

# Supplemental Research

---

Presented by Jeff \_\_\_\_\_, Beth \_\_\_\_\_, and Bizzy Schorr for MCDM COM 597.

August 23, 2013

This document is supplemental to the [CLIENT] Mobile Strategy and is intended to supply additional references and guidance in the execution of the mobile strategy recommendations. Specific references appear in the order of mention in the [CLIENT] Mobile Strategy document.

## Contents

I.	Notes from [CLIENT] Presentation by Dr. Michael Link 4/25/12 .....	2
II.	User Stories and Personas .....	3
III.	Conceptual Wireframes .....	4
	Annotated Wireframes .....	4
	Full Comps.....	5
IV.	[CLIENT] Mobile Readiness Assessment .....	6
V.	Reference of Research Web Links.....	7
	I.    GBD mobile website .....	7
	II.   Mobile content optimization.....	8
	III.  Global SMS solutions and GDHx data visualization apps .....	8
VI.	E-mail Discussions with The Nielsen Company Mobile Experts.....	9
VII.	Recommended Reading .....	12

## I. Notes from [CLIENT] Presentation by Dr. Michael Link 4/25/12

<http://www.healthmetricsandevaluation.org/news-events/seminar/moving-survey-research-next-level-using-mobile-platforms-and-social-media>

[michael.link@nielsen.com](mailto:michael.link@nielsen.com)

<http://www.linkedin.com/pub/michael-link/6/754/328>

Data collection considerations

1. response rates for traditional survey modes are dropping off dramatically
2. users interact with multiple platforms (web, mobile, social)
3. these platforms are now part of the data lifecycle

Understanding the Willingness to Participate in Mobile Surveys: Exploring the Role of Utilitarian, Affective, Hedonic, Social, Self-Expressive, and Trust-Related Factors

<http://ssc.sagepub.com/content/28/3/350.short>

Gamification by Design: Implementing Game Mechanics in Web and Mobile Apps [Paperback]

[Gabe Zichermann](#) (Author), [Christopher Cunningham](#) (Author)

[http://www.amazon.com/Gamification-Design-Implementing-Mechanics-Mobile/dp/1449397670/ref=sr\\_1\\_1?ie=UTF8&qid=1335667105&sr=8-1](http://www.amazon.com/Gamification-Design-Implementing-Mechanics-Mobile/dp/1449397670/ref=sr_1_1?ie=UTF8&qid=1335667105&sr=8-1)

In today's digital world, measurement is a two-way interaction where all of these come into play as motivations for survey participants:

- Information
- Access
- Gifting
- Charity
- Rewards
- Status

Social sharing is ubiquitous and expected.

These factors go against the traditional model of surveys and data collection as a one-way process. What are the benefits and trade-offs in a two way survey and data collection model, where survey participants expect an incentive to participate and are likely to share their answers via social media, thus influencing others responses?

Gamification of surveys: motivations for game orientation

- Achievement
- Winning
- Socializers
- Explorers

Very little research and virtually no empirical research has been done. Areas for research:

1. Incentives

2. Game dynamics
3. Social sharing
4. Trade-offs

## II. User Stories and Personas

Bella is a graduate student getting an MA in public health. She is nearing graduation and is in the process of finishing her thesis and looking for an internship. At a school networking party, Bella hears about [CLIENT]'s amazing work with global health and their equally fantastic fellowship programs. She finds the perfect data source for her thesis on the mobile website while at the party. She sends the reports to herself via email to check them out later and saves the contact info so she can call [CLIENT] about their fellowship programs.

Joey uses global health data as part of his profession. He is at a conference and hears about [CLIENT]'s GBD project at one of the sessions. He does not have immediate access to his laptop but he does have his smartphone! Joey opens his mobile browser and goes to [CLIENT]'s mobile optimized website. Browsing through the GBD reports and videos, Joey discovers some great data for his colleague, Dr. Bones, and sends him some of the data he's just discovered, along with a link to [CLIENT]'s site.

Dr. Bones is a professional working overseas to gather global health data, and working with local officials and doctors to leverage that data for improvements in global health. Dr. Bones is frequently on the go with nothing but his mobile phone. He is on the way to a meeting with local policymakers when he gets an email message from his friend Joey with some of [CLIENT]'s GBD reports, and some video data visualizations that perfectly demonstrate his point. He follows the link to the [CLIENT] mobile website and shows the videos and reports to the policymakers during the meeting.

Amy follows [CLIENT]'s social media sites. She is on her lunch break and checking facebook on her tablet when she sees a new post by [CLIENT] with a link to a GBD report. She follows the link and is able to read a good chunk. She sends the report to herself via email to read the rest that evening.

Mary is in Seattle for just a few days to meet with various people about global health projects. She is attending a meeting at [CLIENT], but doesn't know how to get there. Before starting the car she pulls out her phone, does a mobile web search for "[CLIENT]" and finds their mobile website with a prominent shortcut to contact info. In seconds she has the address plugged into GPS and is on her way.

### III. Conceptual Wireframes Annotated Wireframes



Two sets of toolbar icons were used in these mock ups

The v-card, map, and phone icons are from the Glyphish icon set by: Joseph Wain, © 2010-2012, @glyphish <http://glyphish.com> And licensed under Creative Commons Attribution 3.0 United States License.

All other icons are used courtesy of TheWorkingGroup | <http://twg.ca/> Under a [Creative Commons Attribution-ShareAlike 3.0 US License](#)

iPhone template provided for [design purposes only](#) by: <http://teehanlax.com>

Home > GBD Study Home



GBD Study > Reports List.  
Also a template for search results.



A Report/Document page  
Also a template for News Stories



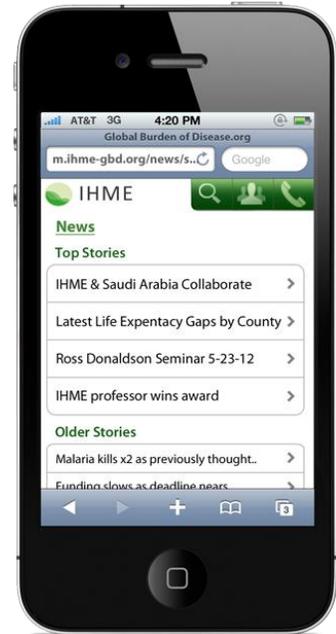
Search Site/GBD



About [CLIENT]



[CLIENT] News



#### **IV. [CLIENT] Mobile Readiness Assessment**

We evaluated [CLIENT]'s readiness for incorporating mobile into the [CLIENT] GBD Digital Communications Strategy (May 2012 draft) based on three factors:

- Organization
- Technology
- Knowledge

##### **Organization**

The Digital Communications Strategy outlined five objectives and associated activities and channels. GBD content distribution and social media were emphasized. Mobile was not considered.

While this is consistent with the 2011-2012 website analytics, which show mobile visits at less than 5% of total web visits, the lack of emphasis on mobile suggests the organization would benefit from immediate efforts to grow its mobile knowledge base. Review the Knowledge Base section for further insight.

[CLIENT] hosted a talk by Dr. Michael Link with The Nielsen Company in April 2012. Dr. Link presented mobile survey and data collection best practices. The high attendance demonstrated strong interest and enthusiasm from the local [CLIENT] community in mobile. Hosting the event was a positive step toward [CLIENT]'s long-term mobile readiness; however, the research of Dr. Link and his associates informs future possibilities for [CLIENT] mobile applications rather than tactical actions for the GBD 2010 Survey release.

##### **Technology**

[CLIENT]'s current website is built on a solid, mobile-friendly foundation. We believe it is within your immediate reach of [CLIENT]'s IT staff to establish an initial mobile web presence that promotes GBD 2010.

The Technology section of the report provides a matrix of your currently used web technologies, short-term and long-term future recommendations for technologies your IT team can implement to evolve [CLIENT]'s mobile offerings.

##### **Knowledge**

The [CLIENT] IT staff indicated they have some knowledge of mobile web development, and Apple/Android app development. However, the absence of mobile in the Digital Communications Strategy suggests that mobile education is required on the business side.

Current	Future – short-term	Future – long-term
XHTML 4.01	HTML5 entry-level tools in jQuery Mobile	Advanced HTML5
Javascript	Javascript tools in jQuery Mobile	HTML5 Javascript tools
CSS	Mobile-optimized style sheets	CSS3
Drupal		Drupal mobile tools
jQuery	jQuery Mobile	jQuery Mobile additional libraries
Adobe Flash	YouTube videos under 5 min. to deliver a mobile experience of GHDx visualizations	Adobe PhoneGap or other Flash-to-HTML conversion for GHDx visualizations
Google Analytics	Full use of Google Mobile Analytics	Customized Google Mobile Analytics
MySQL	Use PHP scripts and jQuery Mobile to implement GBD data queries via mobile website	Integrate with advanced HTML5 to deliver GDHx visualizations to mobile
addThis (for social media sharing)	Optimize social media content (i.e. YouTube videos) for mobile	Integrate social media APIs (Facebook, Twitter, Google)
Issuu	Issuu on Apple Newstand	Issuu Mobile for Android
SlideShare	<a href="http://www.slideshare.net/mobile">http://www.slideshare.net/mobile</a>	
Mobile device detection	Monitor Google Analytics for a usage trend to Android	jQuery Mobile offers mobile device detection tools

## v. Reference of Research Web Links

### i. GBD mobile website

#### jQuery Mobile

- <http://jquerymobile.com/>
- <http://www.mrc-productivity.com/blog/2012/03/how-to-create-home-screen-icons-for-your-mobile-web-apps/>
- <http://jbkflex.wordpress.com/2012/04/17/save-your-mobile-web-app-with-an-icon-to-the-home-screen-iphoneipod/>
- <http://developer.practicalecommerce.com/articles/3373-33-jQuery-Mobile-Tutorials>
- <http://mobile.tutsplus.com/tutorials/mobile-web-apps/build-a-jquery-mobile-survey-app-app-logic-interface/>
- <http://jquerymobile.com/gbs/>
- <http://jquerymobile.com/test/docs/forms/textinputs/>
- <http://www.jqmobi.com/>
- <http://www.jquery4u.com/mobile/50-jquery-mobile-development/>

#### Mobile search

- <http://mobithinking.com/best-practices/mobile-seo-best-practices>

#### Mobile device detection

- <http://webdesign.about.com/od/mobile/a/detect-mobile-devices.htm?rd=1>

- <http://detectmobilebrowsers.mobi/>
- <http://notnotmobile.appspot.com/>
- <http://mobithinking.com/guide-device-detection>

### Social technologies

- <http://www.programmableweb.com/api/usefunnel>
- <http://allthingsd.com/20120425/signs-of-a-pinterest-api-snapguide-adds-mobile-sharing-buttons/>
- Add a Twitter feed widget to normal site that aggregates [CLIENT] Twitter feed with others like MobileActive.org to show users you have a mobile presence and savvy

### Advanced development topics:

- <http://phonegap.com/>
- <http://www.anubavam.com/blogs/building-mobile-cms-website-using-drupal-and-jquery-mobile>
- <http://www.slideshare.net/vivastream/shift-your-game-mobile-social-gaming-9506208>
- <http://jsprunger.com/mobile-architecture-best-practices/>
- If [CLIENT] is interested in hosting and distribution video content globally, look at a cloud services provider such as Amazon Web Services (AWS S3 Storage and CloudFront).
- Check out this app for an example: <http://www.sonosite.com/education/sonoaccess>

### ii. Mobile content optimization

Wordpress blog plugin for mobile

<http://wordpress.org/extend/plugins/wordpress-mobile-pack/>

Slideshare has a mobile website

<http://www.slideshare.net/mobile>

Issuu mobile for Android and soon iPhone + publish to iPad Newstand (Bizzy tested the Android app and found it to be unreliable; Apple app has failed certification multiple times)

<http://www.issuu.com/business/features>

<http://issuu.com/services/>

### ePub documents

- [http://support.apple.com/kb/HT4168?viewlocale=en\\_US&locale=en\\_US](http://support.apple.com/kb/HT4168?viewlocale=en_US&locale=en_US)
- [http://en.wikipedia.org/wiki/Comparison\\_of\\_e-book\\_formats](http://en.wikipedia.org/wiki/Comparison_of_e-book_formats)

### iii. Global SMS solutions and GDHx data visualization apps

The SMS solution and GDHx apps are advanced mobile applications that are likely to be beyond [CLIENT]'s current financial and technical capacity to support. Once you have validated the need for these solutions and the synergy of the solutions with your long-term plans for future GBD survey and data collection, seek project specific funding. For example:

- Federal grants
- International grants
- Donation of in-kind development services
- Co-branding/sponsorship

Before engaging in building the SMS solution or GDHx apps, partner with international faculty to conduct interviews, focus groups, and gather requirements. Make sure you understand the real demand and the complications and limitations of international deployments before committing to them.

### SMS reference links

- <http://www.rapidsms.org/>
  - <http://www.mobileactive.org/howtos/how-rapidsms>
- <http://opendatakit.org/>
  - <http://www.mobileactive.org/research/open-data-kit-tools-build-information-services-developing-regions>
- <http://www.doforms.com/>
- <http://www.reynard.co.uk/Tqube.htm>
- <http://www.google.com/mobile/sms/index.html>
- <http://www.mobiledatanow.com/>

### International SMS cross-carrier solutions

Twilio is the recommended solution to consider first:

- <http://www.twilio.com/>

AT&T (likely to be very expensive for [CLIENT]'s tastes):

- <http://www.wireless.att.com/businesscenter/solutions/email-messaging/smart-messaging-suite/att-global-sms-healthcare.jsp?wtLinkName=SmartMessagingSuite&wtLinkLoc=LN>
- <http://www.wireless.att.com/businesscenter/solutions/email-messaging/smart-messaging-suite/index.jsp?wtLinkName=SmartMessagingSuite&wtLinkLoc=LN>
- <http://www.wireless.att.com/businesscenter/solutions/industry-solutions/vertical-industry/healthcare.jsp>

CDyne and Clickatell look like they have very affordable entry points and API-based solutions. For [CLIENT] to implement RapidSMS or similar solution, an SMS API Gateway would be required:

- <http://www.clickatell.com/>
- <http://www.cdyne.com/api/phone/sms/>
- <http://www.bulksms.com/int/>
- <http://www.solutions4mobiles.com/en/sms-services/sms-hubbing.html>
- <http://www.smsglobal.com/global/en/>

These options would be a bit spendy for [CLIENT]:

- <http://www.mobilemarketingratings.com/node/2>
- <http://econsultancy.com/us/blog/2997-8-sms-gateways-aggregators>

Use with caution, included for completeness:

- [http://en.wikipedia.org/wiki/List\\_of\\_SMS\\_gateways](http://en.wikipedia.org/wiki/List_of_SMS_gateways)
- <http://www.muskurahat.us/sms/international/>
- <http://www.smsroaming.com/content/free-international-sms.html>

## VI. E-mail Discussions with The Nielsen Company Mobile Experts

On May 22, 2012, at 7:06 AM, Bailey, Justin T wrote:

Hi Jeff,

I have a few recommendations for you regarding mobile research. My recent focus has been in developing markets such as Africa, India, and China, so I agree that [mobileactive.org](http://mobileactive.org) is a great resource. There is a group called Jana (<http://jana.com/>) that you might also want to look into regarding global mobile research. Their focus is mainly on crowdsourcing, but the advantage is they have loads of experience in the mobile space in developing markets.

IN the social media space, there are a number of mobile researchers and evangelists that I follow. I'd start with Lenny Murphy (@lennyism) and his blog Greenbook (<http://www.greenbookblog.org/>) He is a champion of all things mobile and has an extensive network of contacts. A definite "influencer" in the mobile research space. I'd suggest checking out his blog, as it provides links to many other companies and individuals doing mobile research, as well as insightful articles by guest bloggers.

As Michael mentioned, we have primarily used SODA by Techneos (now Confrimit). SODA is available on all smartphone Operating systems as an app. If you want basic (non-smart) phones, you might also want to look into Mobenzi (<http://www.mobenzi.com/researcher/>). They provide simple survey solutions for mobile phones. I've personally never used them or know anyone who has, but I think they would be interesting to pursue in developing markets given their unique focus. Both Mobenzi and Jana might have something for SMS-based surveys. Also, there are numerous other survey platforms. You might want to check out Tim Macer's blog on this topic: <http://www.meaning.uk.com/news/mobile-interviewing-the-platforms-favoured-by-software-providers/> comparing the pros and cons of each. It's rapidly changing so even this 2011 post is likely outdated, but still a good starting point.

Lastly, there are several mobile market research groups that you'll want to look into. The Mobile Marketing Research Association is in its first year, but the plan is to create global mobile research standards and best practices and to organize the field of mobile research. It's here: <http://www.mmra-global.org/>. Many of the MMRA members will also be attending and speaking at the Market Research in the Mobile World conference in Cincinnati this July. <http://www.mrmw.net/> It's a great networking opportunity and chance to hear some of the most cutting edge mobile research going on around the globe.

Good luck with your research and please let me know if you have any follow-up questions.

Regards,

Justin

Justin Bailey  
Research Methods COI Manager  
Measurement Science  
Nielsen

Phone 813-366-4670

**On May 15, 2012, at 9:00 PM, Buskirk, Trent D wrote:**

Hi you can consult my recent paper in survey practice February 2012 with Andrus to see some overarching methods for implementing smartphone surveys that expand what Michael has mentioned to you. It might be easier to chat by phone so please feel free to call me and if I can't pick up please leave a voicemail and I will get back to you. My cell is 314-420-2901. Are u going to AApor this year ??

Trent D. Buskirk, Ph.D.

**On May 15, 2012, at 7:23 PM, Link, Michael W wrote:**

Jeff - My deepest apologies for the delay in getting back to you. Since [CLIENT], I've either been on the road or trying to acclimate to some new duties I've inherited. I'm copying two colleagues of mine, Dr. Trent Buskirk and Justin Bailey, both of whom have a great deal more detailed experience in the mobile space than I do and would both be excellent folks to speak with. Trent also comes from the public health sector as a professor for many years. [Trent/Justin - Please feel free to jump in to the conversation...].

In regards to some of your specific questions:

1. I'm personally less embedded with mobile specific groups (I'm more of a mainstream methodologist -- AAPOR, ASA, etc.), but I know Justin and Trent follow some specific mobile communities;
2. Trent and Justin are a great start -- they can also point you to some other folks both in the health arena and outside that area;
3. We've used several -- most frequently we use Survey on Demand App (SODA) by Techneos. Other apps have been homegrown.
4. We use SMS for recruitment and reminders with app-based systems, but not as stand-alone survey tools.
5. Definitely lead -- my view always is, if you've done your homework and there's a vacuum -- fill it! I think you'll find a great deal of interest out there and others in your field who are just waiting for someone to take the lead.

Again, my apologies for the delayed responses -- but I think you'll get a lot of good info from Trent and Justin.

Michael

**On Apr 30, 2012, at 8:33 PM, Mobile Tech Jeff wrote:**

Hi Michael,

Thanks so much for your talk last week, we all appreciate you flying out to share your wisdom with us!

Jill tells me that she mentioned my name to you. I am a graduate student in the UW Advanced Mobile Media Development and Integration course. [CLIENT] is my client for our final group project.

Your talk suggested to me that there is a great deal more research required in the area of mobile surveys and data collection. With that in mind, I have a couple of ideas to help frame our mobile strategy presentation to [CLIENT] that I'd like to run by you. I regret being unable to join your meeting with Jill last week; if you covered any of these in your meeting with Jill, please let me know.

1. Mobile survey and data collection communities of practice I came across the [MobileActive.org](http://MobileActive.org) website this weekend. It appears to encapsulate the preeminent global community of practice for mobile survey and data collection development for health and disease data collection. Are you aware of any other communities of practice that [CLIENT] should consider networking with?
2. Mobile survey and data collection experts Aside from yourself, are there any other experts in your field of study that [CLIENT] should be talking to and following on social media?
3. Mobile survey development tools
4. [MobileActive.org](http://MobileActive.org) has an excellent database of recommended tools. jQuery, which is being used in the [CLIENT] website today, has a mobile survey toolkit. Are there any other data collection and survey development tools that your team at Nielsen has used and could recommend?
5. SMS as a mobile data collection and survey technology Has your research at Nielsen looked into SMS-based technologies? If yes, is there a specific toolset or platform you recommend?
6. Lead or participate in a mobile community of practice?

Based on your knowledge of [CLIENT] and experience visiting with Jill and her team, would you advise them to take a leadership role in forming a mobile community of practice for disease data collection and survey development, or to join an existing community of practice and commit to on-going participation?

Thank you for your time and consideration.

Sincerely,

Jeff \_\_\_\_\_

## VII. Recommended Reading

Go Mobile (the UW Advanced Mobile Media Development and Integration text book)

- [http://www.amazon.com/Mobile-Location-Based-Marketing-Optimized-Strategies/dp/1118167783/ref=sr\\_1\\_1?s=books&ie=UTF8&qid=1338386911&sr=1-1](http://www.amazon.com/Mobile-Location-Based-Marketing-Optimized-Strategies/dp/1118167783/ref=sr_1_1?s=books&ie=UTF8&qid=1338386911&sr=1-1)

Mobile First: book and blog by Luke

- <http://www.lukew.com/ff/entry.asp?933>

A [recent article by eMarketer](#) defines the new smartphone class with over 100 million smartphone members in the U.S. That number could reach nearly 200 million by 2016. One of the key user behaviors they identified is “...to always be “snacking.” The smartphone class doesn’t tolerate dull moments; members turn to their phones for instant gratification.”

Jeff Hansen, Chief Marketing Officer for HipCricket and author of the book [Mobilized Marketing](#) presented at the Seattle Mobile Mixer event on in Kirkland on 5/15/12. Jeff described a key learning from HipCricket’s extensive mobile marketing; that clients who do not have a clearly identified and empowered mobile champion fail to follow through on their mobile initiatives.