STRATEGY ANALYTICS
NAVIGATION LOCATION OPPORTUNITIES

Consumer Attitudes towards the Emerging Location Opportunity

Navigation Location Opportunities Service

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Viewpoint Snapshot

As critical supply side enablers for location enhanced services fall into place, the missing piece of the jigsaw puzzle remains the consumer. The democratization of location has opened the door for new entrants to provision location services beyond usual operator channels. Are consumers using location services today? How satisfied are consumers with current location features on their handsets? Is there demand and willingness to pay for location enhanced applications, and importantly, how does this compare to other services competing for consumer mind and wallet share? This whitepaper focuses on consumer attitudes towards location services and outlines the challenge of monetizing these applications successfully.

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1 Executive Summary

The current penetration of GPS handsets, an important catalyst for the adoption of LBS, is low relative to other applications and device features. However, location functionality is proving an attractive feature versus services such as music streaming and mobile TV:

- 22% of US survey respondents either use GPS regularly or want GPS functionality on their next handset, compared to 30% of Western European respondents.

While there is clear demand for location enabled devices, the consumer experience for services which leverage GPS requires dramatic improvement.

- 36% of US smartphone users indicated dissatisfaction with using GPS on their devices, versus 14% for email.

There is strong consumer willingness to pay for location enabled maps and directions.

- Respondents in both the U.S. and Western Europe are most willing to pay for maps and directions and multimedia messaging on their mobile device, versus a range of alternative mobile media applications.

Although mobile application stores are beginning to generate significant download volumes, willingness to pay for those applications remains low.

- Over two-thirds of iPhone respondents in the US have installed all or the majority of the applications on their phone for free. 69% of iPhone respondents claim that at least three quarters of the applications they have installed did not cost anything.

The growing momentum behind mobile advertising represents an alternative monetization opportunity for mobile applications, including those which are location enabled. Survey respondents were interested in the concept of location-based advertising. However, many were concerned that it may often deliver adverts that were not relevant to their specific interests. Participants also felt that location-based advertising may be somewhat intrusive.

Contents

1 EXECUTIVE SUMMARY 2

2 THE LBS OPPORTUNITY 4

3 CONSUMER ATTITUDES 5

3.1 CURRENT ADOPTION & USE OF LOCATION ENHANCED HANDSETS 5

3.2 LOCATION SERVICE USABILITY NEEDS IMPROVEMENT 6

4 MONETIZATION OF LOCATION SERVICES 8

4.1 CONSUMER ATTITUDES TOWARDS ADVERTISING 11

4.2 CONTACT THE AUTHOR OF THIS REPORT: 14

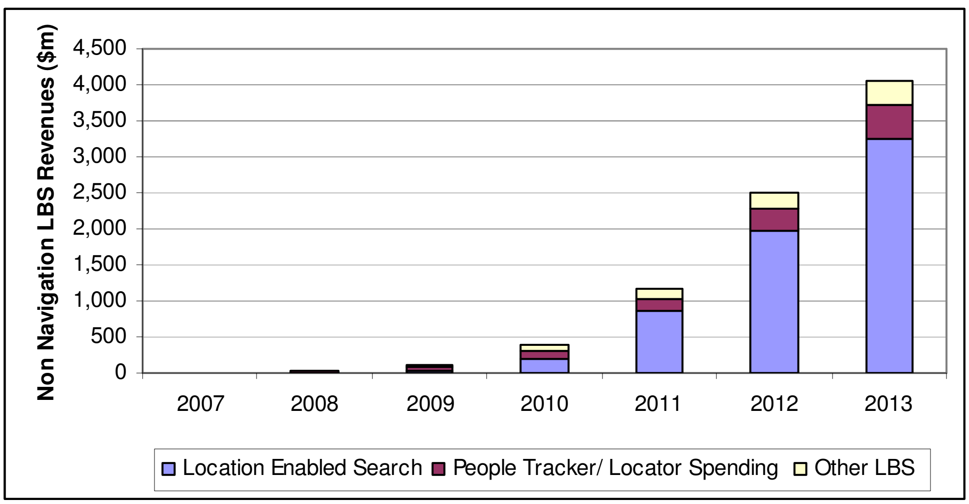
2 The LBS Opportunity

The proliferation of GPS enabled handsets and location APIs combined with the increasing availability of low priced data access has catalyzed the development of a broad range of location applications beyond navigation, maps and routing.

Strategy Analytics forecasts prospects for location based services to brighten considerably, with total spending to exceed $7 billion by 2013.

- Premium LBS applications such as in car navigation will contribute a significant 36% share of total LBS revenues by 2013. In total maps, routing, car and pedestrian navigation solutions will generate just over $3 billion by the end of this period.
- The opportunity for applications outside of mapping and navigation, such as location enabled search, people tracking, and other downloadable location enabled applications will rise substantially over the next five years to reach over $4 billion in 2013. Local search will generate the vast majority of user spend, figure 1.

Figure 1 Global Non Navigation Location Service Revenues by Category



Strategy Analytics predicts strong growth in volume of location enhanced download applications from 5 million globally in 2008 to 280 million in 2013.

3 Consumer Attitudes

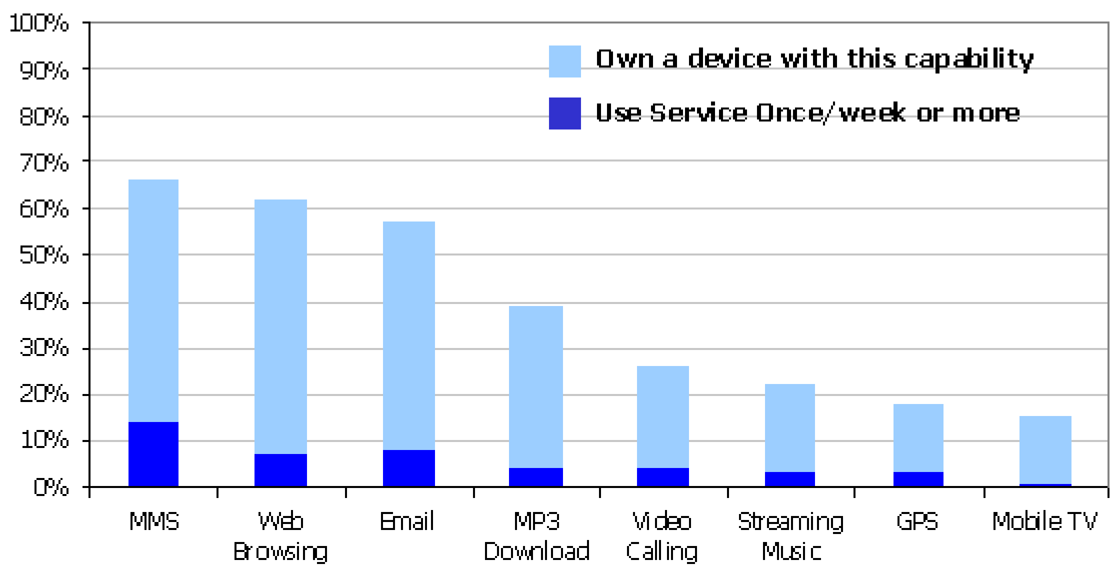
3.1 Current Adoption & Use of Location Enhanced Handsets

Despite the relatively low penetration of GPS capable handsets currently, the future outlook for location enabled handsets and consequently location enhanced services are bright. GPS ranks second as the most desired handset function in both Western Europe and the US.

Approximately 18% of device owners in Western Europe have GPS capability on their handsets, (figure 2). This compares to 66% of mobile phone users in W. Europe reporting that they owned a device capable of sending multimedia messages (MMS). 62% of respondents reported that their mobile device was capable of browsing the web, and 58% claim to own a device capable of sending and receiving email.

Although the penetration of GPS on handsets is low, use of this feature is relatively greater than other handset features.

Figure 2 Reported VAS Use, W. Europe
(% of respondents who own capable devices/ use service at least weekly)

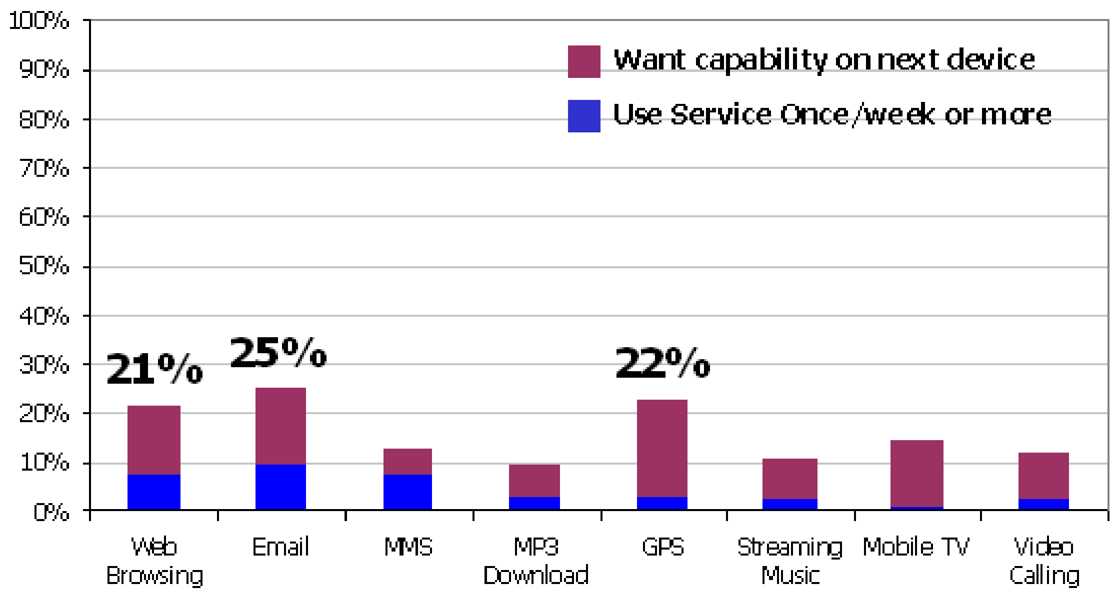


Source: Strategy Analytics, Wireless Media Lab

If respondents who do not already own a device capable of using these service, but who want to have this capability on their next handset are included, GPS stands out as the second most desired, with only mobile email ranking above.

When W.European respondents who regularly use each service are added to those who want the capability on their next handset, GPS is the second most demanded feature. 30% of respondents use or want this feature, highlighting relatively strong consumer demand for location capability on handsets. Similarly in the US, 22% of respondents currently use GPS on their handset or want GPS on their next device. This compares to 33% for mobile email, and 26% for Web Browsing (21%), figure 3.

Figure 3: VAS Priorities, US
(% of respondents who use service weekly; want capability on next device)



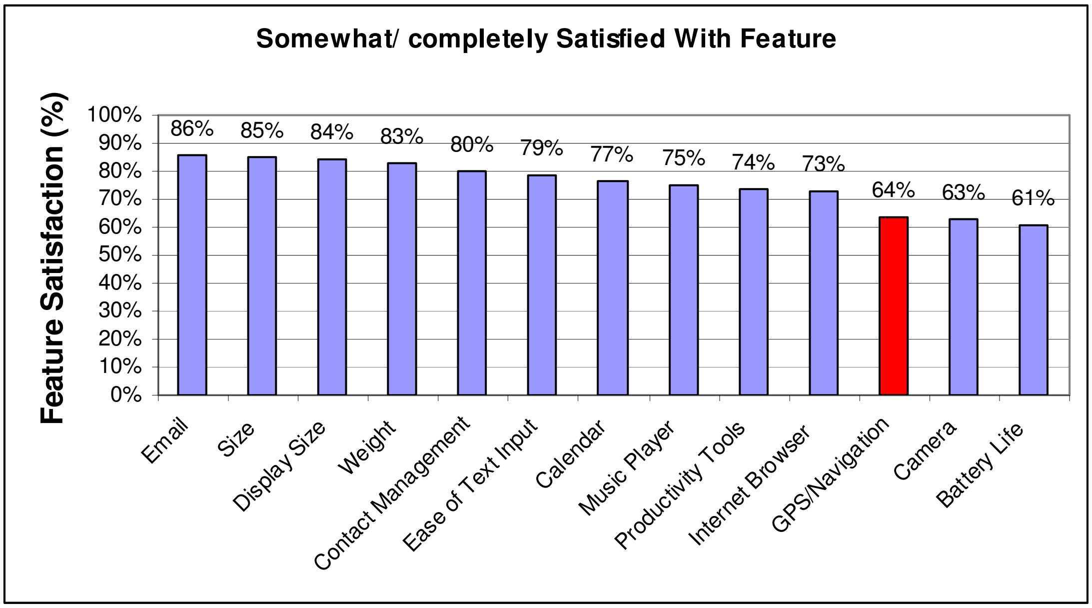
Source: Strategy Analytics, Wireless Media Lab

3.2 Location Service Usability Needs Improvement

Location enhanced applications are gaining traction most rapidly on GPS enabled smartphones, such as Apple's iPhone, Android powered handsets and Symbian S60 devices. While there is strong interest in GPS functionality across this segment, improvement and optimization of the user experience is critical in order to promote the successful adoption and sustained use of location enhanced applications.

However, 36% of US smartphone respondents are generally dissatisfied with the GPS feature on their handset leaving significant room for improvement, figure 4. In previous surveys more 51% of US respondents indicated they do not find the use of the GPS easy.

Figure 4: US Smartphone Feature Satisfaction



Source: Strategy Analytics, Wireless Smartphone Strategies

4 Monetization of Location Services

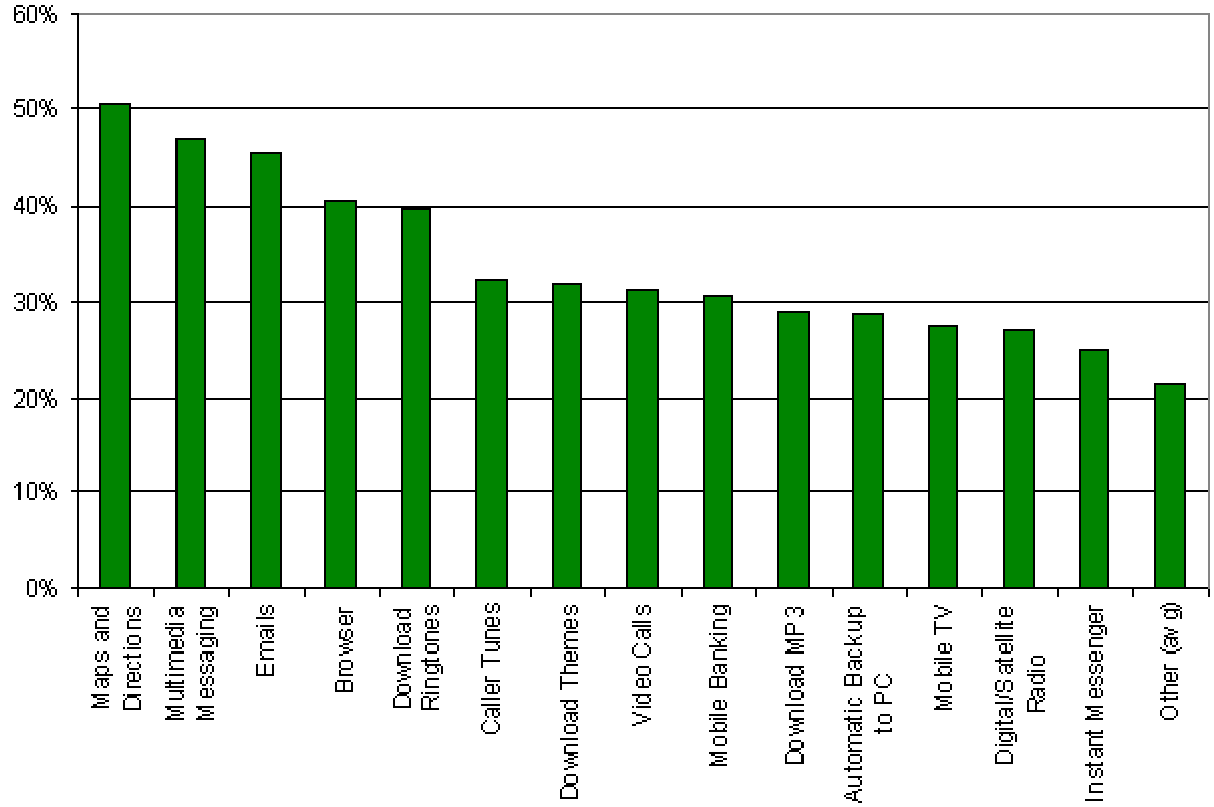
Monetization represents a critical challenge for all application providers, including publishers of location enhanced services. Research from Strategy Analytics' Wireless Labs service indicates a strong willingness to pay for services such as maps and directions among cellular users[1].

Respondents in both the U.S. and Western Europe are most willing to pay for maps and directions and multimedia messaging on their mobile device, figure 6 and 7.

Over half of respondents in the U.S. would pay for maps and directions. Consumer willingness to pay for maps and directions outscores mobile entertainment applications which many mobile operators have pushed more aggressively, like mobile TV and mobile music.

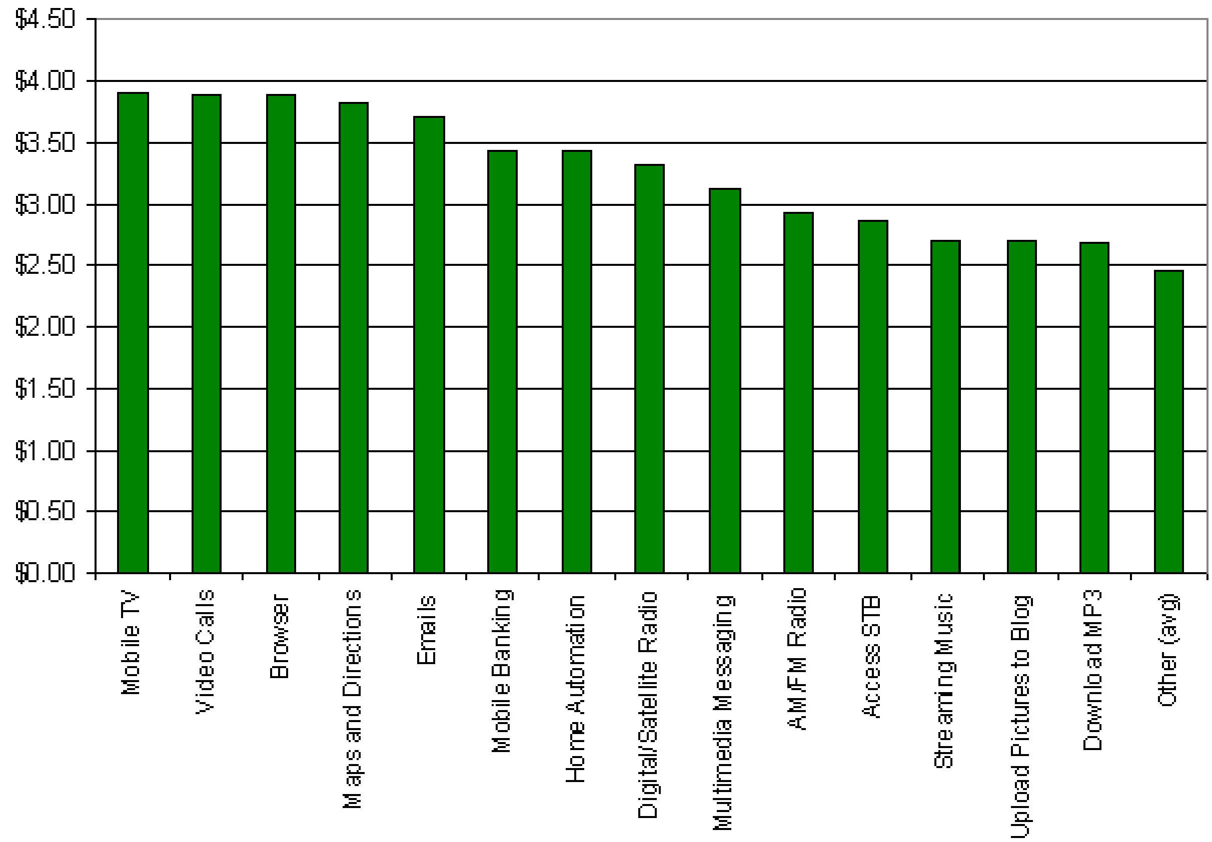
[1] Consumers Are Willing to Pay for Their Mobile Devices to Show Them the Way, Strategy Analytics, Wireless Media Labs

Figure 5: Willingness to pay for mobile services in the U.S.



Source: Strategy Analytics, Wireless Media Labs

Figure 6: Average amount per month U.S. respondents would be willing to pay for mobile services.



Source: Strategy Analytics, Wireless Media Labs

In the US there was little difference between the top four services, while in W. Europe, respondents would pay 6% more for maps and directions than the next highest service.

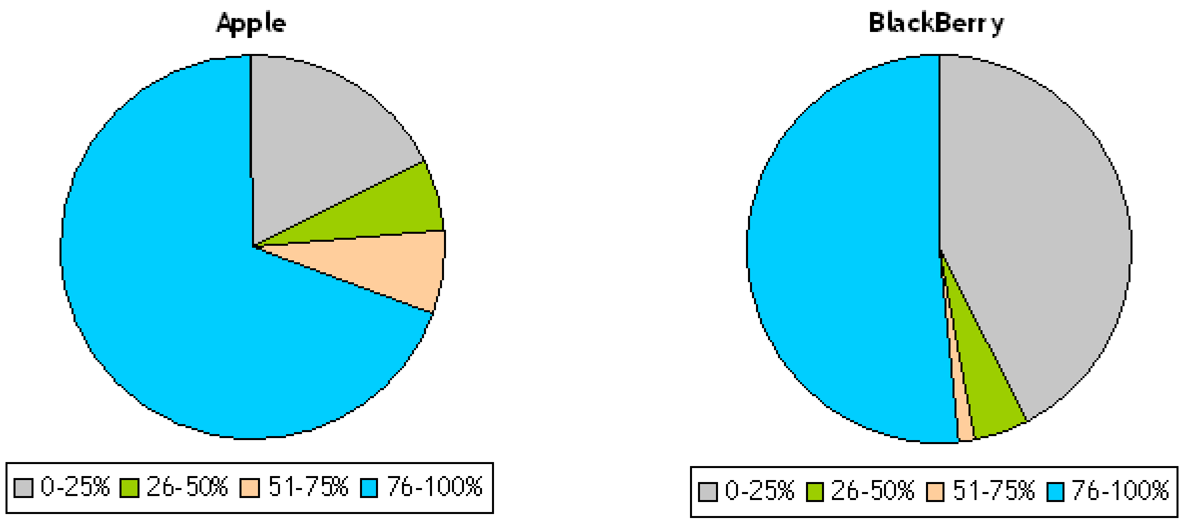
Maps and directions and mobile browsing were in the top 4 in both regions for the percentage of respondents who would be willing to pay, as well as how much per month they would be willing to pay.

However, beyond maps and navigation a plethora of location enhanced applications are emerging through application stores, such as Apple's Apps Store. These range from location enabled to-do lists, to applications which enable users to record and then subsequently locate where they parked car. Although application stores are generating significant application download volumes, most of the applications downloaded are free rather than premium.

- Over two-thirds of iPhone respondents in the US have installed all or the majority of the applications on their phone for free. 69% of iPhone respondents claim that at least three quarters of the applications they have installed did not cost anything.

- Slightly over half of BlackBerry respondents claim most of their applications were free, 42% of respondents claim they paid to install most of their applications.

Figure 7: % of Applications Installed that were Free - US



Source: Strategy Analytics, Wireless Media Labs

The strong up take of free applications compared to premium software underlines the low levels of consumer willingness to pay for mobile applications. The clear alternative for the monetization of location enabled services includes advertisers or application sponsorship.

4.1 Consumer Attitudes towards Advertising

Advertising activity within different mobile media formats continues to rise as media consumption extends to the mobile platform and develops into a platform for targeting their audiences. Therefore, understanding consumer attitudes towards receiving adverts on the mobile handset is essential in order to prevent users turning off from applications.

Strategy Analytics' Wireless Media Labs conducted a study to identify user preferences towards receiving mobile advertising, including location enabled advertising[2].

[2] 12 Rules for Consumer Acceptance of Mobile Advertising, Strategy Analytic, Wireless Media Labs

While users identified some reasons to accept mobile advertising, for the majority of respondents their concerns outweighed the perceived benefits. **Reasons identified by respondents to accept mobile advertising include: direct incentives, exclusive offers, innovative technology and reduced environmental impact (from printed direct marketing).**

- However, most consumers consider the advertising they currently receive by direct mail or email as largely **irrelevant** to their needs and interests, often **repetitive** in nature, and potentially a vehicle for deception or fraud. As such, many fear that mobile advertising means they will be bombarded by further irrelevant offers. They are also concerned that the advertising will be incessant and it will be difficult to opt out.
- **In addition, several respondents identified specific objections related to advertising on mobile devices: interruptions, possible hidden charges, concerns over data security and confidentiality, and impact on battery life.**

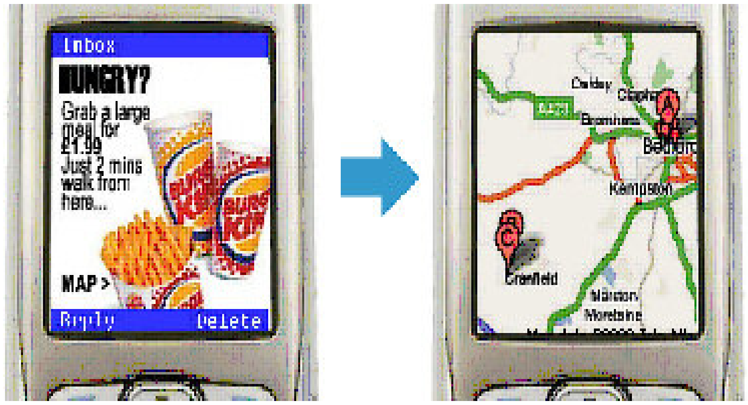
Importantly, location aware adverts will help to improve ad targeting, and reduce irrelevant advertising messages. However, consumer concerns towards basic forms of location-based advertising, such as push alerts over SMS and MMS remain.

Location-Based SMS Advertising involves participants agreeing to receive SMS and/or MMS-based advertising based on their physical location. For example, when in the vicinity of a participating retailer, the consumer would be pushed a message which typically incorporates a time-limited promotion or discount.

Participants were asked to imagine that if they were to sign up to this offer they would receive up to six text messages (or picture messages) per day with offers and promotions for products or services from providers in their local vicinity. In return, they will receive a monthly allowance of texts and minutes.

Participants were shown the following example of this advertising model.

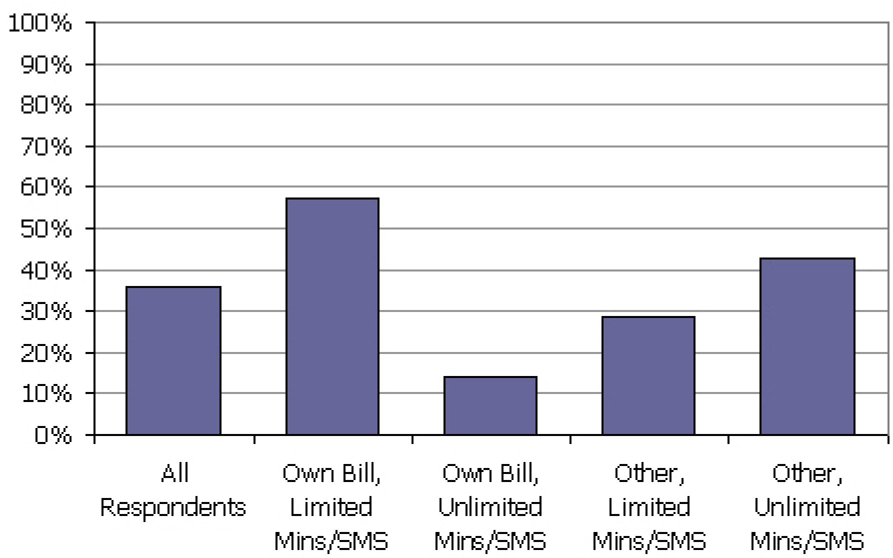
Figure 8: **Example of Location-Based SMS Advertising**



10/28 participants agreed or strongly agreed that they would sign up to Location-Based Advertising if it was offered by their current operator. However, only one participant claimed they would switch operator if another operator offered this scheme but their current one did not.

- This offer was most appealing to participants who are responsible for paying their own bill and have limited minutes/messages.

Figure 9: % of Participants who would Sign Up to Location-Based SMS Advertising



Most participants were interested in the concept of location-based advertising, but felt that it may often deliver adverts that were not relevant to their specific interests. Participants also felt that location-based advertising may be somewhat intrusive.

- One participant commented "Knowing where I am all the time seems a bit creepy".

Participants acknowledged that location-based advertising could be particularly useful if they were visiting a town/place they were unfamiliar with.

- One user commented "I travel around quite a lot and if I received an advert for a restaurant for somewhere I didn't know then I might try it out".
- Another person suggested, "It would be a good idea to have a default home ZIP and a traveling ZIP you can input when out of town".

4.2 Contact the author of this report:

To explore this topic in more detail or to hear how our solutions (Workshops, Presentations, Consulting engagements, annual multi-client services) can support you please visit www.strategyanalytics.com/solutions.html

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