

COLUMNS

What the future of mobile data has in store

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Ashwin Nayak is vice president of platform delivery at Quaero

By A LUXURY DAILY COLUMNIST

By [Ashwin Nayak](#)

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By the time you finish reading the fourth paragraph of this article, users will send 240 million emails, Tweet 277,000 times, share content 2.46 million times on Facebook, upload 72 hours of new video to YouTube and post 216,000 photos to Instagram.

Eighty-five percent of this consumption will come from mobile devices.

Net net

Remember 10 short years ago when most of these data sources did not even exist?

During that time, the focus was on structured data contained in columns and rows of traditional relational database management systems (RDBMS). Those systems required database professionals to serve as gatekeepers of information, since they were the only ones who could help process and analyze large data sets.

Although the data explosion was still a number of years away, managing structured data in that capacity was already pushing the limits of available hardware, forcing enterprises to pour money into supporting technology.

Today RDBMSs are still in use, but they cannot handle the vast majority of new data being created. This new data is largely unstructured, arising out of social media activity, mobile use and the growing number of "Internet of things" (IoT) devices.

The combination of RDBMS and open source technologies such as Hadoop and NO-SQL database has created a new technology ecosystem.

Most open-source technologies come with the native support of analytics query engines that run analytics where data resides, as opposed to bringing data into the analytics environment. Thus, Big Data, coupled with the power of analytics computing, is now the key technology in play, powering most of the software-as-a-service (SaaS) and business applications in use.

Despite all of these advancements, data is still largely underutilized.

The constant increase in consumer data, along with the fragmentation of audiences across devices, poses a challenge for companies: efficiently finding and organizing the pieces of data that will best serve their customers.

Making data useful

The evolution of data-related technologies has already led to better, more relevant information for driving critical decision-making.

The data management industry now is tasked with continuing to improve mining, storage and analysis capabilities for mobile data, which is not only increasing in both volume and complexity, but requires access by a marketing professional and not just a data analyst.

Just as the rise of social and mobile media propelled information technology into the age of Big Data, the IoT renaissance will lead to the next generation of data technologies, with meaningful predictive capabilities about consumer behavior and a focus on data privacy.

As IoT becomes both ubiquitous and mission-critical, the constant output of data from connected devices will continue to drive the data explosion.

Future of marketing data

Analysts expect that by the year 2020, 26 billion IoT devices will be churning out and exchanging data.

Much of this data will be created and shared between machine-to-machine (M2M), or networked, devices that are automating disparate and manual processes into elegant clockwork such as proximity sensors communicating with smart thermostats to determine optimal room heating/cooling configurations.

For example, when John Doe, a sports fan, arrives home from work to relax in front of the television, a series of events will occur before he even reaches the couch.

As soon as Mr. Doe pulls into his driveway, his mobile device will send a signal that turns off his home security system, unlocks the door and turns on his SmartTV.

The SmartTV, which already knows Mr. Doe is a fan of team X, pulls information from television programming to display a personalized message just for him: “Hello, Mr. Doe, your favorite team, X, is playing against team Y. Would you like to watch the game?” Sounds like a scene from a sci-fi movie, right?

In the marketing arena, firms will have unprecedented insight into consumer behavior. Marketers will be able to craft messaging and promotions based on a plethora of consumer information, whether it be spatial, temporal or behavioral in nature, allowing for deeper, more customer-centric engagement.

A virtually endless combination of data points can be processed and analyzed through cross-device tracking, creating a comprehensive profile of existing and potential customers.

In this sense, a firm's mobile marketing campaign will truly focus on the mobile individual, not just the mobile device.

Next 100 years

What will mobile data look like in 100 years?

Given that the first smartphone became widely available only 16 years ago, followed by the first tablet even more recently, it is almost impossible to predict.

One thing is certain: mobile data is going to be at the forefront of many industry advancements.

For example, within the emerging industry of mobile health (mHealth), sensors will eventually be used to detect changes in cardiac output, respiration patterns and resting heart rate.

Within the education industry, mobile learning (mLearning) initiatives are likely to gain enormous strides in the coming years. It is more than likely that traditional institutions will help mLearning solutions scale quickly.

A report just published by Global Industry Analysts projects that the global market for online and other electronic distance learning will reach \$107 billion this year. Make no mistake: the big bet is on mobile data solutions.

Ashwin Nayak is vice president of platform delivery at Charlotte, NC-based marketing software and services provider [Quaero](#). Reach him at ashwin.nayak@quaero.com.