



Keynote's 2007 Trends and Observations of the Mobile and Connected World

Introduction

From the meltdown in the subprime mortgage market, to the rise of hot online social networking sites, to the launch of the iPhone, a handful of developments in 2007 have had impact across industries and across global boundaries. The reverberations of these developments will continue to have broad impact on consumers, companies and industries in the year ahead.

The Internet and mobile devices have become so ubiquitous over the past decade; there is sometimes a tendency to overlook their impact. Yet, again in 2007, the evolution of both technologies continued apace and continued to significantly impact consumer behavior and business across every industry.

The Keynote 2007 Trends & Observations of the Mobile and Connected World report provides an overview of the key issues that shaped the “connected” world. The report examines how technologies, from the Web to the mobile phone, are specifically impacting key vertical industries from financial services to new media.

This report, prepared by [Keynote Competitive Research](#), the industry analysis group of Keynote Systems, includes highlights from the dozens of competitive research studies conducted by Keynote over the course of 2007, as well as the expertise and opinions of Keynote’s expert consultants.

Table of Contents

▪ Keynote Overview	3
▪ Keynote Competitive Research Overview	3
▪ The Web in 2007	4
▪ Top Internet Trends in 2007	5
▪ Mobile Services in 2007	6
▪ Top Mobile Trends in 2007	6
▪ Financial Services in the Connected World	8
○ Best of the Web – Banking	9
○ Best of the Web – Credit Card	11
○ Best of the Web – Brokerage	11
▪ New Media in the Mobile and Connected World	12
○ Best of the Web – News Web Sites	13
○ Best of the Web – Sports Web Sites	14
○ Best of the Web – Mapping Web Sites	15
▪ About Keynote	16

Keynote Overview

Keynote is the global leader in on-demand test & measurement solutions for continuously improving the online experience. For over a decade, Keynote has been providing measurement data and testing capabilities that allow companies to understand and improve their customer's online and mobile experience. Keynote's four key test and measurement businesses are:

- [Mobile Quality](#)
- [Web Performance](#)
- [Customer Experience/UX](#)
- [Broadband which includes Streaming & VoIP](#)

Keynote Competitive Research

The Keynote Trends & Observations of the Mobile and Connected World report draws upon key findings from [Keynote Competitive Research studies](#) that measure customer experience and service levels across a wide range of Web sites and mobile sites and devices.

Overall, the company examined more than 50,000 online consumers as they interacted with 200+ leading Web sites in 2007. In addition, the data published in the studies were garnered from Keynote's 2,400 measurement computers and mobile devices in over 240 locations around the world to test the technical quality (reliability and responsiveness) of hundreds of Web sites over the course of 2007.

Keynote Competitive Research studies have examined the leading companies in the following industries:

Financial Services

- Banking
- Credit Card
- Mortgage
- Brokerage
- Auto Insurance

Media and Search

- Search
- Mapping
- News
- Entertainment
- Sports

Retail

- Consumer Electronics
- Books & Music
- Apparel
- Luxury Auto

Travel

- Airline
- Hotel
- Rental Car
- Cruise

Keynote helps over 2,600 corporate customers improve their online business performance and mobile communications quality.

The Web in 2007

In 2007, more than 1.25 billion people accessed the Internet, and Americans are estimated to now spend more time on the Internet weekly than watching television. The Web has become an essential part of the consumer's life, on a scale unimaginable just a decade ago. The impact has been felt in almost every vertical industry, and the shifts and developments on the Web in 2007 have accelerated and elevated the impact.

In 2007, Keynote studies examined more than 50,000 online consumers as they interacted with 200+ leading sites across 20+ vertical industries. Through year-over-year comparisons of its data and based on the analysis of its consultants, Keynote identified a series of trends on the Web in 2007 that have had, and will continue to have, broad impact on consumers and companies across various industries.

Keynote Experts

Ben Rushlo

Sr. Consulting Manager at Keynote Systems is one of the world's leading Internet performance experts. Ben advises Fortune 500 and Fortune 1000 companies in the Retail, Automotive, and Financial Services industries, helping to transform their global sites into highly performing, highly available Web assets that provide excellent customer experience, every time.

Before joining Keynote, Ben was a Senior Performance and Capacity Planning Engineer at American Express, where he served as a core member of the team that launched American Express on the Web. With more than 10 years of experience in Internet and intranet technologies, Ben has expertise in Internet performance and performance tuning with the major Web technologies (including IIS, Netscape Server, WebSphere, ASP, and JSP) on multiple operating systems. Ben is a frequent speaker at executive summits, industry symposiums in retail and financial services, and test and performance conferences and appeared on CNBC live broadcasts.

Top Internet Trends in 2007

Impact of Social Networking and Community

It is abundantly clear that one of the greater trends in 2007 was the impact of social networking and community sites on the Web specifically, and on business and society in general. YouTube, MySpace and Facebook, among others, rose to new heights in 2007, and the impact was widespread, even reaching the 2008 presidential elections with the YouTube-CNN presidential debates.

Web 2.0 Applications Becoming Mainstream

In 2007, a number of new Web 2.0 technologies have come into the mainstream with Internet giants like Dell and Gap releasing new AJAX-based shopping carts. With these developments, Web sites are moving away from the traditional Web page and towards an online experience more inline with the consumer's desktop experience.

New Technologies Putting a Strain on the Web

As companies implement new technologies, and as Web sites offer a richer experience to consumers, the burden on the technical quality of the consumer's online experience increases. Many companies now assume most consumers are accessing the Web with quality high-speed connections, and many do not properly test the performance of their sites, as result some major brands have experienced technical performance issues with their sites.

Traditional Web Stalwarts Continue to Innovate

The companies that have helped build and shape the Web as we know it continue to innovate, playing a significant role in the Web's evolution. Although relative new comers, such as YouTube or Digg, continue to usher in the latest applications and trends, the titans of the Internet are still innovating and bringing young applications mainstream.

Online Segmentation

A less publicized side effect of the growth and maturation of the Internet, and the burst of social networking online, was the increasing segmentation of online groups and audiences in 2007. The social networking sites have allowed consumers to easily form groups and connections online based on interests and demographics. Additionally, Web leaders, such as Yahoo!, launched a number of new micro-sites to target market segments and increase the stickiness of their sites. For example, Yahoo! has had tremendous success with the launch of OMG, a micro-site targeting teenage girls. Marketers took advantage of this trend, with increased targeting and segmentation in their online advertising, as well as by developing micro-sites of their own to support specific marketing campaigns.

Keynote Experts

Manny Gonzalez, Mobile Technologies

Manny Gonzalez serves as senior director of mobile technologies at Keynote, overseeing the product management, engineering and advanced technical support of Keynote's Mobile Quality Test and Measurement business. He has more than 20 years of experience in developing and delivering software solutions in the high-tech and mobile industries. Gonzalez oversees all facets of mobile test and monitoring technology and is engaged in delivering next generation solutions for Keynote's family of mobile services. Prior to Keynote, Manny served as R&D manager and software architect at Mentor Graphics Corporation, holding positions in engineering, technical marketing and program management, working on alliances and technology integration ventures with Motorola, HP, LSI Logic, VLSI Design (NXP) and a variety of business partners.

Mobile Services in 2007

With the number of consumers with mobile phones and devices in the U.S. exceeding 240 million, or 81% of the population, up from 33% just seven years ago¹, it is clear that consumers are wired to their wireless devices. The mobile services industry counted more than \$135 billion in revenue in 2007, and there is fierce competition to lure an increasingly brand-committed consumer base.

In 2007, Keynote's 2,400 measurement computers and mobile devices in [over 240 locations around the world](#) collected thousands of data points on mobile companies, mobile devices and mobile Web sites. Based on their experience in 2007, Keynote experts identified a series of trends in the Mobile market that had and will continue to have broad impact on consumers and the companies that serve them:

Top Mobile Trends in 2007

Evolution from Mobile Phones to Mobile Devices

Although consumers have been using mobile phones for more than voice communication for years, 2007 saw a significant spike in consumer interest in using mobile devices to access the Web, download music, and upload pictures and for a host of other activities. The launch of Apple's iPhone did much to advance consumer interest and imagination, helping the public to understand how powerful their mobile devices can be.

Dawn of the Mobile Web

In 2007, consumers were seeing more of their favorite Internet-based sites launch Mobile Web Sites, particularly in the banking, travel and social networking markets. This made it much easier to check account status, change an airline reservation and communicate with friends from a mobile device.

The Rising Importance of Performance

2007 was a watershed year in terms of the industry starting to talk about performance. And that's no surprise given the rise in number of mobile devices taking advantage of faster networks. And while there were no major industry announcements about 4G in 2007, there was a step forward in speed driven in part by consumer demand to upload to social networking sites.

The new [Keynote Mobile Index](#) launched in 2007, is the industry's first stab at helping to shed light about mobile performance. The index, a benchmark of top U.S. and European mobile Web sites, measures and ranks sites by their response time, download speed and success rate. The index monitors 10 leading mobile sites hourly from a range of geographic locations and a range of mobile devices, and publishes the results on a weekly basis. The results from the inaugural November edition are provided below. ([Go online](#) to read more about methodology used.)

1 CTIA The Wireless Association

"If 2006 was the year we saw the rise of data services, with consumers buying text and email bundle packages from their providers, then 2007 is the year the Mobile Web dawned, with many of the consumer's favorite Web sites developing Mobile Web sites. Apple's big push around the iPhone really helped consumers see the possibilities of a mobile, connected world,"

- Manny Gonzalez, senior director of mobile technologies at Keynote

Keynote Mobile Index						
(Inaugural Evaluation – November 2007)						
	Response Time		Download Speed		Success Rate	
	Site	Seconds	Site	Bytes (Per Second)	Site	Availability
1	Google	6.6	CNN	2.3k	Facebook	99.2
2	Facebook	6.7	ESPN	1.7k	Google	99.2
3	Charles Schwab	7.1	MSNBC	1.4k	CNN	98.9

Financial Services in the Connected World

Consumers Resilient, as Markets and Banks are Roiled in Subprime Mortgage Meltdown

While 2007 saw mortgage companies, banks and the stock market roiled by the meltdown in the subprime mortgage market, consumers remained resilient. While the effects on consumer spending and confidence remain to be seen, the online consumer continued to grow increasingly comfortable performing financial transactions online, while still seeking assurance in the security of their online banking. The top trends observed in the financial services industry online included:

Acquiring Primary Banking Relationships Online

Banks have traditionally used the online channel to sell credit card offers and high-yield savings accounts—products that don't challenge the primary banking relationship the customer already enjoys with their current bank. However, 2007 saw a number of banks begin aggressively using the Internet to sell checking accounts to new-to-bank prospects. Unlike credit cards or high yield savings accounts, the checking account is the most common foundation of a primary banking relationship. Aggressive selling of checking accounts through the online channel with instant, easy-to-use online account opening marks a new front in the consumer banking acquisition channel: banks are now aiming to steal primary relationships away from competitors without the prospect even walking into a branch. This past year saw a number of banks, led by Washington Mutual and its seven-minute online account opening offer, launch "click to close" programs whereby consumers could open a checking account online and instantly use the account for bill pay and other services.

Mobile Web Banking, Beyond Alerts

By far the most common form of consumer interaction with banks via mobile device is bank alerts and account updates via voice, e-mail or text based messages. The ten largest banks and most large credit card issuers offer some type of mobile alerts, but in 2007 mobile banking saw inroads towards mobile Web banking. Although only a handful of banks offer mobile Web banking today, including four of the top five US banks, as adoption spreads and a competitive advantage arises, Keynote expects to see most major banks offer some form of mobile Web banking by mid-2009

Privacy, Security and Authentication

As online financial services has gone mainstream, Keynote research shows privacy and security issues are on the minds of online users even more in 2007 than in 2006. To address regulatory mandates, mitigate risk and improve consumer perceptions, financial services providers are making visible changes to online authentication, with large banks in particular overhauling online authentication in 2007. These changes include increased adoption by banks and brokers of two-way authentication, where the site authenticates itself to the online user as part of the login process. Further, having learned that mass market consumers do not want to carry around tokens just to log into online account management, banks and brokers are turning consumers' cell phones into tokens, texting authentication codes to

the user for use in logging into online account management or when authorizing high-risk transactions. For instance, Bank of America, one of the first to roll out two-way authentication, has now rolled out SafePass, an opt-in authentication service that sends authentication codes to mobile devices.

Web 2.0 and High-Bandwidth Drive Brand Expansion

With the broad adoption and access to high-bandwidth Internet connections – and broader adoption of Web 2.0 applications – banks and financial services providers increasingly are engineering their Web sites to reflect brand attributes. With Flash, AJAX, and Web 2.0 applications banks are better able to create an online experience reflective of their brand, whether that be by offering live customer support online to communicate a high-level of service – or using Flash to create a rich visual experience.

Best of the Financial Web – Banking 2007

[Keynote Competitive Research](#) produces leading edge competitive industry research that leverages the Keynote's global measurement computer network and commercially available Internet test and measurement products. Keynote Competitive Research regularly evaluates the current state of online customer experience, service levels (responsiveness/reliability) and implementation of best practices for leading Web sites across a variety of financial services industries, including banking, credit card and brokerage. The following firms were the [leaders in the online banking industry](#) in 2007 according to Keynote Competitive Research:

Keynote Competitive Research Banking Leaders 2007*		
Rank	Keynote Scorecards for Financial Services	Keynote Customer Experience Rankings
1	Bank of America	Bank of America
2	Citibank	Wachovia
3	Chase	Washington Mutual

Keynote Competitive Research Banking Leaders 2007* Service Levels		
Rank	Reliability (Indicator of Being Highly Available, Low Downtime)	Responsiveness (Indicator of How Quickly Pages Loaded, Transactions Completed)
1	Bank of America	Washington Mutual
2	Citibank	National City
3	Chase	Bank of America

*Keynote Competitive research conducted two studies of banking industry Web sites

"Keynote offers the only set of competitive intelligence studies that examine banking Web sites from all angles. To effectively acquire customers and stay competitive, banks need to ensure their sites are performing well on not only a technical level, but also in terms of the online customer experience and in terms of incorporating industry best practices. Without detailed metrics into each of these areas a bank's online channel will likely fall behind the competition,"

- Christopher Musto, general manager, financial services consulting for Keynote.

in 2007, one focusing on banking customers and the other on prospective bank customers. The results listed above are from the banking customer study.

Bank of America Ranks #1 in Online Customer Experience

Bank of America was ranked as the #1 site among all online banking sites in the [Keynote Scorecard for Banks](#), performing best, in aggregate, across all 300+ industry best practices for site functionality evaluated in the study. The Citibank site ranked second in the Keynote Scorecard.

Bank of America was also ranked as the #1 site in the [Keynote Customer Experience Rankings for Banking Web Sites](#), with the best overall ranking across the 250+ customer experience and customer satisfaction metrics measured in the study.

Finally, Bank of America also ranked #1 in the [Keynote Service Level Rankings for Banking Web Sites](#), with the industry's best reliability, indicating the site was highly available and experienced little or no downtime. Washington Mutual had the industry's best site responsiveness, an indication of how fast banking sites were in downloading pages and executing transactions.

Keynote Scorecards for Financial Services

The [Keynote Scorecards for Financial Services](#), a bi-annual study, uses a framework of expertly developed criteria to measure the functionality of leading online banking sites against a set of 300+ industry best practices. The Scorecard evaluates sites in a variety of industry-specific tasks and categories, and examines all areas of a site, to help banks discover the strengths of their sites, as well as opportunities for improvement. The Scorecard evaluates bank sites across key general categories such as "Functionality," "Ease of Use," "Privacy & Security" and "Quality & Availability," as well as across specific online banking.

Keynote Customer Experience Rankings

[The Keynote Customer Experience Rankings](#) examines the online experience of more than 2,000 banking customers as they interacted with both the public and the secure online banking areas of leading bank Web sites. The study details how each site performs versus competitors across key business objectives, including customer acquisition, utilizing a rigorous statistical driver analysis that details what comprises success in each of these areas. The study also offers banks specific, actionable steps they can take to improve their online business performance, with a particular focus on improving customer satisfaction, brand affinity and customer acquisition. Keynote also annually conducts a study solely focused on prospective customers interacting with the public areas of banking sites.

The Keynote Customer Experience Rankings provides competitive [rankings of the leading bank Web sites](#) in terms of customer satisfaction, brand preference and customer acquisition success and outlines the key areas of site performance, such as customer support and online bill pay satisfaction, that have the most impact on a Web site's success in these areas. The study captures more than 250+ metrics for each site that are distilled into rankings for dozens of critical categories including online bill pay satisfaction and privacy & security, as well as the overall design and visual appeal of the

site. Further, the study examines why the most successful sites succeed in these areas and offers specific, actionable steps banks can take to improve performance.

The Keynote Service Level Rankings

[The Keynote Service Level Rankings for Banking Web Sites](#) examines the technical performance of leading bank Web sites, including load handling, site responsiveness and reliability. The study uses Keynote’s Transaction Perspective product, the leading subscription-based service for measuring/monitoring Web site performance from multiple geographic locations, to mimic the actions of consumers and collect more than 6,500 data points detailing the online technical performance of each site included in the study.

The study offers banks insight into their technical performance relative to other banks and other financial services industries, and provides detailed data on site performance across seven key measures critical to the operational health of an online banking site. Specifically, the study provides performance data and competitive rankings in site reliability (including site availability and outages) and site responsiveness, including load handling, response time consistency, geographic consistency and responsiveness over both high-speed (DSL) and low-speed connections.

Best of the Financial Web – Credit Cards 2007

Keynote Competitive Research Credit Card Leaders 2007*		
Rank	Keynote Credit Card Scorecards	Keynote Customer Experience Rankings
1	Bank of America	Capital One
2	Chase	HSBC
3	Wells Fargo	Citibank
Rank	Reliability (Indicator of Being Highly Available, Low Downtime)	Responsiveness (Indicator of How Quickly Pages Loaded, Transactions Completed)
1	US Bank	US Bank
2	Citibank	Discover
3	Chase	HSBC

Best of the Financial Web - Brokerage

Keynote Competitive Research Brokerage Scorecards		
Rank	Brokerage (Full-Service)	Brokerage (Discount)
1	Smith Barney	Fidelity
2	Wells Fargo	Charles Schwab
3	UBS	E*Trade

New Media in the Mobile and Connected World

In 2007, consumers were more likely to get their news online than from television or a newspaper; they were more likely to get directions online than from a person on the street; and they increasingly socialized and made personal connections online. The past decade has seen dramatic shifts in the way people get and consume information and entertain themselves thanks to the Web, and 2007 saw continued impact. Keynote has been monitoring the user's online experience and the technical quality of search sites for almost a decade, and in 2007 initiated [Keynote Competitive Research studies on the News, Mapping, Sports and Entertainment](#) industries on the Web.

The top trends observed in the new media, news and search industries online included:

Content Trumps Credibility in Online News

Online consumers are more concerned with the breadth and depth of news that leading news sites provide than they are with the credibility of the news organization. A site's organization and search capabilities also trump the importance of "News credibility." In fact, online consumers have a generally mediocre belief in media credibility, with less than 50% willing to describe leading online news sites as "trustworthy." The top ten leading news sites all register similar ratings in terms of their perceived credibility, clearly indicating that the online consumer approaches media with skepticism.

Community Infiltrates Media

The impact of the growth of social networking sites and peer-to-peer sites had media companies scrambling to enhance the community aspects of their sites. However, consumers were slower to participate in online communities on media and entertainment sites, than they were on the newer social networking sites, such as Facebook and YouTube. This is partially attributable to the fact that the demographics of many social networking sites are skewed towards younger consumers. However, as social networking and peer-to-peer networks expand their demographic base, Keynote expects media, entertainment and sports sites will become a natural expansion ground for online communities. News and entertainment companies are eager to boost their user bases and increase stickiness by building out and promoting these communities, and in 2008 those efforts are very likely to begin paying off. In addition, sites such as Digg and Wikipedia will continue to drive news and information sites to incorporate elements that allow users to help formulate and drive news coverage based on their opinions, such as features indicating the most e-mailed or "clicked" articles.

Traditional Web Stalwarts Continue to Innovate

As stated in the general Web trends for 2007, the companies that have helped build and shape the Web as we know it continue to innovate, maintaining a significant role in the Web's evolution. Although relative new comers, such as YouTube or Digg, continue to usher in the latest applications and trends, the titans of the Internet are the ones bringing young applications mainstream. This applies heavily in the news and entertainment industries, where in 2007 Yahoo!, Google and MSN all invested heavily in

enhancing their news, sports and entertainment presence.

Google and Challengers

Google continued to mature in 2007, and its competitors continued to close the gap. Yahoo!, Ask.com and MSN all saw increased satisfaction with their search results satisfaction, as their results increasingly are on target in fulfilling the consumer's original search intention. The search competitors also drove their results to be more rich and inclusive of video, audio and visual/image results. Ask.com took a bold step in reaching out beyond the Web, and into television, to promote its online search around these innovations. This signaled a burgeoning trend of online properties using mixed or integrated marketing channels to grow their user base or promote innovations.

Best of the Web – News Media 2007

Keynote Competitive Research produces leading edge competitive industry research that leverages the Keynote's global measurement computer network and commercially available Internet test and measurement products. Keynote Competitive Research regularly evaluates the current state of online customer experience and service levels (responsiveness /reliability) for leading Web sites across a variety of new media industries, including online news, sports and entertainment, as well as online mapping and search. The following sites were the [leaders in the new media](#) according to Keynote Competitive Research:

Keynote Competitive Research News Web Site Leaders			
	Customer Experience Rankings	Service Level Rankings Site Reliability (Indicator of Being Highly Available, Low Downtime)	Service Level Rankings Site Responsiveness (Indicator of How Quickly Pages Loaded, Transactions Completed)
1	Yahoo! News	Yahoo! News	CNN
2	MSNBC	Fox	Google
3	CNN	Google	Yahoo! News

Yahoo! News Ranks #1 in Online Customer Experience

Yahoo! News was ranked as the #1 Web site in the Keynote Customer Experience Rankings with the best overall ranking across the 250+ customer experience metrics measured in the study. Yahoo! News was the top ranked site in terms of consumer satisfaction with news content and news search, and in terms of feature satisfaction and news credibility. MSNBC was a top ranked site in terms of news content satisfaction, news search and video news. CNN and Fox News joined Yahoo! News and MSNBC as top ranked sites in terms of video news satisfaction.

In the Keynote Service Level Rankings study, Yahoo! News had the best

reliability of all news Web sites, an indication the site was highly available and experienced little or no downtime. CNN had the industry's best site responsiveness, an indication of how fast sites were in downloading pages and completing searches.

Customer Experience Rankings for News Web Sites

The Keynote Customer Experience Ranking for News Web Sites study examines the online experience of more than 2,000 consumers as they interacted with leading news Web sites. The study details how each site performs versus competitors across key business objectives, including customer satisfaction and customer acquisition, and captures more than 250+ metrics for each site. The study provides competitive rankings in dozens of categories, as well as specific and actionable steps to be taken to improve online performance, customer satisfaction, brand appeal and customer acquisition. The customer experience studies employ Keynote WebEffective, an on-demand software platform for conducting in-depth user experience research which integrates the best aspects of usability, behavior and attitudinal research.

Service Level Rankings for News Web Sites

The Keynote Service Level Rankings study examines the technical performance of leading news Web sites, including site responsiveness and reliability. The study uses Keynote's Transaction Perspective solution, the leading subscription-based service for measuring and monitoring Web site performance. Transaction Perspective mimics the actions of consumers and examines performance from multiple geographic locations, collecting more than 6,500 data points for each site to detail online technical performance. The study offers insight into technical performance relative to competitors, and provides detailed data on site performance across seven key measures critical to the operational health of an online business.

Best of the Web – Sports Web Sites

Keynote Competitive Research Sports Web Site Leaders			
	Customer Experience Rankings	Service Level Rankings Site Reliability (Indicator of Being Highly Available, Low Downtime)	Service Level Rankings Site Responsiveness (Indicator of How Quickly Pages Loaded, Transactions Completed)
1	ESPN	CBS SportsLine	Yahoo! Sports
2	Yahoo! Sports	Yahoo! Sports	Fox Sports
3	Fox Sports	AOL	AOL

ESPN Ranks #1 in Online Customer Experience

ESPN was ranked as the #1 site in the [Keynote Customer Experience Rankings for Online Sports Web Sites](#), with the best overall ranking across the 250+ customer experience metrics measured in the study. Yahoo! Sports followed closely behind ESPN, and lead the competition in the sports community and sports search categories. The study analyzed the experience of fantasy sports participants as compared to the general online consumer population visiting sports sites (non-participants). Keynote found significant differences in attitudes and behaviors of fantasy sports participants vs. non-participants, and found that ESPN performed significantly higher with fantasy participants than with non-participants, while other sports sites did not see as pronounced a difference between the two groups.

In the Keynote Service Level Rankings for Online Sports Web Sites, CBS SportsLine had the industry's best reliability, an indication the site was highly available and experienced little or no downtime. Yahoo! Sports provided the best site responsiveness, an indication of how fast sites were in downloading pages and completing transactions.

Best of the Web – Mapping Web Sites

Keynote Competitive Research Mapping Web Site Leaders			
	Customer Experience Rankings	Service Level Rankings Site Reliability (Indicator of Being Highly Available, Low Downtime)	Service Level Rankings Site Responsiveness (Indicator of How Quickly Pages Loaded, Transactions Completed)
1	MapQuest	Google Maps	Microsoft Maps
2	Google Maps	Yahoo! Maps	Google Maps
3	Yahoo! Maps	Microsoft Maps	Yahoo! Maps

MapQuest Ranks #1 in Online Customer Experience

MapQuest was ranked as the #1 Web site in the Keynote Customer Experience Rankings of mapping Web sites with the best overall ranking across the 250+ customer experience metrics measured in the study. MapQuest was the top ranked site in terms of user satisfaction in accessing a map, saving a map and printing a map.

In the Keynote Service Level Rankings study, Google Maps had the best reliability of all mapping Web sites, an indication the site was highly available and experienced little or no downtime. Microsoft Maps had the industry's best site responsiveness, an indication of how fast sites were in searching for and downloading maps.

About Keynote

[Keynote Systems](#) (NASDAQ "KEYN") is the global leader in on-demand test & measurement solutions for continuously improving the online experience. As an independent and trusted third-party, Keynote provides IT and marketing executives with an unbiased view into their Internet services from around the world. For over a decade, Keynote has been providing measurement data and testing capabilities that allow companies to understand and improve their customer's online and mobile experience. Keynote has four test and measurement businesses: Web performance, mobile quality, streaming & VoIP, and customer experience/UX. In addition, Keynote's industry analysis group called [Keynote Competitive Research](#) publishes proprietary studies measuring customer experience and service levels across a wide range of industries.

Known as The Mobile and Internet Performance Authority™, Keynote has a market-leading infrastructure of 2,400 measurement computers and mobile devices in over 240 locations around the world. Keynote also maintains one of the most representative panels of online users consisting of 160,000 consumers.

Keynote's on-demand, hassle-free infrastructure allows businesses to access services they need, when they need them to pinpoint and fix mobile quality and Internet problems before they impact customers. Keynote helps over 2,600 corporate customers become "the best of the best" by helping them improve online business performance and mobile communications quality. Keynote's customers represent top Internet and mobile companies including American Express, BP, Caterpillar, Dell, Disney, eBay, ESPN Mobile, E*TRADE, Expedia, FedEx, Microsoft, SonyEricsson, Sprint, T-Mobile, Verizon and Vodafone. Keynote Systems, Inc. is headquartered in San Mateo, California and can be reached at www.keynote.com.

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