

# The Truth about Mobile Analytics

Eric Peterson, Web Analytics Demystified, Inc.

Michiel Berger, Nedstat BV

Thomas Pottjegort , Nedstat BV

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## Executive summary

The existing popularity of cell phones and other mobile devices capable of connecting to the Internet, coupled with the dramatic increase in popularity of powerful smart phones like Apple's iPhone, has led to a surge in interest among businesses throughout the world in having a presence on the "mobile Internet". Unfortunately the amount of available expertise for deploying mobile sites across diverse networks, devices, and application stacks is currently lacking. In situations like this, Web Analytics Demystified is a strong champion for the appropriate use of measurement to help determine the quality and efficacy of deployed sites and applications.

While a number of mobile-specific applications currently exist, adoption of these solutions is largely driven by the vendor's targeted efforts to create fear, uncertainty, and doubt on the part of the business, largely around the notion that "mobile-specific solutions are more accurate". We believe this is hyperbole at best and outright lying to get attention at worst; analytics solutions of all shapes and sizes suffer from a variety of data collection challenges. In all cases the onus is on the site operator to choose the most appropriate solution and then work to understand sources of inaccuracy in an effort to minimize their impact on the organization.

This white paper exposes the lies being told about mobile analytics. Authored by Web Analytics Demystified whose thought-leadership is recognized around the world and sponsored by Nedstat whose commitment to their customers' success on both the fixed and mobile Internet is recognized across Europe, our goal is to provide objectivity, clarity, and honesty about this important topic. Our only goal is to help businesses and site operators set better expectations regarding measurement across the mobile web.

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## 1. The Mobile Opportunity and Mobile Analytics

One of the most exciting opportunities on the horizon for businesses of all kinds is the emergence of rich digital experiences through increasingly small mobile devices. Rarely a day passes without an announcement about a new mobile campaign, site, or application designed to make our lives easier, better, or more productive. The research firm IDC estimates that nearly 40 percent of Internet users worldwide have access via mobile devices today, and the number of people accessing information via the mobile web will surpass 1.5 billion worldwide in 2012.<sup>1</sup>

Dubbed by some “the mobile revolution” these numbers alone don’t truly convey the opportunity. According to the research firm Informa<sup>2</sup>, as of November 2007 there are over 3.3 billion active cell phone subscriptions worldwide. While certainly some people have more than one subscription, this data suggests that nearly half the people on the planet have a mobile device of some kind.

What’s more, because younger people are more likely to have some kind of mobile device, and because most new devices have mobile browsing capabilities, the percentage of individuals having access to the mobile Internet is only expected to grow. Either out of necessity or preference, few would argue that our world is becoming increasingly connected thanks to the mobile Internet.

Unfortunately, as is often the case, great opportunities present great challenges. The primary challenge faced by business owners looking to make an investment into the mobile web is the timeless challenge of *quantifying value*. Just like on the fixed Internet, it is easy to spend huge sums on mobile advertising, marketing, and applications and do so in a complete measurement vacuum. Fortunately, as is the case on the fixed Internet, analytics applications can be leveraged to understand the behavior of mobile site visitors, the response to mobile advertising and marketing initiatives, and the return on investment associated with both.

The use of these mobile applications, usually referred to as “mobile analytics”, is not without challenges of their own. Regrettably, the challenges have led some in the measurement industry to rely on hyperbole, rhetoric, and outright lies in an effort to build market share. Our goal is to examine the central challenges associated with mobile analytics and address

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<sup>1</sup> IDC Finds More of the World’s Population Connecting to the Internet in New Ways and Embracing Web 2.0 Activities, <http://www.idc.com/getdoc.jsp?containerId=prUS21303808>

<sup>2</sup> <http://www.reuters.com/article/technologyNews/idUSL2917209520071129>

some of the distractions commonly used to confuse analytics buyers. We conclude with an outline of the truth about mobile analytics as we see it. Our hope is that this document will serve as a guide for companies considering an investment in mobile measurement, one that clearly outlines the opportunity associated with bringing measurements to the “small screen.”

## 1.1 Billions and Billions of Tiny Browsers

From a technology perspective, mobile measurement and analytics is a daunting challenge indeed. Variance in the data passed by different carriers and platforms, different levels of device and user identification, numerous combinations of support for images, cookies, and JavaScript, and the inherent variation caused by the sheer number of handsets in existence today all lead to confusion at the point of data collection. And as every good analyst knows, if you don’t trust your data you can’t trust your analysis.

At the heart of the data collection challenge is an industry that has literally exploded over the last decade. Both the widespread use of cell phones in general, and more recently the growth in use of smart-phones like RIM’s BlackBerry, Nokia’s N95 and Apple’s iPhone, have opened up our collective ability to get information any time from any place. It is estimated that there are thousands of different mobile device models in use, and while each model does not necessarily support a unique combination of factors impacting mobile data collection, when compared to the fixed Internet’s two-browser, three-operating system world the potential for problems is dramatically increased.

## 1.2 Many Screens, One Customer

Aggravating the issue is every professional marketer’s knowledge that the mobile audience is not unique and that a phone-based visitor today may be coming in via the fixed Internet tomorrow and in a physical store the next. Put another way, the small screen is just an extension of the larger screen (fixed Internet, via a computer) and these screens are both an extension of the larger relationship with customers.

When you examine mobile in this spotlight, you can clearly see that mobile analytics is not really a device- or channel-centric challenge; rather, it is a *customer relationship* management challenge. Ultimately, your business should be striving to provide the best customer relationship possible, regardless of the type of device or channel the customer uses. In this context, developing a strategy for mobile analytics is only a pre-cursor to integration with traditional “web” analytics - the pre-cursor to full-blown multi-channel data integration.

### 1.3 The Mobile Analytics Conundrum

The difficulty companies have had measuring the mobile Internet and the hyperbole about it is as much a function of our desire to *understand* as much as anything else. Companies who have been invested in mobile analytics for years have been forced to accommodate a variety of technology limitations associated with older devices, proxy servers, cookies, JavaScript, slow connections, misinterpretation of redirect commands and the like. These limitations directly affect the analyst's ability to accurately determine how many visitors come to the mobile site, where they came from, and what they see.

Fortunately for business and measurement professionals the technology set underlying mobile is improving at a rapid pace. Thanks in part to innovation prompted by Apple's iPhone, more and more mobile browsers are supporting cookies and JavaScript *and* doing a better job at providing for a rich mobile browsing experience in general. As cited earlier, IDC reports that 40 percent of all Internet users worldwide have mobile Internet access and that between 2006 and 2008 the number of mobile Internet users *doubled*. What's more, an IBM study cited by June Dershewitz in November 2008<sup>3</sup> reports that over half of consumers surveyed would preferentially use a mobile device to surf the Internet.

This is the mobile analytics conundrum: while it is unlikely that businesses would turn their back on the mobile opportunity, the limitations associated with the accurate measurement of the return from that investment are being removed as an increasing percentage of mobile users purchase modern handsets. And while Web Analytics Demystified would not recommend that any business owner *not* measure their investment in digital business and marketing initiatives, interested parties are well advised to approach mobile analytics with a clear understanding of the limitations and opportunities.

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<sup>3</sup> *Mobile Analytics and Customer Experience Management*, <http://www.tealeaf.com/resources/mobile-customer-experience-management.asp>

## 2. The Five Most Common Lies About Mobile Analytics

Because mobile analytics is still a relatively nascent sector, and given the scale of opportunity involved, it is not surprising that there is great contention regarding what you can and cannot measure. Unfortunately for the measurement industry as a whole, some vendors have resorted to telling lies and besmirching others in an effort to gather attention for their particular solution. Following are the five most commonly cited misconceptions that vendors are using in their sales efforts today and Web Analytics Demystified's assessment of the truth.

### 2.1 Mobile Analytics are Woefully Inaccurate

Perhaps the single most likely challenge you'll hear about mobile analytics is that they are "woefully inaccurate" and that "because of {fill in the problem} you cannot trust mobile analytics data." While there are certainly challenges associated with collecting data from such a diverse set of browsers, devices, and networks, Web Analytics Demystified's strong opinion is that data accuracy issues associated with the mobile Internet are no more complicated than those already faced on the fixed web.

The primary reasons that naysayers cite when lamenting accuracy in mobile analytics include:

- > Some mobile devices do not support HTML
- > Some mobile devices do not support images
- > Some mobile devices do not support JavaScript
- > Some mobile devices do not support browser cookies
- > Some mobile devices convert persistent cookies to session cookies
- > Some carriers randomly change subscriber identifiers
- > Some mobile devices don't follow redirects (e.g., 301, 302)
- > Some mobile devices don't allow question marks in the URL
- > Subscriber identifiers don't travel from cellular to Wi-Fi networks
- > Content is cached at several points within the transmission
- > High percentage of broken requests caused by interrupted connections
- > High percentage of robots and other automated requests

While this list is certainly daunting, the reality is that the technology deployed on the fixed Internet is only nominally more stable and suffers from a similar list of sources of inaccuracy:

- > Some anti-spyware applications automatically delete cookies
- > Some web browsers limit or change third-party browser cookies
- > Some consumers are actively deleting their browser cookies
- > Some consumers disable JavaScript
- > Event-based interfaces (e.g., Flash, Flex, AJAX, Silverlight) increasingly confuse page view counting models
- > Some redirects remove referring URL information
- > Some technology used on sites creates measurement “black holes” (e.g., mash-ups, widgets, video, RSS)
- > Some privacy tools block web analytics all together

The reality is that measurement always presents challenges, regardless of the type of device used to connect. The Internet and mobile Internet are fundamentally “stateless” and designed to promote the delivery of content, not to facilitate the precise measurement of every click, view, and swipe. So if you do nothing more than deploy simple pixel tags into your mobile site and expect 100% accuracy in reporting you will, of course, be disappointed.

## **2.2 My Current Solution Can Measure Mobile Just Fine (or Not at All)**

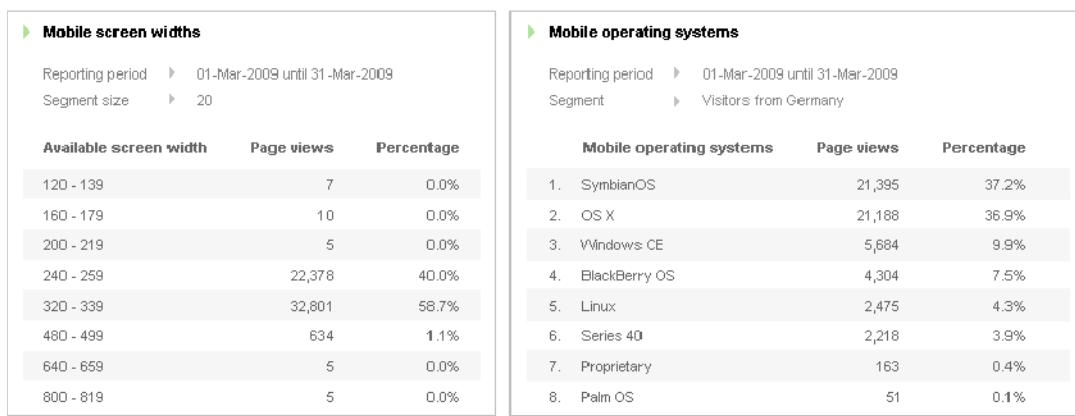
Related to the challenge about mobile analytics being woefully inaccurate is the assertion that your current solution can measure the mobile world “just fine” or that your current measurement solution has zero capability to measure the mobile Internet. While it certainly benefits particular vendors to perpetuate one belief or the other, the truth is not so clear-cut.

The reality is that, for the most part, traditional web analytics solutions *do not* do a phenomenal job of measuring the mobile Internet. Especially if you are running a tag-only solution like Google’s Google Analytics offering, the requirement that you use a single JavaScript file run client-side will prevent any number of mobile devices from collecting data. If your analytics solution relies on cookies to stitch page requests into a sequential session and multiple sessions into a visitor’s history, those devices that either don’t support or somehow transform cookies will likely report inaccurately. And certainly with phones old enough to not support any kind of image rendering, all of the current web analytics solutions depending on images will fail outright.

More importantly, most traditional web analytics applications aren’t gathering and reporting on dimensions of specific interest to mobile application developers. Because the mobile

world is different, and because so much of the mobile relationship is governed by the devices and gateways consumers are using, mobile analytics requires a slightly different set of reports to be actionable.

For example, traditional web analytics offers up a handful of techno-graphic reports on browsers, operating systems, and browser user agents that can be used diagnostically. But on the mobile Internet, the primary dimensions of interest to developers are typically device type, introduction price and date, platform, Java version and screen-size (Figure 1), as well as a handful of subscriber-centric dimensions that detail the visitor's relationship with the site (logged-in or not), network (GMS, CDMA, etc.) and carrier (location, pre-/post-paid).



*Figure 1: Screen width and operating systems reports from Nedstat.*

In case of advanced phones that support high-speed information transfer, run JavaScript, and accept browser cookies like Apple's iPhone, RIM's Blackberry Storm, and Nokia's E71, traditional web analytics applications run just fine, at least from a data collection perspective. In fact, even entry-level analytics solutions like Google Analytics do a fine job reporting when the focus is on modern devices and fairly useful comparisons to fixed Internet usage can be easily created.

In cases where developers are intently focused on creating applications, it is not automatically true that every web analytics tool will work. Dependencies on cookies, page loading, and the execution of JavaScript in some cases will prevent tracking, thus making it important to carefully scrutinize vendor claims about application tracking.

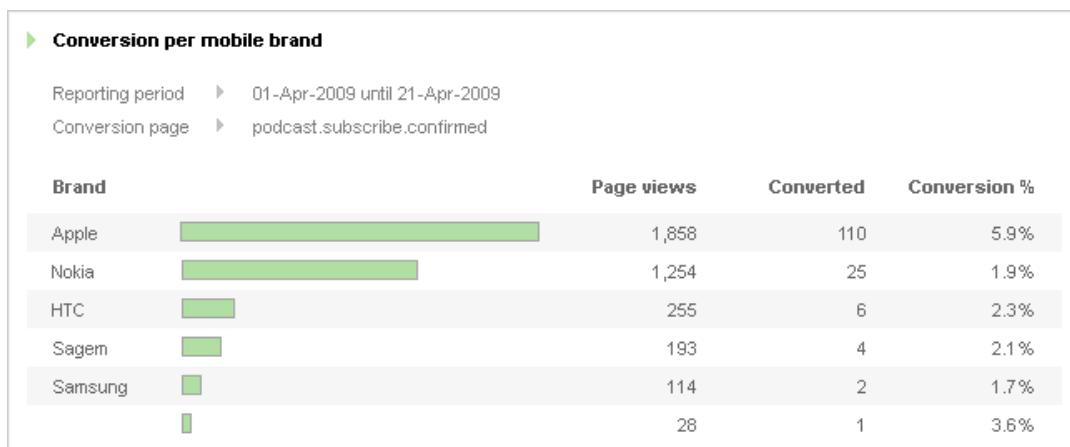
Mobile analytics solutions today are fragmented across established web analytics vendors working diligently to improve their core mobile offerings and a small handful of smaller companies. Because of this, companies wanting to measure their efforts on the mobile Internet must pay extra attention to the message and messenger. Everyone has a vested interest—your challenge is recognizing those interests and translating them to satisfy your own interests.

### **2.3 You Need Special Hardware or Software to Measure Mobile**

Closely related to the concern about your existing solution is the idea that you will need special hardware or software to measure mobile traffic. This idea largely emanates from small companies working to create a name in a market already crowded with established analytics vendors. Many of these companies appear set upon creating the perception that *their solution and their solution alone* is appropriate for tracking mobile visitors, and that if for some reason you're not smart enough to deploy his solution, you are naïve.

Conversely, the “you need special hardware” advocates appear set on creating fear, uncertainty, and doubt around the limitations associated with the use of traditional web analytics log- and JavaScript-based solutions. Complaints about log-based systems revolve around the effort to parse and maintain log files and report generation issues (system maintenance, report generation times, etc.). Complaints about tag-based systems include additional data delivery required, complexity of tagging, sensitivities associated with third-party data collection and storage, and the limitations associated with the most basic image-based data collection strategy.

The reality is that there are a number of solutions in the market today capable of taking accurate measurements from the mobile Internet. This white paper's sponsor, Nedstat, has been working on mobile measurement since 2000 and has a sophisticated customer engagement model to determine which data collection strategy will be most appropriate for a given customer's needs (Figure 2).



*Figure 2: Nedstat conversion by phone brand report, an excellent diagnostic for targeting specific types of mobile users and consumers.*

Other traditional web analytics vendors like Omniture, Coremetrics, and WebTrends are all working diligently to improve data collection and reporting for the mobile web. Additionally, Web Site Optimization Ecosystem vendors like Tealeaf also continue to innovate around the mobile opportunity, creating new potential data sources for other vendors and their customers designed to leverage existing infrastructure.

## 2.4 Measuring Mobile Visitors is Intrusive

The fourth problem you often hear about mobile analytics is that it is intrusive. This concern is not wholly unfounded primarily because, unlike the fixed Internet where our connections are anonymous by design, every mobile device in the world can be identified using the Mobile Subscriber Integrated Services Digital Network Number (MSISDN) or International Mobile Subscriber Identity (IMSI) numbers contained on the phone's SIM card<sup>4</sup>. Since these numbers can be associated back to a mobile subscriber through the subscriber's operator (i.e., AT&T, Verizon, Sprint), many people jump from "mobile tracking" to the intrusive and potentially invasive tracking of individuals.

The availability of these device and subscriber identifiers certainly does create the potential for abuse. Fortunately, the operators themselves hold the keys to translating the MSISDN and IMSI numbers back into meaningful values. For example, the only organization that can immediately translate my 15-digit IMSI into "Eric Peterson" is AT&T, my current mobile service provider. Privacy advocates will certainly proclaim that the mobile operators are more likely than not to have some massive breach of privacy, thereby unleashing the IMSI-to-individual translation table onto the world. At Web Analytics Demystified we believe that

<sup>4</sup> [http://en.wikipedia.org/wiki/SIM\\_card](http://en.wikipedia.org/wiki/SIM_card)

this possibility is both unlikely and hardly the threat to privacy many make it out to be. Still, because the potential for abuse exists, it is encouraging to know that projects like Holland's Open Mobile Internet (OMI2) and their support for an Anonymous Subscriber ID (ASID) exist<sup>5</sup>.

The value of a unique device identifier to the practice of analytics should be clear to any experienced practitioner. Rather than having to rely on browser cookies which are frail at best and fail completely as site visitors move from computer to computer, having a unique subscriber ID associated with what is typically an intensely personal piece of technology dramatically increases the potential to accurately count unique site visitors.

More importantly, given appropriate privacy controls, the anonymous version of IMSI and MSISDN create the potential for very useful segmentation that could be passed along to the analytics application. Consider the vetting process most people go through to subscribe for mobile phone service - credit checks, providing some type of government identification number (social security number in the U.S.), etc. During this process the operators learn a great deal about each of us. It is not unimaginable that some of this information could be securely passed along to support a deeper level of analysis without compromising the visitor's identity.

For example, my mobile provider knows that I am a 35 to 45 years old male living in the Northwestern region of the United States. Additionally, a cursory examination of my call history would likely reveal that I am married, that I travel frequently both nationally and internationally, and that I don't call my mother nearly enough. The only thing preventing my operator from passing along some subset of this information with each request I make via my iPhone is a clear business model for how to monetize the transfer of data. Because the operator serves as a gateway for every transaction - be it a request for a web page, sending an email or SMS message, and placing a phone call - it logically follows that the operator can pass this information including my current location along using established communication protocols (HTTP headers for web requests, etc.)

Carefully applied, the same technology that creates fear, uncertainty, and doubt about mobile analytics being intrusive could be transformed into a significant source of business insights. To be sure, the devil is in the details but compared to the anonymous fixed Internet, the mobile world has tremendous potential.

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<sup>5</sup> <http://www.openmobileinternet.com/> (Dutch)

## 2.5 Mobile Visitors are Different (and Should Be Treated as Such)

Perhaps less a lie than a point of confusion, many companies appear to be at risk of making the mobile opportunity into more than it really is. Clearly the mobile web creates a set of challenges and opportunities that are unique, but at the end of the day the cell phone is just a *smaller screen* connecting businesses to consumers, questions to answers, and challenges to opportunities. Recognizing this important fact allows management to avoid building yet another silo within the business labelled “mobile” which inevitably results in the further fragmentation of business intelligence at a time when companies should be consolidating data.

The reality is that mobile is just another channel, just like your catalog, your physical store, and your web site. More importantly, your mobile site and applications should be thought of as extensions of your existing web presence (Figure 3). Even if you’ve gone the extra mile and have built an entire application rather than simply porting your existing site to be better rendered on a small screen, Web Analytics Demystified encourages you to think about the application as a Rich Internet Application (RIA) rather than something new or different.

Most popular pages per phone brand		
Reporting period ► 01-Apr-2009 until 21-Apr-2009		
Brand	Page views	Percentage
Apple	1,858	50.2%
	news.overview	1,102
	news.financial	322
	podcast.radio1	167
	news.entertainment	153
	podcast.hollywood_inside	114
HP	21	0.6%
HTC	255	6.9%
Motorola	2	0.1%
Nokia	1,254	33.9%
Samsung	4	0.1%
Sharp	1	0.0%
Siemens	114	3.1%
Sony-Ericsson	193	5.2%
<b>Total</b>	<b>3,702</b>	<b>100.0%</b>

Figure 3: Nedstat “most popular pages” report segmented by phone brand, a typical web analytics report applied to the mobile world.

To this end, while Web Analytics Demystified strongly *encourages* companies to give serious consideration to how mobile sites and applications are *designed*, we believe that the best solution for measurement of mobile is to devise an effective, accurate, and

appropriate integration strategy into the existing digital measurement application of businesses. In other words, you are better off focusing your efforts on providing a great experience via the mobile Web, not having to spend time learning a new analytics platform.

Given the lies exposed in this document, integration is unlikely to be easy in most situations or even possible at all in some cases. However, given the general complexity involved in digital measurement and analytics, Web Analytics Demystified does not recommend the further fragmentation of a businesses ability to understand the “whole customer” - something that is inevitable with the deployment of multiple measurement solutions.

Fortunately, the market leading digital analytics providers around the world - including this paper’s sponsor Nedstat - are increasingly getting a firm handle on what measuring mobile traffic requires and support the direct integration of mobile and fixed web traffic. An ideal report is one where you are able to see visitor movement between sites, devices, or channels depending on the particular questions you have at the time. And the ideal set of key performance indicators for this new, integrated world would include “Percent Fixed Web Only Visitors”, “Percent Mobile Only Visitors” and “Percent Fixed Web AND Mobile Visitors” (Figure 4).

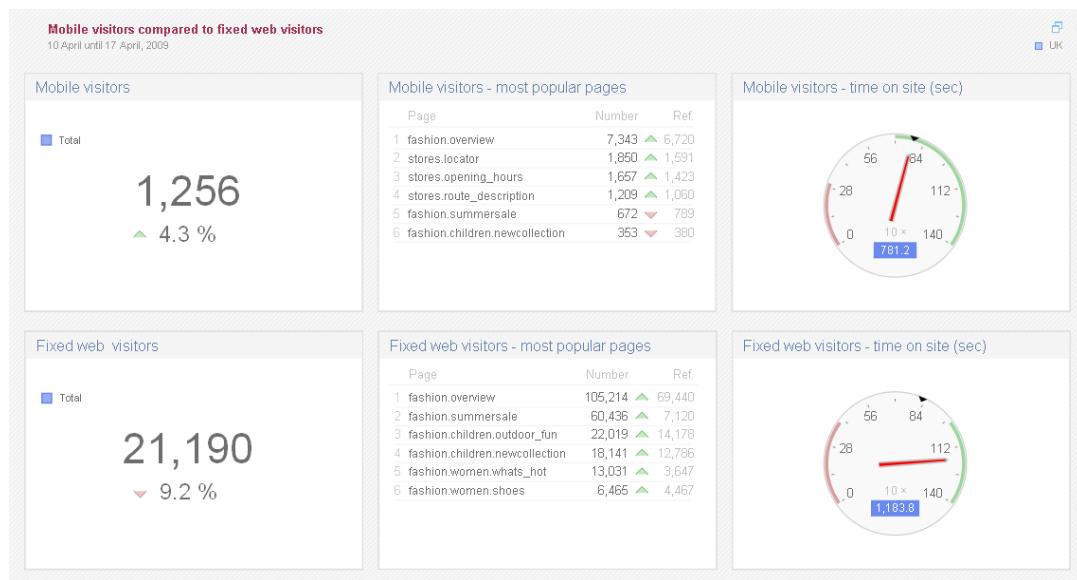


Figure 4: Metrics dashboard from Nedstat highlighting differences between mobile and fixed web visitors.

### 3. The Truth About Mobile Analytics

It is unsurprising that the aforementioned lies about mobile measurement are being told given the relative nascence of this industry combined with the staggering opportunity that mobile ultimately provides. But it is surprising to Web Analytics Demystified that so few companies have spent enough time thinking about how they'll begin to calculate the return for their investment in the mobile web. In our experience companies have a tendency to place too little effort into measurement when they are unclear about the opportunity; their lack of clarity is often caused by poorly set expectations.

Here are three unassailable truths about measuring the mobile Internet that you can use to scope your efforts and evaluate the opportunity for your business.

#### 3.1 Like Web Analytics, Mobile Analytics is Hard

In 2007 Web Analytics Demystified began exposing one of the most egregious lies in the measurement industry today: that “web analytics was easy.” Throughout the course of our “Web Analytics is Hard” campaign, we built consensus across the globe for the idea that the effective use of digital analytics tools is as much about process and expectation setting as it is generating reports and that the former is often unnecessarily complex even in small organizations, much less the true Enterprise.

Today the best digital analytics practitioners are adept at setting appropriate expectations with management about what is required to derive the full value from an investment in measurement technology, people, and process. And the companies that are appreciating the greatest return on their web analytics investment are those who have embraced “web analytics is hard” not discouragingly but as a rallying-cry to be diligent, patient, and clear.

Mobile analytics is no different.

If a vendor is telling you “mobile analytics is easy” they are the worst type of snake-oil salesmen in the business. If they are trying to assure you that “simple changes revealed by mobile analytics can easily increase conversion rates and revenue,” they are misrepresenting both the measurement and site deployment processes. And if they are representing that they alone have the “most accurate mobile analytics solution possible” then they are, in Web Analytics Demystified’s opinion, far more focused on hype and hyperbole than honesty and helping their customers.

On the point about accuracy, which appears to be the crutch that emerging vendors have decided to stand upon, the best practices for creating accuracy in mobile analytics are as follows:

1. **Make a list of metrics that are most important to you from an accuracy standpoint.** Are you trying to drive adoption? If so, visitor counts are important. Trying to drive application use? Visits and page views may be appropriate. Are you actively marketing your online site? Campaign metrics will be critical.
2. **Assess the technology you're using to deploy your mobile site.** Are you primarily focused on a particular platform or carrier? Or are you trying to design an experience that transcends the device? Are you using HTML or XHTML exclusively, or do you have a WML- or PML-based site?
3. **Be prepared to ask measurement vendors for *specifics* about their technology.** Use the "naysayers" list above and ask how the solution counts visitors, visits, and page views in the absence of images, cookies, JavaScript, etc.
4. **Make a list of "known issues" with whatever strategy you deploy and socialize that list.** Don't hide behind a lack of knowledge regarding sources of inaccuracy; make sure you fully understand what might be causing the numbers to fluctuate so that you can incorporate those insights into your analysis.
5. **Remember: It's not the data; it's what you do with it.** No matter how much time, money, and effort you put into making the data you collect accurate and precise, if you're not using that data to improve the user experience you may as well make up the numbers as you go.

Undoubtedly the measures you use will change over time as your understanding of mobile analytics improves, your investment in the mobile Internet grows, and the sophistication of the tools you use increases. Start simple, since measurement has a natural tendency towards complexity.

### **3.2 Integration with Fixed-Web Analytics is Critical**

As previously stated, Web Analytics Demystified firmly believes that treating your mobile audience as somehow different from your fixed web audience is a mistake. Unless you have some clear and compelling data that contradicts this idea, the safest strategy for measurement is to integrate data collection with your existing web analytics solution.

Keep in mind that not all web analytics solutions are currently equal in their mobile measurement capabilities. Here are five common challenges when attempting to integrate data from the mobile and fixed web:

1. **Integration of mobile data will very likely necessitate a different approach towards data collection than you use for the fixed Internet.** Most companies today are using some type of JavaScript-based page tag to collect data from their fixed web sites. Depending on your measurement goals, using the same tags likely will not work so an alternative most likely will need to be found.

2. **It is very useful to be able to identify “mobile visitors” as such, either through a custom variable or segmentation.** Once your integration strategy is defined, keep in mind that you’ll want to be able to clearly identify those visitors using the mobile channel for analysis purposes (Figure 5). Don’t assume that page names will give you everything you need since increasingly mobile visitors are using traditional web sites (thanks to advances in technology like the iPhone and Opera Mini.)
3. **You will almost certainly have a different definition of “unique visitor” applied to your mobile visitors.** Again, because of the challenges outlined previously in this document, the web analytics “standard” of using a persistent cookie to identify “unique visitors” will likely fail for your mobile visitors due to the diversity of handsets being used. This is not a problem; the problem is assuming that the numbers will be the same *and* not taking the time to understand the differences.
4. **You may not get “real-time analytics” from your mobile sites and applications.** Because of the challenges associated with gathering mobile data, many companies that have already completed integration efforts report that mobile data is differently delayed from a reporting perspective and often is not available in “real-time.” Considering that few companies in the world are truly able to effectively leverage this type of data, Web Analytics Demystified does not consider this challenge to be a serious problem.
5. **You may not get *everything* from your integration that you need today.** Because the rate of adoption for mobile applications is nothing short of staggering, many of the traditional analytics vendors are still working out the details of their fixed web and mobile data integration strategies. Don’t let this dissuade you - keep in mind that the fixed web data you have today is far from perfect as well.

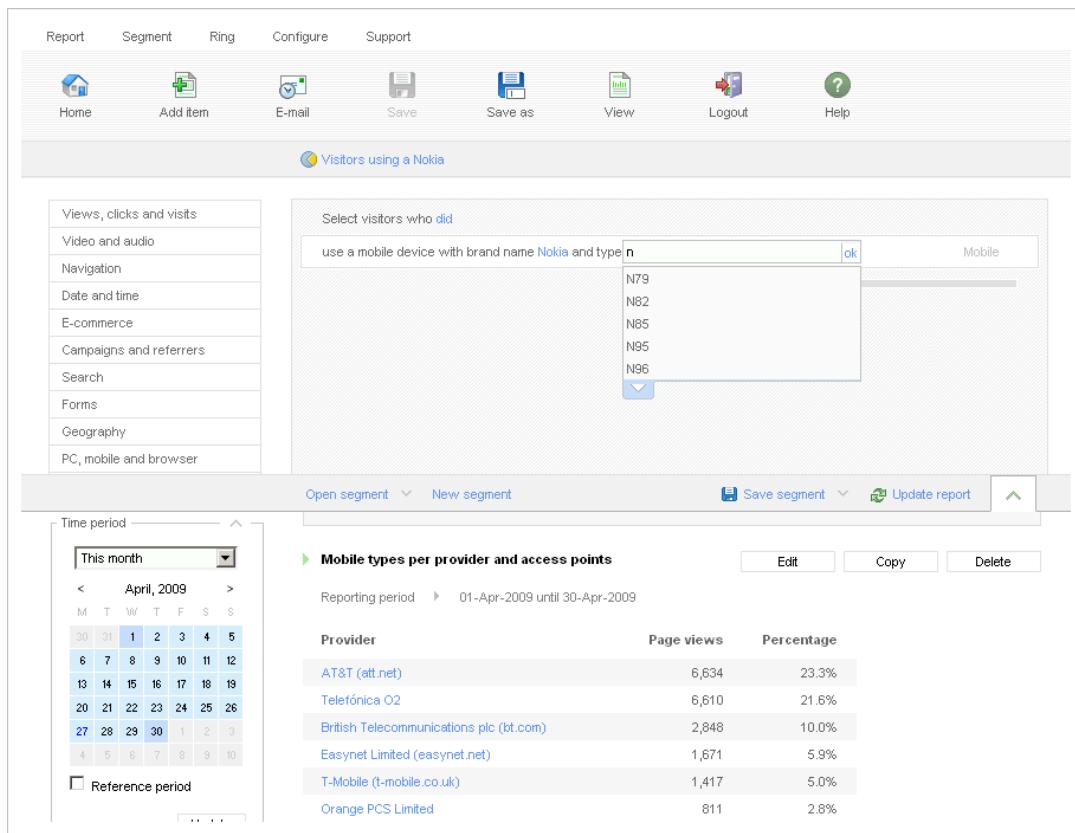


Figure 5: Example segmentation strategy for mobile analytics drilling-down from mobile brand to device juxtaposed against carrier and access points.

While the challenges of integration are many and vary by vendor, Web Analytics Demystified strongly encourages you to work with your vendor and do what you can, keeping the ultimate goal of “one customer, many screens” clearly in mind.

### 3.3 You Need to Prepare for Digital Ubiquity

Anyone paying even casual attention will realize that the recent advances in mobile are pushing society towards a state of “digital ubiquity” - one where we are always connected and information is only a tap or two away. Our phones and fixed Internet devices will connect us to companies, brands, products and services in entirely new ways. Already we can create maps on our computers and push them to our phones so that real-time GPS can guide us to our destination. When we arrive, we can use our phones to provide coupons with bar codes, let our friends know where we are, and take pictures that will be uploaded to our social networks.

Another example of this type of ubiquity is the relationship many airlines are building with consumers through loyalty programs. Now we are able to book online or on-phone, receive confirmation via email or SMS, get flight updates via SMS, and even receive online bar

codes that can be used for check-in by simply presenting our mobile device for scanning (Figure 6).

#### ► Cross channel customer movement

Reporting period ► 01-Mar-09 until 31-Mar-09  
 Customer name ► \*

Customer ID	Customer name	Date	Channel	Action
[+]	1C24A3			
[+]	2FG4H5			
[+]	Z57E85	[+]	[+]	<p>Jonker</p> <p>02-Mar-09</p> <p>E-mail</p> <p>newsletter.03-2009.open</p> <p>newsletter.03-2009.click.offer_bangkok</p>
			[+]	<p>Website</p> <p>store.destinations.asia.bangkok.prices</p> <p>store.destinations.asia.bangkok.availability</p> <p>store.booking.form.traveler_details</p> <p>store.booking.form.payment_details</p> <p>store.booking.confirmed</p>
		[+]	[+]	<p>29-Mar-09</p> <p>Mobile</p> <p>sms.barcode.click</p> <p>boarding_card.iata_barcode</p>
[+]	ZZ81RT	[+]	[+]	<p>Steinbock</p> <p>02-Mar-09</p> <p>Mobile</p> <p>sms.barcode.clickin</p> <p>boarding.iata_barcode</p>

Figure 6: Cross channel movement report from Nedstat showing airline users moving between email, web, and mobile channels during the flight booking and travel process.

This push towards digital ubiquity creates undeniably unique opportunities for connection, and also creates entirely new opportunities to mine customer and visitor behavior. A recent Business Week article<sup>6</sup> discussed how location data passed from mobile phones is being used to identify behavioral types in cities like San Francisco and New York. This behavior data combined with our knowledge of visitors to mobile and fixed Internet sites can potentially be used to create a vastly different picture of audiences than has ever existed before.

<sup>6</sup> [http://www.businessweek.com/magazine/content/09\\_10/b4122042889229.htm?chan=magazine+channel\\_the+future+of+tech](http://www.businessweek.com/magazine/content/09_10/b4122042889229.htm?chan=magazine+channel_the+future+of+tech)

Imagine that you are a portal providing information about restaurants in a specific city. In a digitally ubiquitous world you might connect the web searches for a particular restaurant to the searcher using your mobile site to create a map and, providing they connected again from the restaurant, verify that they went to the establishment by verifying GPS coordinates. Depending on what data you have access to, you might also explore what other bars and restaurants the searcher went to in an effort to present “you might also like” information to other searchers.

Other such scenarios exist to help build a more robust picture of your audience - the mining of GPS data combined with device information to help better understand sophistication and more narrow demographics, or the mining of device-specific applications to measure particular user likes and dislikes. By simply providing users a reason to self-identify across digital channels, site operators can give themselves the ability to create incredibly robust views of visitor behavior across the digital and analog worlds.

To be clear, Web Analytics Demystified is not specifically advocating for this type of data mining, at least not without careful safeguards in place to protect individual visitor's identities. Given the fact that the carriers *can* identify device users to the level of the individual, even if they are unlikely to do so, any company attempting to create this level of integrated view of their visitors across channels *must pay special attention to privacy and data security*. Failure to do so will undoubtedly result in a public relations disaster at best and a setback for the entire industry at worst.

## 4. Getting Started with Mobile Analytics

Aware of the lies, armed with the truth, and faced with the prospect of having to justify the investment of a new mobile site or application you should now be well prepared to meet your challenge head on. As we said at the beginning of this document, we believe there is a tremendous opportunity for every business working online today to participate in what is an increasingly mobile world. But, perhaps not surprising given that this paper was authored by Web Analytics Demystified, we firmly believe you need to be able to measure your efforts and apply what you learn towards the incremental improvement of the customer experience, regardless of channel, device, or size of screen.

### 4.1 Ten Questions to Ask Your Vendor

To assist companies with what is still a complex buying process for analytics applications, we provide the following ten questions that are appropriate for use in any mobile analytics RFP. While there are no particular “best answers” for many of these questions, in our experience the quality of response received is a good indicator of the vendor’s overall ability to help your company quantify your efforts in the mobile channel.

1. **How long has your company been providing mobile analytics solutions?** How long has your company been providing analytics solutions of *any* kind? How many customers do you have today actively using A) your mobile analytics solution and B) your digital analytics solution?
2. **How much experience do your consultants have working in a mobile environment?** Do they have specific experience on mobile sites, or just experience deploying data collection tags? How much support does your company provide for data collection deployment?
3. **Can you describe your data integration strategy for combining my mobile data with my fixed Internet data?** Do you use APIs? Are you collecting data into the same repository? Can we use SQL and store the information you collect locally?
4. **Can you tell me how you identify unique visitors to my mobile site?** Are you white-listed with major carriers and have access to a Subscriber ID? Are you using something like the OMI2 ASID? Do you have a cascade of options in case “more accurate” solutions are unavailable?
5. **Do you depend on cookies for visitor identification or campaign attribution?** If so, are you actively keeping track of which carriers and devices are scrambling or otherwise limiting the use of cookies? If not, how are you tracking visitors moving from a cellular network to WiFi and back?

6. **If you make claims of accuracy in mobile tracking, what is the basis for those claims?** Have you conducted a study against a fixed and known population across carriers, devices, and geographies? Do you hold any patents, accepted or pending, for the technology enabling your particular claims to accuracy? Does your methodology give you the ability to identify unique individuals to the level of MISDN, IMSI, Subscriber ID, or subscriber?
7. **If you use tags for your data collection, how many versions of the tag do you have?** Do you have something for HTML and c-HTML? XHTML? WML 1.x and WML 2.0? XOXO? Do you use server-side scripts? Do they depend on JavaScript? How large are your client-side files?
8. **If you do not use tags for your data collection, can you describe how your application collects data?** Are we required to deploy hardware? If so, what assurances do you provide that the devices will scale and not introduce latency into our site's delivery? If you rely on log files, what is the source of those logs? Do we need to purchase them from a third-party?
9. **What mobile-specific reports do you have in your application today?** Are these reports truly specific for mobile or just able to display mobile-collected data? Can you provide a list of dimensions and metrics you are collecting and reporting from mobile devices? Are you able to differentiate and report on visitors using *cellular* and *wireless* connections? Are you able to work with location-based (GPS) data?
10. **Does your reporting application support segmenting both mobile-collected and non-mobile collected data for visualization in the same interface?** Are you able to build custom segments, metrics, and dimensions from mobile-collected data? Does any report automation functionality you have support the segregation and combination of mobile and fixed web data?

While far from comprehensive, this list will get you moving in the right direction. Remember, like web analytics, mobile analytics is hard. Web Analytics Demystified has provided guidance to hundreds of companies selecting measurement solutions over the years and we have found that the old adage “it looks too good to be true” to be universally applicable. Set your expectations carefully, ask good questions, and keep the truths we’ve outlined in this paper in mind and you will undoubtedly make an excellent choice when selecting and implementing a mobile analytics solution.

## About the Authors

### Eric T. Peterson

Eric T. Peterson, CEO and Principal Consultant at Web Analytics Demystified, has worked in web analytics since the late 1990's in a variety of roles including practitioner, consultant, and analyst for several market-leading companies. He is the author of three best-selling books on the subject, *Web Analytics Demystified*, *Website Measurement Hacks*, and *The Big Book of Key Performance Indicators*, as well as one of the most popular web analytics bloggers at [www.webanalyticsdemystified.com](http://www.webanalyticsdemystified.com).

Mr. Peterson has committed much of his life to the betterment of the web analytics community, so much so that Jim Sterne, President and co-founder of the Web Analytics Association says "Eric's leadership in the industry is unparalleled, his devotion to the community is legendary and his years of experience translate immediately into strategic and tactical competitive advantage for everybody who works with him."

### Michiel Berger

Michiel Berger co-founded Nedstat in 1996 as the first ASP web analytics service in the world. After being developer and CTO for several years, he was appointed Chief Innovations in 1999. Michiel has been leading the design of the current Sitestat generation, the first 100% Ajax-driven web analytics solution in the market, and is responsible for pioneering in mobile analytics. Nedstat released its first mobile reports in the year 2000 and has a long history in developing mobile analytics. When founding Nedstat, Michiel was forced to interrupt the final phase of acquiring a doctorate degree in Astrophysics at the University of Amsterdam (UVA) where he also obtained his Msc degree in astrophysics.

### Thomas Pottjegort

Thomas Pottjegort is Senior Technical Consultant at Nedstat with a main focus on mobile tracking and collection, streaming media and security. Before he started at Nedstat in the year 2000, he was principal consultant at Future-Matics specialised in security and mobile devices and Systems Operator at MyAMI where he developed BBS systems that were used by Lloyds Register for global maritime tracking.

Thomas received several certifications such as CISSP (Certified Information Systems Security Professional), MCSE (Microsoft Certified Systems Engineer), Prince2 and has won the HP star award in 1997. He is an active member in the ABCe workgroups and the IAB.

## About Web Analytics Demystified

Web Analytics Demystified, founded in 2007 by internationally known author and former JupiterResearch analyst Eric T. Peterson, provides objective strategic guidance to companies striving to realize the full potential of their investment in web analytics. By bridging the gap between measurement technology and business strategy, Web Analytics Demystified has provided guidance to hundreds of companies around the world, including many of the best known retailers, financial services institutions, and media properties on the Internet.

For more information on Eric T. Peterson and Web Analytics Demystified, please visit [www.webanalyticsdemystified.com](http://www.webanalyticsdemystified.com), email [eric.peterson@webanalyticsdemystified.com](mailto:eric.peterson@webanalyticsdemystified.com), or call +1 (503) 282-260

## About Nedstat

Nedstat is Europe's largest provider of web analytics and online business optimization and recognized market leader in video and mobile analytics. The products and services enable companies to improve the effectiveness and profitability of their online communication and business.

Nedstat makes website analytics straightforward and accessible for users of all levels and disciplines. Products are easy to use, reports are clear and fast to access, customization is easy, and services and support are personal and high quality.

Nedstat employs 140 people in the Netherlands, Belgium, France, Germany, Spain and the United Kingdom. The client list includes many renowned and internationally operating organizations like Electrabel, Ernst & Young, Haymarket, Hugo Boss, KarstadtQuelle, Renault, Panasonic and Wolters Kluwer.

For more information on Nedstat please visit [www.nedstat.com](http://www.nedstat.com) or [blog.sitestat.com](http://blog.sitestat.com), email [u.ziegler@nedstat.com](mailto:u.ziegler@nedstat.com) or call +31 (0) 205 195 443.