

Opportunity calling

What smartphones mean to researchers

The mobile phone is now far more than a phone. It's our e-mail client, camera, diary, music player and game console. It knows where we are and can tell everyone where we are - sometimes when we don't want or expect it to.

The mobile phone has replaced many devices and seamlessly merged all these functions into a singular device. We are not just talking about the iPhone. Pick up a Windows Phone 7 or an Android phone. They all have full-motion cameras, bright and large high-density screens, GPS chips, Wi-Fi, 3G/4G cellular connectivity and of course thousands of apps to choose from.

A Nielsen report says that one in four households have a smartphone. That number will only continue to rise as smartphones become the new personal computers - with the advantage that we carry them with us all the time.

This is an incredible opportunity for any company that wants to contact consumers. Smartphones have four critical constructs that make them valuable as a research tool: access, location, identity and deployment. Let's examine each of them.

Access

Smartphones require consumers to carry a data plan of some kind. From the carrier's point of view, this represents an additional revenue stream. It also, in today's "always connected" climate, represents permanent tethering of the smartphone user to the Web. The fact that users do not have to pay extra for data allows apps to leverage that access to the cloud with impunity. Unlike SMS, there are no per-byte or per-text message charges that the carriers usually impose. This allows for unlimited communication and innovation

in the research process. Because of this always-connected property, the concept of mobile ethnography becomes a reality, where respondents can upload pictures from their smartphones constantly, showing exactly what they are doing at that moment.

In addition, all large mobile platforms allow for push-notification, the ability for the service provider to push data and notify the end user of an event. This allows information to constantly travel back and forth between the smartphone and the network.

snapshot

As smartphones proliferate, we must seize the opportunities they provide us to research and interact with consumers. The author outlines four critical constructs that make them valuable as a research tool: access, location, identity and deployment.



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Thus, for a qualitative/ethnographic study where 20 participants are asked to take a picture of what they are doing every day at a particular time, they can submit photos from anywhere they are, in the soccer field, taking a break at work or at home.

Location

The GPS chip and cell phone location triangulation models that phones provide today are accurate to within 10-15 feet. This, combined with public (or semi-public) application programming interfaces like foursquare or SimpleGeo, makes it feasible to identify a consumer's location, giving research applications contextual location data about a respondent. This type of location feedback has never been possible before and smartphones now have this as a standard feature.

For example, a global chain can use location to collect point-of-sale feedback. Instead of asking users which store they went to, the location data can be used to infer the store ID. It is also potentially feasible to perform intercept studies where the geo-locational data is used to identify potential respondents based on where they have been.

Identity

Knowing the identity of a respondent in online surveys has always been a challenge. The closest researchers have come to reliable identity is a combination of properties culled from a machine in conjunction with the e-mail address. The smartphone all but eliminates this problem. All smartphones have a unique identifier that users cannot change, at least not without a tremendous amount of effort and some significant technical knowledge. All major smartphone platforms provide access to a unique device identifier or UUID. The UUID, although unique to the device, does not relate to the end-user's phone number or other personally-identifiable information like billing address, etc. However apps do have access to the UUID and can

use that to identify the device and, by extension, the user. Thus the UUID can be easily used to prevent and track multiple submissions or registrations on studies. Another benefit: Users don't have to identify themselves every time they want to participate or be respondents in a research study, which should increase usability and participation.

Deployment

All four major smartphone platforms - Apple, Android, BlackBerry and Windows Phone 7 - have a integrated app stores. While each one is a little different, the fundamental concept is the same on all of the platforms: Software developers create apps for each of the phone ecosystems and submit them to the respective app store for deployment. Users can then search and download the app and automatically download updates when needed. Since apps can be deployed and updated on-the-fly, instant distribution of surveys to respondents across the globe is possible.

A matter of innovating

The mobile ecosystem provides tremendous advantages for researchers. It's a matter of innovating within this new communication mode to come up with research models and applications that have not been possible before due to either technological or economic constraints. Let's look at a few projects that would have been impossible to complete without mobile research:

Dial-testing the State of the Union address: The project involved polling an audience in real time using a mobile app as users watched the 2011 State of the Union. SurveySwipe, my firm's community-based mobile research platform, partnered with UMass Political Science Professor Stu Shulman to use his text analytics research tool DiscoverText to analyze the data from social networks as well as data provided by participants in real-time.

Mobile ethnographic study of the 2011 Super Bowl 2011:

Three days before this year's Super Bowl game, four research firms (Survey Analytics, BrandScan 360, Beacon Research and Hemispheres Research) joined forces to create a large-scale mobile ethnographic study of this major social event. Immediately following the halftime break, the 1,200 iPhone owners in the SurveySwipe consumer mobile panel received a notification with a link to participate in our Super Bowl study and 20 percent accepted. The short survey included both closed- and open-ended questions as well as two questions that asked participants to take and submit pictures.

Inevitable question of sampling

As we think about the smartphone and the mobile ecosystem, the inevitable question of sampling comes up. This is an important issue, especially in public-opinion polling in the political spectrum. This issue alone is the reasoning behind the use of random-digit dialing (RDD) in telephone sampling. Most large public-opinion polling in the United States is still done using some variant of RDD and landline phones. The argument to use landline-telephone based research for public opinion polling goes back to basic sampling theory: "Every member of the population must have an equal probability [chance] of getting selected in a sample." The genesis of RDD-telephone sampling is rooted in the idea that all citizens, in general, have access to a landline and that RDD samples can therefore be seen to be a "random sample" of the population. This is an oversimplification of course, but is the core idea behind RDD.

That being said, recent Centers for Disease Control/Pew reports pointed out the obvious: Nearly 25 percent of U.S. households do not have landlines and even in households that have landlines, over 15 percent of them use the wireless phone as their primary phone. This introduces a significant sampling bias - one that needs to be addressed.

What this means is that, in effect, there is no single medium

(landline, mobile phone, Internet or smartphone) that truly covers the entire population. This poses an interesting challenge in doing multimodal surveys to account for the entire population. A mobile research model can fill in the gap of the group of users who use cell phones as their primary phones.

The obvious argument for mobile research is the coverage and penetration of smartphones within the general population. ComScore reported that 65.8 million people in the U.S. owned smartphones

during the three months ending in January 2011, up 8 percent from the preceding three-month period. By 2013 the current prediction is that smartphone usage in the U.S. will be at 80 percent of the mobile population.

Another wave

Smartphones represent another wave of personalization of computing. The first came with the desktop computer, followed by the more portable laptop and now the smartphone. As these

powerful machines increase their influence on our lives, they are rapidly becoming the primary communication device for social media, messaging, etc. Sometimes they are even used to make phone calls! Their ubiquity has made them a new and critical vehicle for contacting respondents for research purposes. With the unique access and information-gathering opportunities they provide us, we as researchers must get smart and fully embrace their use. | Q
