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Mobile Marketing Guide:
Using Handsets to Drive Sales

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Imagine a sales channel that provides direct access to more than two billion consumers worldwide.

Mobile phone service offers business-to-business (B2B) and business-to-consumer (B2C) merchants new and better ways to promote their brands, interact with existing and potential customers, and process sales.

The number of mobile phone subscribers worldwide recently surpassed the number of wireline phone subscribers. Consumers and enterprises are increasingly making mobile phones their only phones. The percentage of wireless users in the U.S. who have disconnected from their landline phone service is approaching 10%[1].

The mobile phone is one of the most successful high-tech products in history. The number of mobile phones sold in 2005 is estimated at over 800 million—dwarfing the number of personal computers shipped during the same period[2].

Mobile phones are changing the way people shop. Mobile phone and Internet technologies are being combined to create new services. For example, mobile subscribers can search for local retailers, access ticket information, and securely make purchases.

Mobile phone services are ubiquitous and affordable. Mobile phone service is available in more than 210 countries and costs as little as $10 per month[3]. With approximately 2.2 billion mobile phone subscribers worldwide[4], roughly one-third of the world's inhabitants now have mobile phones. A leading market analyst firm predicts 3 billion mobile phone subscribers worldwide by 2010[5]. The **Cellular Telecommunications and Internet Association** (CTIA) estimates there are 204 million mobile subscribers in the U.S. alone.

People take their mobile phones with them everywhere—just like their car keys and wallets or purses. And no wonder. Mobile handsets deliver hours of "talk time" and days of standby operation on a single battery charge.

Mobile phones aren't just for making phone calls. The vast majority of today's mobile phones support text messaging. Consumers can use text messages to access promotions, enter contests, and buy products and services. Merchants can use text messages to send customers reminders, perform quick surveys, and deliver sales receipts.

Mobile phones are available with integrated digital cameras, music players, and PDAs. The mobile phone industry has begun its long-awaited

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[1] According to Yankee Group Research, by 2004 the percentage of wireless users who had "cut the cord" was 6% and growing 1.5% per year. http://www.newsfactor.com/perl/story/27822.html

[2] iSuppli estimates 812.5 million mobile phones shipped in 2005; IDC estimates 208.6 million PCs shipped during the same period.

[3] *India's Wireless Market: Model for the Next Phase of Global Wireless Expansion*, Datacomm Research Company, updated May 2006

[4] "Worldwide Cellular Connections Exceed Two Billion," GSM Association website, http://www.gsmworld.com/news/press_2005/press05_21.shtml

[5] Gartner, Inc., http://www.gartner.com/press_releases/asset_125194_11.html, press release of April 18, 2005

migration to **third generation (3G) wireless** technology promising robust Internet access and multimedia communications. 3G services are available or rolling out in all major U.S. cities.

Meanwhile, advertising in traditional media is in decline. According to one source, while newspaper and free TV advertising budgets grew less than 2% in 2005, advertising budgets for cable TV and Internet increased 15%[6]. Advertisers recognize that new digital media offer the precision targeting and interactivity that traditional media lack.

Mobile phone trends

Placing and receiving phone calls is still the top mobile application. However, text messaging is skyrocketing. By 2004, more than 500 billion text messages were being sent per year to and from mobile phones[7].

Though wireless data services were slow to take off, content downloads are now common. Popular downloads include games; mobile **ringtones**, which customize the sound a phone makes when it rings; and **wallpapers**, which are pictures that appear on the mobile phone's screen. 3G services are being launched in Asia, North America, and Europe; faster networks make it easy for mobile phone users to download songs and stream videos.

Mobile commerce is growing rapidly. Today it's dominated by ringtones, games, and wallpapers. Mobile ticketing for movies, concerts and transportation is poised for dramatic growth. Shrewd Mobile Virtual Network Operators (MVNOs, covered

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[6] *Universal McCann's Insider's Report*, Dec. 5, 2005, McCann Worldgroup, New York, NY
[7]
http://en.wikipedia.org/wiki/Short_message_service

later in this guide) such as Amp'd Mobile are making movie ticketing the centerpiece of their entertainment offering.

Mobile phone billing systems are ideal for handling "**micropayments**"— transactions worth up to $3 or $4 each. Mobile game, ringtone, and wallpaper purchases are added to the user's mobile phone bill. New techniques will allow mobile users to buy items from vending machines with their mobile phones. Solution include sending a text message to the vending machine; displaying a payment-authorizing bar code on the phone's screen; and swiping the mobile phone near a reader (much like a credit card) using a technology known as **Near Field Communications** (NFC). Another application would enable users to hail taxis using mobile phones and location detecting technology; a small "hailing fee" would be added to the mobile phone bill.

The industry is also developing solutions that will allow handsets to handle larger transactions. Some vendors are embedding credit card information in handsets—creating "mobile wallet phones." However, this requires the support of Point of Sale (POS) vendors and financial institutions and most implementations are still experimental. The first solutions to enjoy widespread adoption will employ current technology such as linking mobile phone numbers to credit cards (e.g., Soapbox Mobile's MoneyClip application) or bank accounts. The launch of Mobile PayPal is another example of how mobile purchases can be facilitated using existing infrastructure.

Mobile marketing opportunities

The mobile marketing channel offers direct access to consumers, instant and measurable market feedback,

ongoing relationships with customers, and the ability to tap impulse buying.

Mobile phones offer more powerful targeting, interactivity and personalization capabilities than the Internet. Merchants can push coupons, store locations, and promotions to mobile users while they are out and about—so the users can put such information to immediate use. Mobile phones are also ideal **viral marketing** tools: because users take their mobile phones everywhere, they can share content with people nearby and forward content to friends and family elsewhere.

Research shows that an extraordinary percentage of mobile messages elicit responses—on average between 5% and 20%[8]. Vendors report that mobile advertisements enjoy significantly higher click-through and conversion rates than Internet banner ads[9].

Mobile marketing offers unique opportunities to engage consumers' interest. A print or broadcast ad invites the user to sign up for mobile announcements. The user receives a mobile message containing a promotional code that can be redeemed for a gift or discount.

The mobile marketing channel offers unprecedented targeting. Subscriber preferences, information gathered by operators (though not always directly available to marketers), behavior observed by merchants and (in some cases) users' current locations may be exploited. The mobile channel also possesses a subtle advantage: operators impose restrictions on contacting mobile users that teach merchants to employ advertising so

compelling that mobile users welcome the advertisements.

Mobile marketing is particularly suitable for businesses such as entertainment, travel, media, and leading brands. Mobile phones can now access, store, and play music, videos, and games. Mobile users want help planning travel and navigating their surroundings. The mobile channel is a perfect complement to newspapers, magazines, and cable TV, enabling instant alerts, mobile access to directories and schedules, and previewing content. Mobile marketing adds real value to brands—not just "buy now" messages.

Why mobile marketing?

- Text messaging offers access to 2 billion consumers
- Allows precision targeting
- Provides instant market feedback
- Taps impulse buying
- Enables viral marketing

Mobile content is all the rage. Mobile ringtones, wallpapers and games can be used to promote brands. Weather, news and sports videos present advertising opportunities. Mobile phones now support **ringback tones**—songs or audio messages heard by the caller as the mobile phone rings—that can also be used for advertising purposes.

The mobile marketing channel is attractive to merchants because it offers advertising opportunities for every budget and experience level. Merchants can experiment with one-time text message promotions. Merchants expecting mobile to be an increasingly important marketing channel can offer their own content

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[8] According to a study by i-Touch Movilisto
[9] AvantGo, a mobile Internet subscription service, claims mobile click-through rates are at least 5 times higher than Internet banner ad click-through rates, with unprecedented sales conversions (10%-20%).

and interactive services. Vendors convinced that mobile will become the leading marketing channel can even create their own branded mobile phone service.

The more merchants invest in mobile marketing campaigns, the more they need solid data from market trials. One of the mobile channel's virtues is that it offers ample opportunities for experimenting and testing.

Most mobile marketing vendors advise businesses to treat the channel as an extension of existing media rather than as a replacement. Mobile marketing is in its infancy and consumers still need to be driven to the mobile channel. This can be accomplished, for example, by including text messaging "**short codes**" (described below) in print ads, on billboards, and on Web pages.

Entrepreneurs are combining traditional and mobile phone media in innovative applications. Camera phones equipped with special software can take pictures of bar codes[10], digital watermarks[11], or logos[12]; these are decoded and the user is connected to the vendor's website.

Word-of-mouth has always been one of the most powerful marketing techniques. In the mobile channel, it's easy to refer products and services to family and friends. For example, one content producer includes a "tell-a-friend" button in its software; when a user responds, the content vendor detects the friend's operator and handset model and sends the friend a link to the appropriate version of the same content[13].

The mobile channel integrates nicely with customer loyalty/rewards

programs. Customers making purchases with mobile phones can receive points, view totals, and redeem points for awards at the same time. Merchants can give extra points for using the phone to make a purchase or receive a text receipt, responding to a customer survey, or agreeing to receive text message promotions.

The mobile channel enables merchants to create richer and more reliable customer databases. Databases may contain information on when and where customers make purchases, request information, and refer friends and family. Because most people keep their mobile phone numbers when they move, a mobile phone number-based database is more reliable than a street address-based database.

Mobile marketing challenges

Mobile marketing also presents some challenges. Mobile users have little patience for unsolicited sales pitches. And marketers who want to exploit multimedia content may only be able to reach a subset of mobile phone users.

Mobile marketing challenges

- Mobile ads must deliver real value
- Marketers must observe mobile etiquette
- Digital content must be protected
- Multimedia content can only reach a subset of users
    - Text messages can reach everyone

User privacy and convenience cannot be overemphasized. A service enabling merchants to reach customers directly at any time and any place should be used carefully and

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[10] NeoMedia Technologies' PaperClick
[11] Digimarc's Digimarc Mobile solution
[12] Neven Vision's visual recognition technology
[13] Cascada Mobile's TAG technology

sparingly. Mobile users are busy people. Because handsets have tiny screens and keypads, it takes longer to receive, read, and delete unwanted messages and content. Vendors should only contact mobile users who explicitly opt in and should provide them easy, direct, and quick means of opting out.

The mobile marketing channel should be used to deliver real value and desired entertainment. The mobile phone is a new marketing channel, and merchants should do their utmost to make a good first impression. It's also important for the marketing team to create programs that clearly demonstrate the power and utility of mobile marketing so senior management will continue to support its use.

Young people (ages 15-35) are more avid users of mobile messaging and data features. It may be a bit harder to reach older consumers via the mobile channel, but it can be done.

Marketers employing multimedia content must work with diverse networks and handsets. They must create multiple versions of content and accept smaller audiences.

Multimedia content requires more advanced handsets and 3G mobile phone services—both of which cost more. And more sophisticated products and services are usually harder to use—at least at first. Merchants should weigh the advantages of using multimedia content against the disadvantages of reaching a smaller audience.

Most of these challenges can be overcome by employing opt-in text messaging as a general solution.

Technologies enabling mobile marketing

Mobile phone communications include voice, messaging, and wireless data. There are multiple tools within each category, and these can be used in different combinations. For example, a text message may include a **Call to Action** (CTA) link which, when clicked, places a phone call to an **Interactive Voice Response** (IVR) system. Or the link may take the mobile user to a Web page from which ringtones, wallpapers, games, and other applications can be downloaded.

Screen shot 1 Mobile ad with call to action link (courtesy of Third Screen Media).

Messaging services include standard rate **Short Message Service** (SMS), premium rate SMS (**Premium SMS**), and the new **Multimedia Messaging Service** (MMS).

Mobile phone standards worldwide

Most of the world's 2.2 billion mobile phone subscribers are using **second generation (2G)** handsets and services. There are two major 2G standards. The **Global System for Mobile communications** (GSM) was

developed in Europe and is the dominant standard with approximately 1.8 billion users. Two **Code Division Multiple Access** (CDMA) technologies developed by Qualcomm (**cdmaOne** and **CDMA2000**) have amassed about 300 million subscribers. CDMA is popular in North America, Asia, and Latin America; it is the dominant standard in the U.S. and Korea.

GSM is used by all of the major operators in Western Europe. In the U.S., Cingular Wireless and T-Mobile USA are also GSM operators. CDMA is used by operators including Verizon Wireless and Sprint in the U.S., KDDI in Japan, China Unicom in China, and SK Telecom in South Korea.

Mobile phone networks provide voice service much like landline telephone networks, except that several features that are optional with landline service (such as caller ID) are standard on mobile phone service.

The majority of 2G networks employ "2.5G" data services[14]. Two examples are **General Radio Packet Service** (GPRS) for GSM users and Sprint's "PCS Vision" service based on CDMA2000. The 2.5G mobile data services deliver speeds ranging from about 25 kilobits per second (kb/s) to 150 kb/s—generally fast enough for simple animations and compact applications such as games.

3G services are now available in several countries. The two major 3G technologies are **CDMA2000 EV-DO** (for CDMA operators) and W-CDMA (**Wideband CDMA**, also known as UMTS, or **Universal Mobile Telecommunications System**) for GSM operators.

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[14] There is considerable disagreement about which technologies qualify as "3G." Technically, CDMA2000 is a 3G technology. However, for the purposes of this Guide we classify the technologies in terms most applicable to merchants and end-users.

CDMA2000 EV-DO networks deliver around 400 kb/s throughput. W-CDMA delivers slightly less throughput, but an enhancement known as **High Speed Downlink Packet Access** (HSDPA) promises downlink speeds around 550 kb/s.

Both CDMA2000 EV-DO and W-CDMA can support streaming audio and video on handsets, and high-speed Internet and email access on portable computers. As of December 2005 there were 66.5 million 3G subscribers worldwide, roughly two-thirds of them in Japan and Korea. Today, only a small percentage of mobile phone users can take advantage of 3G services.

Messaging: the most popular mobile marketing tool

Virtually all mobile phone users can send and receive short text messages. Messaging is hugely popular in Europe and Asia, and increasingly so in North America. Analysts estimate that more than 500 billion text messages are sent each year—nearly 100 for every person on the planet[15].

Use of SMS is often referred to as "texting." Messages sent from a mobile phone are **mobile originated** (MO); messages sent to a mobile phone are **mobile terminated** (MT). The emergence of Premium SMS commanding extra charges has given operators an incentive to ensure SMS operations are fast and reliable.

SMS typically supports messages up to 160 characters in length. SMS is good for quick questions, succinct alerts, and focused responses. It's often more convenient than a phone call; the sender usually gets right to the

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[15] According to the article "Short Message Service," Wikipedia, (http://en.wikipedia.org/wiki/Short_message_service)

point and the recipient can read it in seconds.

Premium SMS is increasingly popular. A mobile user can send a premium SMS to purchase a ringtone or even a vending machine item. Premium SMS is also used to deliver regular updates on a subscription basis (typically $3 - $10 per month) and other content for one-time charges. The latter is called "Reverse Billing" SMS because premium rates are charged for messages requested by the user. The revenue potential for a $0.50 Premium SMS message becomes significant when millions of users go for it. Most "off-deck" content (content not listed on the handset's main menu) providers employ Premium SMS because the charges appear on the user's mobile phone bill.

Regular text messages cost $0.10 or less each. In the U.S., many calling plans include a number of free text messages. According to one research organization 25% of American adults with mobile phones used text messaging during February of 2005 alone[16]. The CTIA estimates that 95% of mobile phones in the U.S. support text messaging and 62% of subscribers have tried it. Text messages are very profitable for operators because they consume far less capacity than high-speed data services or even voice calls.

Four developments are accelerating SMS use in the U.S. Interoperability between operators allows any mobile user to exchange text messages with any other mobile user. Short codes (see below) make it quick and easy for users to access special promotions, specific information, and service demonstrations. Premium SMS (often using short codes) encourages merchants to use SMS. And the appearance of SMS in popular culture,

such as the TV show *American Idol,* makes SMS exciting and hip. House of Blues, the U.S.'s second largest promoter of live events, is using SMS to strengthen relationships with audiences (see sidebar).

SMS can be used for voting, chat, and other forms of interaction. One mobile marketing vendor enabled TV viewers to choose the ending of a specific TV show and obtain free show-related wallpaper[17]. Another vendor enables mobile users to send song requests to local radio stations. There are also systems that permit mobile users to send (moderated) comments for display on TVs and electronic billboards.

Text groups present additional targeting opportunities for marketers. Text groups may be created for fan clubs, employees of the same large company, school alumni, and people who share the same hobby. Temporary groups can be created for people attending a special event.

Some firms specialize in hosting text messaging groups, providing a single source for users interested in browsing and joining text groups addressing different interests. Merchants can avoid the laborious process of applying for their own short codes by sponsoring a text group that already has a short code. Text groups typically employ Premium SMS, with either users or merchants paying the fees.

Common short codes are short number strings that can be entered as SMS addresses. Besides being more convenient for end users than typing conventional SMS addresses (usually in the format <10-digit phone number@mobile operator>), short

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[16] The Pew Internet and American Life Project

[17] GoldPocket Wireless enabled CBS to let viewers vote for the ending on the show Big Brother 6.

codes (in combination with specific keywords) make it easier for merchants to track customer responses. Short codes become in effect merchant IDs and are practically indispensable for content providers.

U.S. merchants wanting their own short codes must apply to the Common Short Code Administration (http://www.usshortcodes.com/). The process can be somewhat involved. In addition to setting up an account and leasing a short code ($500 per month per random short code and $1,000 per month per selected short code) the merchant must apply separately to each wireless operator for each use.

Illustration 1 Bar coaster ad promotes SMS campaign (courtesy of g8wave).

Today the U.S. employs 5-character common short codes. (Some operators, such as Cingular, have their own 4-character codes.) The Common Short Code Administration will introduce 6-character short codes to increase the number of codes available from under 100,000 to nearly one million.

Mobile marketing platforms allow merchants to create, manage, and analyze mobile messaging campaigns. A well-designed platform enables merchants to perform these tasks in-house to reduce the time required to launch a messaging campaign, provide more granular control (for example,

producing different campaigns for different locations), obtain faster responses, and enjoy more flexible reporting.

First and foremost, a good mobile marketing platform should be easy to use. For example, Soapbox Mobile's Soapbox Anywhere platform is designed for use by marketing personnel rather than wireless technology experts. Soapbox Anywhere permits merchants to create and launch messaging campaigns using intuitive commands in a step-by-step, guided process. Messages with predefined responses can be created in minutes. Once a campaign is launched, custom reports can also be quickly generated.

In the near future, Multimedia Messaging Service (MMS) will enable wireless users in the U.S. to exchange messages containing graphics, digital photographs, audio, and video clips as well as text. Standard MMS messages are expected to cost $0.25 or more.

MMS requires handsets with MMS client software and the ability to create and view multimedia messages. While it's easy to exchange text messages between different phone models, exchanging multimedia messages between different phone models is more challenging. Camera phones are good candidates for MMS because they are optimized for handling graphic images. The **MMS Center** (MMSC) is responsible for translating content from one handset model to play on another handset model.

Because MMS is just being launched in the U.S., the service will likely have limitations. For example, it may be a while before there is full interoperability between different operators or the ability to send the same message to members of a lengthy distribution list. It will probably be at least a few years before

House of Blues Connects with Concert-goers

House of Blues (HoB) is a leading promoter of live concerts. It was started in 1992 at an historic house in Cambridge, Massachusetts with the backing of diverse investors including Dan Aykroyd, Harvard University, and Paul Schaffer. Today, HoB owns and operates 10 branded clubs and a hotel, sponsors the House of Blues radio hour, and books concerts in some of North America's largest amphitheaters.

HoB is a pioneer in the use of digital technology. During the 1990s, HoB was the first major music company to deliver exclusive content online. In partnership with Motorola, HoB is now leading the way again, using mobile phones to interact with customers, enhance their concert-going experience, and drive ticket sales.

House of Blues relies primarily on SMS because it reaches the largest audience, is easy to use, and gives concert-goers the ability to interact with HoB and each other. For example, HoB's short codes are displayed in print ads to draw in mobile users. SMS contests keep concert-goers engaged after the concert is over. During concerts, individuals can send messages to giant video screens seen by the entire audience.

House of Blues has a proven track record using new technology to enhance its success. HoB selected Soapbox Mobile's Soapbox Anywhere platform to build and manage SMS campaigns. According to HoB's Jim Canella, Nat'l Dir. Of Corporate Partnerships, Soapbox Anywhere enables HoB personnel to quickly create, launch, and monitor SMS campaigns. Soapbox also obtained short codes for each HoB venue and ensured HoB's campaigns would work with all operators and handsets in North America.

merchants can use MMS as easily as SMS to reach large audiences.
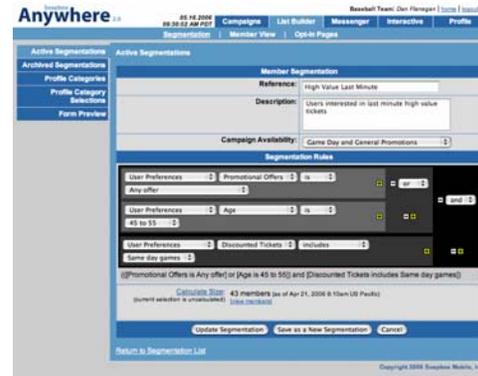
Screen shot 2 PC-based system lets merchants manage mobile campaigns (courtesy of Soapbox Mobile).

How mobile users access Internet content

Wireless Application Protocol (WAP) is an open standard for mobile Internet applications. "WAP sites" format data for presentation and navigation on mobile handsets with small screens and keypads. WAP technology is standardized by the **Open Mobile Alliance** (http://www.openmobilealliance.org/).

WAP Push makes it easy for mobile users to find WAP content. A WAP Push is usually a text message with an embedded link to a WAP address, relieving the user from having to navigate data menus and screens. A WAP 1.2 handset will automatically offer the user access to WAP content (which could be text, multimedia content, or a JAVA application) upon receiving a WAP Push.

Though WAP did not meet initial expectations, it is starting to gain traction in the U.S. WAP content may include advertisements or pages from which orders can be placed.

Developing and distributing mobile applications

Mobile applications may be sponsored by merchants and may even contain advertisements. **Java Micro Edition** (Java ME) and **Binary Runtime Environment for Wireless** (BREW) are two leading solutions for developing and distributing applications such as games for mobile phones.

Screen shot 3 Fans can download NASCAR wallpapers and applications (powered by Digital Orchid).

Java Micro Edition was developed by Sun Microsystems for a variety of resource-constrained devices and is used by both GSM and CDMA operators. BREW was developed (and is administered) by Qualcomm, and is currently used by approximately 60 CDMA (including W-CDMA) operators worldwide.

In the U.S., Alltel, Cricket, U.S. Cellular, Verizon Wireless and several smaller operators support BREW. Cingular Wireless, Nextel, Sprint, T-Mobile and others support Java ME.

Despite the acceptance of the two standard development environments, separate versions of applications must be built for different handsets and packaged for different operators. A typical application requires about 250 different "builds" for use in the U.S.

Screen shot 4 Mobile applications for Olympics (courtesy of Crisp Wireless)

How mobile users find content and local businesses

Mobile search serves two main purposes: 1) to help users find and purchase content created for mobile phones, and 2) to find local businesses. It's anticipated that local mobile search services will eventually use locating technology built into mobile handsets and networks to automatically determine the user's

whereabouts. Thus, **local mobile search** might not only find the closest Italian restaurant but provide turn-by-turn driving directions.

There are also mobile discovery services that provide related for-sale content. For example, when a mobile user purchases a song by a favorite band, the discovery service provides links to other songs by the same band.

Major Internet portals such as AOL, Google, and Yahoo! offer mobile search services. Google offers Web Search, Image Search and Google SMS. Images can be accessed using XHTML (**eXtensible Hypertext Markup Language**) supported by most of today's mobile phones.
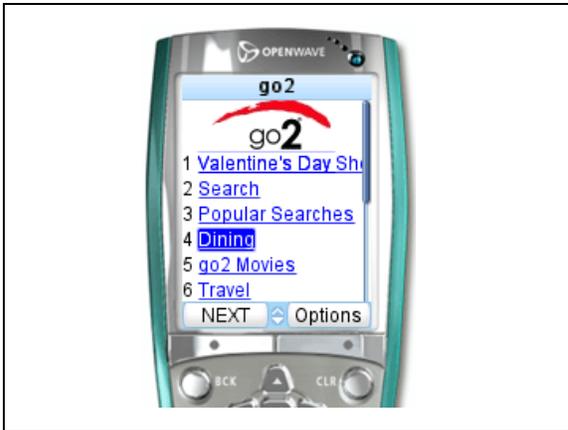
Screen shot 5 go2's mobile search home page.

Mobile search may be performed on WAP sites or via SMS. For example, 4INFO (common short code = 44636) permits users to access Yellow Pages listings as well as stock quotes, weather forecasts, movie times, horoscopes, flight status, package tracking, pickup lines, fantasy player stats, and drink recipes. Mobile search results can be formatted to enable one-touch dialing of the displayed Yellow Page listing.

Screen shot 6 go2's local directory finds restaurants and more.

Using short-range wireless for local services

Many mobile phones now come equipped with short-range wireless technology for communicating directly with nearby personal computers, printers, point of sale (POS) terminals, information kiosks, vending machines, and other mobile phones. Short-range wireless technology enables mobile phones to exchange information with local devices, communicate at higher speeds, and perform secure, local transactions.

Short-range wireless offers three advantages for mobile marketing. First, the technology provides alternative methods of accessing content, some of which are provided at no charge by the venue owner. It also enables more secure financial transactions, as signals are confined to a small area. And third, short-range wireless facilitates exclusively local services for retailers and others.

The short-range technologies being integrated with mobile phones are **Bluetooth**, **Wi-Fi**, **infrared**, and Near Field Communications (NFC). Bluetooth is fast becoming a standard feature on mobile phones sold in Europe and North America. Infrared is often found on mobile phones sold in

Asia. Wi-Fi is expected to be integrated with mobile phones for use on enterprise wireless local area networks (LANs), public "**hotspot**" services, and wireless networks in homes. Near Field Communications technology is being introduced on a trial basis to enable mobile phones to make electronic payments.

Achieving a "critical mass" of mobile phones with short-range wireless technology is one major challenge. Getting retailers to employ Bluetooth-equipped POS terminals is another.

Last year may have been the turning point: some researchers estimate 140 million Bluetooth-equipped mobile phones were sold worldwide in 2005[18]. As Bluetooth-equipped handsets become common, prospects for Bluetooth infrastructure and applications improve.

Bluetooth is a low-power, low-cost, short-range radio technology. The current version supports speeds up to 3 Mb/s at up to 30 feet. Bluetooth is already used in Spain and parts of Latin America to deliver electronic newspapers with advertising and product brochures to Java-capable handsets[19].

Bluetooth can also be used to establish direct communications between two or more mobile phones—an application some call "toothing"—to exchange electronic business cards and other information.

Infrared technology is used in parts of Asia for communications between handsets and Point of Sale (POS) terminals. The same applications can be served by Bluetooth in North America and Europe. Wi-Fi, an

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[18] *Market Focus: Bluetooth in Mobile Devices, Worldwide, 2004-2009*, Gartner, Inc., 4 November 2005

[19] Mobile Dreams Factory

MobiTV Keeps Viewers in the Loop

MobiTV operates mobile television and digital radio services for wireless operators and users. The firm recently announced that its branded mobile television service, launched in November 2003, reached one million subscribers.

MobiTV provides 30 channels of television to operators such as Cingular, Sprint, and Alltel. The firm also powers carrier-branded mobile television services. MobiTV likens its service to cable TV, bringing a killer application invented 75 years ago to mobile phones.

The greatest challenge for mobile television service is that mobile users are busy people—often too busy to stop and see what's on mobile television. According to MobiTV, subscribers appreciate timely reminders about programs of interest to them.

According to Paul Scanlan, MobiTV's Chief Operating Officer, the firm needed an easy and minimally intrusive way to send reminders, and SMS was the natural choice. A search was initiated for the best messaging platform. The messaging platform selected had to provide: 1) a powerful yet easy-to-use management interface; 2) a way to reach subscribers regardless of operator; and 3) a flexible way of sending messages (direct or through operators' portals). Soapbox Mobile's Soapbox Anywhere platform met all these needs—in part because Soapbox has established its own connections to operators' messaging networks.

MobiTV is in the early stages of using messaging to send reminders. The initial messages will be very general. Later, MobiTV plans to send specific reminders to specific users.

extremely popular technology for wireless LANs in homes, businesses, and public hotspots, is also being integrated with mobile phones.

Near Field Communications (NFC) requires the mobile phone to touch or nearly touch a device to communicate with it. (NFC is compatible with contactless smart card infrastructure.) NFC is an excellent choice for mobile commerce applications because its ultra-short range inhibits eavesdropping and unauthorized access. Potential applications include electronic payments (charging to a credit card number stored in an accompanying chip). NFC is being tested in the U.S. on Nokia phones with a special faceplate containing an NFC chip. NFC standards are being developed with the support of the NFC Forum (http://www.nfc-forum.org/home).

There are also non-wireless means of communicating locally with mobile handsets that may interest merchants. Handsets may be connected via cables to local personal computers to exchange information. Removable storage devices (e.g. **miniSD Memory Cards**) may also be employed to transfer content. These methods can be used by merchants to load and configure handsets with brand-related content.

How can retailers be convinced to deploy and use short-range wireless technologies? Successful mobile marketing campaigns using SMS technology can be used to demonstrate demand for applications (such as distributing and redeeming coupons) that could also be served using short-range wireless.

Coming soon: location-based services

Radio locating technology promises to greatly enhance mobile marketing. A Federal Communications Commission (FCC) mandate requires mobile phone operators in the U.S. to pinpoint the physical locations of mobile phones calling E9-1-1 emergency centers. The same technology can be used to assist mobile users in finding specific addresses and points of interest (POI), to provide turn-by-turn driving directions, and to alert users when they come within a specified distance of a particular business.

Locating services also pose some challenges. One concern is that locating technology could be used to track mobile users' movements without their knowledge or permission. The best solution may be handset-based locating technology (integrating **Global Positioning System** (GPS) capability) rather than network-based locating technology. Handset-based solutions allow mobile users to turn locating on and off.

In time, Location-Based Service (LBS) will be used in conjunction with local mobile search to find nearby restaurants, movie theaters, and other places. However, it could be a few years before LBS applications mature.

Ensuring user privacy and security

Mobile marketing offers unprecedented opportunities for establishing direct, immediate, and individualized relationships with customers and potential customers. However, as with any technology, mobile marketing can be abused. To ensure it achieves its full potential, operators and marketers must define, promote and adhere to an appropriate mobile marketing etiquette.

It's essential that mobile users find mobile marketing useful, pleasant, and confidence-inspiring. Marketers should strive to offer more than just a sales pitch. Mobile users should only be contacted with their permission, and the instructions to opt out should be clear, easy to follow, and readily available. Brand owners and operators must develop, implement and promulgate policies that protect end users from intrusive practices, privacy abuses, and inconvenience.

The way to make mobile marketing compelling is to use promotions that deliver real value to end users. Promotions could include giveaways (e.g. free ringtones), contests, chances to express opinions and be heard (e.g. voting), opportunities for interacting with users with similar interests, and valuable information (e.g. tips or alerts).

Mobile marketing experiences must be pleasant. Mobile marketing messages should be entertaining and informative. Marketers and operators must continually demonstrate to mobile users that every effort is being made to protect privacy, minimize inconvenience, and ensure positive mobile marketing experiences.

Mobile users must not see mobile marketing as a slippery slope towards continuous, in-your-face spam, telemarketing, and tracking. One way to ensure they don't is to give them total control over when, how, and by whom they are contacted. Users should be able to specify the types of products and services they want to hear about; how often they will be contacted; the format(s) in which they are contacted; and the day-of week and/or time-of-day they wish or do not wish to be contacted.

There must also be a simple way for users to manage interaction with mobile marketers. Ideally, this should

be a Web page where users can monitor and control permissions, offers, and responses. The management portal should provide a simple means of opting in and out of mobile marketing programs. And it should enable users to clearly convey their preferences to mobile marketers.

Mobile phones can also be used to help ensure secure transactions. For example, when a user initiates a credit card purchase in Korea locating technology is used to determine whether the user's mobile phone and credit card locations match; if not, the mobile user is notified via SMS that someone is attempting to use his or her card.

The Mobile Marketing Association has published a "Best Practices" guide that can be downloaded at http://www.mmaglobal.com/bestpractices.pdf.

Protecting vendors' content

Mobile marketers may also have security concerns. The main fear is unauthorized distribution of proprietary content. Vendors selling or distributing content can employ **Digital Rights Management** (DRM) technology to protect content.

DRM standards are being developed by the Open Mobile Alliance (OMA). A feature called **separate delivery** is of interest to content providers who wish to exploit viral marketing. Separate delivery enables content to be forwarded to, and previewed by, other users. (The users must obtain individual licenses if they wish to play the content beyond the allowed preview.)

Why ease-of-use is so important

Ease-of-use is a critical success factor for mobile marketing. Mobile handsets' tiny screens are a limitation; the small telephone keypad found on most handsets makes doing anything beyond placing a phone call challenging. Advanced features must be easy to use and intuitive—or they will not be used.

Many industry participants recognize the importance of ease-of-use, and many are diligently working on solutions. A key measure of ease-of-use is the number of key clicks required to complete a given task. It's also important to monitor the number of key clicks the average user actually makes to perform the task, and how easy it is to get back on track after making a wrong selection. Generally, the "clear" (CLR) key permits the end user to undo the last selection.

A related issue is whether content is available "**off-deck**" or "**on-deck**." Most U.S. operators offer handsets with custom menus that lead users to preferred content—also known as "on-deck" content. Naturally, the average user is much more likely to find on-deck content. It's always possible to get to off-deck content, but that may require typing in a URL or using a mobile search service. According to one survey, 90% of mobile game users learn about their games from their operator[20], a finding that highlights the importance of being positioned on-deck.

When choosing specific mobile marketing techniques, marketers must ask themselves whether the average mobile phone subscriber can and will use the required features. Advanced technology is not necessarily user-friendly. Marketers should not hesitate to use simple techniques such as phone calls to automated attendants and text messages to get the job done. One firm has developed a solution that lets users request content via ordinary phone calls[21]; the users play special tone-generating cards while holding the cards next to their handsets. Another vendor combines IVR and video so that users can make selections and enter responses while playing videos[22]. These solutions were developed so that users would not have to navigate confusing data menus on their mobile phones.

It's also important that merchant tools be easy to use. Non-technical personnel in a wide range of industries should be able to use tools such as messaging campaign platforms.

Getting started in mobile marketing

Several types of mobile marketing campaigns are possible. These range from text messaging promotions, to mobile commerce applications, to branded **Mobile Virtual Network Operator** (MVNO) service.

Text messaging campaigns are generally the best place to start. Almost all mobile phone subscribers can be reached via text messaging. Text messaging campaigns are easy to design and implement. Merchants can start with one-time promotions—graduating to larger campaigns as they acquire experience.

The first step may be to invite customers to visit a Web page or call a toll-free number. Information can be gathered regarding the mobile user's interests and preferences. Email can

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[20] M:Metrics press release of November 28, 2005

[21] Ki-Bi Mobile Technologies, Ltd.
[22] MX Telecom Video Gateway

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be used to remind users how to opt out or change preferences.

Text messaging is also an excellent tool for leading users to other content. For example, a consumer brand can send text messages with links to wallpapers, ringtones, games, and other mobile applications. This content may be branded or include advertisements.

Merchants can also work with mobile advertising aggregators. These companies act as brokers for ad space on existing WAP pages, applications, and videos. There are banner ads that appear at the top or bottom of the mobile phone's screen and interstitial full page ads that are inserted between WAP pages or before, during, and after mobile videos.

Small merchants may start by working with text groups or online stores offering mobile content. For example, there are online stores that specialize in wallpapers, ringtones and games. Anyone with a digital camera can produce their own mobile phone wallpaper.

Larger organizations may want to develop comprehensive mobile marketing strategies. The first step should be to define and prioritize goals. For example, is the top priority to promote a brand, enable transactions, or build user communities?   Brand promotion can range from "brought to you by" messages to full-blown branded mobile phone service. The mobile channel may be used to enhance transactions by offering coupons, making payments, and delivering receipts. User communities can be built around contests, loyalty programs, and shared interests.

Branded mobile phone service may be offered by a Mobile Virtual Network Operator (MVNO). An MVNO is a

wireless service provider employing another operator's network. MVNOs typically target specific market segments (such as youth, ethnic groups, and prepaid users) with differentiated devices, services and pricing packages. ESPN, Tracfone and EZLink are examples of MVNOs.

A new entity known as the **Mobile Virtual Network Enabler** (MVNE) has emerged to help companies establish MVNOs. The MVNE offers services such as wireless access, billing, customer care, and mobile data. The MVNE enables the MVNO to get to market quicker and focus on marketing rather than network operations. Versent Mobile and Visage Mobile are examples of MVNEs.

Don't be left behind

There are now more users of mobile phones than landline phones. The cost of handsets and services has declined significantly, and the market continues to grow. Virtually all mobile phones support text messaging and a growing percentage support multimedia.

The mobile phone offers merchants unprecedented ability to access customers, interact with them, and drive sales. Savvy merchants are learning today how to master this new medium—it's never too soon to gain a competitive advantage.

While exciting, new features are in the pipeline, the best way to reach most mobile phone users is via text messaging. Text messaging is easy to use, unobtrusive, and is supported by virtually all phones and operators. A well-managed text messaging campaign is a powerful sales tool.