THE KEYNOTE

Benchmark

The Mobile & Internet Performance Review

PERFORMANCE AND USABILITY: CONNECTING WITH CUSTOMERS ON THE NEW INTERNET

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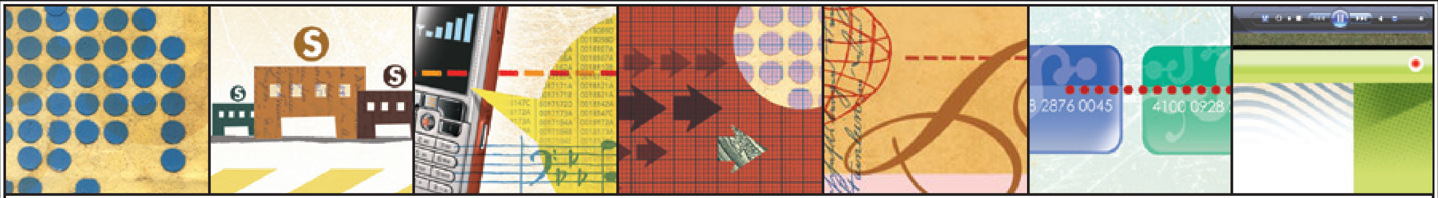


KEYNOTE®

The Mobile & Internet Performance Authority.

Dear Fellow Executive:

Welcome to the inaugural issue of *The Keynote Benchmark,* a high-level intelligence report for every executive and manager who is involved in online strategy and execution, or whose organization depends on a successful Web presence. That's just about all of us.

For years now, we've been testing, measuring and monitoring the online performance of some of the world's leading organizations. In this issue, we look at how Web and mobile performance and usability have become even more critical to overall customer satisfaction, and ultimately your success.

A lot of people are talking about "Web 2.0." Some dismiss the term as just a catchphrase. But by any name, everyone's business is and will be affected by this wave of new technology that includes rich Internet applications, broadband content including streaming media, social networking, user-generated content, and the continued growth of the mobile Internet. The overwhelming challenges these radical changes present for usability experts and Web operations teams are just beginning to be truly appreciated.

In this first issue of *Benchmark,* you'll meet usability and performance experts from Yahoo!, Fidelity Investments, MauroNewMedia, MobiTV, Akamai, PowerReviews, and others. You'll get a glimpse of how these organizations are adapting to and leveraging the latest technologies. And you'll see how consumers react to Web sites in the important brokerage and wireless industries.

One comment in this issue that really says it all was made by Paul Graham, senior vice president, retail brokerage at Fidelity, who said, "Fidelity is a financial services firm, but we're also a technology firm." That really sums up the challenges faced by most successful companies operating today. Leading organizations realize that it is no longer good enough just to have a Web site or a mobile presence. Staying on top of the technological aspects of the evolving Web and mobile worlds is like running an entire business in and of itself.

Our goal for *Benchmark* is not to provide all the answers, but rather to highlight the rapidly evolving online world and the ways in which businesses are meeting its challenges.

We hope you enjoy this issue and we look forward to forging an ongoing relationship with you as the magazine evolves right alongside the online medium that is its focus.

Best Regards,

Umang Gupta
Chairman and CEO, Keynote Systems

The Online Competition for America's Ears & Thumbs

Online customer experience proves to be an important brand-building tool for major wireless carriers and third-party resellers. But the most important driver for conversion is the ability to quickly and clearly compare phones and plans.

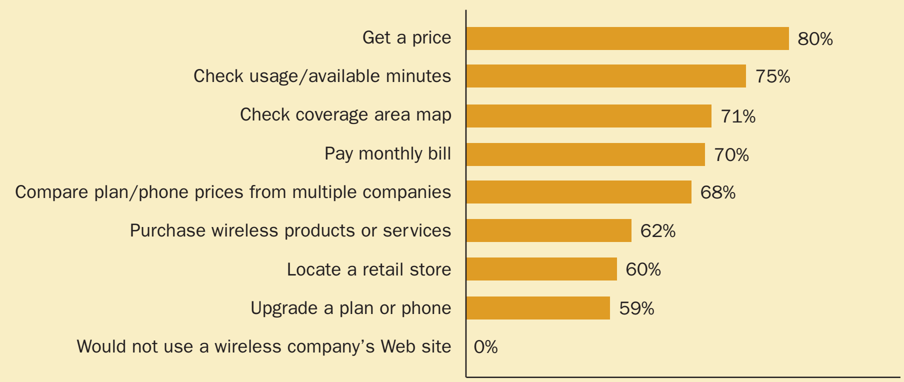
Growth of the U.S. cellular telephone industry since the turn of the millennium has been nothing short of meteoric, reaching over 219 million wireless subscribers, more than 72 percent of the total U.S. population, by 2006. Those subscribers used more than 857 billion minutes in the first six months of 2006 — a jump of 27 percent from 2005 — putting annual usage on a track to reach 1.7 billion minutes and generating total wireless revenue at an annual rate of $121 billion.[1] As a sign of just how ubiquitous wireless has become in America, more than 40 percent of 12- to 14-year-olds now carry cell phones.[2] In the United States and around the world, the cell phone is the number-one-selling consumer electronic device.

ALTERNATIVE REVENUE STREAMS FOR A SATURATED MARKET

With cell phone market penetration breaching the 70 percent mark, analysts are seeing the saturation point on the near horizon, with one analysis quoted in a recent *Business Week* article estimating that cellular penetration will peak in the mid-70s.[3] Conventional wisdom has it that that point will easily be reached before the decade is out. With few new users to attract to subscriber rolls, carrier revenue growth will have to come by enticing customers to switch from other providers, and from the sale of enhanced wireless services.

Wireless Web storefronts are not just a convenient and efficient channel to sell phones and plans, but a critical brand-building venue as well.

CHART A: WHY DO WIRELESS CUSTOMERS GO ONLINE?



Source: "Customer Experience Rankings: Wireless," July 2006, Keynote Competitive Research.

Visitors to the cellular service carriers' sites are not only seeing that provider's offerings, but are also getting a taste of what the online experience will be like if they sign on with that carrier — an important consideration, since more than 70 percent of subscribers visit their carrier's site each month.

Some 20 percent, or 45 million subscribers, switch carriers every year.[4] With phone number portability now an accepted and expected reality, and free or cheap cell phones standard in the industry, the only barrier to customer switching is the length of the carrier contract. Support, service, and ongoing value are the carriers' primary defenses against the one- or two-year contract churn that impacts a significant portion of their subscriber base.

As subscriber growth plateaus, enhanced services delivered via cell phone hold the greatest potential for revenue growth. Text messaging has exploded since 2005, as any parent with teenagers can testify. In the first six months of 2006, subscribers thumbed 64.8 billion text messages, a whopping 98.8 percent increase over the same period in 2005.[5] Other cell phone services including mobile Internet, email, location services such as Verizon's Navigator, and most notably, entertainment — ring tones, ringback tones, music, videos, and broadcasts — are being aggressively marketed as carriers vie to offer the greatest value to their customers and maximize the revenue each customer generates.

THE WEB IS AMERICA'S WIRELESS SHOPPING MALL

Whatever mobile services consumers are increasingly driven to buy, from basic service to data to digital downloads, they frequently do their shopping online. (See Chart A) Recent research by Keynote Competitive Research reports that 80 percent of consumers surveyed go online to get pricing for their wireless services. Three-quarters of surveyed customers check their minutes online, and 70 percent pay their monthly bill online.[6] For both initial shopping and ongoing customer relationship management, Web sites have become critical success drivers in the wireless industry.

When initially shopping for a cell phone and service, consumers have a choice of two types of sites: dedicated sites offered by each major cellular service provider (the carriers) and independent, third-party/reseller sites where consumers can shop and compare a number of providers and their phones. Once signed up, of course, the subscriber is married to his or her provider's site for ongoing account maintenance, upgrades, and additional services. So the carriers' sites are a selling tool not just for the initial phone and contract purchase, but for the user's full contract-term customer experience. Ensuring a positive Web site experience, then, is a vital component of the carriers' overall selling strategy.

CAN YOU CLICK ME NOW?

Which sites are clicking with cell phone consumers today? And what can cellular vendors of all types do to win more shoppers and buyers in an intensely competitive marketplace?

As it has done for books and music, Amazon.com has again demonstrated its dominance and perfection of the online retailing model in the cellular phone market. In nearly every important site impact measure — from customer experience to brand impact to conversion — Amazon is ranked number one, according to the recent consumer study of more than 2,000 wireless prospects conducted by Keynote Competitive Research.[7] (See Chart B)

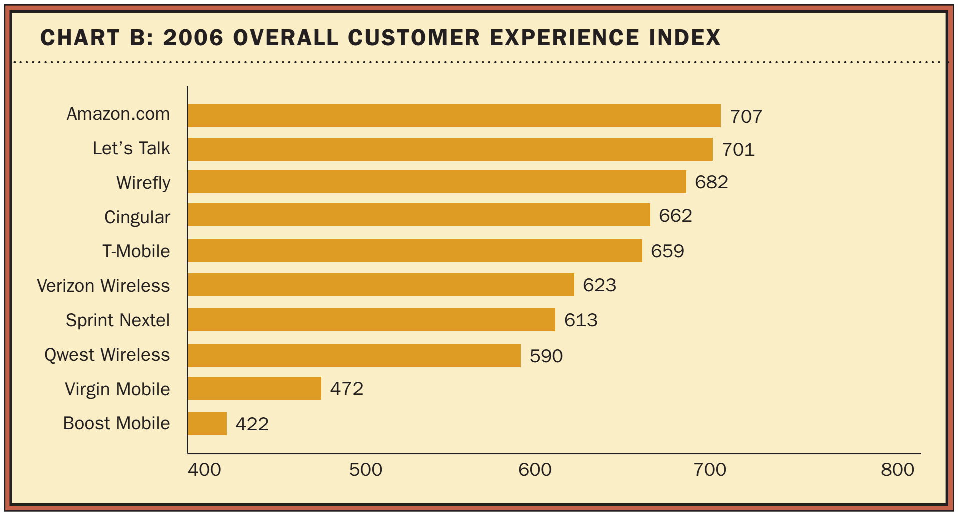
Overall, the independent sites consistently outperformed the five major carriers surveyed (Cingular, Verizon, T-Mobile, Sprint Nextel, and Qwest), which tended to cluster in the middle of customer rankings for most attributes. The carrier sites apparently face some challenges. First, Amazon and the independents offer users who are shopping for new service the convenience of comparing plans and phones from multiple providers all on one site. Second, prospects barraged by the intensive advertising campaigns of the majors likely have higher expectations of their Web sites than they do for relatively unknown "all-in-one" sites such as Let's Talk and Wirefly.

One area where two of the major carriers did break into the top three is the overall customer satisfaction index, a composite measure of the survey that factored a number of metrics including overall satisfaction, ease-of-use, organization, plans and service, and plan features. T-Mobile placed second in this ranking, and Cingular placed third. Because this index included a number of measures of actual plans, phones, and features, it is possible that the rankings reflect prospects' impressions of the product offerings themselves as much as or more than the online presentation.

BEFORE AND AFTER: DOES THE SITE HELP THE BRAND?

Beyond the nuts and bolts of navigation, ease-of-ordering, graphics, speed-to-load, and other practical Web site dynamics is the overall brand experience. Does consumer interaction with the Web site enhance overall brand perception or undermine it? Are the key brand propositions supported and validated? Is the brand relationship solidified, or does it encounter a disconnect?

Here again, consumer expectations appear to play a significant role in brand scores. Consumers apparently approach



Source: "Customer Experience Rankings: Wireless," July 2006, Keynote Competitive Research.

The customer experience index factors more than 80 customer satisfaction metrics, as well as brand impact and conversion impact indices. It is noteworthy that none of the major carriers finished in the top three. Customers value the ability to compare across carriers, and perhaps approach carrier sites with higher expectations.

A positive online brand experience correlates closely to high conversion impact — the likelihood to make a purchase from the site or to recommend it. In fact, the top five sites for positive brand index were also the top five for conversion impact.

lesser-known, independent sites with lower expectations than the name-brand carriers; consequently, they have the opportunity to come away with a much more positive impression. In pre- and post-experience studies, Let's Talk's "before" positive brand perception of just 4 percent leaped to 57 percent after prospects spent time on the site. Similarly, Wirefly's positive perception jumped from a "before" of 10 percent to an "after" of 55 percent. Both sites' post-experience brand index numbers edged out the five major carrier sites studied.

Movement was noteworthy but not nearly as dramatic for the carrier sites. Cingular gained 25 percentage points and T-Mobile 30 percentage points in brand index after users interacted with their sites. Verizon gained a relatively scant 8 percentage points.

Interestingly, Amazon's positive brand perception actually dropped 13 percentage points post-experience, perhaps indicating a higher bar set by consumers for the perceived leader in online retailing. Even though the site ranked first in seven of nine positive brand attributes, prospects still came away

For both initial shopping and ongoing customer relationship management, Web sites are critical success drivers in the wireless industry.

with a slightly diminished perception of the Amazon brand.

The bottom line is that wireless Web storefronts are not just a convenient and efficient channel to sell phones and plans, but a critical brand-building venue as well.

SUCCESS DRIVERS: SHOW ME THE PLANS

A positive online brand experience correlates closely to high conversion impact — the likelihood to make a purchase from the site or to recommend it. In fact, the top five sites for positive brand index were also the top five for conversion impact, and in the same order. And the number one success driver for both brand impact and conversion impact is plan shopping. Phone shopping was virtually tied with plan shopping for conversion, and was a close second for brand impact.

Drilling down to the specifics for plan shopping, while the same five sites stayed in the top spots, their order was shuffled. Amazon dropped to the number five spot, with Let's Talk moving to the top. Interestingly, T-Mobile and Cingular moved up to number two and number three, respectively, even though consumers can shop these sites only for plans from each respective carrier.

Whether comparing various carriers' plans or a single carrier's different plans, the key best practice appears to be the side-by-side comparison. Users gave the thumbs-up to a grid format that lines up the various aspects of the plan, such as prime time and night/weekend minutes, along with the prices, for quick and easy scanning and comparison.

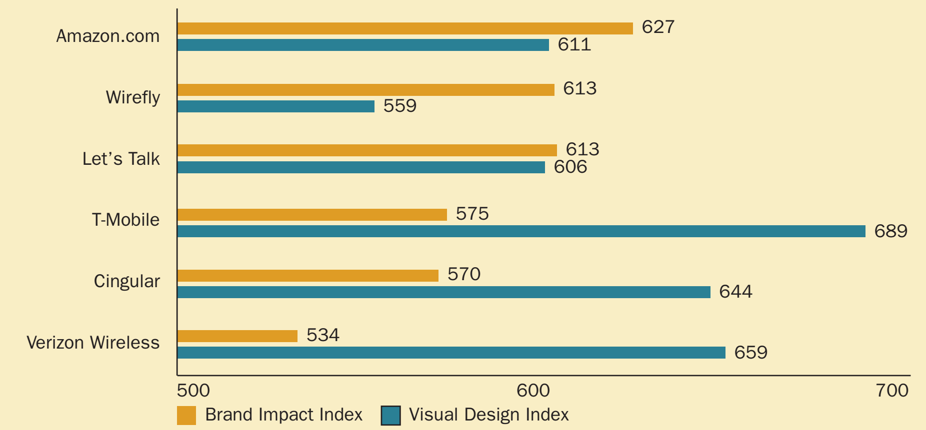
The same five sites finished at the top in the phone shopping process, although in slightly different order. Surveyed consumers pointed to a wide selection of phones, multiple photos, detailed descriptions, and the ability to make side-by-side comparisons as the most important features for the phone shopping process.

T-Mobile was called out by some prospects for several innovative site features. For plan shopping on the home page, a unique "slider" tool shows the total minutes and pricing for various types of plans, and then allows the user to jump immediately to full details for a selected plan. For phone shopping, another T-Mobile tool lets prospects select their most important features, and then delivers a filtered list of phones that satisfy those requirements.

FUNCTIONALITY TRUMPS EYE APPEAL

While teenagers and style-conscious urbanites may consider the cell phone a fashion accessory, visual design has less impact on cell phone site scores and perceptions than it does on more image-sensitive industries, such as retail apparel and automotive. (See Chart C) Sites rated highest by prospects for brand experience and purchase intent tended to cluster in the middle of the ratings for visual design. Tweaks to several sites' visual designs did little to affect other metrics. For example, a 2006 makeover by Verizon earned some improvement in its visual design scores; conversely, Wirefly's redesign had a significant negative impact on its visual scores. But in neither case did the redesign move the needle significantly in customer experience, satisfaction, or likelihood to buy. Usability and ease of comparing phone models and service plans appear to

CHART C: LOOKS AREN'T EVERYTHING



Source: "Customer Experience Rankings: Wireless," July 2006, Keynote Competitive Research.

Visual appeal of wireless sites' home pages does not correlate closely to overall brand impact. Consumers value clear navigation, easy comparisons, and a streamlined purchase process more than visual appeal.

be the primary drivers regardless of the visual appeal of the site.

MAKING THE CONNECTION WITH CELL PHONE PROSPECTS

So many phones, so many plans, so many options. What appears on the surface to be a relatively simple shopping task — pick a carrier, a plan, and a phone — in reality requires a complex, multifaceted decision process. It's a time-consuming and often confusing task to sort through scores of phones and a multiplicity of plan variations — different for each carrier — to arrive at the combination that's right for an individual or family.

It's not surprising that Amazon and the independent resellers are well-received by prospective cell phone customers. On one site, prospects can sort through and compare a host of options at various prices from all the major carriers. As evidence of how prospects welcome such all-in-one, independent sites, consider this: Of more than 2,000 prospects surveyed, more than 70 percent had never heard of Wirefly or Let's Talk. Yet after interactions with these two sites, both were ranked in the top group for both brand perception and conversion impact.

While the major carrier sites face the limitation of offering only their own plans and phones, they enjoy the competitive advantages of big-company credibility and overall market presence. The same site features that are so well-received on the independent sites — namely, the easy ability to compare phones and plans — can be leveraged for each carrier's own product offerings. And innovation creatively applied, as T-Mobile does with its plan slider tool and phone feature filter, can be a positive differentiator that shows prospects the kind of experience they can expect in the long-term relationship they will have with their chosen carrier's site.

With U.S. cell phone market penetration at 70+ percent and approaching saturation, there are few new customers for cellular carriers to attract. Growth in subscriber base will require solidifying existing customer relationships and luring new customers from competing carriers. Revenue growth will depend heavily on sales of enhanced services. In both cases, an effective and satisfying online experience, from initial shopping to ongoing account management and additional purchases, will be central to the success of cellular vendors.

ENDNOTES

[1] Cellular Telecommunications Industry Association estimate, September 2006.
[2] Plunkett Research estimate, 2006.
[3] "Wireless: Still Too Crowded?," Business Week Online, May 1, 2006.
[4] "Suddenly, An Industry Is All Ears; A Saturated Cellphone Market Puts the Focus on Customers," *The New York Times*, March 4, 2006.
[5] Cellular Telecommunications Industry Association estimate, September 2006.
[6] "Customer Experience Rankings: Wireless," Keynote Competitive Research, July 2006.
[7] ibid

WHAT THE CUSTOMERS HAVE TO SAY:

The following quotes are a sampling of verbatim extracts from customer comments after interacting with Web sites of various wireless vendors.

ON SHOPPING:

"The comparison of different plans from different companies is an awesome feature."

"Love the way I can choose the options and cross-compare. Never seen something like it for cell phones. Very easy to use."

"I loved being able to get exactly what I would want in a plan or phone by using the left-side pull-down menu."

"I liked the way the plans were set up in a grid pattern that I could peruse quickly and accurately."

"The multiple views of the phone were very helpful in determining if I like it."

"I liked the side-by-side comparisons of the phones and their features."

ON PURCHASE PROCESS:

"I liked the fact that it shows you the complete charges before you register or provide your credit card."

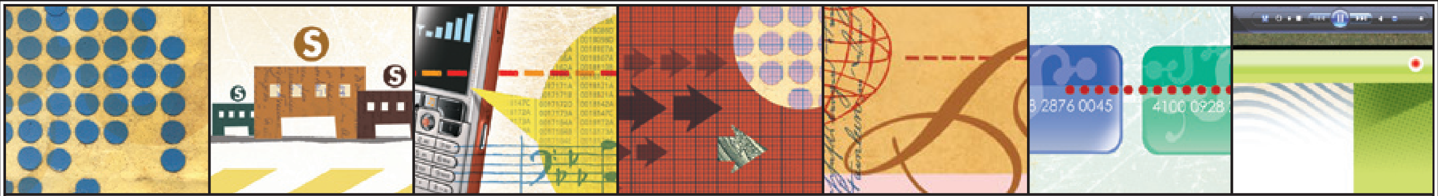
"I loved that checkout was all on one page!"

"Each page was clearly labeled, and the title bar with the steps of the process — highlighting what step you were on — was helpful."

ON COVERAGE MAPS:

"There were coverage map links available on each of the plan pages, so it was easy to locate."

"It gave you other options above the map on seeing roaming coverage and nationwide coverage, etc."



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***Benchmark* wishes to acknowledge the valuable contribution of these industry leaders who are kind enough to share their expertise and insights with our readers.**

Parrish Arturi
Senior Vice President, Web Channel
Fidelity Personal Investments

Parrish Arturi is responsible for channel oversight and management of the customer experience on www.fidelity.com, Fidelity's primary consumer Web destination, as well as management and development of Fidelity's wireless and automated phone channels. Arturi and his team are tasked with delivery and execution against channel sales and service goals, as well as ensuring competitive leadership and differentiation of Fidelity's consumer offerings. Arturi holds a B.A. degree in Economics and an MBA, both from Wake Forest University.

Thierry Curis
Streaming Product Manager
Akamai Technologies

Thierry Curis is responsible for bringing to market new solutions and services that enable businesses to deliver digital media to a wide range of PCs and IP-enabled devices. He has directly contributed to enabling the success of many first-time digital media events, such as the Tour de France and the 2004 Olympics. Curis is a graduate engineer in Computer Science and Telecommunication from the Ecole Nationale Superieure des Telecommunication in Paris.

Paul Graham
Senior Vice President, Retail Brokerage Product Development
Fidelity Personal Investments

Paul Graham is responsible for the strategic direction of Fidelity's retail brokerage business, and oversees all related product development efforts, in addition to Active Trader capabilities through Fidelity's online channel. Graham holds a B.S. in Finance from Long Island University and an MBA from the University of Dallas.

Kay Johansson
Chief Technology Officer
MobiTV

As CTO, Kay Johansson drives the creation, development and deployment of mobile television technologies on mobile devices and personal computers over the broad array of networks. Prior to joining MobiTV in 2006, Johansson served as the CTO of Popwire, a former Ericsson company, where he led development and product strategy.

Klaus Kaasgaard
Vice President of User Experience Research
Yahoo!

Klaus Kaasgaard is responsible for all user experience research activities at Yahoo! He is author of the book, Software Design and Usability, as well as numerous articles and peer-reviewed papers. Kaasgaard holds a Ph.D. in Human-Computer Interaction from Aalborg University in Denmark.

Charles Mauro
President
MauroNewMedia

In 1975 Charles Mauro founded MauroNewMedia, a leading provider of professional usability engineering and high performance user interface design consulting services. Prior to forming MauroNewMedia, Mauro worked personally with product design pioneers Henry Dreyfuss and Raymond Loewy. Mauro is a Certified Human Factors Engineering Professional CHFP/BPCE, and holds a Masters Degree in Ergonomics from New York University.

Darby Williams
Vice President, Marketing
PowerReviews

Darby Williams is a high-tech marketing veteran with more than 20 years marketing and product management experience in the software and Internet industries. Williams led the launch of the multimedia computing platform at Microsoft, drove widespread developer adoption of Windows 95 at its launch, and started the first online meal solutions delivery service. He holds a B.A. from the University of Virginia and an MBA from the University of Chicago.

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Keynote Corporate Headquarters
Keynote Systems, Inc.
777 Mariners Island Blvd.
San Mateo, CA 94404
650-403-2400
www.keynote.com

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