

BETA

# MOBILE MARKETING

## How to get your brands directly into their hands

*Mobile is the first PERSONAL mass media, it crosses all market segments, travels well globally and hyperlocally. It offers the way for direct, immediate, accountable and intimate contact with consumers that no other platform affords yet.*



### BATTLE for the WORLD'S MOBILE ADS

Studies indicate that there are four times as many mobile phone users as Internet users, and that mobile advertising has eight to 10 times higher click-throughs CTR than online advertising. Knowing what you do from the previous chapter, you know this fact is MASSIVELY important. It's where the money will go.

In this chapter we'll be focussing on why mobile has had such a profound effect on developing and mature markets alike. And what to do about it.

From simple SMS campaigns to the dazzling iPhone applications and location-based services we'll touch on how useful and even vital various mobile campaign elements

can be to your overall marketing strategy.

Reference your glossary (at chapter's end) if you encounter terms that need more explanation.

There is plenty of opportunity, on a vast scale, lots of data but no precedent for this new medium's effects. Let's get a sense of what's working now >>

One-third of all Google searches via mobile web pertain to some aspect of the searcher's local environment. **"We think of location as a hugely important signal"** -Director of mobile advertising at Google, Diana Pouliot

The Communications Marketing Report (UK) found requests served by Admob, the world's largest mobile advertising network (bought by Google 2009), had more than **doubled over the past year**, growing from 254 million to 585 million.

Google's AdWords has refined its service to allow advertisers to specifically target mobile phone users based on the business' location. "The ad appears as a text banner with a business icon that expands to show your location on a Google map along with your ad creative, click-to-call phone number and option to get directions,"

Google hopes that this form of PPC management will allow online advertising businesses the flexibility to reach mobile phone users without overspending on their PPC budget. Mobile PPC ads contain two lines of text, followed by your URL or even click-to-call.

NOTE: Mobile ads may not show if the user is using a smartphone with standard web browser

THE OBSTACLE: As a more established medium, however, the desktop Web still enjoys the advantage of being easier to buy than mobile. **Despite the promise of better return-on-investment, launching a campaign across different handsets, mobile operating systems and networks remains more difficult than selling a brand online.**

## MOBILE AS A FINANCIAL MODEL



<< When we still used these, they were tool of communication. The mobile phones, even basic phones have the power to change the fate of developing world farmers, offer financial services to the previously unbanked and saves lives as a medical tool. Amusing perhaps that we still call them phones.

Mobile phones can do things other media can't. Be sure, it's not

# JUST ANOTHER CHANNEL

## MOBILE APPLICATIONS TO MAKE USE OF IN YOUR MARKETING

**SMS (short message service) or text** the best all-rounder for any type of phone. The primary tool for marketers (60-70% use). Advertisers can send relevant marketing messages in form of 160 character texts.

**MMS (multimedia message service)** delivered like an SMS, but with rich media like video, sound or images.

**Bluetooth** one of the easiest tools for proximity marketing. Multimedia or text messages can be broadcast in a particular area or at an event.

**Wifi** much the same as Bluetooth. If the device is open to receiving, messages and objects can be sent directly to the phone.

**Mobile Applications** like installing a program on a computer you can have a richer experience - specifically targeted at the smartphone user though utility

**BEWARE THE LIMITATIONS:**  
**SIZE** small screens, small keypads. Big creative problem. Brevity & single direction scrolling required for mobile sites.  
**STANDARDS** multiple screen-sizes, browsers, operating systems, handsets, basic/feature or smart all render differently.

applications like Mxit or fring can embed happily in feature-phones.

**Click-to-Call** a script that allows for mobile ads to offer a call through directly from clicking on the ad.

**Voice Marketing** automated calls running off a database wherein pre-recorded messages are played.

**QR codes** (more in next section) Quick Response barcodes (also 2D barcodes) that can be embedded with information, multimedia or redirect to a site. They can



**YOU DON'T HAVE MUCH TIME:** get yr msg + call2action in 160 characters 4SMS

**Our behaviour is different in this medium too. Mobile users aren't passive.**

be placed in realworld settings & scanned with the phone camera and decoded with pre-downloaded software to execute the QR code action. Long popular in Asia, Google has taken a fresh look and rolling out QR campaigns with GoogleMaps.

*"You could not advertise on the internet without a website and the same goes for mobile. Brands should at least optimise their current site for mobile so that mobile visitors don't drop off while waiting for a full site to load on their phone."* Ogilvy Group UK head of mobile technologies Scott Seaborn.

Current smartphone offerings clearly show the future of mobile advertising but it will be some years before smartphones have deep enough penetration in developing markets to allow for mobile campaigns for the reach needed mass-market brands.

## UNIQUE CHARACTERISTICS OF MOBILE MEDIA

7 characteristics defined by Tomi Ahonen who coined the term "Seventh of the Mass Media" for mobile in 2008. [new +1 that has emerged as only applicable to mobile, augmented reality]

**Captures social context** of media consumption. where we are, what we buy and who we talk to can be monitored and used by marketers.

Available at the **point of creative inspiration** to take pictures, text, notes, video etc.

Supplementary data information layers can be viewed through **augmented reality** applications

Has a **built-in payment system** because subscribers can be charged through the mobile operator



**First PERSONAL mass media.** Our phones are more than just tools, because they contain personal information and artifacts. We don't like to share them or our privacy invaded.

**Always near** or carried on us. Morgan Stanley research showed that for 90% of us, our phones are always within 3 feet of us at all times. Equals fast reaction times to messages

It's **always on**

Most **accurate audience and engagement measurement** of all media

### SMART

These phones are handheld computers with fully-functional operating systems. Generally with bigger screens. Most offer 3G, WiFi and GPS capability.

### FEATURE

Phones that can access the internet, additional features like a camera, MP3 player and data storage. Discernable from smartphones by alphanumeric rather than QWERTY keypads also.

### BASIC

Phones that can at least: make calls, send and receive SMS and have USSD capabilities to engage with operator services by text.



Who are your customers and what are the most applicable, useful services to offer when they're on the move?

# ELEMENTS OF A MOBILE CAMPAIGN

Aimless browsing and extended text input aren't **typical behaviour patterns of a mobile user**. They're less likely to enter a URL or stumble across a website. So a direct approach is often most effective in the success of a mobile site or campaign.

## SMS

OLDSKOOL PERHAPS, BUT STILL VERY EFFECTIVE SAYS GLOBAL RESEARCH

**Before enthusiasm, permission.** To ensure you aren't labelled a spammer (*and face a hefty fine in South Africa*) make sure your recipients are genuinely interested and won't be put off when they receive your content. A **double opt-in** will assure that you're good legally and welcomed.

We've all learned from Twitter that the **140/160 character limit** provides enough space to be valuable. No matter the device, SMS is a **consistent user experience**. It's linked directly to a phone number for **identification, tracking and transaction security**.

We've come a long way since the standard 'text-to-win' promotions. From sending vouchers, to customer alert service, CRM to peace-of-mind with banking transaction alerts the marketing possibilities for SMS are *still* growing.

One of the ways to request permission is with **Common Short Codes (CSC)** where customers text a specific keyword to a short (4/5 digit) number. Used to enter competitions, request info, cast votes or rewards or discounts. It's a premium service so users can be **charged more than standard SMS** rates so they can serve as a handy payment or donation device.

Typically a third party vendor is used to manage an SMS program on your behalf and will most often have an application to build and track your campaigns.

A peculiar emergence from the recession and the localisation trend has been mobile coupons.

Often given as rewards for an action taken - like opting into a service - it works well when delivered by SMS to avoid operating system snags that may be specific to a downloaded app and not available to those without a particular kind of smartphone for example.

*Restaurants, hotels and retail stores in particular have had success with this form of marketing enticement.*

## THE MAGIC OF MXit

One of the gems for youth marketing in South Africa (and increasingly global) is the free instant messaging platform MXit.

It has its own currency - Moola (1 SA cent = 1 MXit moola) prepaid from credit card or mobile operator subscription, the Trading Post through which marketing, job offers, games, advertising and sales happen and MXit music to promote bands and offer downloads.

Strong results with good interaction from an engaged community is possible if you work within the constraints of IM text to drive initial engagement. Quality analytics are within the close control of MXit which sometimes frustrate agencies, but the results tend to outweigh this glitch.

## OTHER OPTIONS FOR MOBILE INTEGRATION

- Create a mobile version for your site, making it accessible to all. Denote it as a subdomain of your primary site or use the domain .mobi. Keep mobile URLs short or use a URL shortener to redirect to the mobile site.
- Have a presence on social networks that favour mobile connectivity (Facebook, Twitter, YouTube etc.).
- Geotag as much content as possible with your location to increase relevance in the mobile sphere. Use map ads on platforms like GoogleMaps or Nokia Maps.
- Don't forget to use SEO guidelines when creating content for better findability on mobile search.
- Pay Per Click ads (PPC) are a great way to display your ads on search engines. Joining an ad network like AdWords (tick mobile ads checkbox) or AdMob is a quick start to have your brand advertised on mobile sites.
- Integrating click to call in your ads for local ads.
- Remember to always include Terms and Conditions, even on your mobile website - as well as clear opt-out options for your audience.
- Use offline exposure and traditional media to drive your campaigns with keyword CSC to build your database and get permission to connect on this personal medium.
- Get creative with QR barcodes for print, websites, business cards, merchandise or shop windows.
- With permission, invite proximity marketing broadcast at events or instore or within a 'geofenced' area to engage, entertain, serve and inform customers, delegates or visitors.
- Device-dependent you can use SMS, Bluetooth, radio frequency tags, QR tags, GPS or augmented reality to add extra layers of meaning and build game-like features onto regular reality.



### 2D or QR CODES are handy to try because:

Avoids the hassle of text entry for the audience  
 Eye catching, fun and instantly recognisable as a 2D code.  
 Can be displayed offline and decoded on the fly.

Takes mobile user directly to the URL/video/offer  
 Variations like Microsoft Tags can have simple pictures or multiple colours in the barcode.  
 Handy for long mobile URLs

## TAKING IT PERSONALLY

Consumers are more likely to participate in mobile campaigns, if marketers get their privacy

permission, understand their preferences and respect their



Location is the hottest trend to roll into mobile marketing war-rooms. **Location-based services** (LBS), applications and location-based additives to Facebook, Twitter and Google have had a seismic effect.

LBS providers utilize their users' mobile phones, equipped with GPS or other positioning technologies, to offer useful information about their area or the whereabouts of friends, offer "check-ins" to physical places and increasingly deliver real-time offers from businesses in the area. Due to their growing popularity with consumers and promise for real-time advertisement.

Location-based mobile services have the potential to bring consumers and marketers together more quickly and more cost effectively than most other media channels, successfully closing the loop on advertising campaigns via revenue-generating transactions.

For specific events like concerts or sporting events it means that **occasion meets location in a perfect contextual opportunity** for marketing to fans who want a richer experience. the phone can deliver it.

Optimize your content for **multiple devices**. Ensure that location-based mobile tools have **high utility** and **privacy**. Users are more comfortable sharing their location when they see a tangible benefit to providing it - give them a good reason to do so.

Knowing where a mobile user is - whether in-store, with friends, at a restaurant or at the office - can help businesses know which content is most relevant to deliver to the consumer in that context.

They can be games like Foursquare or SVNGR or simply send a personal greeting or deliver loyalty rewards like a digital version of the stamp-card on each purchase.

## WHERE 2.0 now?

### HOW LOCATION-BASED SERVICES FIND YOU:

#### IP Address

Your IP, that number assigned to your computer when it is participating in a connected network like the Internet. It gives a rough estimate of your location.

**GPS** the easiest way of finding you on a GPS-enabled phone is using at least 3 satellites to triangulate your co-ordinates. Clear line of sight to the sky is needed so indoor discovery is tricky.

**CellPhone Towers** like GPS, 3 cellphone towers need to triangulate to confirm your position - known as GSM localisation.

**WiFi** if local wifi points are known to the database, it matches your GPS and SIM data to an established wifi point.

*Most services will use a mix of these to lock in accurate location.*

It's not all about the bright shiny new apps, Bluecasting, the broadcast of Bluetooth messages can be beamed to **mobile users in close proximity** at shopping centres or commercial/cultural points. Though not new, all manner of proximity marketing is being used in the quest for better local marketing. Permission definitely required on this one!

Maps have moved from flat and static creations to rich representations of the world. And now maps are moving to realtime. Location-awareness has become an expected feature of newer mobile devices. It's also brought increased attention to new mapping data (with useful crowdsourced applications like Ushahidi), new interfaces (such as augmented reality) and the occasional awkward social situation.

From reviewing platforms for travel and restaurants like Yelp.com to sophisticated place/photo recognition like Google Goggles or Nokia's Point and Find, no street corner will ever be the same. We'll be able to check on utilities nearby, reviews of local businesses and alerts. Online reputation will increasingly affect realworld foot-traffic.

CAVEAT: for now location-based applications like Foursquare or Gowalla for smartphones. A Forrester research survey in July 2010 showed that only 4% of US adults used social location-based networks on their phones and only 1% more than once a week. Only a few million consumers are using geolocating apps for now, but perhaps Facebook Places will heave their 5 million users into place-awareness.

## 3 TRENDS BEYOND THE PLACE RACE

### MOBILE FUNCTIONALITY CHANGING GLOBAL INFRASTRUCTURE

**1 PROXIMITY PAYMENT & COMMUNICATIONS** using 'Near Field Communications' simply swiping your phone over a sensor effects your payment. Checking in for flights, mobile ticketing for all manner of travel and transport. The technology has been in existence for a while but has never made it into the mainstream.

**2 BANKING** There will be around 1 billion people accessing financial services by mobile by 2015. The MFS market will be dominated Asia, driven by mobile operator-led initiatives in developing nations to bank the unbanked. Money transfers by mobile is growing three times faster than m-banking. Banking the unbanked in developing nations -through mobile operators- is coming in hard and fast.

**3 HEALTH** from just-in-time diagnostic support, holding medical data on a SIM, mobile health monitoring through smartphones, medication reminders, patient peer-support, life-saving healthcare information delivery to emergency services response. The evolving capacity of the mobile phone will reshape developing country's health crises and provide sophisticated StarTrek-like support in mature markets.

There are lots of numbers and lots of potential.

# MOBILE STATISTICS

There is no precedent for what to do with all this data, but enterprising marketers, business, search engines, phone manufacturers and governments are trying to make it all meaningful through experiment, policy and entrepreneurial spirit.

- **SMS is used by four billion consumers worldwide.**
- In 2009 worldwide SMS traffic topped **5 trillion messages**, and that figure is set to exceed 10 trillion in 2013.
- MMS, mobile email and mobile IM are all growing strongly. The driver for MMS is the number of camera phones, for mobile email is the business market and while IM is popular with the youth market.
- The global **mobile messaging business is worth over US\$150 billion**, and will hit US\$233 billion by 2014.

- Portio Research (February 2010)

Smartphones were only 15 percent of global mobile device sales in 2009

- Despite the popularity of mobile email, IM and MMS, simple SMS is predicted to exceed 10 trillion in 2013.
- On average, SMS gets **7 times the response rate versus email** (7% vs 1%) and reaches 25 times the number of responses on Twitter

The overall global decrease in fixed phone lines is echoed in South Africa where the number of households with phone lines dropped from 20% in 2007 to 18% in 2008 (according to AMPS figures).

South Africa has a higher cell phone subscription rate than the United States. Growth is fastest in parts of the world where the desktop computer or laptop is not the first user experience of the Internet. India, South Africa, Indonesia and Saudi Arabia are seeing the fastest growth in Mobile Internet usage.

- |                 |                         |
|-----------------|-------------------------|
| 1. Facebook.com | SA's most visited       |
| 2. Google.com   | mobile sites by         |
| 3. MXit         | unique visitor          |
| 4. YouTube      | <i>Opera Mini (July</i> |
| 5. Wikipedia    | <i>2010)</i>            |

Half a billion people accessed **mobile Internet** in 2009.

- Up to 50 percent of the world's mobile subscribers could be making **payments by mobile** (m-payments) in 2014.
- M-commerce is predicted to reach US\$119 billion in 2015, Japan remains king.
  - **M-ticketing** will be used by more than 1 in 10 mobile subscribers in 2014, **particularly in the transport sector.**

"There are more than 150 million active users currently accessing **Facebook through their mobile devices**. People that use Facebook on their mobile devices are twice as active on Facebook than non-mobile users." - *Facebook official statistics (August, 2010)*

Mobile subscribers will surpass 5 billion in 2010 (**over 70% of the world population**) and growing rapidly, led by China and India. - *The International Telecommunication Union (February 2010)*

MXit is South Africa's largest mobile social network

The MXit application has a global registered user base of 19.6 million. 17 million of those are SA users. MXit sends & receives about 250 million messages a day.

"In the last twelve months, customers around the world have ordered more than US \$1 billion of products from Amazon using a mobile device," - *Jeff Bezos, founder and CEO of Amazon.com. (July 2010).*

By 2011, over 85 percent of handsets shipped globally will include some form of **Internet browser**. - *Gartner (March 2010)*

**25% of all search queries on Google from SA come through mobile phones.**

## SMARTER THINKING about SMARTPHONES

Beware: there is a lot of misinformation about the market share of smartphones and some handsets in particular.

Though Apple takes the lion's share of publicity in the smartphone space it holds only about 15% of smartphone market share.

### TOP 5 SMARTPHONE MANUFACTURERS

1. Nokia 38.9%
  2. Research In Motion (Blackberry) 19.8%
  3. Apple 14.4%
  4. HTC 4.6%
  5. Samsung 3.3%
- (IDC Jan 2010)

Apple sold 25.1 million phones in 2009 - while this sounds impressive it is only 2.2 percent of new handsets. Nokia sold nearly 3 times as many smartphone handsets in total (431.8 million)

### TOP 5 MOBILE OPERATING SYSTEMS

1. Symbian (open license)
  2. RIM (closed)
  3. iOS (Apple) (closed)
  4. Microsoft Windows Mobile (closed)
  5. Linux (opensource)
- (Gartner Feb 2010)

### TOP 5 HANDETS IN SOUTH AFRICA

1. Nokia 5130 Xpress Music
  2. Nokia 2700c
  3. Nokia 2330c
  4. Samsung GT-S5233A
  5. Samsung SGH-E250
- (Opera July 2010)

## YOUR MOBILE DATA IS A BANKABLE RESOURCE

Marketers can define a startling access to your mobile choices and behaviour now. Be aware.

## THE BIG 3 ESSENTIAL IDEAS

*(the least you'll need to know)*

**Idea #1** Our phones are very personal communicators/transmitters so marketers need to be aware that **privacy concerns are paramount**. Get permission to connect.

**Idea #2** Be aware of spending disproportionate time & budget on creating apps and ads for a **limited operating system** serving a slim segment of mobile users. Mobile Web and SMS are better for mass-market brands.

**Idea #3** We act differently on mobile so brevity, being useful and direct is key to success on the small screen.

## REFERENCE WORKS

### & RECOMMENDED RESEARCH LINKS

#### Stats Reference

Mobithinking - Mobile Stats July 2010  
<http://mobithinking.com/mobile-marketing-tools/latest-mobile-stats>  
 ABI Research on location-based applications (August 2010)  
<http://www.abiresearch.com/research/1005771>

#### Recommended readings and podcast:

Can Apple's iAd deliver on iPromises?  
<http://www.thedaily Maverick.co.za/article/2010-09-01-can-apples-iad-deliver-on-i-promises>  
 Mobile Agencies: Ogilvy  
<http://www.mobithinking.com/mobile-agencies-guide/ogilvy>  
 Cannes Lions - Mobile Campaign  
<http://mobithinking.com/mobile-awards/Cannes>  
 Mobile Marketing in South Africa (Rick Joubert, October 2009)  
<http://www.rickjoubert.com/?p=77>  
 PSFK (Telecoms)  
<http://www.psfk.com/category/display-categories/telecom>  
 Msearchgroove podcasts on mobile marketing  
<http://www.msearchgroove.com/category/podcasts/>

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## THE FLIP-SIDE

### *No flipside ..only flip phones*

There will be few people left out of the transformative effect of mobile.

As marketers it's important to remember who their efforts are pitched toward, and being of service. Offerings need to match the technology in their pockets.

Don't forget that all the principles of usability, SEO, analytics and online advertising have a place in this mobile space as we move more fluidly between realities and borders.

Take care to respect the privacy of your market. Spam only generates resentment here as in any other medium only more so because its personal.



SEARCH - how are we finding things on mobile?

**There is no Google for mobile search yet.** So here's what marketers need to know about the half-dozen ways people are hunting down information using their wireless devices.

1. MOBILE WEB - if the search experience replicates the desktop experience, as it does for users of smartphones equipped with browsers, users are more likely to stick to what they know and go straight to already-familiar search engines.

2. APPS - The challenge is how to rise above thousands of apps out there already; the iPhone App Store alone has 65,000 apps at last count. User metrics for apps are also pretty dismal: Only about 20% of consumers return to use a free app after the initial download, according to Pinch Media. Thirty days later, less than 5% are using it.

*"Apps tend to work well when they offer something useful and serve a true need – people play games on the commute to work, access maps when they need directions and so on."*

3. CARRIER DECKS - on non-smartphones, launching the web on the service provider's page or carrier deck. This traffic is declining, as people learn to book mark or use direct navigation.

4. Search by CAMERA - Mobile tagging technology, such as QR or 2D barcodes or radio frequency identification devices (RFID), let marketers load tags with marketing and product information.

5. SMS Users can find answers to questions by texting keywords to SMS answering services, which embed advertising in their SMS responses. Where SMS lacks a rich user experience, however, it makes up for in reach and response rates: In the US SMS ads on these services average a 16% response rate, according to comScore, outperforming the typical 1% to 3% click-through for mobile web display ads.

## GLOSSARY ON THE GO

Words from the jargon-jostling world of mobile technology

**2D codes** [aka semacode, Aztec, QR, or matrix codes] these are mobile barcodes that allow a barcode reader in a mobile phone camera to act as a scanner. The key is that mobile barcodes are a pull technology, a permission-based way for a consumer to engage with an advertiser.

**3G** - Third Generation mobile communication system - allows for quicker and larger volumes of voice and non-voice Data transfer such as broadcasts, video and email across GSM networks.

**4G** refers to the fourth generation of cellular wireless standards. It is a successor to 3G and 2G standards due to rollout in 2010 and promises mobile ultra-broadband (gigabit speed) connection.

**Alerts** notifications, typically in the form of a text or multimedia message, containing time-sensitive information (event details, weather, news, services updates) that are pushed to a mobile subscriber who has opted-in to receive this information. Note: If the mobile subscriber has not opted in to receive said information, the notification would be considered SPAM.

**Alternative Method of Entry** (AMOE) A no cost or low cost means for an individual to enter a contest.

**Bluetooth** A communication protocol that enables mobile devices equipped with a special chip to send and receive information wirelessly over short-ranges, using the 2.4 GHz spectrum band.

**Bluejacking** the anonymous sending of unsolicited messages over Bluetooth to Bluetooth enabled devices such as mobile phones, PDAs or laptop computers. Spam.

**Click to Call** a service that enables a mobile subscriber to initiate a voice call to a specified phone number by clicking on a link on a mobile web site. Typically used to enhance and provide a direct response mechanism in an ad.

**Confirmed Opt-In** the process used for verifying a mobile subscriber's intention, and for gaining the subscriber's explicit agreement to participate in a mobile program/contest/game/alert service.

**CSC** -Common Short Codes - Users send messages to shortened numbers, usually to get something in return, like a competition entry or multimedia download.

**Double Opt-In** The process of confirming a mobile subscriber's wish to participate by requesting the subscriber to opt-in twice, prior to engaging the subscriber. A requirement for premium and many other types of mobile services.

**EDGE** - Enhanced Data rates for GSM Evolution - the speedier version of GSM wireless service. It enables data to be delivered at rates up to 384 Kbps via broadband.

**GSM** - Global System for Mobile Communications - globally the most widely used of the three digital wireless telephone technologies (used in Europe, Africa, Middle East, United States, Australia & South America)

**In-game** mobile marketing delivering promotional messages or product placement within mobile games or sponsoring entire games to drive consumer engagement. This is known as mobile adverging or ad-funded mobile game.

**Location-based services** are offered by some cell phone networks as a way to send custom advertising and other information to cell-phone subscribers based on their current

location. The cell-phone service provider gets the location from a GPS chip built into the phone.

**MMS** - Multimedia Message Service- an extension of SMS that allows pictures, sounds or low quality videos to be sent on a wireless network.

**Moblog** mashup of the words mobile and blog. A moblog consists of content posted to the Internet from a mobile or portable device.

**Mobile Originated** [MO or MOM] an SMS/ MMS message sent from a mobile device.

**Mobile Terminated** [MT or MTM] an SMS/ MMS message received to a mobile device.

**Network** aka Carrier South Africa has three Networks: Vodacom, MTN and Cell C. The networks consist of towers and base stations that span the country to connect and transfer calls and data.

**Pull SMS** requested services (e.g. ringtones or games) from a mobile phone via WAP. The service requested is sent back via SMS

**Push SMS** requested services (i.e. ring tones or games) from a mobile phone by sending a preset SMS code to a predetermined number. The service is sent back by SMS.

**SIM** - Subscriber Identity Module - the chip used in a phone to identify the number/account.

**SMS** - Short Messaging Service - text messages that can be sent to mobile phones from the Internet or from other mobile devices.

**USSD** an unsung hero of the GSM and now the 3G world. Despite the relative obscurity of this session-based service, USSD is the workhorse behind pay-as-you-go and callback systems and mobile banking, various customer care services and other more mundane features like call diverting/ forwarding. It's plain jane user-interface and 80's style user experience have meant that it isn't seen as sexy as SMS, but it is stable, scalable and far cheaper. SA is a world-leader in USSD.

**VoIP** - Voice over Internet Protocol - is a system of rules which allow for voice and sound to be streamed live across the Internet or WAP. This allows the system to operate exactly as a traditional telephone.

**WAP** - Wireless Application Protocol - a set of communication standards for the way wireless devices (like mobile phones) connect to the Internet, a format of the mobile web.

**WAP Pull** where the user directly requests a mobile WAP site by entering a URL, or by entering the phone number on a content provider Web page.

**WAP Push** A specially encoded message which includes a link to a WAP address that allows WAP content to be pushed to the handset with minimum user intervention.

**WASP** - Wireless Application Service Provider - provides hosted wireless applications so that companies will not have to build their own sophisticated wireless infrastructures.