The State of the Union of Mobile Marketing

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Introduction

Mobile phone usage is exploding in the United States and globally. New devices and form factors, such as smartphones, are cropping up and many new services are becoming available. As with the latest wave of Internet services, many of these mobile services plan to support themselves through marketing, such as advertising. Marketing on a mobile phone has many attractive benefits, including: 1) the fact that only one person uses each phone leading to the ability to target, 2) the ability to know where a user is (location information) and 3) the fact that the person is mobile and more likely to act on an advertisement or promotion.

The interest in mobile marketing is an offshoot of the general interest in Internet startups. We see the mobile space as the next frontier for entrepreneurship, very similar to when the Internet was first becoming commercial. At that time, Internet standards were emerging, there was a lot of excitement about the Web and many people were trying new things but no one knew what would work. We see many parallels with that time and with the state of mobile technology today. This project is a way to understand how this new market is both similar to and different from the first Internet wave of entrepreneurship.

The team sought to understand the current state of mobile marketing, including the roles of participants in the industry, expected outlook in terms of size of the overall market, expectations of participants such as advertisers, and barriers or drivers of adoption. This report contains our understanding of where mobile marketing is today and what factors have led the industry to this point.

What is Mobile Marketing?

Mobile marketing is defined as delivering a marketing message or offer to current and potential customers through their mobile devices. It encompasses various methods of reaching that customer, as detailed below, and various objectives in doing so.

Mobile marketing is virtually inseparable from mobile data and content services, as these are seen as the key vectors that will allow the delivery of the marketing message to the mobile user. Several consumer surveys have found that mobile users in general are willing to receive and view adverts in return for free or lower-cost mobile apps. One survey from Informa Telecoms & Media reveals that music, games and mobile TV/video are the most wanted mobile content services mobile users also want for free. [1]

Characteristics of Mobile Marketing

As a marketing channel, mobile has a group of characteristics that no other marketing channel can match.

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[1] Chau, F. (2006) "Ads Migrate to Mobile Handsets", BusinessWeek Retrieved Feb 20, 2007 from http://www.businessweek.com/globalbiz/content/nov2006/gb20061128_210391.htm.

Ubiquity

Mobile phones are ubiquitous – nearly everyone possesses one. Mobile phones have higher penetration than computers with Internet access. One recent study from Park Associates, a Dallas-based technology market research firm, showed that 29 percent of U.S. households, or 31 million homes, do not have Internet access and do not intend to subscribe to an Internet service over the next 12 months.[2] In contrast, eMarketer projects that 296.8 million Americans will have a mobile by the end of 2010, up from 207.9 million in 2005, representing over 95 percent of the country's population.[3]

This ubiquity means that it will be very difficult to find someone who is NOT reachable via the mobile channel.

Immediacy

The mobile channel is also an immediate channel, in two key ways: a) the user can be reached immediately, and b) the user can respond immediately.

It is important to remember that mobile is first and foremost a communications channel, and one which is readily accessible because it is almost always turned on. When mobile owners describe how they use their phones, fully 52% of all cell owners say they keep their phone on all the time and 81% of cell-only users say the device is always on.[4] As such, any messages sent to the device are likely to be received and responded to immediately.

Secondly, the mobile channel makes it extremely easy for a mobile user to respond to a message. In online and traditional forms of marketing, the desired response requires high effort – the user has to place a call, go online, or visit a store. With mobile marketing, the fact that the marketing message is sent to the very communication device means that the threshold of effort is vastly lowered. A link can contain an embedded phone number which can be called simply by clicking on it – no numbers to look up, remember or dial. Because the telephone is nearly guaranteed to be used by a single person and the carrier has the user's address on file and handles all of the billing, true one-click purchasing can be enabled whereby the user can simply click on a "buy" button and be ensured that the product will be delivered to their correct address and that they will be billed later. The user has a strong incentive to pay the bill when it comes due, since the carrier has the leverage that it can cut off the user's means of communication via mobile if they don't pay. In short, the mobile phone has become an instant response channel whose characteristics very few other, if any, marketing channels can match.

Users have confirmed that this immediacy of communication and access is desired. In a recent study, having instant access to the Internet anytime, anywhere was cited as priority

[2] Reuters (2007) "Many Americans See Little Point To Web: Survey", Reuters Retrieved Feb 20, 2007 from http://www.informationweek.com/internet/showArticle.jhtml?articleID=198500549

[3] Belcher, J. (2006) "Mobile Data Services", iMedia Connection Retrieved Feb 20, 2007 from http://www.imediaconnection.com/content/11319.asp

[4] Rainie, L., Keeter, S.(2006) "Cell phone use", Pew Internet and American Life Project Retrieved Feb 20, 2007 from Retrieved Feb 20, 2007 from http://www.pewinternet.org/pdfs/PIP_Cell_phone_study.pdf

in life for 48 per cent of those who owned a PDA, notebook or laptop with wireless access.[5]

A key benefit of this immediacy is that it allows for instant gratification, providing a powerful tool for marketers. The mobile channel can both accept input and deliver an instantaneous response, providing instant gratification for the consumer and instant insight to the brand[6]. For example, a mobile user can enter a contest and find out immediately if they've won.

Another key benefit of this immediacy is that it allows for targeting a message by time of day, something which is not possible in other mediums. A mobile user could be sent a message about a restaurant at lunchtime, and because of the immediacy of delivery the marketer can be fairly assured that the message would be received at approximately that time. In contrast, a message delivered via browser cannot provide this same level of targeting because the user may have had the browser open to that particular page for some time. There is no guarantee or expectation of a narrow-enough time window in that case.

Personalized

Mobile marketing is above all a personalized marketing channel because the marketer is guaranteed to be having a one-to-one conversation with a single individual. This opens up tremendous opportunities for the marketer to get to know the individual behind a particular mobile phone and to better target their offer or message to that individual.

This is possible because there exists a unique identifier for every mobile user, and that identifier can be made available to the marketer. In contrast, browser-based marketing cannot be personalized beyond a certain level for two reasons: 1) computers are sometimes shared, such as in work, school or home settings, making it impossible to guarantee who is on the computer, and 2) no unique identifier for each computer exists. Some would argue that the Internet Protocol (IP) address required for a computer to access the internet could be used as a unique identifier, but while this identifier may be mostly unique, it is not truly unique. IP addresses are not assigned permanently and can be changed, and they are sometimes masked behind firewalls. As such, IP addresses cannot be used in the same way that a mobile phone number can be.

Targeting provides two benefits: 1) the marketing message is more effective, and 2) the user is more willing to tolerate the message. Findings from a recent survey, conducted by Harris Interactive and commissioned by Enpocket, reveal that mobile users are far more accepting of mobile advertising when it is relevant. The Consumer Mobile Advertising report, conducted with more than 1,200 mobile Internet users across the US, Europe and

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[5] RBC Capital Markets Press Release, March 2, 2006, "Consumers hesitate at the mobile technology check-out counter", Retrieved Feb 20, 2007 from http://www.rbc.com/newsroom/20060302mobile.html
[6] Baker, M. (2006) "10 Tips for Going Mobile-- Today", iMedia Connection Retrieved Feb 20, 2007 from http://www.imediaconnection.com/content/12622.asp

India, shows that targeted mobile advertising is 50% more acceptable to mobile Internet users than untargeted ads.[7]

Linked With the Physical World

Because the mobile device is carried on a person wherever they go, it provides a unique opportunity to link a marketing message to the physical world. This happens through one of two major mechanisms: 1) linking a message to a location (location-based services) and 2) linking a message to a physical object.

Location-based services are possible because of Federal regulation that required mobile carriers to be able to pinpoint the location of a user for 911 emergency purposes. The vast majority of carriers chose to meet this requirement through the inclusion of GPS chips or triangulation technologies that provided the user's location. Of course, once this location data is generated, it can be made available to marketers and service providers to improve their targeting or services.

Messages and services are also increasingly becoming linked to physical objects. This allows a mobile user to request or see more information on whatever may be immediately in front of them. One startup, 4INFO, has a partnership with Gannett Newspapers in which certain sections and articles have mobile shortcodes embedded within them. The user can send a text message to that shortcode to obtain more information, such as sports scores, weather, etc[8]. Of course, along with that information comes a message targeted to that particular content.

Another method of linking is made possible by the vast numbers of mobiles with cameras. Under this scenario, users take pictures of specially embedded codes and use that data to retrieve messages or services. One U.K. firm, World Forum Research, believes that the success of using mobile phones as code readers in Japan and Korea, means that 70% of U.S. and European consumers will use 2D codes to activate content on their phones by 2009. These mobile "hyperlinks" will use a visual code, an audio cue or even some sort of touch or proximity signal to pull down to the phone some piece of content or WAP link. In the ideal world, the user can aim the phone camera at a movie poster and get times and reviews. They can swipe their phone across a print ad and a coupon shows up on the handset.[9]

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[7] Chau, F. (2006) "Ads Migrate to Mobile Handsets", BusinessWeek Retrieved Feb 20, 2007 from http://www.businessweek.com/globalbiz/content/nov2006/gb20061128_210391.htm.

[8] Conversation with Zaw Thet, 4INFO CEO and Co-Founder

[9] MediaPost Publications - The Revenge of the CueCat - 03/06/2007, http://publications.mediapost.com/index.cfm?fuseaction=Articles.showArticle&art_send_date=2007-3-6&art_type=38

Marketing Mechanisms

US mobile marketers have created numerous and varied campaigns to reach current and potential customers. While the individual campaigns have differed in their approach, content, and effectiveness, three main mechanisms exist in the US to reach mobile users:

Messaging

Short message service is a standard for telephony messaging systems that allows sending messages (also known as text messages or SMS) between mobile devices that consist of short messages, normally with text only content. Mainstream brands have begun efforts to entice customers to send an SMS to a short number, or 'shortcode', in order to win a prize, enter a contest, or participate in a poll. Shows like American Idol pioneered the use of SMS text as a marketing mechanism by having users send SMS texts in order to vote for their favorite participant, which was then used to select a winner. Even less exotic brands, like Crest Toothpaste, have begun using mobile marketing to entice customers to send a text in order to win prizes.

One of the sticky features about this mechanism is that prizes, contests, and voting/polls provide the marketing organization with a population that can later be targeted for additional marketing opportunities. In a way, these users become a subscriber base for marketing material specific to a particular brand or product. For example, Clear Channel radio station WXKS (KISS FM) in Boston offers a 'text-club' where listeners receive mobile alerts and promotions, and can interact with DJs during the broadcast. In a recent contest to win a breakfast with a pop star, 48% of the club sent SMS texts to the station in order to register. Once subscribed, 'text-club' members receive information and promotion such as locations of radio-sponsored events and are able to request songs via SMS to DJs.

Some forward-looking brands are moving beyond simple text and now employ the next-generation of texting, known as multimedia messaging (MMS). MMS is a standard for telephony messaging systems that allows content beyond text, such as images, audio, video, and rich text. Starbuck's 'summer' campaign participants received clues to each week's quiz answer via SMS, and they could submit their response by sending a photo via MMS or email of something that represented the correct answer. Starbucks was also able to target these participants with additional marketing material including information on new products, discounts, and promotional material.

Mobile browser

Although the majority of consumers are unaware of it, virtually every new phone comes equipped with a built-in browser that enables advertising similar to today's Internet. Major media sites, like The New York Times', sell ad inventory on their mobile Web sites. Advertisers are able to display messages to users in a format they are familiar with, banner adds. Marketers can target specific messages based-upon demographic information regarding the visitors to a particular mobile Web site. Additionally, vendors like JumpTap, which powers search for carriers like Alltel, sell ad keywords just as Google does for users that are using their mobile Web site search functions.

Applications and content

Marketers have begun to offer applications and content that is entirely ad-supported. Users are offered discounted or free services if they opt to allow adds to be delivered to their handsets. Earlier this year, Mobizzo, part of Fox Mobile Entertainment, teamed with Toyota to market both the Prison Break TV show and Toyota's new youth-targeted vehicle, the Yarus. Each of the two-minute videos delivered to a user's mobile phone, known as Mobisodes, was preceded by a 10 second ad by Toyota's Yarus. Fox saw large numbers of TV viewers choosing to get sneak-previews and additional content regarding the show, and Toyota saw the sponsorship as a unique and compelling way to reach a younger demographic. With the success these approaches, there has been an increased level of interest from advertisers in leveraging digital platforms, like mobile, to extend their reach and brands.

Another example comes from Virgin Mobile USA. The mobile operator plans to allow people to use their mobile services for no money at all. They will, however, have to pay by watching advertisements. The program, called SugarMama, lets people earn one minute of talking time by watching thirty second commercials on a computer or receiving text messages on their phones, then answering questions to prove they were, in fact, paying attention. While SugarMama may be the first ad-supported mobile phone service in the United States, several companies have taken similar approaches, with limited success, by offering free Internet access backed by advertising.

Demographics

One subtle aspect of mobile marketing is that it enables marketers to more easily reach certain demographics. It turns out that wireless users are a self-selected group that exhibits different behaviors and demographics than Internet users in general.

Wireless Users

One difference in behavior was discovered by the Pew Internet and American Life Project, which surveyed 798 US internet users about their wireless habits and sampled almost 2,300 people overall. It found that some 34% of internet users have logged onto the internet using a wireless connection either around the house, at their workplace, or some place else. While 54% of internet users check e-mail "on the typical day," 72% of wireless users check daily. Just under half of wireless users get news online every day, compared to 31% of internet users at large. The report speculated that wireless might allow for high-intensity use, which supported the idea that "the key feature of mobile communication is connectivity and not mobility".[10] The report notes that the differences between wireless and home broadband users are statistically significant and notable

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[10] Pew Internet: Wireless Internet Access, http://www.pewinternet.org/PPF/r/203/report_display.asp

because most wireless users (80%) have broadband connections at home.[11] Users of the wireless internet also tend to be younger than internet users in general.

18-to-34 Youth Demographic

The 18-to-34 youth demographic is one of the most sought-after groups that advertisers target. It is this very group that engages their mobiles the most, and thus is one of the easiest groups to reach via the mobile channel. People under 30 were also the most likely group to access the internet wirelessly. [12]

A recent survey by the Pew Internet Center makes it clear that younger cell users – those between ages 18 and 29 – have different experiences with their cell phones than do older Americans. Compared to older cell owners, young adults are more likely to reserve their calls until the hours that do not affect the minutes used in their rate plan; more likely to make spontaneous calls when they have free time they want to kill; more likely to use their cell phone to avoid disclosing where they are; and more likely to feel burdened by the intrusions the cell brings into their lives. In addition, they are more likely to experience sticker shock when monthly bills arrive (47% vs 23-38% for the other demographic groups).

Their overall feelings toward cell phones are more positive: 32% of the youngest cell phone users say they couldn't live without their cell, compared with 18% of cell owners ages 30 and older who say that. Fully two thirds of younger cell owners (67%) say they always have their cell phone on. Among those who have both a cell and a landline, younger cell owners are more likely than older ones to prefer their cells: 49% of them use the cell more, compared with 24% of older cell owners.

It is not surprising, therefore, that the young are also the most likely to use extra cell phone features, or that they want to acquire whatever interactive media and communications capabilities are available to them. For instance, 36% of younger cell users say they would like the option of having instant messages sent to their cells, compared with 19% of cell owners ages 30 and older who say they want this feature. If they could limit the IM forwards just to select members of their buddy lists, young cell owners would even more avidly embrace the feature: 50% say they would like that, compared with 34% of those 30 and older.

Mobile marketers are picking up on mobile as a way to reach this demographic, as this demographic has also received more unsolicited messages than the other demographics, 28% vs 13-15%.[13]

This demographic is also very easy to target, since they are more responsive to certain methods of marketing than other groups. According to a Mobile Data

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[11] Horrigan, J. (2007) "Wireless Internet Access", Pew Internet and American Life Project Retrieved Feb 20, 2007 from http://www.pewinternet.org/PPF/r/203/report_display.asp
[12] Pew Internet: Wireless Internet Access, http://www.pewinternet.org/PPF/r/203/report_display.asp
[13] Pew Internet: Cell phone use
http://www.pewinternet.org/pdfs/PIP_Cell_phone_study.pdf

Association/M:Metrics survey conducted in January 2006, nearly a quarter of the highly-sought-after 18 to 34 demographic participated in some form of SMS voting, either through television or radio. The same study revealed a 60 to 40 preference by men for SMS voting, a data point sure to throw gasoline on the fire of marketers' interest in reaching this population. [14]

The implication of this demographic difference is that the early mobile marketing initiatives most likely to succeed will be those that target this particular demographic.

Market Size

As with any emerging medium, estimates of the potential market size vary wildly. Several analysts have attempted to forecast the size of mobile marketing directly. Another useful proxy is the forecasts for local advertising, since a big chunk of local advertising is expected to become mobile advertising.

Mobile Marketing

It is no secret that mobile phones are attractive to advertisers and marketers. In March 2006, BusinessWeek and visiongain projected that U.S. mobile advertising and marketing spending will increase rapidly from 2005, reaching $602.3 million in 2009. [15] In contrast, a recent eMarketer report, for example, predicts that brands will spend nearly $5 billion on wireless advertising, up from $421 million in 2006. [16] In another estimate, the Yankee Group found that the mobile-phone ad market brought in just $200 million in 2006, vs. $16 billion for online ads. Nonetheless, ABI Research expects revenues for location-based services in North America to spiral from less than $1 billion last year to more than $13 billion by 2011, partly because of the cheap GPS chips and free Google maps that power some devices. [17] Another recent study from Jupiter Research predicted that mobile ad spending would more than double - from an anticipated $1.4 billion this year to $2.9 billion in 2011. [18] Finally, according to Informa Telecoms & Media, worldwide spend on mobile advertising and marketing will reach over $11.35 billion by 2011, affording consumers cheaper mobile content as advertisers come to terms with the medium. [19]

The variety and divergence of estimates and analysis shows that getting a true handle on the size of the opportunity is difficult. What can be said is that the consensus is that the

[14] iMedia Connection: The U.S. Mobile Messaging Market
http://www.imediaconnection.com/content/11937.asp
[15] iMedia Connection: Mobile Data Services
http://www.imediaconnection.com/content/11319.asp
[16] iMedia Connection: iPhone Seeds Mobile Marketing Growth
http://www.imediaconnection.com/content/13331.asp
[17] A Wireless Street Fight -- Thursday, Feb. 15, 2007 -- Page 1 – TIME,
http://www.time.com/time/magazine/article/0,9171,1590458,00.html
[18] P&G, Others Build Mobile-Marketing Budgets · Marketing VOX,
http://www.marketingvox.com/archives/2006/12/01/pg-others-build-mobile-marketing-budgets/
[19] Ads Migrate to Mobile Handsets,
http://www.businessweek.com/globalbiz/content/nov2006/gb20061128_210391.htm

opportunity is huge, the industry is at a very early stage, and there is much uncertainty as to how it will develop or who the winners will be.

Local Advertising

We can also look at the local advertising market to get a sense of the overall size of the mobile marketing market. This is because a large portion of local advertising is expected to be mobile, so market size estimates for local advertising should set a lower bound for the mobile marketing market. For example, the Kelsey Group claims that 40 percent of all online search queries are for local businesses, and an amazing 92 percent of local searches convert later offline -- and adding mobile maximizes that marketing.[20]

One estimate is that U.S. businesses spend $90 billion annually on local advertising. [21] According to The Kelsey Group's latest forecast, the market for pay-per-call advertising is expected to reach $3.7 billion in the next four years.[22] Similarly, Borrell Associates state in a report that local online advertising will grow 31 percent in 2007, peaking at $7.7 billion. Local paid search will mushroom by 86 percent in 2007 to $1.8 billion, and local email advertising will grow to $233 million, a 54 percent increase.[23] Another estimate from The Kelsey Group's Global Directories Forecast 2007, estimates that advertising revenues from print Yellow Pages, Internet Yellow Pages and Local Search will grow from $30.6 billion in 2006 to $38.9 billion globally in 2011, representing a 4.9 percent compound annual growth rate.[24]

As when estimated directly, using local search as a proxy also indicates a huge potential for mobile marketing.

Early Attempts

Given the huge advantages inherent in mobile marketing, the question arises as to why it has not taken off before. Mobile phones have existed for nearly half a century and have been popular for more than a decade. Text messaging has also existed for over a quarter century, and has long been available on handsets. Given that, were any attempts previously made to capitalize on this channel?

It turns out that several attempts by big players *were* made. In his blog, Mario Tapia recalls meeting a guy from London at a workshop held in December of 2000. This individual worked at Doubleclick, a leading web advertising company. They had started experimenting with banner ads on mobile sites and conducted this effort for more than a

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[20] iMedia Connection: Convert Local Search into Mobile Sales
http://www.imediaconnection.com/content/13600.asp
[21] iMedia Connection: Convert Local Search into Mobile Sales
http://www.imediaconnection.com/content/13600.asp
[22] iMedia Connection: Convert Local Search into Mobile Sales
http://www.imediaconnection.com/content/13600.asp
[23] iMedia Connection: Convert Local Search into Mobile Sales
http://www.imediaconnection.com/content/13600.asp
[24] Center for Media Research - Global Ad Growth Rate on Internet Yellow Pages Outpacing Print Four to One, http://www.centerformediaresearch.com/cfmr_brief.cfm?fnl=070320

year until abandoning it.[25] Similarly, he describes an effort by AT&T in 2001 to show interstitial Ads on Pocketnet (an early mobile internet service) for a short period before it was pulled due to subscriber complaints. [26]

Mario also describes how on June 1 2000, NTT DoCoMo, Dentsu Inc. and NTT Advertising Inc. jointly established D2 Communications Inc., an advertising agency for the i-mode service. In Japan, mobile ads are now mainstream for both on deck and offdeck. [27]

In his blog, Mario attributes these early failures to the lack of several key technical requirements. Screen sizes were small and mostly monochrome; markup languages had not specifically supported features to allow easy mobile ads, and bandwidth was limited and bulky ads (relatively speaking) were increasing latency times. To this he added a business factor – most carriers charged the mobile user for the bits to download. [28]

Most of the technical factors identified by Mario have been addressed. Screen sizes now average at least an inch and a quarter square and are in color on most phones. Bandwidth, while not at widespread broadband speeds yet, is two generations beyond what it was back then. The business hurdles still remain, but there is tremendous activity by virtually all participants in the industry to try to find business models that work.

Industry Structure

The current state of mobile marketing arises because of the structure of the industry and the characteristics, motives and capabilities of each of the players within the mobile marketing value chain. While this structure provides some of the benefits, such as the ability to bill directly through a carrier, the structure mostly creates the remaining challenges that have to be addressed before mobile marketing can reach its true potential.

Ad Agencies

Advertising agencies are the main drivers of traditional marketing and are expected to play a key role in mobile marketing. Ad agencies work with brands and marketers to create advertising campaigns and then implement those campaigns via the specified marketing channel.

One of the primary issues is the newness of mobile marketing. To understand how new forms of advertising get adopted, you need to understand how advertising is bought today.

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[25] Mario Tapia: Mobile Ads Part I - The Past History of Mobile Ads
http://www.mariotapia.com/moleskin/2007/01/mobile_ads_part.html
[26] Mario Tapia: Mobile Ads Part I - The Past History of Mobile Ads
http://www.mariotapia.com/moleskin/2007/01/mobile_ads_part.html
[27] Mario Tapia: Mobile Ads Part I - The Past History of Mobile Ads
http://www.mariotapia.com/moleskin/2007/01/mobile_ads_part.html
[28] Mario Tapia: Mobile Ads Part I - The Past History of Mobile Ads
http://www.mariotapia.com/moleskin/2007/01/mobile_ads_part.html

In most instances, ad agencies control the ad budgets for the largest advertisers in the world. Within those ad agencies, one of the functions is media buying. A media buyer's role is to optimize reach (and sometimes quality of audience) for their client across all possible advertising channels. The problem with new forms of advertising is that they are often not represented in the media buyers' spreadsheets and models. And if it's not in the model, it doesn't get allocated any ad spend. [29]

Agencies do see the potential of mobile marketing, but lack the in-house capabilities to deliver on that vision. Agency BBDO and marketer Coca-Cola UK have each made claims that mobile will eventually replace TV as the most important medium for advertisers. Other agencies such as Oglivy, Publicis and Saatchi are already conducting mobile marketing campaigns using text messaging. Yet many consumer-brand companies and their agencies lack the knowledge and technology to move beyond limited message-based mobile campaigns. Agencies and their clients are failing to take full advantage the cell phone-- what an executive at Quigley and Simpson calls "an exceptional response mechanism in the pocket of nearly every consumer."[30]

A recent study by Forrester further highlighted that the web and related digital technologies are exposing major weaknesses in traditional agency skill sets. This trend, the study finds, is working in favor of specialist digital shops, which marketers are increasingly calling upon to fill skill gaps. "Today, agencies must deliver technology--in addition to creative--expertise, and many traditional agencies struggle to adapt," Peter Kim, Forrester Research analyst and author of the report, said. Indeed, according to the study, marketers today view ad agencies as the least competent among service providers to deliver marketing technology.[31]

This lack of in-house knowledge has created a business opportunity, one which Michael Becker hopes to capitalize on via his startup, iLoop Mobile[32]. His startup, among others, provides technology that allows traditional ad agencies to handle mobile campaigns entirely in-house, instead of outsourcing them to specialists. As Michael Becker puts it, the ad agencies saw the amount of business going to specialty firms and want to capture that revenue for themselves, both for the revenue and to prevent competitors from sprouting up.

One key challenge for traditional ad agencies is that mobile works best as an integrated channel where branding and direct response are handled within a single campaign. Traditionally, agencies have separated branding duties from direct response media. The consensus among a panel of experts appearing at OMMA Hollywood earlier this year is that agencies not ready. Agency silos remain the order of the day, erecting boundaries between brand and direct response media. "Consumers, especially younger ones, if they

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[29] New forms of advertising are hard « Lightspeed Venture Partners Blog, http://lsvp.wordpress.com/2007/02/19/new-forms-of-advertising-are-hard/
[30] iMedia Connection: Understanding Mobile Marketing, http://www.imediaconnection.com/content/8758.asp
[31] MediaPost Publications - Digital Shops Exploiting General Agency Skill Gaps - 02/27/2007, http://publications.mediapost.com/index.cfm?fuseaction=Articles.san&s=56138&Nid=27793&p=386070
[32] Conversation with Michael Becker,

see something in any form of media, they're going to want to go further with it," said Tim Hanlon, senior vice president-Ventures Group, at Publicis Groupe's Denuo. "Agencies should be de-siloing to make that expression both a branded and Direct Response (DR) vehicle," whether it's a TiVo vehicle or a telescope unit, "a little TV with a DR component," adding: "Is that the direct marketing agency's responsibility or the brand agency's? I think it's both, so why do have two separate groups?"[33]

Traditional ad agencies have been addressing these challenges by developing or acquiring new capabilities and by refocusing on emerging media. For example, on the heels of its $1.3 billion acquisition of Digitas, a specialist firm in new media, Paris-based agency holding company Publicis Groupe plans to accelerate its position in digital media and interactive marketing services with a goal of deriving 25% of its total company revenues from digital interactive and mobile marketing services by 2010.[34]

Handset Makers

Handset makers have traditionally had little power in the U.S., as most carriers subsidized handset purchases by consumers, giving them a large say in which handsets became popular. The carriers also control closed networks, which means that they can set requirements for devices which connect to those networks, and thus have the power to approve or reject new devices on their network. Because of this, handset makers have traditionally innovated mostly within the handset, and have left the provision of services and marketing to others within the value chain.

This attitude is now changing, and traditional handset makers have become eager for a piece of the mobile marketing opportunity. For example, on March 06, 2007, Nokia announced two new mobile advertising services. Nokia Ad Service is a fully managed service for advertisers to conduct targeted advertising on mobile services and applications. Nokia Ad Service consists of a group of mobile publishers forming a mobile ad network and a platform to deploy, manage and optimize mobile advertising campaigns. Nokia also introduced Nokia Advertising Connector, a private label service for third party Publishers and Advertising Aggregators that want to extend to relevant mobile advertising. Nokia Advertising Connector operates as an intelligent switch, selecting between text, visual, audio and video ads - depending on the user's context - and feeding the ad to the device.[35]

With these entries, Nokia has expressed the intent to capture some of the opportunity for itself. While they do control the handset, a desirable part of the value chain, it remains to be seen how the other industry participants, notably the carriers, respond.

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[33] MediaPost Publications - Agencies Warned: In Digital Media, Change Or Die - 03/22/2007,http://publications.mediapost.com/index.cfm?fuseaction=Articles.san&s=57452&Nid=28566&p=386070
[34] MediaPost Publications - Publicis Eyes More Acquisitions, Organic Growth In Digital Media - 02/28/2007,
http://publications.mediapost.com/index.cfm?fuseaction=Articles.san&s=56294&Nid=27824&p=386070
[35] Nokia announces platforms to connect advertisers and media publishers with mobile
March 06, 2007, http://www.nokia.com/A4136001?newsid=1109788

Carriers

The U.S. market for cellular and personal communications services had an estimated 207.5 million subscribers and operator revenue of more than $122 billion at the end of 2005, according to Gartner Research. While there are numerous smaller operations and resellers of mobile services, the market remains dominated by the top national players, which have the advantage of having large national network coverage areas and roaming agreements in areas that they do not directly serve. Additionally, a recent period of consolidation has bolstered the biggest players with the claimed benefits expansion of their network and marketing presence, economies of scales in back-office and network operations, and more leverage and negotiating power over equipment suppliers, handset providers, and other carriers when negotiating network roaming agreements. Recent merger activity includes Sprint/Nextel, Cingular/AT&T Wireless, and Alltel/Western Wireless. Further consolidation can also be expected in the market as other, smaller carriers merge or sell off their assets

Figure 1: Mobile service connection levels and recent growth rates for the top five wireless service providers in the U.S. market

U.S. Wireless Market Share

	Connections (Millions) Year-End 2004	Market Share (%) Year-End 2004	Connections (Millions) Year-End 2005	Market Share (%) Year-End 2005	Connections Growth Rate (%) 2004-2005
Cingular Wireless	49.109	27.1	54.144	26.1	10.3
Verizon Wireless	43.816	24.2	51.337	24.7	17.2
Sprint Nextel	36.555	20.2	42.131	20.3	15.3
T-Mobile USA	17.314	9.5	21.690	10.5	25.3
Alltel	10.021	5.5	10.662	5.1	6.4
Others	24.565	13.5	27.531	13.3	12.1
Total	181.380	100.0	207.495	100.0	14.4

Notes: Sprint Nextel includes Sprint PCS plus Nextel for 2004.
Alltel includes Western Wireless for 2004.

Source: Gartner Dataquest (March 2006)

In overall trends, subscriber growth remained strong in the U.S. wireless services market in 2005 (growing 14.4 percent compared with 2004); however, we expect growth rates to decline during the next several years (largely as a result of already high penetration rates and a maturing market). Pricing stabilized for the most part in 2005, and average revenue per unit (ARPU) was relatively the same at year-end 2005 as it was at year-end 2004. We expect ARPU to slightly decline for the next few years and then start to slightly increase from 2008 through 2010. Churn also remained steady from the end of 2004 to the end of 2005 at an overall average rate of 2.4 percent, and we expect little change in overall average churn rates for the next few years. Some carriers have made strides in decreasing churn by offering two-year contracts, offering incentives to stay with the carrier,

introducing family calling plans (although these have also contributed to lower ARPUs) and improving network coverage. Still, churn could be affected by the appearance of more mobile virtual network operators (MVNOs) in the U.S. market.

AT&T Wireless

AT&T Wireless, formerly Cingular Wireless, is the largest U.S. wireless company. In March 2006, AT&T/SBC announced plans to acquire BellSouth, which will put the operator under single ownership. AT&T Wireless's network covers the top 100 U.S. markets and more than 270 million people (or about 90 percent of the total population) in the U.S. Internationally, AT&T Wireless will provide roaming to more than 180 countries, along with data roaming to more than 100 countries.

AT&T Wireless launched UMTS in limited markets in 2005 (with plans to increase coverage to most major markets by year-end 2006) and conducted a Near Field Communication trial in Atlanta, Georgia, between December 2005 and April 2006. This technology allows customers to use their mobile phones to make payments and access specialized content. Cingular has MVNO agreements with TracFone, EZLink, Cool Mobile and some smaller MVNOs.

Verizon Wireless

Verizon Wireless is the second-largest wireless communications provider in the U.S. Verizon Wireless is jointly owned by Verizon (with 55 percent) and Vodafone (with 45 percent). Verizon Wireless' network reaches more than 250 million people in the U.S., and the company has international roaming agreements in more than 170 countries. Verizon Wireless' network is based on CDMA, with evolution-data only (EV-DO) covering 60 percent of its market as of the first quarter of 2006. Verizon has an MVNO agreement with Amp'd Mobile, which launched its nationwide services in January 2006, and with Helio, which plans to launch services in 2006.

Sprint Nextel

Sprint operates an all-digital national wireless CDMA network, rolling out EV-DO in the U.S. to 190 million points of presence by year-end 2006. Nextel Communications has an all-digital wireless (Motorola) iDEN network in the United States. The two companies completed their merger in August 2005 and became Sprint Nextel, the third-largest wireless service provider in the U.S. The company has made several more acquisitions, including US Unwired, Gulf Coast Wireless and IWO Holdings in 2005 and Alamosa Holdings, Enterprise Communications and Velocita Wireless in 2006; it plans to complete the acquisition of Nextel Partners in the second quarter of 2006, which will add about 2 million connections to its current total. In April 2006, Sprint Nextel announced plans to acquire affiliate UbiquiTel, with more than 450,000 direct subscribers. Sprint Nextel also has a subsidiary, Boost Mobile, which primarily targets the youth market and competes with MVNOs operating in this segment. Boost Mobile had more than 2.6 million connections at the end of 2005. In addition to Boost, Sprint Nextel has

MVNO agreements with Disney Mobile, Mobile ESPN, Movida and Virgin Mobile. The company signed reseller joint-venture agreements in November 2005 with cable companies Comcast, Time Warner Cable, Cox Communications and Advanced/Newhouse Communications — with services expected to launch in 2006 via these providers. Also in 2006, Sprint Nextel plans to spin off its local landline business, which will be known as Embarq.

T-Mobile USA (Deutsche Telekom)

T-Mobile USA is the fourth-largest provider of U.S. wireless communications services, with a network based on GSM technology, using GPRS and newly launched EDGE technologies. The T-Mobile USA network reaches more than 268 million people in the U.S. (including roaming and other agreements), and the company operates a Wi-Fi network with more than 7,400 public access "hot spots." T-Mobile offers international coverage in 186 countries.

Alltel

Alltel is a smaller, regional player, ranked No. 5 in the U.S. wireless services market, but it still has more than 10.5 million connections. Alltel operates a CDMA network with EV-DO, serving more than 35 states. The company has announced plans to spin off its fixed wireline business in 2006 (similar to the plans announced by Sprint Nextel). Alltel has grown substantially over the past few years via acquisitions of several smaller providers — in particular, Western Wireless (in August 2005); some assets of Cingular Wireless (formerly part of AT&T Wireless) and Public Service Cellular of Georgia (in 2005); and First Cellular of Southern Illinois (in May 2006) — and it plans to acquire Midwest Wireless in 2006. Alltel's network covers about 95 percent of the U.S. population (with its roaming and other agreements). The company has not yet signed any MVNO agreements.

The incumbent U.S. operators (Cingular, Verizon Wireless, Sprint Nextel, T-Mobile) have seen steadily declining ARPU for voice services as they try to grow their wireless data ARPU. In November 2005, eMarketer sketched the voice and data ARPU shifts over time for the big four incumbent operators. On average, voice ARPU declined by 3.6 percent between 2004 and 2005, a trend that seems to be holding for 2005 and 2006 as well.

Mobile Virtual Network Operators (MVNOs)

MVNOs started popping up in the U.S. market in 2002, with a more-significant number of market entries in 2005 and more planning to launch services. MVNOs don't have their own network facilities; rather, they initiate agreements with other wireless service providers to use their networks and then contract with mobile phone equipment vendors to get specialized/customized phones to offer to their subscribers. Generally, MVNOs also offer specialized content. The combination of specialized/customized phones and content allows MVNOs to target particular market segments, such as the youth market, sports fans and music fans.

Figure 2: MVNOs in the U.S. Market

MVNOs in the U.S. Market

	Affiliated Service Provider	Date Services Launched	Specialty Area
Amp'd Mobile	Verizon Wireless	January 2006 (nationwide)	Youth market — music fans
Boost Mobile	Subsidiary of Sprint Nextel (iDEN network)	2002	Youth, prepaid market — Boost is actually a subsidiary of Sprint Nextel
Cbeyond (BeyondMobile)	Not identified (but believed to be Sprint Nextel or Verizon)	2006	Small business clients (as part of bundled offering)
Cool Mobile (cool.Prepaid)	Cingular Wiress	2006	Flat-rate prepaid service
Disney Mobile	Sprint Nextel	Planned for mid-2006	Families
EZLink	Cingular Wireless (EZLink is a subsidiary of DBS Communications)	DBS founded in 1998	Prepaid market
GTC Wireless (previously GTC Telecom)	Not identified	2005	Bundled local, long-distance and wireless offering (primarily to residential market)
Helio	Verizon Wireless	May 2006	Youth (high-tech) market; partnered with MySpace
Kajeet	Not yet committed	Planned for 2006	Pre-teen/early teen and family market
Mobile ESPN	Sprint Nextel	February 2006 (nationwide)	Sports fans (ESPN is a division of Disney)
Movida	Sprint Nextel	2005	Hispanic market in U.S.
Virgin Mobile	Sprint Nextel	2002	Youth market
TracFone	Cingular Wireless (TracFone is a subsidiary of America Movil)	Founded in 1996	Prepaid market; Hispanic market in U.S.
TuYo Mobile	T-Mobile USA (TuYo is a subsidiary of IDT)	2005	Hispanic market
Xero Mobile	Not yet committed	Year-end 2006/early 2007	Free service, subsidized by mobile advertising

Source: Gartner Dataquest (March 2006)

Service Trends

Several trends are expected to have continued influence on the U.S. mobile and wireless services market, including the following:

- Continued consolidation (especially as smaller local/regional service providers are acquired by larger providers or by other local/regional providers)
- More MVNOs and resellers continuing to enter the market, offering specialized content and customized phones and services
- Wireline substitution continuing as more (particularly younger) users make their wireless phones their only phones
- Flat to slightly lower churn rates for the next year or two, increasing as MVNOs start taking more business away from traditional service providers
- Continued growth in ring tone downloads, SMS, MMS and mobile gaming
- Video services and mobile TV picking up as content improves and pricing drops

Regulatory Issues

The Federal Communications Commission (FCC) has taken steps to open telecommunications markets to competition and to help the mobile wireless market by implementing intermodal number portability (which facilitates wireless-to-wireline substitution in a number of cases), making available additional spectrum, and facilitating the deployment of advanced technologies while lightly regulating the mobile wireless market. While the FCC has imposed new standards that place wireless carriers on par with wireline carriers, when it comes to telephone bill, certain state regulators — led by the California Public Utilities Commission — are taking more-aggressive steps to re-regulate the wireless market as well.

Regulatory public policy events especially affecting the mobile wireless market include the following:

- The FCC has initiatives to reclaim and make available for commercial use military spectrum and analog broadcast spectrum, which will be auctioned in the 2006 through 2008 time frame and used to round out carriers' 3G available spectrum levels.
- Air-to-ground auctions will occur in 2006 that will allow usage of cell phones in airplanes and Wi-Fi access in planes by 2008. While the FCC has approved rules that will allow airlines to offer high-speed Internet service over the radio frequencies used by these seatback phones, the FCC has yet to definitively relax its ban on the use of cell phones aboard airplanes.
- A federal law will be passed limiting to some degree competitive municipally owned networks

Internet Giants

The vast potential of mobile marketing is attracting established players from the Internet industry.

Among the more eager of these are the giant Internet portals – specifically the big 4: Google, Yahoo, MSN and AOL. These portals see the mobile platform as an emerging, untapped marketing platform where they can use their skills and assets built on the Internet side.

For various reasons, these players represent the biggest threat to the hold that the carrier oligopoly has on the mobile market. For one, each of these portals has massive scale, with over 100 million unique monthly users, according to eMarketer. [36] In contrast, small, unknown brands do not have any scale and are almost entirely dependent on the carriers for their users. As such, the carriers can extract painful concessions in terms of onerous requirements and revenue-sharing agreements. They can't do this with the giant portals, which means that they run the risk of being made 'dumb pipes' by them. Not surprisingly, carriers have shied away from working with them, instead preferring no-name white label solutions for now[37], such as Verizon's recently announced deal with mobile search startup Medio[38].

The carrier's fear of the portal's size is justified, as the portal's control over online ad dollars has only increased year over year[39]. Research from Marketscape determined that 88% of the gross online ad spend in the US in 2005 went to the four companies, Google, Yahoo, MSN and AOL. For 2006, Marketscape has determined that the "Big Four" received 92% of the gross online ad spend in the U.S. The landscape isn't leveling, it's tilting even more.[40]

On top of this, a study in December 2006 from Jupiter Research found that 22% of companies advertising online also are doing mobile marketing.[41] This means that if the portals gain a foothold in mobile marketing, they can bring over their enormous base of advertisers and capture them as clients on the new platform as well. For these reasons, carriers would prefer to not work with them.

Interestingly, both Google and Yahoo have had more success in Europe, where the handset is not subsidized by and thus not as tightly controlled by the carriers. In that

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[36] MediaPost Publications - Big Four Portals Grab Bulk Of Ad Dollars - 03/20/2007,
http://publications.mediapost.com/index.cfm?fuseaction=Articles.showArticle&art_aid=57317
[37] MediaPost Publications - Wrestling With Yahoo - 02/20/2007,
http://publications.mediapost.com/index.cfm?fuseaction=Articles.showArticle&art_send_date=2007-2-20&art_type=38
[38] Medio press release, "Medio to Help Verizon Search", September 13, 2006, accessed March 10, 2007,
http://www.mediosystems.com/company/articles/20060913.php
[39] MediaPost Publications - Big Four Portals Grab Bulk Of Ad Dollars - 03/20/2007,
http://publications.mediapost.com/index.cfm?fuseaction=Articles.showArticle&art_aid=57317
[40] Online Spin » Blog Archive » Highlights Fom OPA London, http://blogs.mediapost.com/spin/?p=991
[41] P&G, Others Build Mobile-Marketing Budgets · Marketing VOX,
http://www.marketingvox.com/archives/2006/12/01/pg-others-build-mobile-marketing-budgets/

environment, handsets can be taken across carriers and compete more on features. Google and Yahoo help add to the features available on a particular handset maker's phone and thus help differentiate it.

Yahoo

Yahoo's main initiative is the development and distribution of its Yahoo Go software. Besides access to the main features of Yahoo's portal, such as mail, IM, and calendar, Yahoo Go also includes the "oneSearch" box. Yahoo has developed a new type of search specifically for mobile and distinct from its online search.

This search tries to accurately anticipate what the user needs in the mobile context. The query box is specific to the current vertical, so if the user searches "Knicks" in the sports area he or she gets team-specific news, scores, Web images for wallpapers, and feeds they can pull into the area permanently. The local search also is superb, with a clean list of results that click into options for mapping, rating, direct dialing, etc. One of the things done well is that they anticipate a user's next most likely moves in a given task, which is a very strong talent to have on a phone. [42]

So far this year, Yahoo has signed deals to feature its Yahoo Go software, including the OneSearch service, with four of the world's top five mobile handset makers: Nokia, Motorola, Samsung Electronics and LG Electronics. [43]

Google

Google has much more ambitious plans than Yahoo to enter the mobile market. As Google sees it, its mandate extends to any 'network-attached computing device' and the mobile phone is just the next generation of 'network-attached computing device'.

One primary initiative is the extension and adaptation of its search engine to the mobile phone. Google has offered search services for wireless devices since 2001. But the company has made concerted effort to improve and broaden those applications in the last year as competition for mobile consumers has heightened. [44] It is currently testing a service that offers ads alongside search results on a cellphone screen, a counterpart to its flagship business of selling ads linked to regular Internet searches. Google, which had about 32.1% of the $16 billion U.S. online ad market in 2006 according to research firm eMarketer, wants to offer a search engine tailored to cellphone users and has begun displaying ads linked to these cellphone searches. The phrase "ringtones," for example, brings up sponsored links to companies selling ringtones for cellphones. The response mechanism is also modified, with some of the Google ads giving users the option of clicking a link to call the advertiser.

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[42] MediaPost Publications - Wrestling With Yahoo - 02/20/2007,
http://publications.mediapost.com/index.cfm?fuseaction=Articles.showArticle&art_send_date=2007-2-20&art_type=38
[43] Local data is sent to cellphones by Yahoo - International Herald Tribune,
http://www.iht.com/articles/2007/03/20/business/search.php
[44] Google buys Android | News.blog | CNET News.com, http://news.com.com/2061-10812_3-5837102.html

Google also wants to place more of its properties on the mobile phone. In February 2007 it began a U.S. trial to give users the ability to personalize the information they want to see, Deep Nishar, the company's director of product management for mobile, says. For example, users can choose to see updated weather information for a certain location or receive a feed of their stocks. The company also unveiled a new mobile map program for Microsoft Windows that uses a global positioning system to provide directions, information about local businesses, and real time traffic – providing an integrated approach to what had previously been disparate applications.[45]

Finally, Google also appears to be working on its own version of a mobile phone, or at least its own version of mobile phone software. Several tantalizing clues have surfaced that point in this direction. First, in mid-November of 2006, Google CEO Eric Schmidt said more money could be made if cellphones were free and users spent more time online, viewing ads, playing games and downloading content.[46] Recent acquisitions also seem to bolster this viewpoint, with the quiet purchase of the mobile startup Android in July of 2005. Little is published on the company's Web site, or in the press. But it's the next generation operation of Andy Rubin, who previously founded mobile-device maker Danger. Android reportedly makes software, or operating systems, for wireless devices that are location-sensitive or personalized for the owner.[47] The company's online job listings also reveal several clues, with postings that declare that it is "experimenting with a few wireless communications systems," adding that "we are building a small team of top-notch logic designers and analog designers aimed at nothing less than making the entire world's information accessible from anywhere for free."[48] Finally, Google executives themselves have confirmed it, with the head of Google in Spain and Portugal confirming that Google is working on a mobile phone. "Some of the time the engineers are dedicated to developing a mobile phone," Isabel Aguilera is quoted as saying on the Spanish-news Web site Noticias.com.[49] Given the trail of clues, it seems likely that we will see a Google phone or something similar shortly.

Google is also helped in its mobile efforts by the general consumer's perception of its brand. A recent survey by RBC Financial Group found that roughly 43% of Americans surveyed said wireless service providers should provide free access to Google.[50] Another 23% admitted that "Google is part of my every day life and I want access to it anytime,

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[45] The Battle for Mobile Search,
http://www.businessweek.com/technology/content/feb2007/tc20070220_828216_page_2.htm
[46] Is The Party Ending For Wireless? - Forbes.com,
http://www.forbes.com/technology/2007/03/19/wireless-verizon-fon-lead-innovate-cx_cc_0320christensen.html
[47] Google buys Android | News.blog | CNET News.com, http://news.com.com/2061-10812_3-5837102.html
[48] How To Spy On Google - Forbes.com, http://www.forbes.com/technology/2007/03/19/google-hiring-ads-tech-cx_bc_0320google.html
[49] Europe exec confirms Google Phone | News.blog | CNET News.com,http://news.com.com/2061-10812_3-6167826.html
[50] rbc.com - Consumers hesitate at the mobile technology check-out counter,
http://www.rbc.com/newsroom/20060302mobile.html

anywhere." [51] With consumer sentiment like that, any efforts by Google to get on the mobile phone should have an easy time getting adoption.

New Entrants / Disruptors

The huge potential for mobile marketing has attracted a slew of new entrants into the market. Several of these entrants, such as Apple, are from existing industries, but many more are emerging startups with new ideas and new business models.

Emerging Mobile Ad Networks

Chief among these is AdMob, the startup ad placement marketplace founded by Omar Hamoui in January 2006 out of his dorm room at Wharton. AdMob took the DoubleClick model of matching advertisers to publishers with the AdSense-like twist that price is set by demand. There is no Adsense-like matching or optimization behind the scenes, AdMob is strictly placement of the ad and monitoring of clicks. AdMob gets the credit for enabling WAP sites to place ads seamlessly on their sites, with no effort, technical or sales, required on their side. What they do is not terribly complicated, but no one else had been doing it. Before 2006, it was rare to see an ad on a mobile site, AdMob opened the flood gates and now it's just the opposite - mobile sites without ads are the exception. What's so great about that? Simply this, advertising makes the mobile web economically viable, bringing the same source of financial support available through the browser-based Internet to mobile sites.[52] Interestingly, reception to AdMob has been so great that their biggest issue is keeping up with their growth, much less worrying about new development.

Another emerging mobile advertising network is Third Screen Media. They are often mentioned along with AdMob, but they differ in the key aspect that AdMob is mostly automated placement of advertsing, whereas Third Screen Media is more of a mobile advertising agency and actually works with the marketers.

Apple

Apple is listed here because of its proven ability to disrupt static industries with innovative products. Its iPhone promises to do to the wireless industry what the iPod did to the music industry – change the rules of the game to the benefit of the end users and in the process initiate a new industry reality.

It's doing this with the making of the iPhone. Apple bucked the rules of the cellphone industry by wresting control away from the normally powerful wireless carriers. These service providers usually hold enormous sway over how phones are developed and marketed -- controlling every detail from processing power to the various features that come with the phone. Not so with Apple and Cingular. Cingular agreed to leave its brand off the body of the phone. Upsetting some Cingular insiders, it also abandoned its usual

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[51] rbc.com - Consumers hesitate at the mobile technology check-out counter,
http://www.rbc.com/newsroom/20060302mobile.html
[52] 2006 - The Mobile Web Grows Up at Wap Review, http://wapreview.com/blog/?p=238

insistence that phone makers carry its software for Web surfing, ringtones and other services. The deal also calls for Cingular to share with Apple a portion of the monthly revenues from subscribers, a person familiar with the matter says.[53]

Beyond the change in industry business practices that Apple promises to foment, its iPhone will also move the industry forward by addressing several current limitations. The first is the limited screen size and awkward keyboards of current handsets, which Apple addresses through its touchscreen interface. It has also rethought some long-untouched industry features, such as the introduction of Visual Voicemail.

Startups

There are a tremendous number of startups forming to take on the mobile marketing space. One of the authors has contacts at the Stanford School of Engineering and has seen first-hand the frenzied atmosphere surrounding mobile. As with any field that attracts a high number of startups, it is very unclear which startup will succeed, but the tremendous variety and experimentation with mobile services and business models means that the models and services that work will be discovered sooner.

Interestingly, the hot startup environment has also attracted top talent from existing players who are seeking to make it on their own. In mid-November 2006, Pekka Ala-Pietila, once the president of Nokia, and Antti Ohrling, CEO of the advertising agency Contra, announced plans to launch Blyk, the first free, ad-supported wireless carrier in Europe.[54] If Blyk launches and is successful, it will be a tremendous blow to the incumbent carriers as it has the potential to undermine their revenue stream. It would be a radically different business model against which the incumbents would be hard-pressed to compete.

There are also startups that are attempting to bring models that work online to the mobile phone. Rhythm NewMedia Inc. of Mountain View, Calif., has developed technology to insert short video spots before mobile TV segments. Mobile users can access the content for free, since the content is paid for by the advertiser, but must watch the ads. The company is planning to cooperate with several wireless carriers in the U.S. and Europe and has attracted $27 million in venture funding.

Barriers To Adoption

Despite the promise in mobile marketing, there are still numerous obstacles that stand in the way of its widespread adoption. Fortunately, these obstacles are well-known and are all areas where startups and the incumbents are attempting to innovate and discover a solution.

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[53] How Steve Jobs Played Hardball In iPhone Birth - WSJ.com,
http://online.wsj.com/public/article/SB117168001288511981-
euxzmjNFZTZhA_2z8OBtD6GK900_20070224.html?mod=blogs
[54] Is The Party Ending For Wireless? - Forbes.com,
http://www.forbes.com/technology/2007/03/19/wireless-verizon-fon-lead-innovate-
cx_cc_0320christensen.html

Usability and Ease of Use Challenges

Usability

Mobile phones were conceived of as communications devices for making phone calls, not for the multipurpose device they have become today. Handset makers and other software providers have not yet come up with the requisite interfaces and ease of use that will let users access their data and content in the easiest way possible.

For example, unlike mobile Internet usage by wireless customers in Japan or South Korea, surfing the mobile Web in the U.S. hasn't yet caught on. In a survey conducted by Yankee Group in April, about 18 percent of wireless users in the U.S. said they had at least tried using the mobile Internet, but only 6 percent considered themselves regular mobile Internet users. Experts say the biggest reason why users aren't using their cell phones to access the Web more often is that compared with the traditional Internet, today's mobile Internet is still fairly rudimentary when it comes to Web site quality and ease of navigation. Part of this experience is determined by the technology used by Web site developers and phone manufacturers providing access to sites.[55]

On phones, drilling for applications and WAP favorites, passing photos to one another and downloading music is just on the other side of the tipping point of convenience. It is barrier just high enough to keep most people away. The content is not that good to induce users to learn new habits -- and the alternative, easier channels to the same information are just not that far away.[56]

Deep Nishar, Google's Director of Product Management for Mobile seconded this sentiment when he stated that "on mobile, people don't have the patience to go through several different screens and fire up one application to do one thing and another application to do another".[57]

But why does a killer experience mean so much to the advertising business and the mobile communications industry as a whole? To put it simply, an entertaining and easy-to-use experience means increased usage and consumption, and that consumable content is often surrounded by advertisements. With the mobile phone industry's Achilles heel of less-than-desirable experiences suddenly removed, users are more likely to connect, engage and consume.[58]

One bright light on this topic is the entry of Apple into the mobile market with the iPhone. Just as with the iPod, Apple has done what just a few months ago seemed impossible - it

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[55] The mobile Internet: Are we there yet? | CNET News.com,
http://news.com.com/The+mobile+Internet+Are+we+there+yet/2100-1039_3-6110100.html
[56] MediaPost Publications - Content And Convenience - 03/20/2007.
http://publications.mediapost.com/index.cfm?fuseaction=Articles.showArticle&art_send_date=2007-3-20&art_type=38
[57] The Battle for Mobile Search,
http://www.businessweek.com/technology/content/feb2007/tc20070220_828216_page_2.htm
[58] iMedia Connection: Unveiling Apple's Mobile Phenomenon
http://www.imediaconnection.com/content/13691.asp

has simplified the entire mobile communication experience. What was once such a cumbersome experience that it turned most users away from potentially valuable phone features is now a pure joy.[59] Even if the iPhone is not successful, Apple and its famed usability have the potential to show others how it can be done and in the process help the users.

Discovery of Relevant Services

General mobile user awareness of mobile content and services will not be enough to drive widespread adoption, as those concepts are too generic to make users with no prior experience see their value or adopt them. Instead, the concepts need to be explained in specific details.

In a telephone conference, Alana Muller, a Director of Product Marketing in the wireless group at Sprint, shared with us the story of her grandfather, who used to good-naturedly tease her about her job and what she did, stating that he would never need a phone for anything other than making calls. That is, he teased her until she showed him that he could get golf scores anywhere he was via his mobile. This turned out to be the killer application for this individual, who has used the data capabilities of his phone since then to check golf scores.

As stated by Michael Mace on his blog, the compelling thing about mobile data isn't the total number of applications – it's the individual discovery of an application that does something critical just for you. Proponents have to find a way to explain mobile data differently to every individual person, which means that conventional mass-marketing won't make mobile data happen.[60] One key to this could be an integrated discovery and install process, which would recommend content and services to an individual and make it easy for them to try them.[61] In fact, there is a classmate of ours (Ajay Kapur, MBA '07) who is working on a new mobile interface that do precisely this – observe what you do on your mobile phone and recommend content and services that you might find relevant.[62]

Sprint also ran into this need. In their research, they found that why customers adopt or (choose not to) adopt content has less to do with it being too expensive. Instead, people said they didn't subscribe because it wasn't relevant.[63]

New Content Access and Navigation Methods Are Required

The early designers of services and content for the mobile took as their inspiration and model the online browser world and what had worked there. In fact, after SMS and other

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[59] iMedia Connection: Unveiling Apple's Mobile Phenomenon
http://www.imediaconnection.com/content/13691.asp
[60] Mobile Opportunity: We need a new mobile platform. Sort of.
http://mobileopportunity.blogspot.com/2006/06/we-need-new-mobile-platform-sort-of.html
[61] Mobile Opportunity: We need a new mobile platform. Sort of.
http://mobileopportunity.blogspot.com/2006/06/we-need-new-mobile-platform-sort-of.html
[62] Ajay Kapur, Founder, Moov Technologies, Conversation with Luis Arellano
[63] Advertising seeps into the cell phone | CNET News.com,
http://news.com.com/Advertising+seeps+into+the+cell+phone/2100-1039_3-6115617.html

messaging products, the first mobile content and services available on mobiles were through a mobile version of the desktop browser. The industry has moved beyond this and is now experimenting with downloadable clients and other advanced UIs, but fundamentally the experience is still based somewhat on the browser experience.

Take as an example mobile search, which is touted as one of the "killer" apps for mobile. There are a couple of key differences between search on a mobile phone and a computer that make companies unable to apply the same search engine product to the smaller mobile screen. The first is relative lack of speed. Phones have less processing power than newer PCs, frequently have slower Internet connections than broadband users are accustomed to, and often lack the kind of keyboards that allow for fast typing. These factors, coupled with the fact that on-the-go users want their information even faster than they do when surfing the Web on a computer, makes mobile users less willing to navigate through a bunch of links for information.[64]

Speaking of which, the final big choke point for mobile content is, in fact, the drill-down. The old Internet design principle used to be that with every click you put between users and their goal, you lose half your audience. Apply that principle to mobile phones and we should regard ourselves lucky that anyone accesses WAP at all. Content for me needs to bubble to the top.[65]

One company who has tried a different approach on mobile is Yahoo with its Yahoo Go client. Online, Yahoo Search serves up a list of links that the user can then click through. On a mobile, Yahoo Go serves up a list of actual information, such as news headlines, images from Yahoo's Flickr photos site, business listings, local weather and links to other Web sites. Rather than showing popular movies or critical reviews, for example, Yahoo OneSearch lists local theaters playing a particular movie, user ratings of the film and news headlines related to the movie.[66]

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[64] The Battle for Mobile Search,
http://www.businessweek.com/technology/content/feb2007/tc20070220_828216_page_2.htm
[65] MediaPost Publications - Content And Convenience - 03/20/2007.
http://publications.mediapost.com/index.cfm?fuseaction=Articles.showArticle&art_send_date=2007-3-20&art_type=38
[66] Local data is sent to cellphones by Yahoo - International Herald Tribune,
http://www.iht.com/articles/2007/03/20/business/search.php

Customer Challenges

Customer Lack of Awareness

Participants in the mobile industry currently have a lot of excitement and interest in mobile marketing. Left out of this awareness however, are the vast majority of mobile users, who are not always aware of what types of mobile content and services are available or even what mobile content and services are. In a telephone conference with Alana Muller, a Director of Product Marketing in the wireless group at Sprint, she identified this lack of awareness on the part of the mobile user as her biggest concern. Alana shared with us the story of her husband, who never used text messaging and never understood why anyone would. Alana started sending him text messages, and eventually he would respond via SMS as well. This individual now uses SMS for everything he can, and recently upgraded his plan to accommodate his increased usage.

Another example comes from Harris Interactive, which in a study in June 2006 revealed that many Americans still do not understand why much of the world is worked into a lather over messaging. Over 70 percent of those surveyed didn't see a need for using their mobile handset for messaging. [67]

It seems that mobile users still think of their mobiles as primarily calling devices, and are not yet aware of the new capabilities that their mobiles support. Until users become educated on this, the mass adoption of mobile marketing may be stymied.

One natural question that arises from this concern is what carriers are doing to promote awareness. The answer seems to be that carriers are missing key opportunities to educate users at the point of sale. A recent survey found that poor in-store experiences were partially to blame for the slow uptake of mobile content and mobile data services. The in-store experience is the essential customer touchpoint for new and existing data services, but many wireless retailers miss readily available revenue opportunities by failing to spend time on customer needs assessment around data services (20% of national retailers ask no questions about data service needs or interest) and on data service demonstrations (27% of all retail channels did not have live devices available for demonstrations). In-store sales efforts are crucial to selling data services and exposing them to the market; the research found that there is significant room for improvement around in-depth sales force needs assessment (asking the right questions), data service demonstration (on a live device) and recommendations for add-on services (based on needs assessment). [68]

Customer Intolerance of Advertising

Much of the hope of widespread adoption of mobile content and services is predicated on the expectation that advertisers and marketers will subsidize or underwrite the consumption of that mobile content by mobile users. This presumes that mobile users

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[67] iMedia Connection: The U.S. Mobile Messaging Market
http://www.imediaconnection.com/content/11937.asp

[68] FEATURE: 5 Questions w/ Karl Maier, CEO, Market Force Information – FierceWireless,
http://www.fiercewireless.com/story/feature-5-questions-w-karl-maier-ceo-market-force-information/2007-03-02

will tolerate the advertising and will see it as a fair tradeoff for access to the content. The results of several surveys show that this assumption might need to be revisited.

For example, a report by Forrester states that 79% of the people interviewed found mobile ads annoying.[69] A different survey found that concern for price doesn't mean Americans would accept advertising or text messaging to lower their service or subscription costs. 52% of those surveyed rejected the idea, while 56% were unwilling to trade personal information for discounted products and/or services. Mobile marketers and advertisers should take note that 58% of survey respondents said mobile marketing is a nuisance and should be prohibited. In fact, the only exception to consumer's price sensitivity was the willingness by 43% to pay more for a cell phone or PDA that prohibits marketing or advertising messages.[70]

A glimmer of hope comes from a recent Harris Interactive survey which revealed that mobile users are far more accepting of mobile advertising when it is relevant. The Consumer Mobile Advertising report, conducted with more than 1,200 mobile Internet users across the US, Europe and India, shows that targeted mobile advertising is 50% more acceptable to mobile Internet users than untargeted ads.[71]

This issue may then be: can marketers target precisely enough? In the online world, Google has found great success by being able to target advertisements better than others, but there still remains a lot of room for improvement and it's not clear that this success can be transferred to a mobile environment.

Customer Data/Information Preferences

One thing overlooked by proponents of mobile marketing is that mobile users do not equally prefer all types of mobile content and services. There will be some that are vastly more popular than others and hence gain adoption quicker. As with everything in a nascent field, no one yet knows what things users will like and which they won't.

An early clue comes to us from studies by M:Metrics and Nokia. M:Metrics noted in a study released in July 2006 that only 10 percent of mobile subscribers browsed news and information on their mobile phones, compared to a third of respondents who said they had texted.[72] Interest in news and other information via mobile phone may not compare to messaging and entertainment.

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[69] Mario Tapia: Mobile Ads Part I - The Past History of Mobile Ads
http://www.mariotapia.com/moleskin/2007/01/mobile_ads_part.html
[70] rbc.com - Consumers hesitate at the mobile technology check-out counter,
http://www.rbc.com/newsroom/20060302mobile.html
[71] Ads Migrate to Mobile Handsets,
http://www.businessweek.com/globalbiz/content/nov2006/gb20061128_210391.htm
[72] iMedia Connection: Why Text Ads Are Best
http://www.imediaconnection.com/content/11262.asp

Privacy Considerations

One of the key value propositions of mobile marketing to marketers is the ability to precisely target a message to a particular user in (possibly) a particular place. However, to be able to do this targeting, the marketer needs to collect extensive amounts of personal and behavioral data on the user and to identify the current location of the user. It is not clear how willing users will be with sharing this data or how comfortable they will be knowing that it's available and used.

When asked "what is the issue that most troubles you about mobile technology?" in a recent study, 46% of respondents said "the security of my information and my privacy" was of greatest concern. More than a third (36%) expressed concern about organizations spying on them when using a mobile device. [73]

A December 2006 survey by Harris Interactive shows that most U.S. mobile phone users also worry about privacy when it comes to location-based services. When asked how they feel about other people having this information about them, the majority of those surveyed say such services are an invasion of privacy. "We expect these technologies eventually to catch on," said Joe Porus, VP and Chief Architect with Harris Interactive's Technology and Telecom Practice. "But providers must give users control over location-based features to allay privacy concerns." [74]

However, users are not terribly worried about it, as 61% of respondents in the first survey believe that solutions will be found to address identity theft and invasion of privacy. [75] Similarly, marketers can choose their targets carefully to minimize this concern. Milt Ellis, VP and Sr. Consultant with Harris Interactive stated of location-based services, "For marketers of these services, the key initially is to target groups of users -- such as teenagers, busy executives, delivery and emergency service personnel -- who value the benefits of being connected more than they worry about privacy." [76]

Availability of Access Alternatives

At the Mobile Persuasion conference at Stanford University in Feb of 2007, a panelist was asked what alternative a mobile user had if they did not wish to see ads to access a particular piece of content. The panelist responded that the user would have the alternative of paying for the content to avoid the advertising. A conversation with Victor

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[73] rbc.com - Consumers hesitate at the mobile technology check-out counter, http://www.rbc.com/newsroom/20060302mobile.html

[74] Survey Shows Privacy Concerns a Major Roadblock for the Adoption of Location-based Services and Presence Technology, http://prnewswire.com/cgi-bin/stories.pl?ACCT=ind_focus.story&STORY=/www/story/02-23-2007/0004533689&EDATE=FRI+Feb+23+2007,+06:49+PM

[75] rbc.com - Consumers hesitate at the mobile technology check-out counter, http://www.rbc.com/newsroom/20060302mobile.html

[76] Survey Shows Privacy Concerns a Major Roadblock for the Adoption of Location-based Services and Presence Technology, http://prnewswire.com/cgi-bin/stories.pl?ACCT=ind_focus.story&STORY=/www/story/02-23-2007/0004533689&EDATE=FRI+Feb+23+2007,+06:49+PM

Shao, CEO and co-founder of Purifi Networks, brought up an often-overlooked third option: the user could simply access the content on his home or work computer[77].

In terms of user experience and capability, a computer handily beats a mobile device. Computers have 17" screens, compared to a mobile's 1 ¼". They have fast connections to the Internet, usually T1 speeds at work or broadband at home, versus the slow mobile internet connections. Computers have full keyboards, versus the mobile's nonexistent or tiny keyboards. Ads on computer screens are much less intrusive than ads on a mobile phone, given the difference in screen real estate. Given a choice between accessing content on one or the other if both are available, a user will almost invariably choose the better experience and will choose to access content on the computer.

The majority of Americans have a computer with Internet access at both home and work. If a user will pick the computer every time, then that restricts when mobiles are likely to be used to times when there are no computers present. This is usually times such as when the user is commuting to or from work. [78] This theory could explain why countries such as Japan which have widespread mass transit have advanced so much in mobiles – mass transit is a perfect place where a user would access a mobile in the absence of any alternatives. Some evidence can also be seen in South Korea, where most people access internet through mobile phones because they can't afford computers. [79]

To add a further complication, the widespread availability of WiFi HotSpots and wireless-enabled laptops mean that Americans have an alternative to a mobile device that they can carry with them. A quick visit to any Starbucks will show how widespread the use of wireless laptops outside of work and home is. A recent Pew Internet & American Life Project survey in December 2006 found that 27% of wireless users logged on wirelessly from a place other than home or work. [80]

Market Challenges

Targeting the Right Demographic With the Right Message and Right Incentive

While there is a lot of excitement around mobile marketing and confidence that it will be successful, there is a dearth of knowledge as to the details of which users will respond to which types of offers. This knowledge is critical to the execution of successful campaigns.

A new study by Harris Interactive reports that while 90% of all cell phone users are disinterested in receiving mobile ads, that number drops to 64% if an incentive is offered.

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[77] Victor Shao, CEO and Cofounder, Purifi Networks, Interview with Luis Arellano, 2/7/07
[78] MediaPost Publications - Content And Convenience - 03/20/2007.
http://publications.mediapost.com/index.cfm?fuseaction=Articles.showArticle&art_send_date=2007-3-20&art_type=38
[79] iMedia Connection: A New Tipping Point
http://www.imediaconnection.com/content/11831.asp
[80] Horrigan, J. (2007) "Wireless Internet Access", Pew Internet and American Life Project Retrieved Feb 20, 2007 from http://www.pewinternet.org/PPF/r/203/report_display.asp

Of that overall percentage, the study group's willingness to watch mobile ads is then tempered by demographic, the type of ad displayed and the incentive offered in exchange for the ad. Mobile advertisers and wireless carriers need to consider each group's tolerance level very carefully when developing a mobile ad strategy. As an example of who not to target, very few 40- to-49-year-olds are interested in receiving mobile ads at all, and only 13% of people with incomes of between $125,000 and $149,000 are interested in receiving ads in exchange for some incentive. The younger cell-phone-using demographic--those between 18 and 39 years old--are most interested in receiving mobile ads in exchange for incentives, such as cash or free cell phone minutes. Prepaid mobile service provider Virgin Mobile already has found this to be true and developed their Sugar Mama program around that--connecting users with targeted brand advertising in exchange for free airtime or text time minutes. The Harris Interactive study found that adult mobile phone users' willingness to watch mobile ads would be mitigated by having a variety of choices regarding ad content, frequency and timing of ad delivery, platform of ad delivery and giving the cell phone user the ability to opt-out altogether.[81]

Given the survey results, marketers will need to experiment with combinations of offers, demographics, incentives and methods of marketing to find successful combinations that targeted users respond to.

Large Marketers Are Uncertain and are Still Experimenting

Any mature media market will contain the large national marketers that spend billions annually on marketing. However, a new eMarketer report, "Portal Marketing: The Big Four", found that "Traditional marketers tend to find safety in established, mass-market brands". "And since advertisers put only 6.6% of their ad budgets online in 2006, the need for established Internet brands will remain strong for several years."[82] If this same trend holds for the mobile market, large marketers may elect to stay out until the established, mass-market brands that they prefer emerge.

Some evidence of this arose in a conversation with Omar Hamoui, Founder and CEO of AdMob, an ad network. Omar stated that big brands were using his site to place text and banner ads on mobile websites, but were doing so only experimentally.[83] They had not committed big buys as they would online or via traditional media, and they were still trying to figure out what worked and didn't work. For example, Omar mentioned that one of the marketers on AdMob was Procter & Gamble, which was experimenting with mobile marketing to promote haircare products. Not an obvious fit, but indicative of the spirit of exploration that mobile marketing is undergoing at the moment.

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[81] MediaPost Publications - Harris Reports Acceptance Of Mobile Ads On The Rise - 03/16/2007
http://publications.mediapost.com/index.cfm?fuseaction=Articles.san&s=57199&Nid=28402&p=386070
[82] MediaPost Publications - Big Four Portals Grab Bulk Of Ad Dollars - 03/20/2007,
http://publications.mediapost.com/index.cfm?fuseaction=Articles.showArticle&art_aid=57317
[83] Conversation with Omar Hamoui, Founder & CEO, AdMob

Advertising Agencies Lack Knowledge and Technology

As mentioned in the section above, advertising agencies face challenges in adapting from their traditional backgrounds to the new requirements of mobile marketing. Given their traditional role in determining through which channels marketing and advertising get placed, they have the potential to influence mobile marketing positively or negatively according to how well they make the transition.

Access to Customer Data

Providing targeted marketing messages requires access to customer data to use in the segmentation and targeting process. Traditionally, carriers have been the primary source of this data, but have shown an unwillingness to share for competitive reasons of their own. Carriers also face a regulatory burden to seek approval (opt-in) from their users before the users' data can be used for marketing, meaning that much of the data they have collected from before cannot be used for marketing purposes.

This means that bypassing the carrier is important to gain consumer information. "The carriers are not willing to give the advertising companies demographic data about the subscriber," explains Gary Towning, group account director at OgilvyOne Worldwide. "We don't want to irritate the consumer; we want to target our campaigns and make them as relevant as possible."[84]

Thus marketers have the need to obtain the user data in some other manner without annoying the user. One possibility is to ask the user to enter their data, but asking this of their users means that they will get less data. Interestingly, a recent report (Consumer Mobile Advertising) found that of the surveyed users who found mobile advertising acceptable, 64% would be willing to provide personal details to be analyzed to improve the relevance of targeted ads[85]. The marketer could also build up a base of data from the user's actions on their application or service, but this approach would leave out the actions that the user does on other services or applications, yielding an incomplete picture of user activity and behavior.

One intriguing possibility is that the mobile marketers could team up with non-carrier partners who already have the customer's data. For example, a mobile marketer could team up with a magazine and pool their combined data to generate targeted advertisements. Several efforts are underway in this particular area to do just that.

Price of Data Access

Carriers charge mobile users by the bit for any data that they consume. This has been due mostly due to historical reasons and because they could; there was no pressure to do

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[84] iMedia Connection: Understanding Mobile Marketing,
http://www.imediaconnection.com/content/8758.asp
[85] Research Shows that Targeting and Relevance are Key to Making Mobile Advertising Work – Enpocket,
http://www.enpocket.com/news/press-releases/research-shows-that-targeting-and-relevance-are-key-to-making-mobile-advertising-work

otherwise and no carrier offered a reasonably-priced unlimited data plan. Recently, the market has shifted and most carriers now offer reasonable unlimited data plans. The last US holdouts, Verizon and Cingular now offer unlimited data to the handset at respectively $15 and $20 dollars a month. T-Mobile is the U.S. value leader in mobile data at $6/month. Sprint/Nextel's Boost and MVNO STI give even prepaid users $10/month unlimited data plans. [86]

Reasonable unlimited data plans are important to the widespread adoption of mobile data for several reasons. The first reason is that when people are uncertain about how they are getting charged for usage they will restrict their usage. Users that don't restrict themselves will find out the hard way that charging by the bit gets expensive, as the poor South Korean man who received a bill for $1,059 USD for using 4GB of data did. [87]

The second reason is that charging by the bit introduces a chicken-and-egg problem for the mobile user. There may be some desirable content available that the user would love to get. However, the user won't know this until he actually buys it and tries it, which will cost him or her something because of the pricing structure. It doesn't have to be a very high cost before the user is dissuaded from trying new content and services.

Nicky Walton, senior research analyst with Informa Telecoms & Media, predicts that mobile operators will increasingly adopt ad-funded models in the coming few years, as it will help eliminate high charges that are extensively inhibiting take-up. "At the moment the cheapest game to download over a mobile operator's portal is around $5, which is very expensive," Walton says. "If operators started offering mobile game downloads for free or a reduced cost, even if it doesn't initially increase usage, it's going to increase the likelihood of people trialing different games, because spending $5 to download something you might not like is lot of money. [88]

Some carriers are attempting to find a middle ground and are offering "bite-size" chunks of data access for a fixed fee. For example, Sprint and Verizon both offer location-based services, such as maps, on an unlimited monthly basis for a fixed fee. However, they are also letting customers that don't want unlimited access buy the navigation services for $2.99 per day.[89] This lets users try a service while at the same time removing their fear of being hit with exorbitant and/or unknown service charges.

Fred Campbell, co-founder of Egreetings and now co-founder of a mobile startup, Lexy, believes that flat-rate unlimited pricing will usher in a new era in mobile marketing.[90] He points to the start of the Internet, where a similar situation existed. At that time, a few big networks (AOL, Prodigy, CompuServer) controlled most access to the Internet and

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[86] 2006 - The Mobile Web Grows Up at Wap Review
http://wapreview.com/blog/?p=238
[87] Network Operators to Alert Users of Too Much Internet Use - 3/16/2007 10:23:00 AM - Wireless Week - CA6425443, http://wirelessweek.com/article/CA6425443.html
[88] Ads Migrate to Mobile Handsets,
http://www.businessweek.com/globalbiz/content/nov2006/gb20061128_210391.htm
[89] Sprint pushes LBS – FierceWireless, http://www.fiercewireless.com/story/sprint-pushes-lbs/2007-03-22
[90] Fred Campbell, Co-Founder, Lexy, interview with author

charged per-use. Once these behemoths introduced flat rate pricing, usage exploded as users felt free to explore and try new services. Fred sees a similar dynamic waiting to happen with the mobile carriers.

Price of Advertising

Rates for mobile advertising are currently very high. CPMs (cost per thousand impressions) are in the range of $25-50[91], compared to rates from $1 to $20 CPM for online sites, according to how "advertisable" the site is.[92]

AdMob charges on a Cost-Per-Click (CPC) model, and because it's a marketplace, rates are set dynamically by ad buyers. Ad rates on AdMob as of March 15, 2007 range from $0.08-$0.80 per click[93]. Interestingly, these rates were as high as $1.50 per click when the team checked them approximately three months ago.

Michael Chang, CEO of Greystripe, a distributor of ad-supported games, says Greystripe sells advertising space in its game network for $45 CPM with three different forms of adverts - click-to-call, click-to-mobile web and click-to-jump page (to a survey/poll) - and shares the revenue with game publishers. Chang says that the average worldwide click-through rate for its ads with actions in GameJump games achieved a remarkable 15%.[94]

Taking Michael Chang's numbers at face value, we can calculate how much profit an advertiser will have to make on each item sold via an ad to break even. Applying the 15% clickthrough rate to the 1,000 impressions gives us 150 clicks. Michael doesn't mention how many of these clicks converted to actual purchases, but we will use a very generous 10% conversion rate to give him the benefit of the doubt, giving us 15 sales. As an advertiser, we spent $45 to yield the 15 sales, so each item sold cost us $3 in advertising.

The poster item for mobile marketing is the Starbucks cup of coffee, with the common story being that mobile marketing will allow you to target someone walking by the store. However, a grande latte at Starbucks is $3.05[95], so a cost of advertising of $3 per item means that Starbucks would lose money once labor and other costs are factored in. Any advertiser wishing to use Greystripe would require a profit margin on their sold item of at least the $3 to break even, meaning that the item sale price should be at a minimum retail price of anywhere from $10 (at a 30% profit margin) to $30 (at a 10% profit margin). That rules out many impulse, small-dollar purchases such as Starbucks coffees. These figures become worse if we apply a skeptical eye and use a 5% clickthru rate, yielding a

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[91] Mobile Advertising: Not If, But When And How « HighContrast, http://simeons.wordpress.com/2006/11/08/mobile-advertising-not-if-but-when-and-how/
[92] Three ways to build an online media business to $50m in revenue « Lightspeed Venture Partners Blog, http://lsvp.wordpress.com/2007/02/26/three-ways-to-build-an-online-media-business-to-50m-in-revenue/
[93] AdMob, http://admob.com/network.php
[94] Ads Migrate to Mobile Handsets, http://www.businessweek.com/globalbiz/content/nov2006/gb20061128_210391.htm
[95] Starbucks on corner of Stanford Ave and El Camino, Palo Alto, priced on March 10, 2007

cost of advertising of $9 per item and minimum retail prices of $30 (30% margin) to $90 (10% margin).

Obviously, these rates cannot be sustainable, and since clickthru and conversion rates cannot be controlled by the ad publisher, pressure will be hardest on the ad price. What can explain this seeming discrepancy? The first answer comes from Omar Hamoui of AdMob in an interview[96]. He told the team that advertisers on AdMob fall into one of two buckets: a) companies related to the mobile industry, such as ringtone vendors, etc and b) traditional marketers testing the medium. Both of these groups pay the same rate for advertising, since it is set by the market. However, the group from the mobile industry enjoys much higher clickthrus and conversions since its advertising is very targeted to the medium – they are advertising mobile-related products and services on a mobile phone. This means that their cost of advertising per item sold is much lower than our calculations above, yielding a very cost-effective marketing channel for them. In fact, the idea for AdMob originally came to Omar when he was trying to promote a previous mobile-related venture through mobile sites.

The situation for the traditional marketers is very different, as they don't enjoy the product fit with the advertising medium. For these marketers, we expect worse clickthrus and conversions, leading to higher cost of advertising per product sold. So why would they participate? It turns out that they are merely testing the waters and are not seriously advertising. The cost of the ad is the cost of running the experiment. Because it is an experiment, they buy ads in very low volumes, as confirmed by Omar[97], so their total dollars lost is very low, despite a relatively large per-item loss.

This implies that for traditional, large scale marketers to get into mobile marketing they will have to find ways to make their marketing campaign fit the medium and generate high clickthrus and conversion rates, or that rates will have to come down to a level where mobile marketing is profitable for these companies.

There is precedent for rates being high initially in a new marketing medium and then dropping as the medium matured. This very situation happened with online banner ads, which initially enjoyed a high response rate due to the lack of clutter and novelty, but which then quickly lost effectiveness as the Internet became saturated with them.

Reach

Traditional advertisers require significant reach in a medium before it becomes a viable marketing medium for them. Simply put, they have to move a lot of product by reaching a lot of customers, and if the medium does not provide access to the scale required, it won't be used.

Advertisers at this early stage, according to Gartner analyst Daren Sidall, are cautious about allocating budgets to the mobile channel chiefly because there is not yet an

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[96] Omar Hamoui, AdMob founder and CEO, interview with team, February 21, 2007
[97] ibid

audience for advertisers to reach. "Consumption of mobile content is very small, around the 10% mark, while the penetration of 3G subscribers at most is in the low single digits in most countries. Watching live TV or video, meanwhile, is a relatively new phenomenon and will remain a niche application for some time, which means that the potential reach for advertisers will be too low to attract widespread interest," Siddall says. Therefore, he notes, the industry at the moment is facing a classic "chicken and egg" situation: advertisers won't commit budget to the mobile channel until they see there is audience to reach. Content providers and mobile operators, which realize that advertising will be an enabler for mobile content, conversely, are worrying whether or not they can generate enough impressions for advertisers and enough revenues to compensate changing their business model from pay-to-use to ad-sponsored. [98]

Some forms of mobile marketing have built-in scale, such as SMS messages and WAP sites. They have scale because a single message can reach users across all of the individual carrier networks. Where scale breaks down right now is when the ad delivery mechanism is a downloaded app or a platform that otherwise requires the approval of the carrier through which it is delivered. In that scenario, the platform provider has to work with each carrier to be allowed on their network, and has to achieve significant numbers on each, which makes it harder for them to get the reach necessary for large advertisers to consider them. [99]

Technical Challenges

Standard Ad Formats

Mobile advertising's nascent status also means that the delivery format is still in development, as is any standard to guide that development. [100] While the Mobile Marketing Association (MMA), a trade group for mobile marketing, has published a set of guidelines and standards for mobile advertising[101], the field is so new that formats as in flux as many players are still trying to determine what formats work.

Again, we also see parallels between the early Internet and mobile in this area. For internet companies, standardization means that you need to get the IAB (Internet Advertising Bureau) to issue a new "Standard" ad unit, in much the same way that the IAB issued its first set of "voluntary guidelines" that set up 8 standard banner ad units in 1996, a massive reduction from the over 150 ad sizes that were in use at the time. This

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[98] Ads Migrate to Mobile Handsets,
http://www.businessweek.com/globalbiz/content/nov2006/gb20061128_210391.htm
[99] MediaPost Publications - - 02/28/2007 THE MOBILE CHALLENGE: SCALING THE Silos,
http://publications.mediapost.com/index.cfm?fuseaction=Articles.showEdition&art_send_date=2007-02-28&art_type=31
[100] Ads Migrate to Mobile Handsets,
http://www.businessweek.com/globalbiz/content/nov2006/gb20061128_210391.htm
[101] Mobile Marketing Association, "Mobile Advertising Guidelines", November 2006, version 1.3,
http://www.mmaglobal.com/mobileadvertising.pdf

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standardization greatly eases logistical complexity for both advertisers and media companies.[102]

While formats remain unstandardized, potential marketers may have to create different versions of their ad to run on different platforms, greatly increasing the effort involved and complicating the ability to easily fine-tune the ad for performance.

Measurement

For the mobile advertising market to move from test and niche levels to becoming part of the mainstream buying process, analysts say the industry must provide more visibility into the medium, including the establishment of reliable measurement and metrics for advertisers to measure the effectiveness of mobile adverts. [103]

Currently there is little in the way of transparency or metrics available to measure the effectiveness of mobile advertisements. There isn't even any agreement as to what those metrics should be. Measurement techniques used in online advertising - such as click-through rates, impressions, cost-per-sale and cost-per-thousands – are a good start for the mobile environment, but more metrics are needed to handle mobile-specific characteristics. [104]

This problem of measurement is by no means restricted to mobile. According to a new study by Forrester Research, reported by eMarketer, many marketers are dissatisfied with advertising's return on investment (ROI). 76% of marketers had no way to determine their ROI from their lead agencies, and 69% said ROI is too difficult to measure.[105] The eMarketer summary said that a new joint survey by NSON Opinion Research and the Audit Bureau of Circulations found that over 50% of North American ad professionals said that they would be more likely to advertise via mobile if the results were independently verified by a third party. [106]

Slow Connection Speeds

It goes without saying that what enables mobile content and services (and thus mobile marketing) is a connection to the Internet. If this connection is too slow, the user will not be able to or willing to wait to get the content or service that they requested.

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[102] New forms of advertising are hard « Lightspeed Venture Partners Blog,
http://lsvp.wordpress.com/2007/02/19/new-forms-of-advertising-are-hard/
[103] Ads Migrate to Mobile Handsets,
http://www.businessweek.com/globalbiz/content/nov2006/gb20061128_210391.htm
[104] Ads Migrate to Mobile Handsets,
http://www.businessweek.com/globalbiz/content/nov2006/gb20061128_210391.htm
[105] Center for Media Research - Advertisers Want Independent Verification of Results,
http://www.centerformediaresearch.com/cfmr_brief.cfm?fnl=070307
[106] Center for Media Research - Advertisers Want Independent Verification of Results,
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In fact, slow service was one of the most frequently cited causes of customer frustration, according to the CMO Council's Global Mobile Mindset Audit, a study of 15,000 consumers in 37 countries unveiled on Feb. 12, 2007.[107]

The advent and widespread adoption of 3G wireless networks will help resolve this obstacle as upgrades will make wireless connections closer in speed to broadband connections. Other variations of these technologies, such as HSDPA, promise download speeds of anywhere from 1.8 Mbps to 14.4 Mbps.

Screen Size

The display and access of mobile content and services requires a visual interface. Mobile phone screens have increased in size and features tremendously over just the last decade, from a single line of grayscale text then to our color, 176×220 pixel screens (Motorola Razr) which are capable of displaying graphics and videos in 256K colors[108]. Smartphone screens, such as that of the Palm Treo, are slightly bigger, at 320x320 pixels[109]. However, these screens, while adequate for many tasks, are still fairly small and form factor limits appear to have set "hard" limits (i.e. bigger screens would mean bigger devices, which users would not tolerate).

Apple's iPhone has made an impact here as well. It provides a 320x480 pixel screen through the use of an innovative touchscreen interface that lets a user use the same surface for either input or for display[110]. Several other manufacturers, such as LG, also have touchscreen phones available or in progress[111]. If this factor takes off, then it greatly increases the screen size available for displays of mobile content and services.

Conclusion

The purpose of this project was to understand what is happening in the mobile marketing world with an eye towards being able to judge whether the potential is real or not. Given what we've learned, the people we've spoken to and our own analysis, we've come to the conclusion that there is indeed tremendous potential for the mobile marketing medium. Specifically, this medium possesses a set of attributes which can't be found elsewhere, giving it unique advantages for marketers. This market is still very nascent; only recently have trends come together in such a way that mobile marketing is even possible, and there still remain many serious obstacles on the way to full, widespread adoption. We are also still in the very early days of this medium, as the wildly diverging estimates from the analysts show, and it is not yet clear which marketing models, much less which

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[107] The Battle for Mobile Search, http://www.businessweek.com/technology/content/feb2007/tc20070220_828216_page_2.htm
[108] Motorola RAZR V3 - Wikipedia, the free encyclopedia, http://en.wikipedia.org/wiki/Motorola_razr
[109] Palm Treo - Wikipedia, the free encyclopedia, http://en.wikipedia.org/wiki/Palm_Treo
[110] iPhone - Wikipedia, the free encyclopedia, http://en.wikipedia.org/wiki/Apple_iphone
[111] 8 cool new touchscreens | 1 | Business 2.0, http://money.cnn.com/galleries/2007/biz2/0703/gallery.touch_screens.biz2/index.html

companies, will succeed. One thing that is clear in our minds is that some form of mobile marketing will succeed, and it will exist widely in the near-term future.

During the course of our research, we uncovered several key drivers of adoption and many more potential barriers to adoption. As a follow-up project, we recommend that these be investigated further, with a large enough sample of actual marketers mobile end users, to truly understand which are significant and which are merely inconveniences.

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