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Lee Wright's research and analysis has appeared in Ad Age, Wireless Week and Internet Advertising, and at conferences such as @dtech, Internet World and others.

Wireless application protocol (WAP)

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Abstract

The increasing popularity of mobile phones and other wireless devices over the past few years has fuelled interest in the concept of wireless Internet connectivity. With Europe and Asia leading the way, devices are becoming more sophisticated, and users can now connect to the Internet without sitting in front of a 'wired' PC. The result is the first convergence of wireless connectivity with the power of the Internet.

The wireless application protocol (WAP) is a crucial element in displaying content on most wireless devices. As wireless devices and applications grow in popularity, so does the opportunity for marketers. A new marketplace has been created where marketers can use WAP to reach consumers in many new and effective ways.

According to a study in WAP-related marketing by AnywhereYouGo.com, marketing industry executives throughout the world recently indicated that wireless advertising will become one of the most important forms of marketing over the next two years. Wireless marketing initiatives enable companies to discover new ways of connecting to consumers, new business models and new business strategies. Companies which embrace the new technology will become leaders in their fields.

This paper discusses the opportunities presented by WAP, ways that marketers will implement campaigns for wireless devices, and challenges that will be encountered as the industry changes and grows to meet user demand.

Keywords: WAP, wireless, mobile, permission-based marketing, location-based services, branding

Introduction

Wireless application protocol (WAP) is the leading browser-based worldwide standard for providing applications and services to mobile phones, pagers, personal digital assistants (PDAs) and other wireless devices. WAP-enabled device and application development is a rapidly growing industry. Manufacturers like Nokia and Ericsson are working furiously to keep up with consumer demand for products. In addition, development groups like Razorfish and Agency.com are working to create applications that will be valuable to end users. The industry first took off in Finland and Japan, where a large and eager teenage market quickly embraced wireless services such as the short message service (SMS).

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**Consumers will
depend on wireless
technology**

WAP provides many opportunities for marketers and advertisers to reach consumers no matter where they are. With the advent of location-based technology, WAP-enabled applications — including advertisements — can reach consumers when they are most likely to make a purchase, accept an offer, or use a service.

As the technology increases in sophistication, consumers will probably come to depend on wireless devices for information and services. In Finland, where the technology is widely accepted — an estimated 90 per cent of teenagers have mobile phones — consumers can pay for a carwash or purchase a Coke with their mobile phones because they have wireless access to their bank accounts.

Consumers will come to expect instant availability of information, and the wireless service industry will become a key driver of competitiveness for companies which want to be successful in reaching them. For example, a consumer now has access to compare prices of a given product throughout the world via a WAP-enabled device. If that consumer is shopping in a bricks-and-mortar store, the store will be faced with the choice of lowering their price to meet another merchant's price or possibly losing the sale.

Wireless marketing has the potential to revolutionise the shopping experience for millions of consumers throughout the world.

What is the opportunity presented by WAP?

Analysts estimate that by 2004, almost one-third of all Europeans — 220 million consumers — will own mobile phones and use them regularly to access the Internet and other wireless services.¹ Worldwide, similar growth means that over the next four years more people will access the Internet via wireless devices than with traditional wired connections.

The growing trend is already apparent when reviewing the penetration numbers for wireless subscribers in various markets throughout the world (Table 1).

Because consumers use wireless devices everywhere, both 'bricks-and-mortar' and Internet companies have the ability to carry out effective wireless marketing campaigns through this medium. Marketers have the ability to develop true one-to-one relationships with customers through permission-based advertising initiatives, and to develop a unique brand image through sponsored services, events and content.

Location-based services, where firms will be able to target customers who are in close proximity, will allow companies to reach consumers who are within the desired demographics. These consumers will have better control over which advertisements and marketing messages they receive. The companies that implement location-based services will be perceived as innovative by early adopters of wireless — the young, high-income individuals who will pave the way for wireless market saturation. Subscriber numbers will increase as the price for equipment falls and the services become more ubiquitous.

Imagine this scenario. You are away on vacation when you realise that it is your best friend's birthday. You have not purchased anything to

Table 1: Wireless market penetration²

Market	Estimated no of subscribers	Penetration %	Market	Estimated no of subscribers	Penetration %
Sweden	5,353,000	60	France	21,082,000	36
South Korea	27,500,000	53	USA	93,650,000	34
Italy	31,118,321	52	Germany	25,000,000	30
Taiwan	11,452,541	52	Canada	7,000,000	22
Portugal	4,804,671	48	Turkey	9,234,976	14
Netherlands	7,139,000	45	Argentina	5,685,522	13
Japan	57,950,000	43	South Africa	5,300,000	12
UK	25,517,000	43	Mexico	8,694,500	9
Spain	16,370,150	41	Brazil	14,438,963	8
Australia	7,824,560	41	China	46,500,000	4

mark the occasion. What do you do? If you have granted wireless advertising permission to companies where you would typically purchase gifts, you have no worries. Simply dial up the information from your wireless device of choice. As a preferred customer of these companies, you will have access to special offers, coupons and promotions that are not offered to the general public. You find the perfect gift and complete the transaction using your wireless device and one of the wireless coupons offered. Your friend will be delighted, and you have saved time and money.

This scenario will some day reflect a typical use of wireless marketing and advertising techniques. Permission-based marketing, achieved by allowing interested consumers to opt to receive promotions on their wireless devices, affords retailers many opportunities to build brand and consumer loyalty.

The bottom-line benefits for companies marketing for wireless devices are:

- marketing messages reach a highly targeted audience
- because advertisements are permission-based, messages received are perceived as a service rather than as advertising
- messages reach consumers at the appropriate time and place
- location-based information provides companies with the ultimate one-to-one marketing opportunity, offering customers in the immediate vicinity special offers, incentives or coupons
- companies can provide real-time information to consumers on a variety of topics, such as new items, promotions and clearance sales
- ads to wireless devices have the potential for high readership as they are delivered to wireless devices via a pop-up message or to a consumer's e-mail, requiring consumers to take action; unlike a banner or print ad, users cannot just ignore a wireless advertisement, as the consumer must use keystrokes to delete; also, wireless ads have the benefit of immediate action in that a consumer can respond to or accept an offer with only a keystroke
- wireless marketing is cheaper and faster to design and produce because of current limitations in the technology; though this will

Benefits for companies

probably change in the next few years, ads and messages are now primarily text-based.

How will WAP be used in marketing?

Today, consumers who are exposed to marketing over the Internet have little control over the amount or type of messages they receive. They are bombarded daily with messages that may or may not be relevant to their needs. Many of these ads require an immediate response, and consumers may not be equipped to react accordingly. Currently, the situation is the same with WAP-based marketing — marketers could send messages to all of the subscribers of a given carrier. This type of situation is likely to irritate consumers, though, so marketers should look to other ways of determining who will receive messages. WAP-based marketing via wireless devices can change the landscape by giving consumers control. Within the next four to five years, consumers should have the ability via wireless devices to:

- control the level of advertising received on their wireless devices
- access desirable content and offers at any time from anywhere
- instantly compare prices, offers and services from competing companies while shopping
- create user profiles with their merchants of choice to receive the localised information they want, when they want it
- purchase merchandise and/or apply discounts and special offers using their wireless devices.

Each of these goals can be accomplished through the use of WAP in marketing. How does WAP work? Figure 1 illustrates how content goes through a WAP gateway to reach wireless devices.

Once it has been established that a company will enter into the wireless marketing arena, several questions must be answered.

- What is the most effective way to deploy wireless marketing to consumers?
- In what ways will consumers want to receive marketing?
- What scenarios provide the most value-added services to consumers?

Figure 1: WAP Internet access

- What kind of technology is required to implement a wireless marketing campaign?
- How easy will the relationships created with consumers be to maintain?
- What kind of return can a company expect from an investment in wireless marketing?
- Do companies continue with their current marketing strategies, or should they switch to wireless marketing?
- When should a company enter the wireless marketing industry?

The answers to these questions clearly reflect the wide range of opportunities presented by the wireless services industry. Solutions will vary among companies, though results should be consistent when marketing initiatives are effectively implemented.

The following are several examples of how wireless marketing can be used to develop and maintain relationships with consumers effectively. Each example is a real-world use of WAP-based marketing applications through beta testing or formal rollout in the UK, Asia or the USA. Though these applications vary in complexity, WAP development tools and a number of interactive firms are available to make the transition to wireless marketing much easier for companies.

Permission-based targeting will improve customer relationships

Permission-based targeted marketing

Permission-based targeted marketing has the potential to change consumers' perception of advertising. If marketers take care only to target individuals who have granted permission to send along the message, their clients will have more successful relationships with customers. The opportunity exists to use permission-based marketing to its full potential, giving better value to both marketer and advertiser. As customer profile information becomes more complete, marketers will have the ability to target consumers based on age, interests, income, time of day and location.

Example: a business traveller is running late for a flight, which his office booked at the last minute. The traveller can use his WAP-enabled device to access Sabre's 'Virtually There' service, which gives him all of the flight information, including gate changes and departure times. Users also receive alerts for travel-related specials such as rental car promotions or events occurring in the city they are travelling to.

Location-based marketing

Location-based marketing will connect consumers with local merchants in ways that were previously not possible. Applications can be used to enhance a consumer's daily activities through a number of value-added services.

Example: a teenager in New York has listed in his preferences for his Upoc account that he is interested in basketball. (Upoc is a youth-oriented service that allows subscribers to communicate through WAP and other wireless devices.) Not only is the teenager notified when a spur-of-the-moment game is being scheduled in his area via a

message on his WAP-enabled phone, but a sporting goods retailer has the opportunity to sponsor the message.

**Marketers may
choose more subtle
advertising**

Marketing via sponsored services or events

Marketing industry experts believe that sponsorships will be the first viable vehicle for most marketers. Because wireless subscribers are not yet comfortable with the range of devices available, marketers may choose to enter the industry with a subtle form of advertising to avoid interrupting the user experience.

Example: a consumer who trades stock has signed up with a business news and information service sponsored by their favourite trading company. When the stock drops 20 points in value, the consumer receives an alert regarding the change. The message is accompanied by the information the consumer wants next: the URL to buy or sell shares, a news article about the situation, and additional information about the company. The consumer associates the valuable news and information with the marketing sponsor, establishing a solid relationship between the consumer and the sponsor.

Content provider marketing

Content providers can partner with wireless companies to make their information available to mobile consumers. To make this scenario most effective, content providers should partner with companies which deliver content to multiple devices. They should also consider multiple partnerships to reach consumers subscribing to various service providers.

Example: someone subscribing to AvantGo's wireless service can access many types of content from their mobile phone, including news, sports and entertainment information, travel information, and more. When the subscriber accesses entertainment news from AvantGo, the content is provided and sponsored by TF1, InfoSpace and Variety.com. This may build brand loyalty with a subscriber who is also a regular reader of InfoSpace information on the Internet, and it may create new customers for InfoSpace through high-quality content available at all times.

Marketers can use the examples above to begin examining the appropriate marketing implementation for their clients. Marketers should also follow the subsequent guidelines to ensure the success of their clients' campaigns.

- Restrict targeted wireless marketing initiatives to permission-based advertising.
- For broad audience marketing initiatives, sponsor services, events or content.
- Once a customer has given permission for advertising, target marketing based on the customer's message preferences.
- Offer products and services that are considered value adds by consumers.
- Marketing messages, especially those that are location-based, should be perishable. For example, a wireless coupon could feature a 'today-only' special, creating a sense of urgency for the consumer.

- Change the message, promotion or offer frequently. Keeping information fresh will maintain consumer interest.

Implementation

How will companies implement WAP-based marketing initiatives? While development efforts will vary depending on the complexity of the marketing campaign and size of the company implementing the campaign, there are some basic concepts for implementation that can be followed by most.

- Local companies can buy messages based on real-time, location-specific needs. Costs for marketing to certain customers only will be lower than mass marketing, and response rates will be much higher.
- Large companies with multiple locations can create intelligent ad-purchasing triggers that automatically purchase wireless ads (or deliver coupons) based on sales trends at specific brick and/or click locations for specific items or services.
- E-commerce companies can sponsor specific wireless content and generate m-coupons for m-commerce purchases. Because these companies have already established opt-in e-mail relationships with customers, they can fine tune their strategies to reach customers more effectively.

What will make WAP marketing successful?

Brand relevance

Establishing a solid brand will be perhaps the most important element for a successful wireless marketing campaign. Because customers will conduct many types of transactions with their WAP-enabled devices, they will choose to do business with companies with which they have reached a high level of comfort, trust and reliability.

Relationship building

WAP-enabled devices provide a great opportunity for both bricks-and-mortar and Internet companies to establish individualised relationships with consumers. As specialised coupons, offers, bulletins and other time-sensitive information are provided to consumers, deeper relationships than ever before will be achieved with customers.

In order to provide useful information that will help build relationships with customers, marketers need to understand how customers will use marketing-related messages. Customer-initiated permission-based advertising surveys will be helpful in assessing customer interests and expectations. As a customer receives and uses messages, further customer profiling will help marketers narrow down the most effective means of communication.

Challenges

The waiting game

In recent months, WAP has been decried in the technology press as inadequate: the user navigation is difficult; WAP is much too slow to be

A solid brand is a vital element

WAP is the necessary step between wireless data and third-generation services

useful; the content for WAP is lacking; WAP device sales have fallen off after a meteoric start. While these concerns are valid, the sky is not falling on WAP. WAP is a necessary intermediary step between the beginnings of wireless data in the marketplace and third-generation (3G) services and devices, which will offer much faster, more robust services to users. The arrival of 3G is at least 18 months down the road, and the push for wireless data will not wait. WAP fills the gap, and will be a viable solution while 3G works the kinks out.

Serving ads

Serving advertising to wireless devices will definitely pose a challenge. Though design will be simple for most WAP-enabled devices — primarily text-based — screen size, multiple devices and multiple networks will create a myriad of challenges. In fact, AnywhereYouGo.com recently completed an audit of WAP-enabled applications and found errors with 28 per cent of the sites tested. The challenges can be overcome through careful planning and thorough testing of applications before they are deployed.

A major consideration in planning is the target audience. Deploying a marketing campaign that will reach wireless subscribers in the UK will probably pose fewer problems than a worldwide campaign because there are fewer devices, fewer network types and fewer gateway issues to deal with.

Potential alternatives are on the horizon. Audio technology is being improved, and audio advertising via wireless devices will soon be a reality. Finally, larger full-colour touch screens are becoming a reality for wireless devices. These screens will provide many more options for marketing design and deployment.

In the meantime, deployment of WAP content via XML feeds or sophisticated wireless-hosted networks can improve service to multiple devices and networks. XML is a means of formatting content, and can effectively reformat the same content for multiple devices and networks. Wireless-hosted networks can also provide solutions for formatting content as required for multiple devices. Another option for serving ads is use of server software aimed at wireless devices. These server software packages enable ads to be served via different transmission signals based on several key real-time criteria. These include geography, user-defined profiles, device, and device operating system requirements.

Location-based services

Location-based services are relatively new to the wireless marketplace. Many companies are unsure how to implement an effective location-based marketing campaign without being intrusive.

If not handled appropriately, location-based marketing could be perceived as an invasion of a customer's privacy. Much debate exists in the industry now as to the most appropriate use of the technology.

The ideal one-to-one marketing relationship

While many consumers eagerly await such services, others are concerned about being contacted by companies constantly for products and services in which they have no interest.

The consensus is clear: permission-based marketing combined with location-based services provides the most benefit to consumers, thereby providing the most return to marketing firms and consumers. Consumers must be given an opportunity to choose what kinds of promotions they receive and how many of these promotions are acceptable. The result is an ideal one-to-one marketing relationship because location-based communication becomes personalised rather than intrusive.

Once a company chooses to market using location-based information, it is important to provide services to customers who have granted permission to receive messages. WAP technology will add greatly to this medium as messages become more detailed and visual.

Privacy

Privacy has been a primary concern of advertisers since the advent of the Internet. This concern is amplified when discussing advertisements delivered via wireless devices. Pushing content to someone's mobile phone, pager or PDA is considered more personal because the messages can be delivered anytime and anywhere.

To avoid the perception of privacy intrusion, it is essential that marketers present a clear and concise privacy policy to customers.

Conclusion

Success in wireless will be driven by the ability of marketers to understand the unique attributes of 'anytime, anywhere' marketing. Fundamentally, this means marketers working as conservators of the unique relationship between their brand and each individual. In the end, those marketers who focus on the unique capabilities of wireless communications, not on the technology that delivers it, will set the standards by which other marketers will be judged.

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References

1. The Forrester Report, (1999) 'Europe's Mobile Internet Opens Up', (www.forrester.com)
2. RCR, (2000) 'RCR's Top 20 International Markets', (19 June). (www.rcrnews.com)

Further reading

AnywhereYouGo.com (www.AnywhereYouGo.com)

ChannelSeven.com (www.ChannelSeven.com)

Advertising Age (www.adage.com)

Media Metrix (www.mediametrix.com)

American Marketing Association (www.ama.org)

Wireless Advertising Industry Association (www.adforce.com/waia)