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2012 State of Mobile

Moving Med/Legal-Regulatory with Mobile Prototyping

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Introduction.

2012 has been the long-awaited “Year of Mobile.” From QR codes on posters in doctors’ offices to packaging transformed by augmented reality to audio watermarks that connect user experiences across screens, it’s tough to ignore the impact the mobile medium has made on daily life. Innovative technologies allow users to talk to their phones - and for the phones to answer them back. These devices “know” their owners and provide to them a hidden world of data and content.

The technologies may seem futuristic, but they are made to support present-day needs. Inside these pages, you’ll find the mobile best practices of today and the next practices of tomorrow.
The power of the mobile medium cannot be understated. 2012 has truly been the year of mobile, putting personal and professional connections, photos, finances, news, music, and health-tracking tools at a user’s fingertips.
Across the globe, the facts speak for themselves.

More people in developed countries access web-based information via mobile connections than on personal computers. Smartphones outnumber personal computers in the United States. Americans spend an average of 2.7 hours each day socializing on their smartphones, which is more than double the amount of time spent eating and one-third of the time spent sleeping each day.

Mobile penetration has provided new ways for users to connect with one another, organize their lives, and even track and understand their health. Consumers are not only driving adoption of mobile health information, but are increasingly using connected devices – like Nike+ Fuelband and Fitbit’s sleep tracker – to generate personal health data. Almost every health and fitness metric can be stored, tracked, and analyzed by smartphones and interpreted online to make better health decisions. This movement even has a name – the Quantified Self.
1.038 billion
ARE SMARTPHONES

75%

25%

3.05 billion
ARE SMS ENABLED

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Still, patients and caregivers are not the only ones seeing the benefits of smartphone usage; physician smartphone adoption is double that of American consumers. They are prolific mobile adopters, integrating both smartphones and tablets into their practices, from EHR and billing management to the exam room itself. Physicians are even recommending health-related apps to patients for certain disease states. And why wouldn’t they? It’s hard for a practicing physician to turn down the opportunity to educate patients, learn more about their symptoms, and track their progress to improve their treatment and health outcomes.
NEARLY 30% OF ADULTS AGE 18-29 HAVE USED THEIR PHONE TO RESEARCH HEALTH INFO.  

47% OF AMERICANS WOULD GIVE UP COFFEE BEFORE THEY GAVE UP THEIR PHONE.  

46% OF ALL AMERICANS ARE SMARTPHONE USERS.
For health and wellness brands, embracing innovation is essential to successful adoption and adherence. With the help of mobile prototyping and interaction design, brands can help medical-legal-regulatory teams understand the power and promise of their most innovative offerings.
No matter what the effort, mobile or otherwise, using prototypes to explore design options can help identify strengths and weaknesses of a concept before it becomes too expensive to correct or improve.

In the context of understanding regulatory compliance requirements, an interactive prototype can be particularly helpful. During a medical-legal concept review, using flat images or manuscripts to explain interactive components can pose a challenge for reviewers unfamiliar with technological jargon. With an interactive prototype, however, there is little left to the imagination in terms of how content and functionality relate. Stakeholders can use it, touch it, and walk through scenarios – all at a time in which project adjustments can be made without costly consequence.

For mobile and touch interfaces in particular, context of use plays a vital role in design decision-making. The interactive prototyping process demands more immediate cross-capability collaboration, while the prototype itself gives each member of the project team the opportunity to troubleshoot, question, and examine the value of the interaction design and componentry without the ambiguity of sketches or the “investment” of high-quality graphic design.

Interactive prototyping, by nature, is changeable, iterative, collaborative and exploratory. It evolves creative with an eye toward the finished product: an accurate, functional, and usable experience.
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Tactical Approaches

- 2D Codes
- HTML5 vs. Flash
- Augmented Reality
- Audio Tagging
- Location-based Services
Quick response (QR) codes are hardly new. Since the mid-1990s, these 2-dimensional display images have been used to track and distribute information, much like traditional 1-dimensional bar codes.

In recent years, however, QR codes have skyrocketed in popularity, along with the camera-equipped mobile phones that can read and process their contents. With a simple barcode scanning application, mobile users are granted quick access to digital content that functions across device capabilities. From the mobile web to mobile apps, from SMS (text messaging) to email, from calendar invitations to coupons to customer service connections, QR codes allow users to retrieve valuable information, interact with content, and become more immersed in a brand experience.

Given this tremendous opportunity, marketers are constantly looking for ways to implement QR codes into their overall strategies. One of the easiest tried-and-true tactics is to include a QR code on print materials to connect users to a mobile-optimized brand experience.
58% of people scan QR codes from home

30% of mobile users are open to scanning 2D codes to get coupons

QR code scans by gender

69% 31%
When the reward for scanning a QR code properly reflects the user’s context and need, the execution of a QR code program can offer incredible value. Items sold in Target stores nationwide now carry individual QR codes right on the shelves to allow for quick purchase. Consumers can avoid long check-out lines by simply scanning the shelf code with the Target smartphone app, which will ship the item to his or her home, free of charge.

What Time of Day IS EVERYONE SCANNING?
The battle between HTML5 and Adobe Flash has been well-documented, but what it means for brands looking to implement these technologies – for the first time or to transition a desktop experience to a mobile experience – is finally becoming clear.

In 2012, 20-30% of all site traffic came from mobile devices, and that number is expected to continue growing across the globe. To capitalize on this momentum, marketers are looking for ways to bring rich mobile experiences to life through two competing technologies: HTML5 and Adobe’s Flash. In many instances, the two technologies can be used interchangeably, given their similar features and capability for accommodating audio, video, and interactive elements. Still, technological acceptance varies widely across devices and operating systems. Given that Apple’s iOS devices are not currently Flash-enabled, it is difficult to transition Flash-based interactive desktop sites into interactive cross-platform mobile experiences.

Forecasts indicate that the adoption of HTML5 is growing, even though the technology is not expected to be complete until 2014. As 2013 approaches and new browser versions continue to be released, more and more support will be provided for HTML5 assets.
Of all Mobile Apps will be based wholly or in part on HTML5 by 2015.

By 2013, there will be over 1 Billion HTML5-capable mobile browsers in the world.

2.1 Billion by 2016
For mobile web banner ads, brands can test multiple creative assets to determine HTML5 banner performance. Because of high ad-serving fees for HTML5 banners, this testing is best for highly targeted creative messaging and/or placements on sites with 20-30% mobile traffic, rather than for higher-volume, general awareness campaigns. After testing, front-end and back-end data can be used to assess performance and usability of HTML5 banners versus Flash and static back-up banners.

<table>
<thead>
<tr>
<th></th>
<th>Chrome on Android</th>
<th>Firefox Mobile</th>
<th>Safari on iOS 6.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile/Tablet Market Share</td>
<td>39%</td>
<td>&lt;1%</td>
<td>50.02%</td>
</tr>
<tr>
<td>HTML5 Compatibility Rating</td>
<td>Great/Moderate</td>
<td>Great</td>
<td>Great</td>
</tr>
<tr>
<td>Flash Compatibility Rating</td>
<td>Moderate</td>
<td>Moderate</td>
<td>None</td>
</tr>
</tbody>
</table>
26% of users may experience issues with HTML5.

4% of users may experience issues with Flash.

70% of users can use both Flash and HTML5.

IE6, IE7, IE8
Firefox
Safari
Chrome
iOS Devices
Android
Opera
Augmented Reality.

Referred to by some as the “new QR code,” augmented reality (AR) uses technology to alter or augment the visible and audible world by overlaying or superimposing new video, sound, or graphics onto it.

Much like QR codes, augmented reality has been gaining traction in recent years due to the proliferation of camera-ready smartphones. By aiming a smartphone’s camera at a particular design, ordinary packaging, print pieces, and billboards can come to life with more information or interactive qualities. While this may seem difficult to implement, companies like Layar and Aurasma make it easy for app developers to more effectively include AR content layers in the mobile experiences of their apps through their development APIs and services.

Because of its ease of implementation and often unique visual reward, brand marketers are more frequently turning to AR to better interact and engage with consumers. Product packaging offers the greatest opportunity to implement AR technologies by using additional digital brand information to augment the user’s product experience. To see AR in action, grab a copy of the latest IKEA catalogue. Launch the IKEA app and simply hold a smartphone’s camera up to any page in the catalogue and watch in amazement as the page comes alive with interactive options for colors, sizes, and styles. You can even layer the furniture from the page over your own room to see what it will look like when you get it home.
30% of mobile subscribers within the next two years will use AR at least once a week. 

200 million AR-capable smartphones worldwide.
Audio Tagging

Life moves at the speed of mobile, which means there’s no time to wait to find out the artist or title of a song playing on the radio. Fortunately, there’s an app for that and much more – Shazam.

Shazam began as a simple but powerful music app that allowed iPhone users to identify almost any song playing on the radio, on TV, or in a store. Its power lies not only in its 225 million users, who tag music and audio in broadcast radio and TV approximately 10 million times each day, but also in its ability to predict which songs and artists will become commercial hits across 20 countries using its Tag Charts. Still, Shazam is no longer just about music. Now its audio watermark technology allows users to tag television commercials and show content on any channel at any time.

These audio watermarks allow marketers to serve ads based on the broadcast TV shows users are currently watching. This powerful “second screen” engagement model drives access to potential customers beyond the standard :15 to :60 TV spot. With consumers multitasking across multiple screens more than ever before, this kind of technology provides an opportunity for users to interact with brand content on a deeper level.
85% of mobile users use Shazam to interact with TV.¹⁶

86% of mobile internet users are using their devices simultaneously with TV.¹⁷
Location-based Services

For marketers, the beauty of mobile devices is in the ability to connect with on-the-go consumers.

Location-based services (LBS), which include connected check-in services, local search, and now location-based SMS, rely on the device’s global positioning system (GPS) to connect with users. In fact, mobile carriers regularly ping users’ smartphones throughout the day and use location information to support services for which users have opted in, including weather applications and turn-by-turn navigation.

Connected check-in services allow marketers to capitalize on the location-based benefits of mobile marketing. Through check-in applications like Foursquare, marketers can tie a patient’s or caregiver’s physical check-in to a reward in a secondary program. Once a user links his or her program identification number (such as a credit card number in the case of American Express), the brand can validate participation in a particular program and reward user behavior. By connecting pharmacy rewards programs with a brand’s savings card, for example, users can connect prescription refills with adherence or outcomes programs to better track progress and earn more rewards.
Half of local searches are performed on a mobile device.
Mobile-initiated search also benefits from LBS. A simple Google search on an iPhone will sort and display links not only based on relevance of the request, but also the user’s current location. Local businesses have grown to love this feature, knowing that 70% of all mobile searches result in action within one hour.

In addition to the more traditional check-in and search services, location-based SMS enables marketers to deliver SMS or MMS messages to opted-in users within a specific geo-fenced area. As an opted-in user moves in and out of a designated location, SMS providers serve a brand’s message. The reach and targeting value of such a program can support a brand’s adherence and loyalty programs, help to inspire a purchase with a pharmacy coupon offer, and more.
75% of users have **clicked through or taken some action where ads are based on their location**.²⁰

63% of iPhone owners use **location services at least once a week**.²¹

1.5 billion people will be using location-based services by 2014.²²
Responsive Design.

As users continue to access information across a variety of devices and screen sizes, brands and content providers are charged with creating extended multi-screen experiences. When employing a “mobile-first” philosophy, implementation approaches like responsive design can offer the best, most relevant styling and information for users, regardless of device.
With a cohesive mobile strategy based on an understanding of the brand’s audience, mobile usage, and context in place, the team must then consider designing and implementing a mobile experience that reflects the strategic vision through responsive design.

This “mobile-first” design process triggers changes in layout, content presentation, and navigation based on screen size, creating a web experience that is “aware” of multiple presentation platforms, including desktop computers with wide-screen displays, tablet devices capable of changes in orientation and high-resolution graphics, and handheld devices with smaller screens that use touch and gestural interfaces.

Unlike the reduction process that accompanies scaling down a full-feature website that does not contain mobile-relevant or mobile-functional content, this “mobile-first” approach enables a ground-up construction of a unified and cohesive experience. Responsive design is often considered when a brand’s user is predominantly mobile based (40-50% of traffic is from a mobile device), and when the tablet or desktop sites will be built up from the mobile version.

By considering the design of the mobile interface first, the designers establish a user-centered content strategy that presents clear and meaningful choices directly related to customer goals and priorities. This approach informs the prioritization of content for larger interfaces, resulting in a universally more usable and meaningful design.
CONSIDERATIONS FOR RESPONSIVE
Apps vs. Mobile Web

Understanding the differences between mobile websites and applications is vital to establishing a mobile presence. The question is how to determine which is right for a particular brand.
Establishing a mobile presence involves first understanding the differences between the medium’s two main offerings: mobile websites and applications. Both can include text, images, and video, as well as device-specific features, like email or click-to-call functionality.

While mobile websites are accessed via a connected mobile browser and function in much the same way as desktop websites, they are designed for smaller screens and touchscreen interfaces. Apps, on the other hand, are downloaded to a device, can be used even without an internet connection, and often provide access to device specific features like GPS and cameras.

Still, when developing a mobile strategy, there is no standard answer to the web-or-app question. Mobile websites are easily accessible via browsers on a variety of devices, while apps must be tailored to each mobile operating system and then downloaded by users before use. Apps can provide a much more media-rich brand experience that does not rely on the availability and quality of internet connection each time the user wants to use it.

As with all marketing endeavors, the strategy must be clearly set in order to determine if mobile websites, apps, or both are appropriate for the brand.
Apple leads the market in app downloads by double, even though Android boasts the highest market share.26

19% of US smartphone users keep over 30+ apps on their phone at any time24

60% of consumer mobile phone time is spent on apps25

15% of those 18-29 years old have health apps on their phones.4
Tablets and Second Screen Viewing

Tablet usage during popular TV shows, also known as “second screen viewing,” has become the new normal. To embrace this new marketing opportunity, brands must find ways to connect experiences across screens.
The United States market is made up of multi-taskers: Tablet users regularly access content information, and even augment content from other channels like TV, radio and movies on their iPads, Kindle Fires, and Nooks.

In fact, second screen viewing has become so popular (two-thirds of tablet owners do it regularly when watching TV), that it has become vitally important to provide content across multiple screens when producing campaigns or content.

Apps for popular shows, like AMC’s *The Walking Dead* or HBO’s *Game of Thrones*, include features like Story Sync that allow users to sync delivery of additional content to their iPad, or Android tablet in time with the plot of the episode as it is viewed – in real-time or on-demand.

Popular second screen applications like ZeeBox or SmartGlass allow tablet users to not only access additional deeper content, but also enable like-minded fans to connect and share the viewing experience over a number of social networks while a particular show is airing. They can also make show-related purchases and view additional advertising content.
Looking Forward.

With so much mobile know-how available at our fingertips, the question is no longer centered on what’s possible for brands that embrace the medium. Now the question is “Where do we go from here?”
Looking Forward

Marketing has changed for good.

If brands are to remain relevant moving forward, they must understand patient, caregiver, physician, and payer audiences — and establish a presence in the places where those audiences are willing to engage with the brand. For many brands, both now and in the foreseeable future, that is on mobile devices. Regardless of the tactical mix, it is important to understand the audience first and develop an integrated strategy that includes the mobile channel.

How does this audience access information on a mobile device? What do they want that the brand can provide on their mobile device? Why will they come to the brand for that information or service? How is the brand going to benefit from providing them with the information they need?

But the value of the mobile channel isn’t limited to the purely tactical. Mobile is radically transforming healthcare every day, from wearable devices that track our every health- and fitness-related action to tools and programs that can be prescribed with, or in place of, traditional treatments.

How will you leverage the power of this channel for your brand?
80% of the world will access the internet by mobile device by 2015.29

30% of smartphone users will be using wellness apps.28

2.1 billion global mobile internet users by 2015.30


10. IDC Highlights Key Milestones in Mobile HTML5 Development Update. (2012, May 10). IDC.


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