

Mobile Analytics

By Jerry W. Thomas

The earth is shifting beneath our feet. Smartphones, iPads, and tablet computers combined have surpassed PCs in number of units shipped annually. These highly portable devices, and the new technologies embedded in them, represent tectonic shifts in research possibilities. Despite the shock and rubble of tectonic upheaval, new opportunities are visible through the clouds of confusion.

New Possibilities

Before we get too excited, let's keep in mind that the new possibilities are just that: new possibilities. These new devices and new technologies are not a magic panacea. You should expect no miracles nor any pot of gold at the end of the rainbow. However, if we apply the new possibilities wisely and use them in conjunction with tried-and-true research methods, these new capabilities just might help us identify new opportunities and devise creative solutions to a range of marketing problems.

So, what are some of these new mobile technical capabilities brought forth by the smartphone and tablets? While capabilities vary across the different types of devices, most contain the following features:



- **Web Access**—While not new, this is a universal smartphone and tablet feature, and it empowers many of the devices' technical capabilities. Pictures, videos, and survey responses can be transmitted at almost any time and place.
- **Cameras**—The camera itself is not new, but it is ubiquitous now with a camera in most smartphones, and many tablets. Respondents can take pictures and incorporate them into survey responses.
- **Video Cameras**—Most new smartphones have at least some video recording capacity. Respondents can record videos of their offices, homes, or an activity or event, and make the recording a part of their answers to a survey. Video recordings can be used in mobile surveys, traditional online surveys, or in qualitative investigations.

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- **GPS**—Many of the new smart phones and tablet computers have **GPS (Global Positioning System)**. It is now possible to trace the geographic movements of an individual, or thousands of individuals, and plot their traffic patterns through shopping centers, neighborhoods, or cities. Also, surveys can be triggered at particular geographic points (a store, a billboard, etc.), or certain apps can allow a respondent to “check in” when entering a store or location. By marrying GPS with databases of retail stores’ GPS coordinates, it’s possible to know which stores have been visited. Of course, respondent permission is essential for any type of GPS tracking.
- **Scanners**—With scanning technology built into many of the new mobile devices, it is now possible for consumers to scan the barcodes of products they buy, or the barcodes of products in the refrigerator or pantry, or even the barcodes of products in retail stores. This provides more accurate data about product purchase and usage at the SKU level of detail, compared to traditional survey data.
- **QR Codes**—These codes in ads, brochures, or at point-of-purchase can be “triggers” for surveys when scanned by smartphones.
- **Dictation**—As a consumer visits an entertainment event, or shops for a new car, or sees the eye doctor, she can easily

record her feelings and observations by dictating to her smartphone, or by calling an **IVR (Interactive Voice Response)** number. If it’s important to understand the sounds in an environment, then this smartphone feature allows the respondent to capture (to some degree) sounds in a retail store, a doctor’s office, or elsewhere.

- **QWERTY Keyboard**—This keyboard makes it possible for participants to type answers, so mobile surveys can include open-end questions (generally no more than one or two per survey is recommended). Younger users, of course, have better skills at smartphone keyboards and tend to do better at open-ends than older users of smartphones. However, voice recordings provide another means of registering open-end answers.
- **Near Field Communication (NFC)**—This system permits radio communication between a smartphone and some other device, merely by bringing the two close together. Radio communication between a smartphone and an unpowered **NFC chip** (a “tag”) is also possible. The potential applications of this technology are numerous. The most visible applications at present are smartphone payment systems such as Google Wallet—to replace traditional credit cards.

Applications to Qualitative Research

The smartphone, and tablets to a lesser degree, are godsend to qualitative researchers. Participants in qualitative projects

can respond “on the go” or while visiting particular stores or geographic locations. Participants can record and transmit voice, pictures, video, and sounds. The smartphone makes ethnographic studies especially valuable, with the ability to take pictures and record video and sounds. Respondents can orally record reactions “on the spot” and later transmit these recordings, or they can call into an IVR system to record reactions. Diaries can be maintained on respondents’ smartphones during an ethnographic project. Some common qualitative applications:

- **Motivational Explorations**
- **Product Usage Explorations**
- **Shopping Investigations**
- **Customer Experience Studies**
- **Event Marketing Projects**

Applications to Quantitative Research

Mobile devices have displays and touch screens that make simple surveys easy to answer “on the fly.” If it’s important to know what someone is thinking or feeling at a particular place or point in time, or while engaged in a specific activity, mobile devices provide the means of immediate measurement. Decision Analyst’s online panels in the U.S., for example, provide access to roughly 500,000 smartphone users who can be recruited for mobile surveys.

The traditional online survey, if concise and simple in design, works perfectly well on smartphones (and tablets). Mobile surveys and traditional online surveys can be mixed and overlapped, depending on the target market, to achieve more representative sampling. Some examples of the range of studies that can be conducted via mobile devices:

- **Usage Diaries**—Since smartphones are carried everywhere at all times, they can become a constant diary where products purchased and consumed can be recorded “at the moment” (and barcodes can be scanned). This yields extremely accurate usage data, compared to reliance on respondent memory after the fact.
- **Traffic Patterns**—GPS allows tracking of respondents’ whereabouts and movements through a city, a park, a zoo, or a shopping center. This is useful in site location analyses, traffic flow analyses, and media selection.



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- **Surveys Triggered by GPS**—For example, the impact of outdoor advertising might be measured by triggering a mobile survey after respondents pass by a billboard. Surveys about a shopping experience could be triggered as respondents leave a retail store.
- **Brand-Share Data**—A sample of smartphone users could be recruited to scan the barcodes of all grocery products purchased within a given time period, or to scan the barcodes of all food and drinks purchased at convenience stores, or to scan the brands in one's refrigerator, and so on. This provides highly accurate brand-share or brand-inventory data.
- **Out-of-Stock Analyses**—A thousand randomly recruited smartphone users could photograph the peanut butter displays in their supermarkets. These photos could be analyzed—and out-of-stock levels measured by type and location of stores.
- **Management Alerts**—Smartphones and tablets (and PCs and netbooks) can be programmed so that customer-service issues identified by satisfaction surveys are automatically emailed to appropriate store managers or supervisors for remedial actions.
- **Younger Audiences**—Teenagers and younger adults are easier to reach via smartphone than traditional email to a PC. So, if the target audience is younger, then smartphones can improve response rates and the representativeness of surveys. Smartphones can be a complement to traditional online surveys to help increase response among younger respondents.

Mobile Analytics

Mobile software, smartphones, and tablets are merely data collection devices. New data-collection methodologies rarely move us closer to the truth, or closer to good decisions. Good decisions result from sound research design and insightful analyses of the resulting data.

Like other data, mobile data must be studied in light of business imperatives, marketing objectives, the competitive environment, sampling limitations, and research design constraints. In the end, it's all about thinking and analytics, so that mobile data can be translated into useful intelligence and sound strategic decisions.

Contact Information

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