The Value of Big-Network Data for Advertisers

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Advertisers need help. Between social media and the web at large, the average consumer is being hit with more promotional messages than ever before. And that is before you even consider TV, direct mail, or the many other platforms through which businesses push their products. It is no surprise we are all suffering from ad fatigue as a result. There is a lot of data to show how adverts are blurring into the background for most people, which is leaving attempts to reach consumers with new offers or promotions going largely unnoticed.

But there is light at the end of the tunnel, as carriers are in a position to influence or change this fact using their network data. Network quality of experience (QoE) can be the secret sauce that enables carriers to help advertisers and content providers.

Granted, the idea of using information pulled from various mobile and Wi-Fi networks to drive advertising-based revenues is nothing new. For example, the use of big data analytics for advertising purposes has been a topic of conversation in the industry for many years. It has also been widely recognized that, thanks to technology, marketers no longer need to rely on assumptions about user behavior and they can motivate consumers to actually make purchases through targeted advertising.

But even with all the technology available today, turning insights into a monetizeable reality still proves difficult. But technology is becoming more sophisticated and promises far greater potential for advertisers, particularly as more carriers bring Wi-Fi into their service offerings and look to combine proximity-based advertising with network QoE considerations. This has been the missing piece of the puzzle, until now.

The Value of Wi-Fi

Wi-Fi access points, beacons, and other network-driven sensors that communicate with mobile devices and monitor subscriber locations have a number of benefits. There is obvious and immediate bottom-line value in being able to identify patterns as visitors move in, as well as knowing the destinations from which their devices came. A more interesting benefit, however, is the way this information can be used to create new advertising revenue streams for businesses and

content providers.

Wi-Fi has been the staple of high footfall areas, such as airports and shopping malls, for a long time. These are destinations where retailers (and their advertising partners) have a captive audience and arguably want to target users the most. The downside is that these networks are typically controlled by a third-party, and are overloaded with traffic, offering spotty performance at best. At its worst, the poor performance means consumers cannot connect at all.

On the face of it, this would appear to be a barrier to success. However, rather than posing a problem, the current situation actually represents an opportunity for innovative carriers. Those carriers that deploy their own managed Wi-Fi technology in these high-footfall areas, and those that look to deliver the same QoE considerations as they do for the mobile network, will be in a position to stand head-and-shoulders above what is available as a viable alternative.

It goes without saying that consumers will naturally trust a service from their mobile provider much more than a poor-quality Wi-Fi hotspot hosted by a dubious or unknown brand — one that may or may not carry inherent security risks. To avoid falling into the same trap as that of other Wi-Fi hotspots, carriers' alternatives have to be reliable and consistent.

QoE Considerations for Success

The value in using Wi-Fi to drive data insights is that these networks are highly sensitive to traffic and application behavior while also providing granular information about users' locations. Cells are usually small and indoor networks present an opportunity to understand what people are doing, where they're doing it, and what their next destination will likely be. This gives operators a goldmine of valuable subscriber data, which they can combine with insights pulled from their own networks in order to make this even more useful for highly targeted advertising.

If an advertiser knows a user is about to walk past a certain store based on the real-time location of his or her handset, it becomes possible to push a discount code to the device and encourage the potential customer to come inside. If a person is stuck in a long line for security at the airport, there is a chance to upsell a "premier traveler" package at an additional cost.

The challenge is getting users onto that Wi-Fi access point in the first place, and keeping them connected long enough to make targeted advertising a success. After all, consumers need to be able to readily connect and engage with a service in order to be willing to provide location and usage data. This is essential to ensuring retailers and content providers have enough actionable information, aggregated over time, to make planning and marketing decisions for the future.

This brings us back to the importance of carrier-grade Wi-Fi connectivity in locations such as those mentioned above. Although the approach outlined above holds great potential for advertising, its success depends on reliable communication among users' devices and networks. When typical Wi-Fi access points get congested with many users, network QoE management becomes the piece of the puzzle that is critical — and it's a piece that has been missing, until now. It is an element over which carriers have control and from which advertisers can benefit.

Network Data Potential

To make the aforementioned scenarios a reality, operators need to not only have a carrier-grade Wi-Fi network in place for high-footfall areas, but they also need the tools required to more effectively manage W-Fi performance. In much the same way they would approach other performance issues on their cellular networks, they must be able to control high-bandwidth applications and services in order to shape traffic and distribute available resources fairly among connected devices.

In an environment like this, maintaining as many concurrent subscriber connections as possible without delivering a poor experience to any is the name of the game. Any missed opportunity to connect a new user is a potential missed conversion from targeted advertising. It is also a missed

opportunity to collect more valuable location data to help planning efforts in the future.

Delivering consistent connectivity is just the start. Carriers must be able to integrate data from a wide variety of access points, analyze this information in real-time, and process the flow of metadata from each access point individually, as it's this information that stands to benefit advertisers most. An approach like this makes a wide range of network applications possible, either for more advanced data analytics or for the introduction of new policy actions that ensure the subscriber's experience at each cell is optimized.

The Hidden Data Value

Combined with a robust big data platform, and the inherent security benefits of carrier managed Wi-Fi, this approach is crucial to unlocking the next generation of targeted advertising. For content providers, having robust and secure Wi-Fi in a place where a carrier knows subscribers will have free time (e.g. an airport, a mall) offers an opportunity to upsell streaming services or other add-on applications.

By keeping subscribers connected to a Wi-Fi cell longer and with a strong QoE, carriers will have access to a wealth of tangible data for advertising purposes. In many instances, this information can also be paired with data pulled from the carrier's mobile network and subscriber activity across the board, providing much more detailed insights into the subscriber and individual preferences than would be possible with a pure Wi-Fi access point vendor. This would prove to be a win-win for both carriers and advertisers, and is set to become the future of proximity-based advertising.