The '411' on Mobile Directory Assistance: New Consumer Survey Findings

This is a transformative period for directory assistance (DA) service providers and callers alike. Call volumes are skewing toward mobile devices and competitive threats exist in the form of mobile Internet search, downloadable mapping applications and free DA alternatives. These competitive challenges raise strategic and tactical questions for mobile carriers and their service providers (about pricing and content) in the near term. The findings of a new Local Mobile Search consumer survey present a snapshot of mobile DA usage and of an industry very much in transition.

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Greg Sterling
Senior Analyst

Local Mobile Search
An Opus Research Advisory Service
300 Brannan St., Suite 305
San Francisco, CA 94107

For sales inquires please e-mail info@opusresearch.net or call +1(415)904-7666

Overview & Findings

Local Mobile Search (LMS) conducted a survey of mobile directory assistance (DA) callers on behalf of V-Enable, using Greenfield Online's consumer panel. The survey was fielded and completed in November 2007. There were 671 respondents, most falling within the 25-54 age range, 61% female and a distribution that directly mirrored U.S. mobile carrier market share.

- **Exploring caller frequency, location, intent** – The survey sought to obtain a picture of current mobile 411 usage behavior and related consumer attitudes. Among other things, the survey explored call frequency, user intent, caller location and use of and satisfaction with "free 411" alternatives.

- **Typical mobile DA user** – The most common usage frequency among respondents is "once every three months." The majority of 411 calls are made in the car and typically seek information regarding business location, hours and product or service information. The "typical" mobile DA user thus emerges as a highly "qualified" consumer en route to conduct a transaction.

- **Usage while traveling** – Contrary to expectations, the majority of mobile DA users said they did not use 411 while traveling and expressed preferences for other methods for finding, for example, local restaurant information.

- **Enhanced DA content** – A majority of mobile DA users were unaware of the availability of enhanced content (e.g., maps, sports, stocks, movie showtimes) or expressed limited interest in these types of content. However, this does not definitively mean such content, properly promoted, would not be sought out by mobile users.

- **DA price awareness and sensitivity** – The overwhelming majority of mobile DA users did not accurately know how much they paid on a per-call basis for 411. While price was cited as the main reason for not calling 411, there is also a segment of callers who are fairly price insensitive.

- **Free DA usage** – Roughly three-fourths of mobile DA users have not used one of the free alternatives to date. However, customer satisfaction levels are generally comparable to traditional paid DA among the sample that had used both. Free DA had higher satisfaction on price, while advertising on free DA was given a neutral rating.

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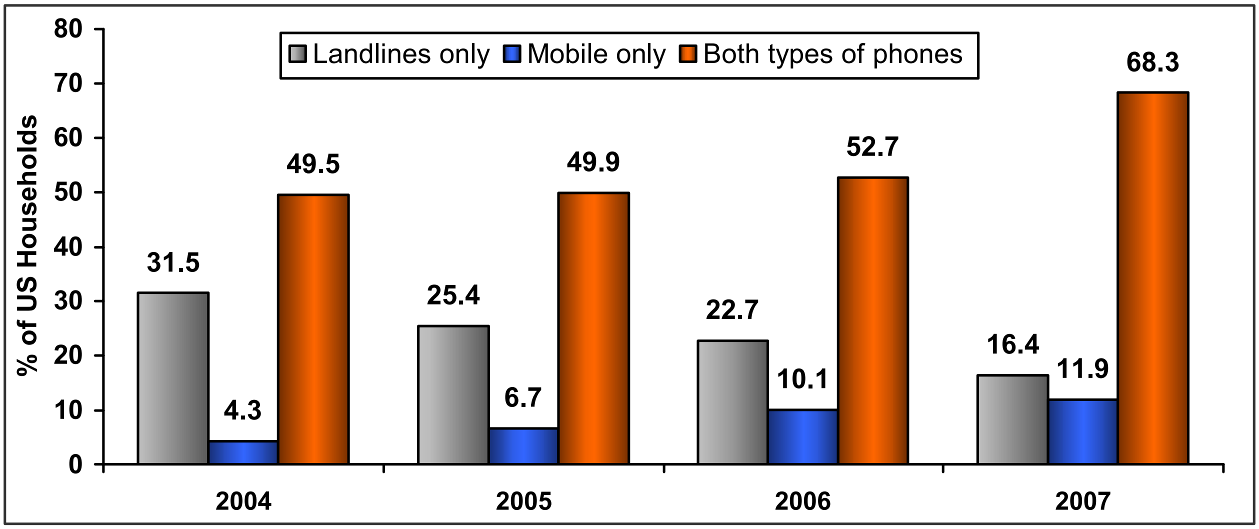
Directory Assistance Is Going Mobile

There are roughly 5.4 billion directory assistance (DA) calls made annually in the United States. Approximately 2.3 billion originate from landlines and 3.1 billion are from mobile phones. Five years ago, fixed-line DA call volumes were double those of mobile, but that has been changing. The trend is clearly toward mobile DA usage which is accelerating with rising mobile penetration and the growth of mobile-only households.

Figure 1: Comparing Phones in U.S. Households



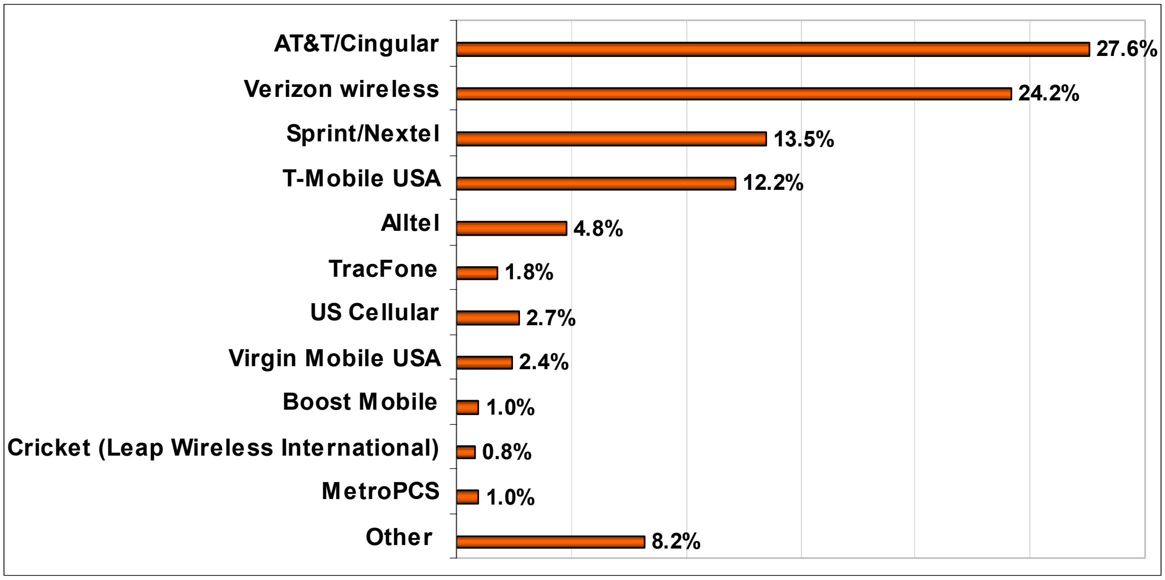
Source: U.S. CDC (6/07)

The trend is even more pronounced for younger users. According to the U.S. Center for Disease Control data cited in Figure 1 above, more than a quarter (27.9%) of young U.S. adults (18-24) exclusively have cell phones.

Separately, in April 2007, Mediamark Research Inc.'s "Survey of the American Consumer" (n=13,000) found that the percentage of people living in U.S. households with at least one mobile phone (86.2%) exceeded the number of people living in households with landlines (84.5%) for the first time. That survey also found that "32.3% of 18-24 year-olds live in a household with a cell but no landline, as do 27.0% of adults who meet the census categorization of 'single, never married.'"

With the recognition of these trends, Local Mobile Search (in a survey conducted on behalf of V-Enable) sought to obtain a picture of current mobile 411 usage behavior and related consumer attitudes. LMS conducted the online survey using Greenfield Online's consumer panel. It was fielded and completed in November 2007 with 671 total respondents (U.S. adults 18 years and older). The results trended towards a female audience (61%)[1] with 62.8% of respondents falling in the 25-54 age range. (Demographic breakdown of respondents is provided at the end of the document.) In addition, as seen in Figure 2 below, the distribution of survey respondents mirrors the U.S. wireless carrier market share very closely.

Figure 2: Survey Respondents by Wireless Carrier



Source: Opus Research (12/07), n=671

Usage Frequency, Location and Caller Intent

The fundamental issues explored in the survey include call frequency, user intent, caller location and use of free DA alternatives (e.g., 800-Free-411). While these are more fully discussed below, the high-level survey responses to these questions are:

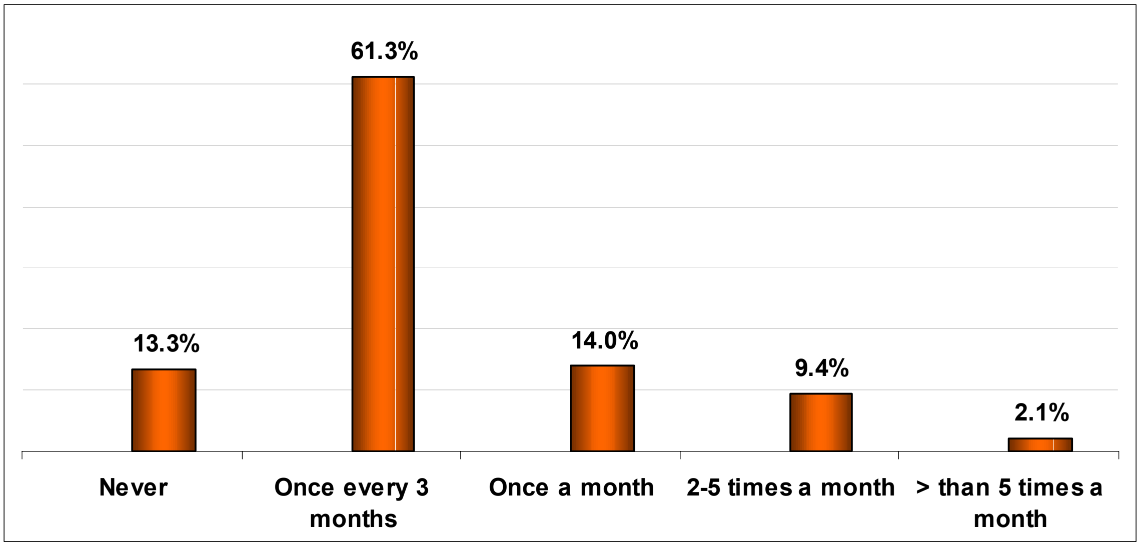
- Most common usage frequency is "once every three months"
- Majority of calls are made while in the car
- Caller intent varies; the three highest response categories were:
    - Obtaining an address or driving directions
    - Hours of operation
    - Ask questions about a product or service
- Three-fourths of mobile DA users have not used one of the free alternatives to date

[1] Nielsen Mobile released the results of a broad mobile survey (conducted Q3, 2007) that compared DA and other types of mobile usage. What the company found was that demographics vary by search method. But it found that 61% of 411 search users were female, while 60% of WAP search users were male.

These and other responses paint a picture of the average mobile DA user as someone actively on his or her way to a business to potentially buy something or conduct a transaction.

Figure 3: Usage Frequency

How frequently do you call 411-directory assistance from your mobile phone?



Source: Opus Research (12/07), n=671

An earlier mobile user survey sponsored by Ingenio and conducted by Harris Interactive asked U.S. adults "How often do you call 411 (information) from landlines and cell phones?" The results varied somewhat by phone form factor:

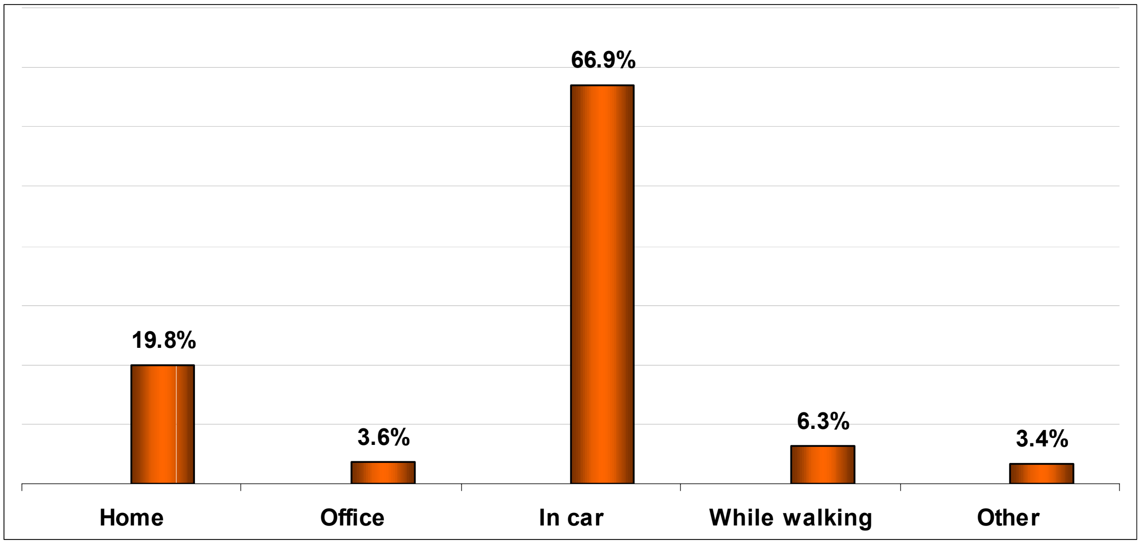
Traditional cellphone users	Smartphone users
Never: 67% Ever: 33% • Rarely: 26% • Sometimes: 6% • Often: 1% *(n=2,583)*	Never: 56% Ever: 44% • Rarely: 32% • Sometimes: 10% • Often: 1% *(n=162)*

Source: Harris Interactive-Ingenio (3/07)

Interestingly, one might expect smartphone owners to call DA less than conventional cell phone users. However, that wasn't true in these data. However, in both cases, the Ingenio-Harris results reflect much higher "never" responses than the LMS data. But because questions are phrased differently, there's limited ability to compare the findings otherwise.

Figure 4: Usage Location

In the past year, when using your mobile phone, where did you make most of your calls to 411?

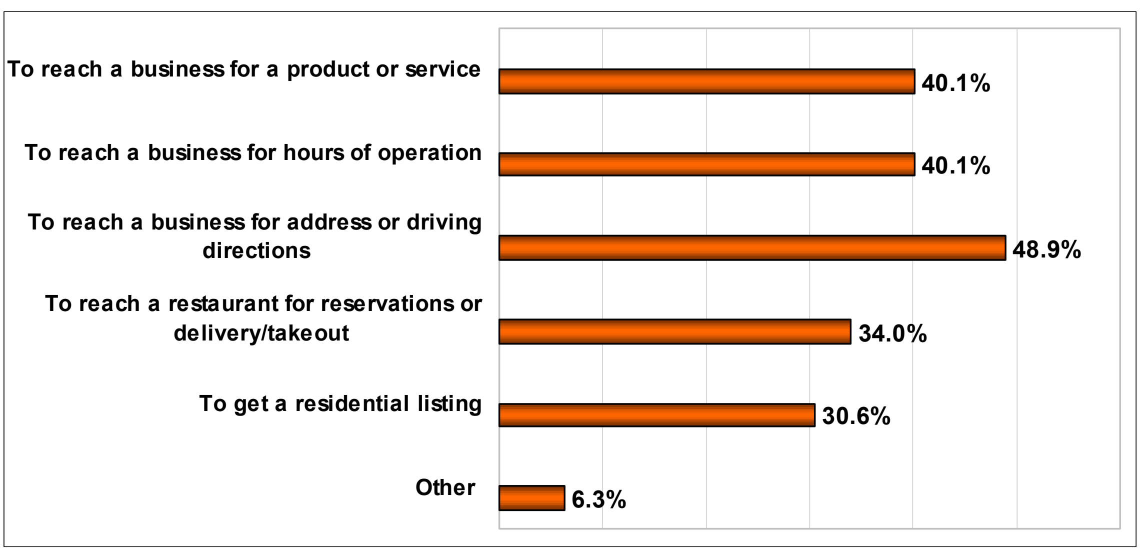


Source: Opus Research (12/07), n=556

At home or in the office people typically have access to the desktop Internet. By contrast, the available information in the car is limited (unless users call friends or family at their computers). Even though DA predates the Internet, we would argue that mobile DA usage should increasingly be seen in the larger context of Internet search behavior.

Figure 5: Caller Intent

What is your most frequent intention in calling 411 from your mobile phone? (Select top two choices)



Source: Opus Research (12/07), n=556

These answer categories were based on historical DA caller intent. However, the open-ended option ("Other") produced responses that were generally consistent with the categories offered. Some representative responses:

- To set or confirm an appointment
- To call a tow truck
- To find a hotel location
- To tell someone I would be late
- To find a friend's number

Respondents present a fairly typical picture of DA usage in that they are generally seeking to locate a business (address/directions), determine whether a business is open or whether a particular product or service is available. When combined with the most common usage location ("in car") the mobile DA user emerges as a highly "qualified" consumer en route to conduct a transaction.

However, respondents indicated that a substantial number of their mobile calls (30%) were for a residential listing. This figure is higher than other industry data which is typically cited around 20% or less.

Maps, Enhanced Content and Travel

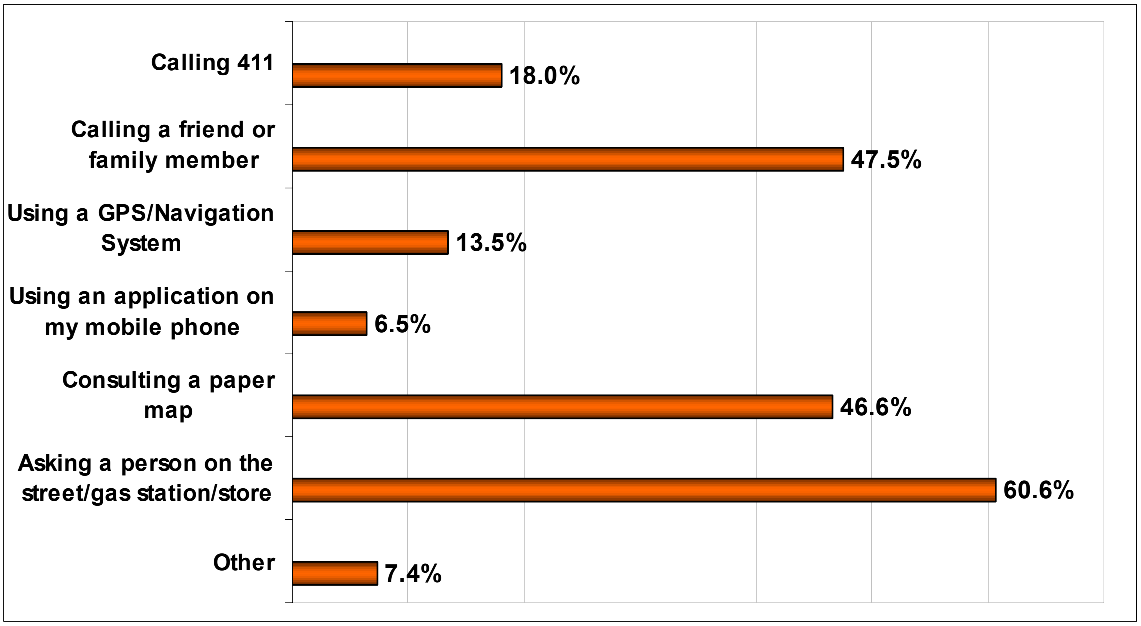
The survey explored whether users sought content through 411 beyond the limited range of conventional DA lookups identified above; it also sought to learn whether DA habits are different when users are traveling.

Figures 6 & 7 below reflect behavior and attitudes associated with obtaining maps and directions from DA, in the car and more generally.

Respondents who indicated they use 411 "in the car" – incidentally, the most common usage location – expressed a range of behaviors that included calling friends, using GPS devices or simply asking other people on the street or at a gas station. Calling 411 for directions was more common and popular than using GPS or mobile applications. That's to be expected given the relatively low penetration of GPS devices and smartphones that accommodate advanced mapping applications. Beyond this, however, calling 411 was a relatively unpopular way to get directions, according to survey respondents.

Figure 6: Directions in the Car

In your car, how do you most often get directions when you are lost? (Select top two choices)

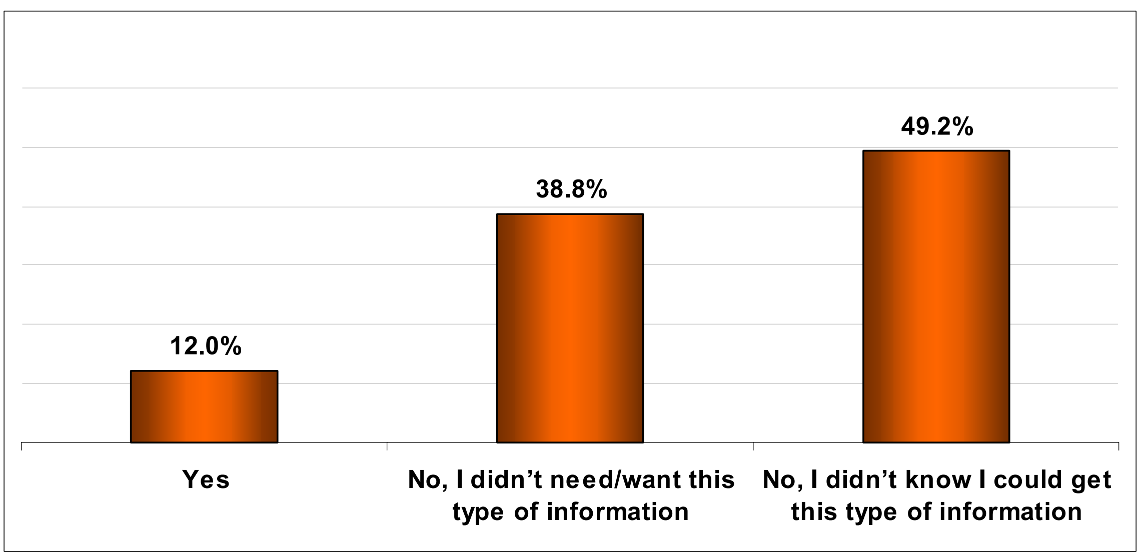


Source: Opus Research (12/07), n=556

A related question asked about obtaining maps and directions from 411 more generally.

Figure 7: Maps & Directions Queries

Do you ever request a map or directions from your mobile 411 service?



Source: Opus Research (12/07), n=549

In contrast to the "in-car" data reflected on Figure 6, an even lower percentage of respondents (12%) said they seek out maps or directions from 411 in response to this more general question. The discrepancy between these responses in Figures 6 & 7 can probably be partly explained by the fact the question wasn't qualified by "in the car." Indeed, if one assumes that some number of respondents to the question in Figure 7 factored in the hypothetical availability of the Internet, it makes sense that a smaller percentage would call DA for maps/directions, as part of their regular behavior.

By contrast, if one segments the responses in Figure 7 by "regular DA users" (those who call mobile DA at least once a month), 18.8% have sought maps and directions information.

Roughly half of the survey respondents (49.2%), however, said they simply didn't know this type of information was available. Interestingly, that figure holds for the "regular DA users" as well. One cannot necessarily make the leap that if this group knew about the availability of maps/directions via 411 that they would use these services. Conversely, maps and directions are consistently among the most desired and highly used mobile applications. Indeed, search marketing firm iCrossing found that "maps and directions" was the most sought after content category among mobile users in its April 2007 mobile consumer survey.

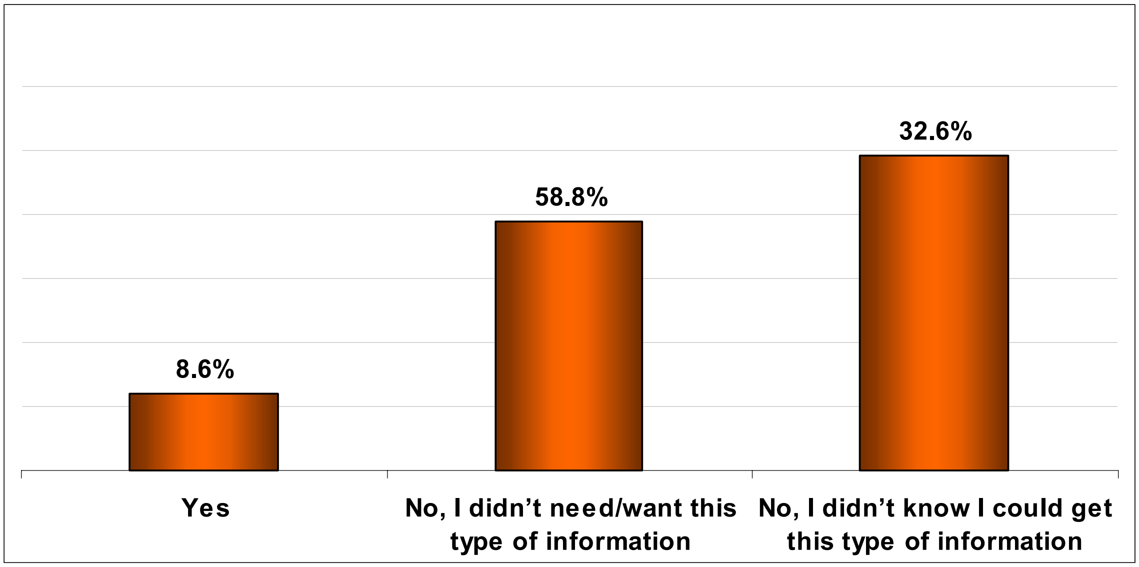
In order of demand and usage the categories in the iCrossing study were as follows (n=225):

1. Maps/directions
2. Weather
3. Local information
4. News
5. Entertainment
6. Sports
7. Finance
8. Other

Sports, finance and entertainment are all popular content categories in mobile, as reflected in the iCrossing data above. In particular, ESPN has said that it has received more visits to its mobile website on occasion than to ESPN.com on the desktop Internet. However, as with the mapping category, a large number of respondents in the LMS survey were unaware that these types of content were available through 411 (12.7% of regular DA users responded "yes" to the question).

Figure 8: Sports, Stocks, Movies

Do you ever ask/request sports scores, stocks quotes, movie times etc. from your mobile 411 service?



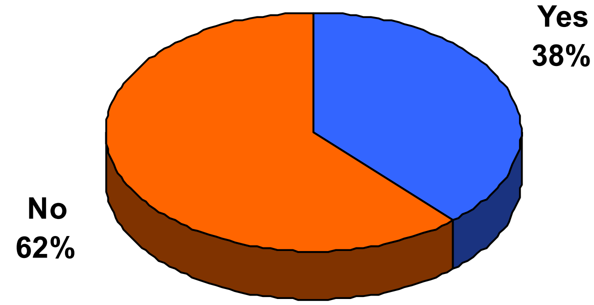
Source: Opus Research (12/07), n=549

However the majority of respondents here answered, unlike in the mapping category, that they "didn't need/want" the content. That suggests lower demand among mobile 411 users for these content categories (the "didn't need/want" figure is roughly equivalent at 55.8% for regular DA users). We believe it would be incorrect, however, to automatically assume that enhanced services are inherently undesirable to mobile DA users. A more reliable inference probably is that users don't associate these content categories with conventional 411, and mobile carriers have not done a good job of promoting or "selling" enhanced services to their customers.

A particularly counterintuitive finding from the survey is of a discrepancy between in-town and away usage of mobile 411 (Figure 9 below). One might logically assume that DA usage would be roughly equivalent "at home" and away. However, the LMS survey reflected that the majority of respondents (61.7%) don't call mobile 411 in other cities. Given the historical prompt "what city, what listing," this is a curious result. One explanation may be that mobile users think of DA as inherently "local." Other potential explanations become more speculative.

Figure 9: 411 Away from Home

In the past 12 months, have you called 411 from your mobile phone while traveling in another city?



Source: Opus Research (12/07), n=556

There was something of a gender difference in this response. Men tended to call DA away from home more than female respondents:

Males (called mobile DA while traveling, past year):

- Yes – 44.2%
- No – 55.8%

(n=199)

Females:

- Yes – 34.5%
- No – 65.5%

(n=339)

What we're calling "regular DA users" were split about 50-50 in their behavior away from home:

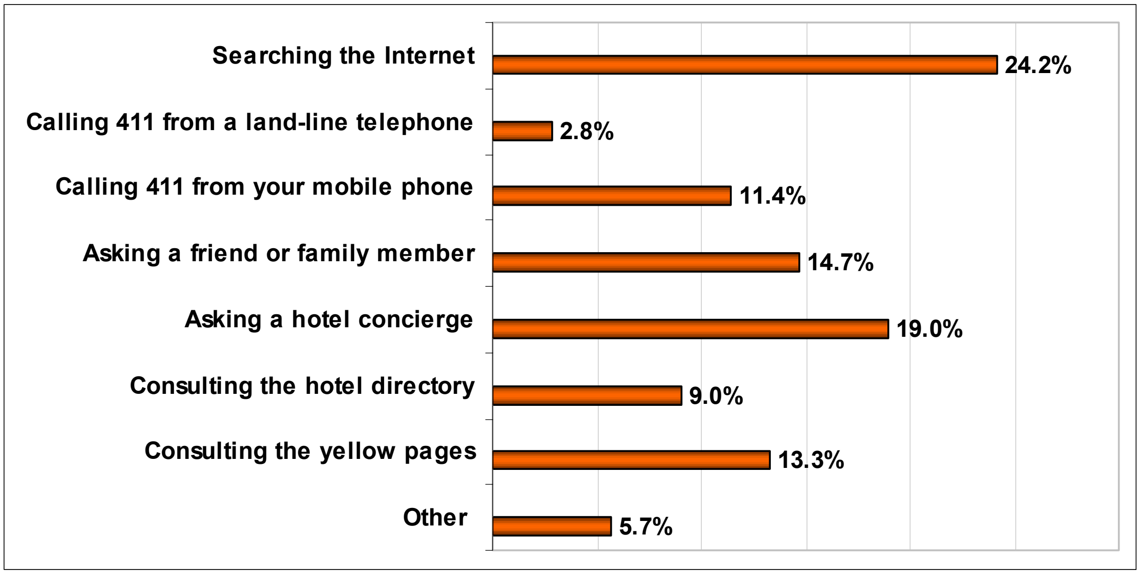
Regular callers (past year):

- Yes – 50.6%
- No – 49.4%

(n=166)

Figure 10: Finding Restaurants 'on the Road'

While traveling, what is your preferred source of information for finding local restaurants?



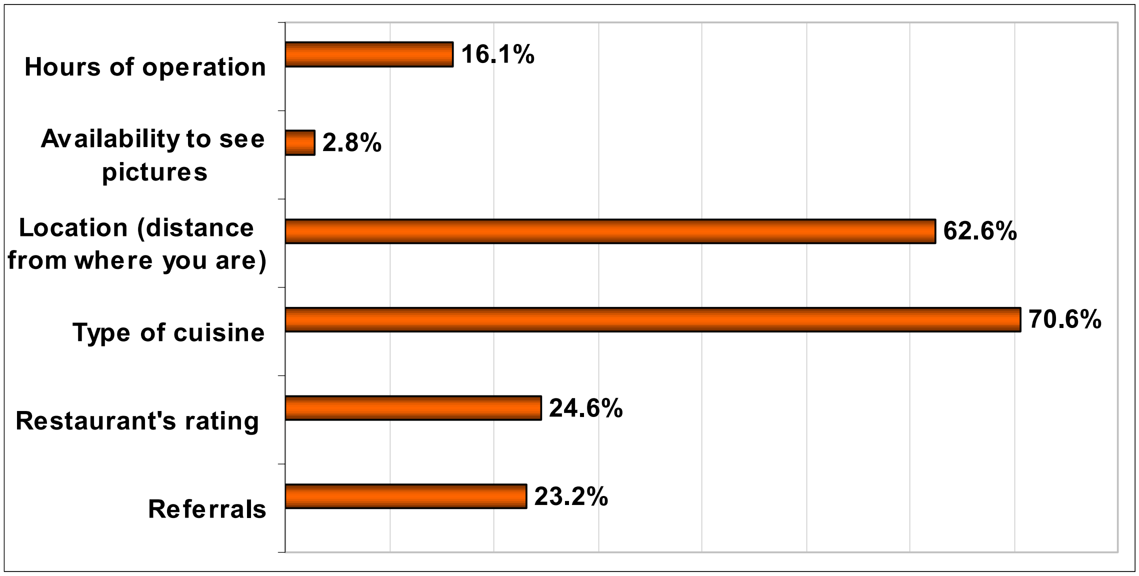
Source: Opus Research (12/07), n=211

Reaching local restaurants is one of the top activities for mobile DA users. However, given the lower usage of DA during travel, it's not surprising that landline and mobile DA aren't heavily used methods for finding local restaurants away from home. By contrast, "regular DA users" called mobile 411 for restaurants while traveling somewhat more frequently (18.1%). As Figure 10 illustrates, the Internet is the preferred research tool if it's available.

As Figure 11 below reflects, "cuisine type" and "proximity" were the two most important considerations (followed well behind by "rating") in choosing a restaurant. This question sought to determine the types of enhanced content that mobile DA should offer consumers to help them make restaurant selections in this high-use content category.

Figure 11: Choosing a Restaurant

When traveling, what do you consider most important in choosing a restaurant? (Select top two choices)



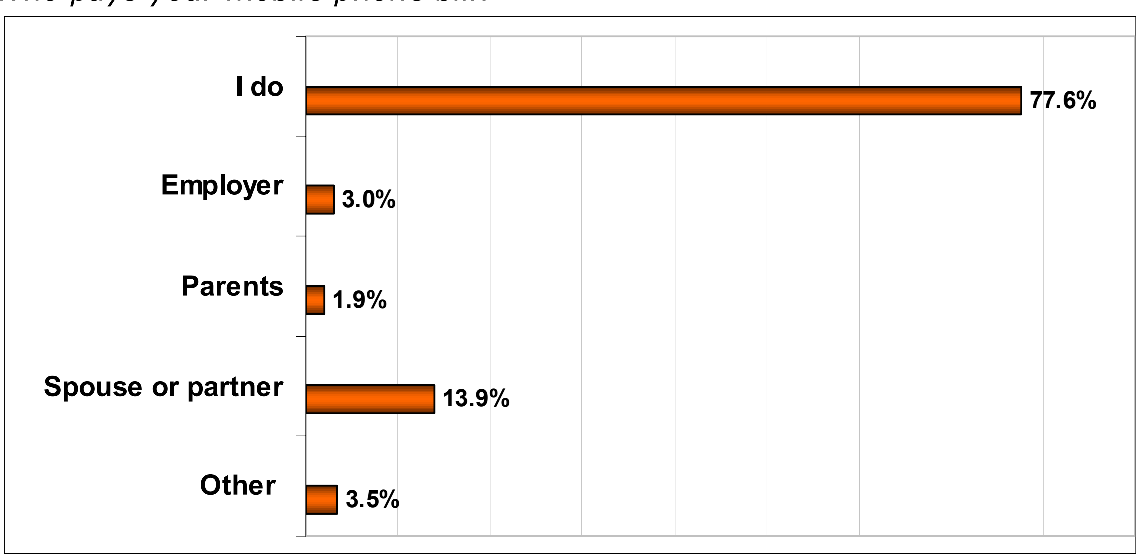
Source: Opus Research (12/07), n=211

Carrier DA Pricing and Consumer Price Sensitivity

Price is the arguably the single greatest factor inhibiting more frequent mobile DA usage. Nonetheless, most users do not know precisely the amount they pay for mobile DA (Figure 14). Pricing thus becomes an increasingly strategic question for traditional DA providers and new market entrants who seek to rely on consumer subscriptions as opposed to an ad-supported model.

Figure 12: Who Pays the Bill?

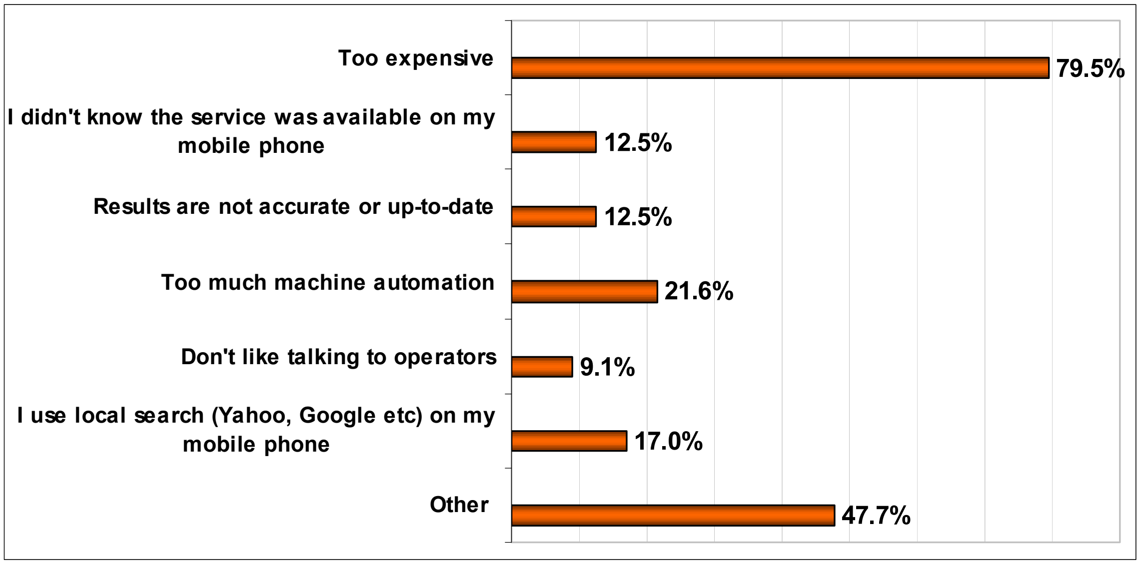
Who pays your mobile phone bill?



Source: Opus Research (12/07), n=624

Figure 13: Primary Reason for Not Calling 411

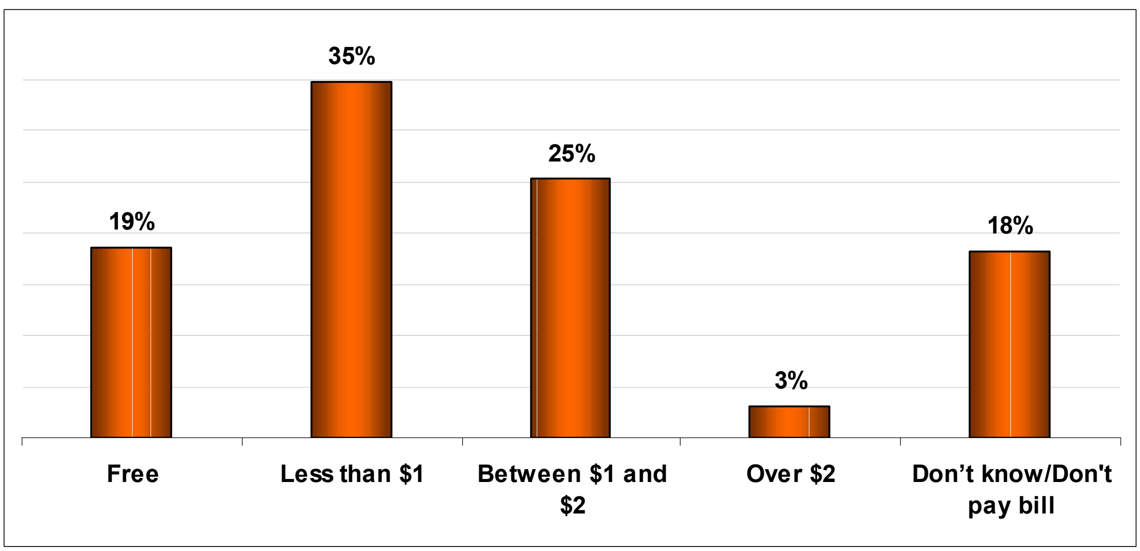
What is the primary reason you do not call 411 from your mobile phone?



Source: Opus Research (12/07), n=88

Figure 14: DA Pricing

How much do you pay for each call to mobile 411 directory assistance?

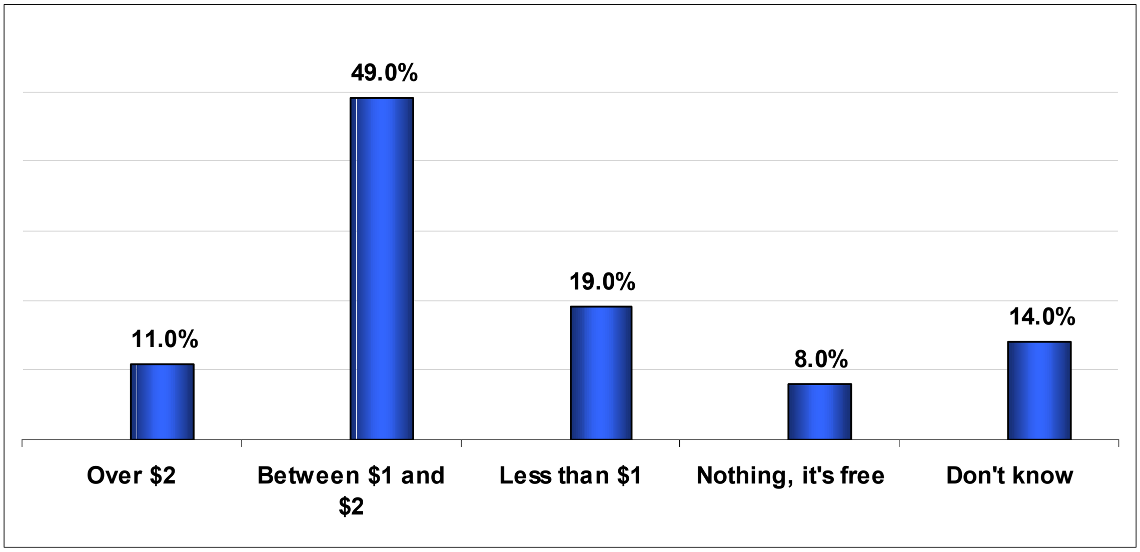


Source: Opus Research (12/07), n=549

More than 50% of respondents underestimated the cost of mobile 411 charges and, of that group, almost 19% thought it was free. Another 18% didn't know the cost at all. That means roughly 70% were largely or totally incorrect. Despite the group that responded "between $1 and $2," fewer than 10% were actually within the correct range of most carrier-based DA calls. In most cases, DA calls through U.S. mobile carriers cost between $1.50 and $2.00 per call. Compare these results to those of an earlier Jingle Networks-sponsored comScore consumer survey (Figure 15).

Figure 15: DA Pricing (comScore Data)

Perceived amount paid when using directory assistance from mobile phone



Source: comScore (6/06)

Although it's not totally comparable to the LMS data, almost half the comScore survey respondents thought that per-call DA pricing was between $1 and $2 versus 25% of those in the LMS survey. Among the segment of "regular DA users" (once or more per month) in the LMS survey, 59.8% of respondents believed that mobile DA calls cost less than a dollar per call or were entirely free. Yet LMS survey respondents who believed that they were paying more than $2 per DA call still called with some regularity:

- Once every 3 months – 64.7%
- Once a month – 5.9%
- 2-5 times a month – 29.4%

(n=17)

While this latter slice of the data is much too small to draw any real conclusions, one might find some segment of the DA user base reasonably insensitive to price (especially at lower usage levels). On the other end, as mentioned, there was a correlation between heavier usage and the belief in a lower per-call price point among LMS respondents.

As more DA users become aware of actual per-call fees we expect them, however, to "defect" to free/ad-supported alternatives. This anticipated shift

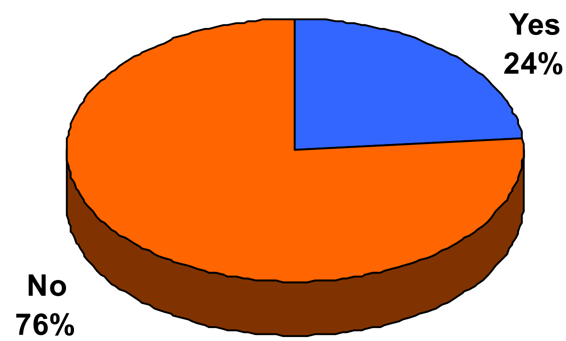
creates a strategic and tactical dilemma for carriers regarding how to manage the traditional product henceforth.
Here are the choices:

- Raise DA prices and ride the traditional product "into the sunset"
- Potentially "cannibalize" usage of the traditional DA offering with an ad-supported version (e.g., AT&T)
- Provide enhanced DA services for a fixed monthly fee (e.g., MetroPCS)
- Or some combination of these approaches

Free Directory Assistance Alternatives

Figure 16: Free DA Awareness and Usage

Have you ever used one of the free alternatives to carrier-provided 411 directory assistance (800-FREE-411, GOOG-411, etc.)?



Source: Opus Research (12/07), n=629

These data are consistent with other findings in the market that indicate the majority consumers are unaware or have not used one of the several, free DA alternatives. Two earlier, more-informal online surveys by LMS with smaller samples found that 71% and 77% of mobile consumers had not used any of the services. Finally, three waves of surveys, all conducted in 2007 by comScore, showed consistently that 66% of the survey respondents were not aware of these free 411 alternatives.

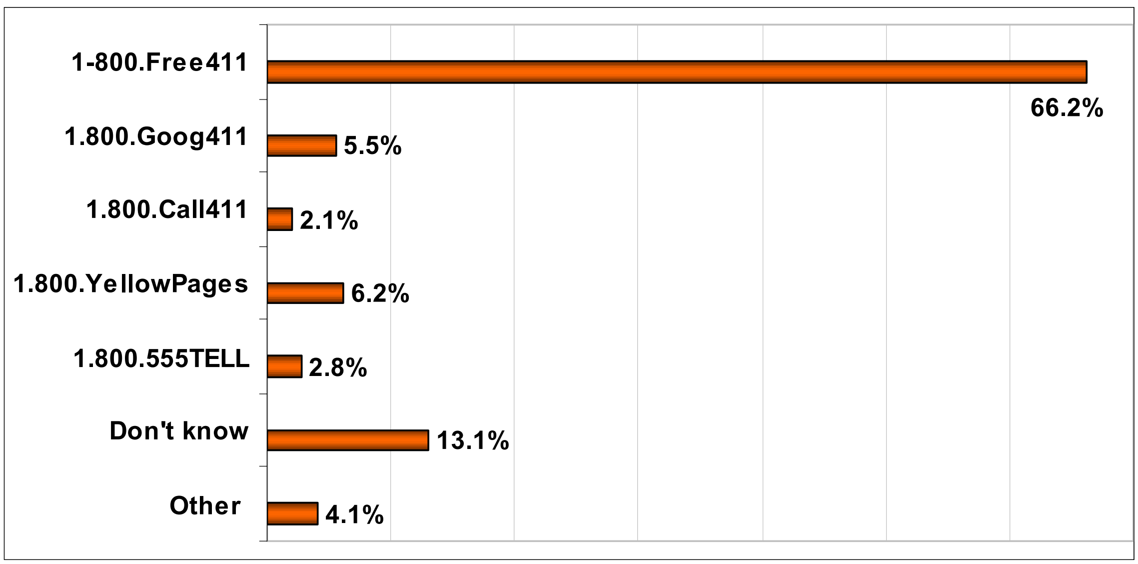
Nonetheless, 24% of the U.S. mobile user population is still a substantial number: approximately 60 million people. If each of these individuals called "free 411" only once every three months (the frequency identified by 61.3%

of survey respondents), that would still represent 240 million calls annually to free 411 services.

However, there's also strong reason to believe that call frequency will increase with free 411. Data in June 2006 from comScore found that 88% of consumers said they "probably" or "definitely" would use free 411 services more than paid 411. Considerable anecdotal evidence suggests this outcome as well.

Figure 17: Free 411 Usage and Market Share

Which of the following free alternatives to 411 have you used?



Source: Opus Research (12/07), n=145

Other than Jingle Networks' 1-800-Free-411, which is more established than its competitors, no single service has any meaningful share of the market. Google has done some limited outdoor advertising for Goog411 but the other services are largely unknown to consumers at this point. The 13.1% usage share assigned to 1-800-YellowPages is likely a product of consumer familiarity with the concept and the term "yellow pages" rather than an actual reflection of market share.

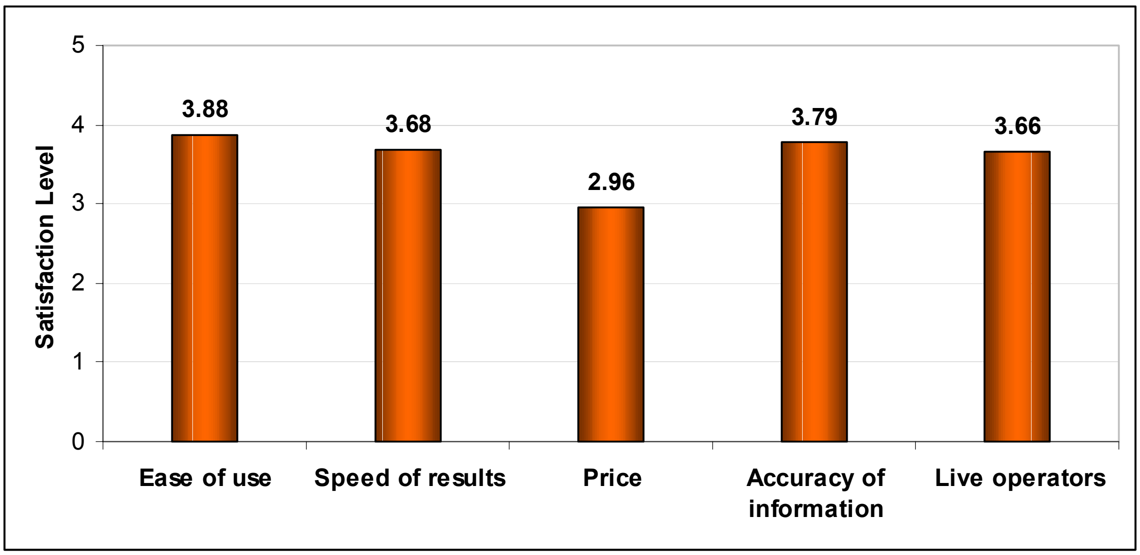
Customer Satisfaction with Carrier and Free DA

Satisfaction ratings of carrier 411 (Figure 19) and free 411 (Figure 20) reflect that consumers see the competing offerings as generally comparable across most categories of service. (That changes among those respondents indicating a "4" or "5" positive satisfaction levels, Figure 21). Price is one is an area where significant differences appear, as one might expect, with free 411 getting higher satisfaction marks than traditional DA.

Traditional DA scores somewhat better than free 411 in the "speed of results" and "live operators" categories. (Among free providers, only 800-Free-411 and 800-YellowPages have operators.) Advertising, which does not appear in traditional DA, is given a basically neutral rating. Those sampled confirm the general feeling that listening to audio advertisements is not a deterrent to use, although they show only moderate satisfaction. Not all the free services feature advertising at the present time. However, we believe that relevant audio ads or other ads associated to DA initiated lookups (e.g., text) can add value and potential consumer satisfaction to the experience.

Figure 18: Carrier DA Consumer Satisfaction

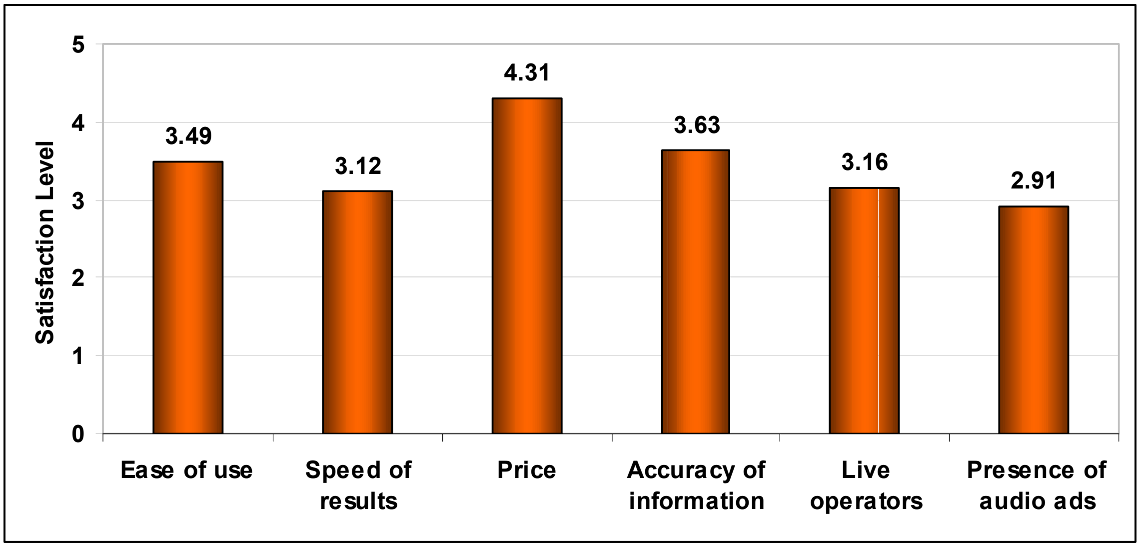
On a scale of 1 to 5 – where "1" is extremely dissatisfied and "5" is completely satisfied – indicate your satisfaction with your current wireless carrier's 411 service:



Source: Opus Research (12/07), n=549

Figure 19: Free 411 Consumer Satisfaction

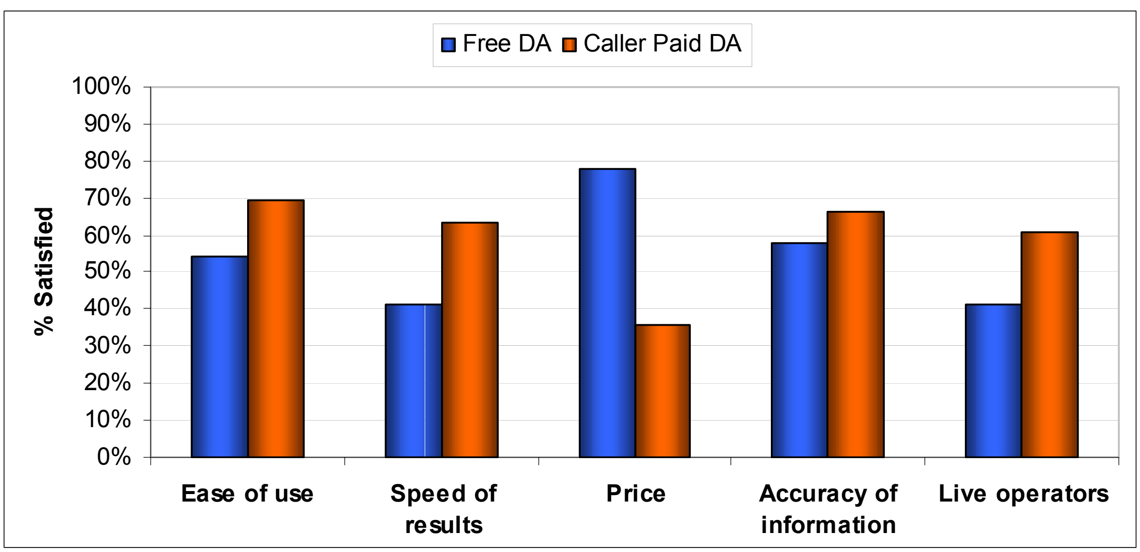
On a scale of 1 to 5 – where "1" is extremely dissatisfied and "5" is completely satisfied – indicate your satisfaction with the alternative, free source of 411:



Source: Opus Research (12/07), n=145

Figure 20: Comparing Satisfaction Levels

Percentage of survey respondents indicating a "4" or "5" positive satisfaction levels for traditional and free DA



Among those most satisfied with both types of services, traditional DA scored more favorably other than on price. (It should be noted that there's a significant discrepancy in the sample sizes with a base of 549 respondents for the traditional DA category and 145 for free DA.)

Overall, these data suggest that traditional carrier-based paid DA will continue to see its consumer base erode over time, unless advertising in the free 411 services becomes excessive or otherwise alienates users. Alternatively, the combination of limited free DA awareness and better publicized enhanced DA services from traditional carriers might enable the latter to retain a meaningful percentage of their current DA call volumes for the foreseeable future.

Summary & Conclusions

Consumer-paid directory assistance is a multi-billion dollar industry, which is now in a period of upheaval and transformation as more calls shift to mobile devices and a range of competitive challenges arise – from the mobile Internet to free DA alternatives. These competitive challenges raise strategic and tactical questions for mobile carriers and their service providers (about pricing and content) in the near term.

Though DA pre-dates the rise of the Internet, it should now be seen in a larger context of Internet search behaviors as a form of "local mobile search." Indeed, this is how it is now being positioned by many of the free DA competitors (e.g., Google, Microsoft).

One could say that mobile DA's chief attractions appear to be simplicity, familiarity and convenience. It is also typically used in situations where other data sources are unavailable. Accordingly, the main usage location identified in the survey was "in the car." Yet DA callers also emerge as "qualified" sales prospects typically on their way to potentially conduct a transaction. This is a critical point for ad-supported models.

Despite paying their own mobile phone bills, only 9% of survey respondents correctly estimated the per-call pricing of carrier DA. The rest were incorrect to varying degrees or totally ignorant of pricing. This ignorance may enable paid DA to "coast" for awhile, based on habitual consumer behavior in calling 411.

Roughly three-quarters of mobile consumers have not used free DA services. But awareness of these services will grow with corresponding consumer adoption over time. Once consumers discover the free services, it's highly unlikely they will return to paid DA. Evidence of this is customer satisfaction ratings that are largely on par with paid DA.

Call volumes are also likely to increase with free DA as inhibitions against calling (i.e., price) are removed. Consumers appear to have a neutral attitude toward audio ads in free DA. But there is considerable opportunity to improve the relevance and quality of those ads, thereby improving the overall consumer experience.

Consumer marketing and secondary word of mouth will drive awareness and adoption of free DA services. Jingle's initial round of awareness-raising has had a positive effect (with 66% of survey respondents citing its name). But there is also considerable room for other free DA brands to emerge (consider that many people think they called 1-800-YELLOWPAGES even though it's unlikely they actually did).

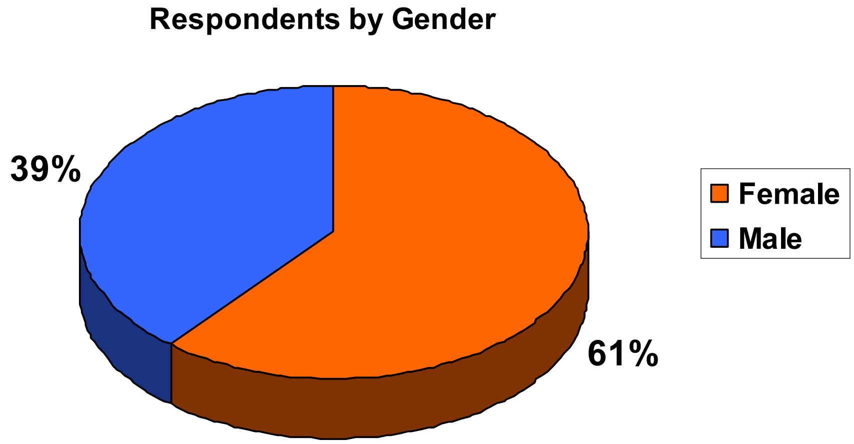
Enhanced carrier DA services have not, to date, been well publicized or well "sold" to mobile users. Consequently, users are either unaware or do not see a need for these services. However, better publicity and positioning of enhanced services and content might offer carriers a differentiated user experience to compete with free DA and potentially retain users.

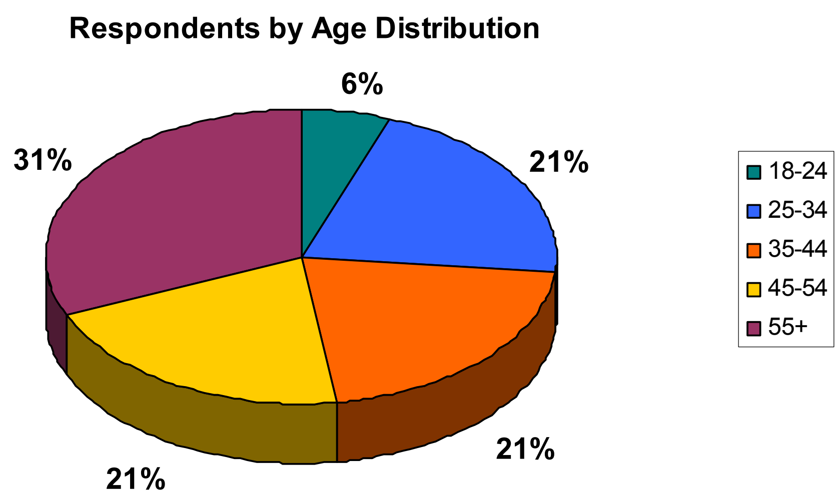
In testing pricing options for traditional DA, there appears to be a mixed outlook for "unlimited," fixed-fee DA services (though it's too early to draw definitive conclusions on this point). Some survey respondents indicated positive acceptance, while others showed a lack of interest or need because they had "weaned" themselves from DA, based on cost.

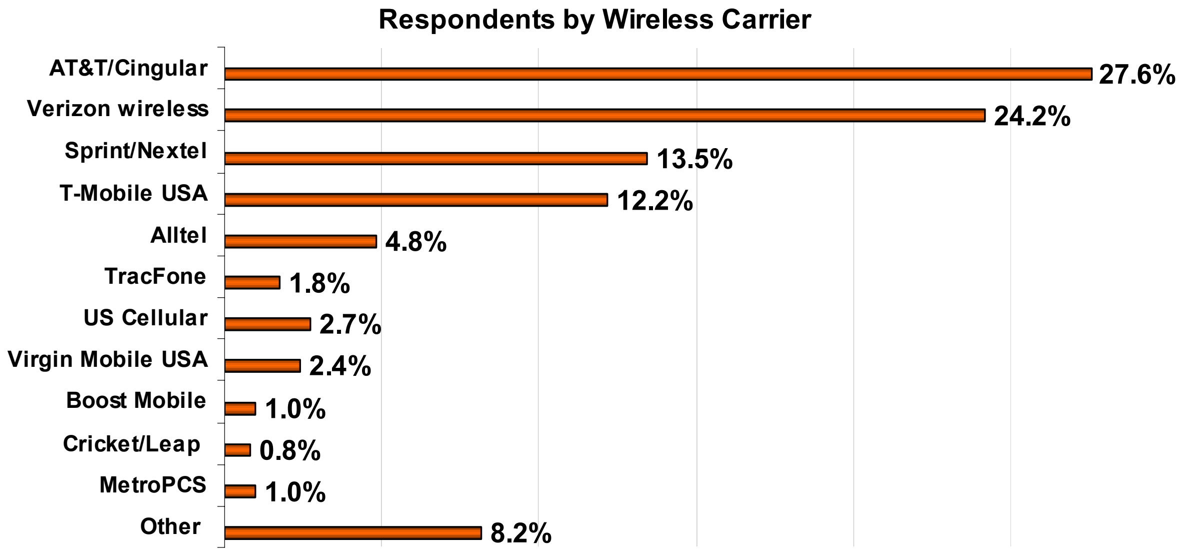
Ultimately some version of paid DA and free DA may coexist, with different user segments for each. But how that user distribution plays out will depend on carrier DA innovation, pricing and awareness-building by free DA service providers.

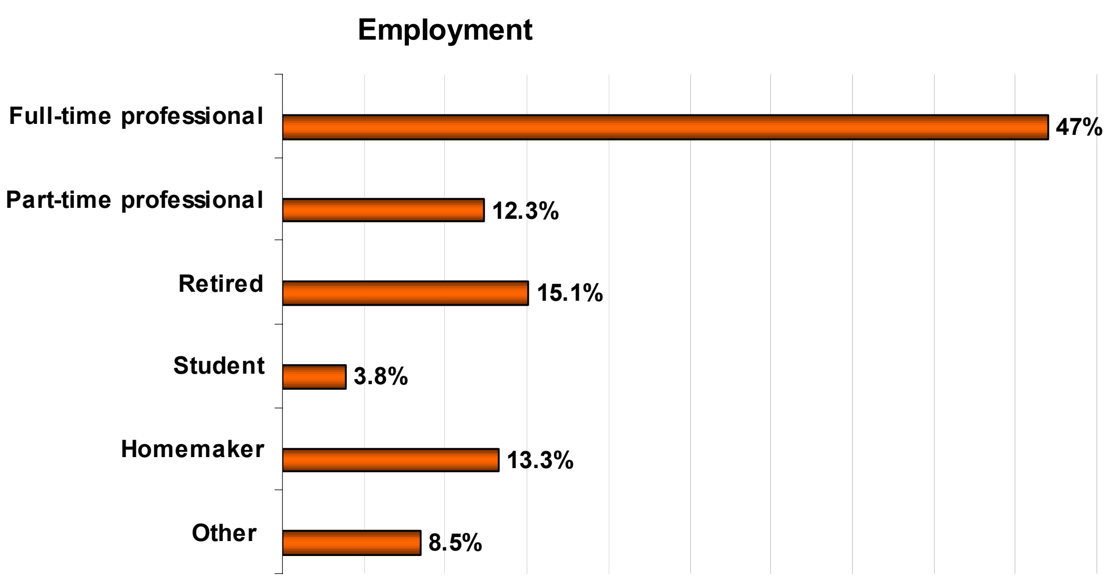
About the Survey

The survey had 671 total respondents (U.S. adults 18 years and older) and was sponsored on behalf of V-Enable. It was fielded and completed in November 2007 using Greenfield Online's consumer panel. The following charts reflect the distribution of respondents by gender, age, wireless carrier and profession.






Respondents by Wireless Carrier
AT&T/Cingular
27.6%
Verizon wireless
24.2%
Sprint/Nextel
13.5%
T-Mobile USA
12.2%
Alltel
4.8%
TracFone
1.8%
US Cellular
2.7%
Virgin Mobile USA
2.4%
Boost Mobile
1.0%
Cricket/Leap
0.8%
MetroPCS
1.0%
Other
8.2%


Employment
Full-time professional
47%
Part-time professional
12.3%
Retired
15.1%
Student
3.8%
Homemaker
13.3%
Other
8.5%