future and ask: What will trigger churn, and how can we prevent it? Of course, the answer to this varies with each subscriber, but again, advanced analytics leaves room for this and enables targeted outreach based on an integrated view of the users.

Then, there are the opportunities for up-selling, cross-selling and new customer acquisitions. For instance, identify the ideal users for a new 4G service launch and grab their interest via an appealing offer, or target those customers who travel frequently with data roaming bundles, if they don’t already have them. Ultimately, the entire process of using analytics for new sales opportunities is underpinned by the concept of advanced offer management, which just means the ability for CSPs to know which promotions work and to manage this via data like traffic statistics or loyalty points.

Advanced analytics plays a pivotal role in helping CSPs employ their assets efficiently. Real-time feeds from network and back-office systems, combined with the prediction of customers’ lifetime values, spending patterns and service use, among other things, can help CSPs make intelligent operational and business decisions. For example, it can support capacity planning and network optimization, and drive advanced policies and charging models, working in unison with network inventory and service fulfilment processes, to deliver the level of service quality customers are paying for and willing to spend more on.

The reality is that too many CSPs are stuck making operational decisions manually or offline, which tends to be subjective and, at best, suboptimal-or these decisions are ‘hard-coded’ inside a BSS/OSS app that stifles change. It’s true that traditional business intelligence and data warehouses have taken some measures to move the industry forward by consolidating data sources into a centralized location. However, this data,

again, is limited in its functionality to simply provide reporting. We’re now moving into an era in which big data can-and must-be converted into real-time actionable insight. ●



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