

Mobile Competitive Monitoring and Analysis

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Network quality is often cited as the top reason in selecting a mobile carrier. Consequently vast resources are allocated to monitoring internal operations. But if that's all that's being done, you're only getting half the picture.

Carriers and infrastructure providers looking to get a comprehensive view of the performance and end-user experience take the additional step of benchmarking against their competitors. This testing helps you understand industry standards and take the actions needed to stay ahead of the curve. After all, maintaining the highest standard in service performance is of paramount importance when it comes to retaining customer loyalty.

Keynote Competitive Research, the industry analysis group of Keynote Systems, Inc., offers benchmarking for the services provided by leading mobile carriers. You'll get unmatched insight into the mobile performance issues and trends of the core data services that matter today—and those that will drive revenue growth in the future.

Overview

Keynote Mobile Competitive Monitoring and Analysis (MCMA) is ideal for customers who need a panoramic view of the mobile landscape and can benefit from knowing the strengths and weaknesses of the competition. MCMA gives you valuable perspective and ongoing performance and reliability data so that you can maintain the service levels you, your customers, and partners expect.

The starting point for competitive monitoring and analysis is precise and accurate data. The Keynote global on-demand test and measurement network, the largest in the world, collects the data that goes into every MCMA report. Already used by many of the largest carriers in the world, Keynote is a trusted independent third party. MCMA subscribers also get the expertise of Keynote's consulting team in presenting rich, detailed data alongside clear and concise summary reporting. Keynote consultants help you interpret the data and can provide recommendations on how to achieve service-level standards.

How It Works

You can subscribe to any of the MCMA packages:

- **Intra-Carrier SMS** – on-going performance data and analysis for SMS messages initiated and terminated on mobile devices of the same carrier

- **Inter-Carrier SMS** – continued performance data and analysis for SMS messages initiated by a mobile device on one mobile carrier and terminated on a different carrier network
- **Intra-Carrier MMS** - on-going performance data and analysis for MMS messages initiated and terminated on mobile devices of the same carrier
- **Inter-Carrier MMS** - continued performance data and analysis for MMS messages initiated by a mobile device on one carrier and terminated on a different carrier network
- **Data Throughput** – insight into the fluctuations of uplink and downlink throughput on the 3G networks, seen over aircards
- **WAP** – performance data and analysis of top WAP sites
- **Streaming** – in-depth perspective into performance of streaming services on mobile devices across different carrier networks

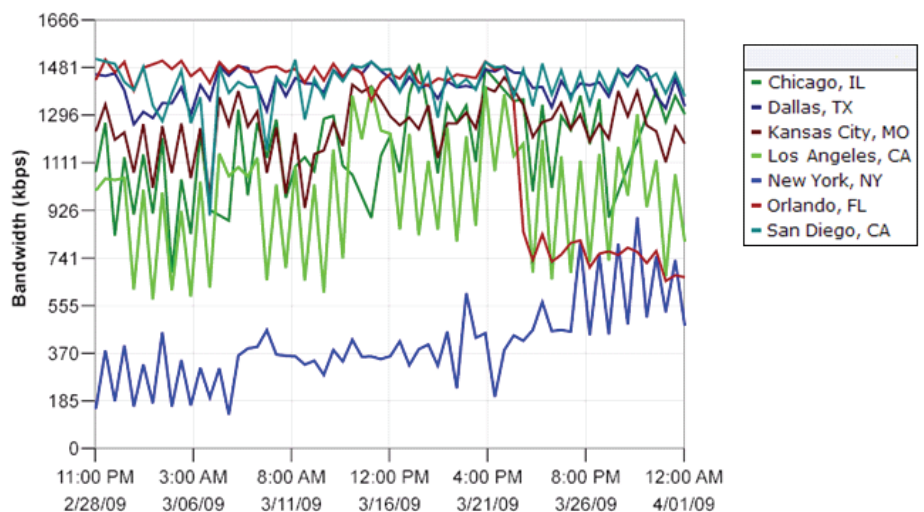
Keynote collects data on messaging, WAP, streaming, and data throughput using real devices, proprietary software running wireless modems, and aircards, all connected to the live mobile networks of AT&T, Verizon, Sprint, and T-Mobile. Keynote MCMA is a robust service, collecting 3G, EDGE, and 1xRTT measurement data.

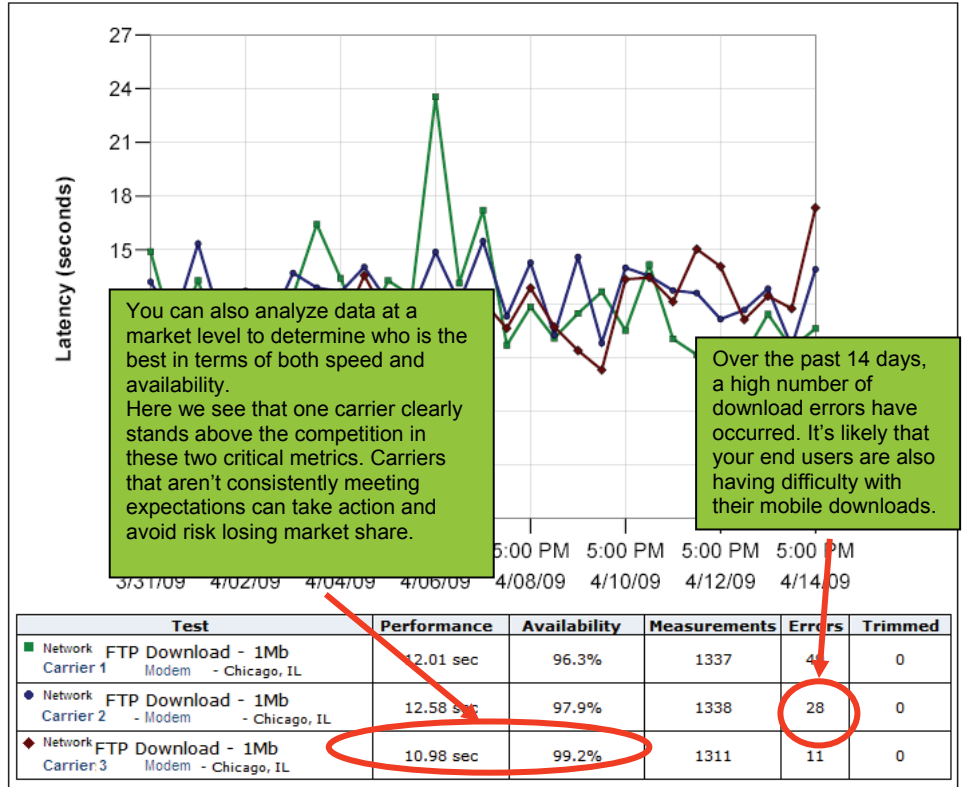
Keynote MCMA gives you geographical diversity by gathering measurements in multiple markets: San Diego, Chicago, Dallas, New York, Los Angeles, Orlando, and Seattle.

Once you choose the package and locations you want, Keynote consultants guide you through customized monthly reporting that trends KPIs and, analyses data variability and consistency results. The trend analysis and troubleshooting capabilities of the MCMA subscription allow you to resolve issue and reduce their customer impact. Finally, Keynote MCMA gives real-time access to the selected data with around-the-clock viewing in the user-friendly MyKeynote portal.

Throughput Speed Across Key Markets.

12 Hour Averages for 744 Hours (3/01/09 12:00 AM - 4/01/09 12:00 AM)





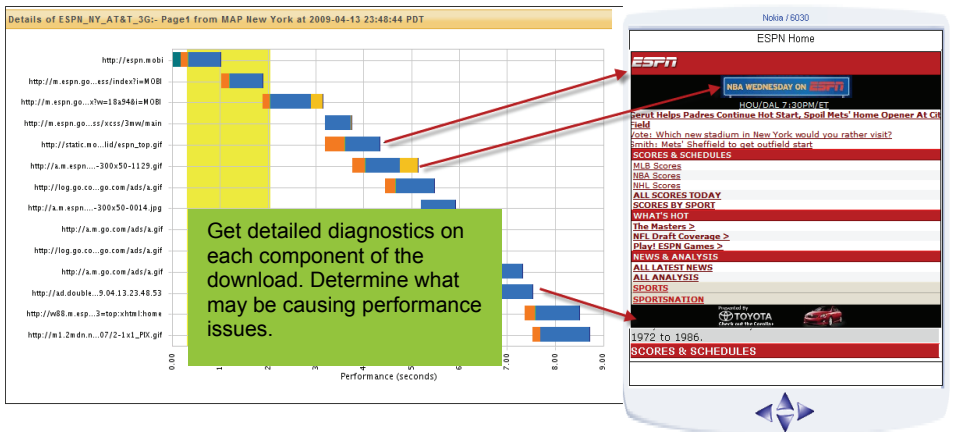
You can also analyze data at a market level to determine who is the best in terms of both speed and availability. Here we see that one carrier clearly stands above the competition in these two critical metrics. Carriers that aren't consistently meeting expectations can take action and avoid risk losing market share.

Over the past 14 days, a high number of download errors have occurred. It's likely that your end users are also having difficulty with their mobile downloads.

As end users are increasingly using carrier aircards to surf the Web from laptops, user performance expectations for speed and reliability are beginning to match the expectations of wired experience. Carriers now clash just as ISPs have done for over a decade. The challenge in wireless is even greater because the barriers to switching are much lower than in the fixed-line market. With the deployment of 3G and 4G networks, carriers are paying ever-increasing attention to upload and download speeds on their networks.

Keynote MCMA customers can grow market share by demonstrating fast and reliable data downloads at either a national or regional level. More important, you can reduce data subscriber churn by satisfying the current base. MCMA gives insight into the network throughput fluctuations associated with different file sizes. Additional details include HTTP component trends as well as RF signal strength.

WAP Performance and Availability



Inter-Carrier SMS Overall Time

Overall Average Time		Destination			
		Carrier 1	Carrier 2	Carrier 3	Carrier 4
Origination	Carrier 1	8.66	13.52	12.32	20.16
	Carrier 2	8.74	13.72	8.51	19.36
	Carrier 3	9.96	12.99	9.24	22.22
	Carrier 4	12.34	23.65	16.77	20.52
Intra-Market		Overall Average Time	Overall Average Time	Overall Average Time	Overall Average Time
		Carrier 4 is experiencing long delays in SMS delivery possibly frustrating many end users and causing SLA issues.	Green ≤ 10 Yellow > 10 - ≤ 20 Red ≥ 20	Green ≤ 10 Yellow > 10 - ≤ 20 Red ≥ 20	Green ≤ 10 Yellow > 10 - ≤ 20 Red ≥ 20

Inter-Carrier SMS Overall Success Rate

Overall Success Rate		Destination			
		Carrier 1	Carrier 2	Carrier 3	Carrier 4
Origination	Carrier 1	99.89%	95.93%	99.77%	98.73%
	Carrier 2	99.05%	95.49%	98.80%	97.93%
	Carrier 3	99.70%	95.80%	99.72%	98.28%
	Carrier 4	99.89%	95.80%	99.66%	99.19%
Intra-Market, 180 second timeout		Overall Success Rate	Overall Success Rate	Overall Success Rate	Overall Success Rate
		Green ≥ 99.5% Yellow > 99% - < 99.5% Red ≤ 99%	Green > 99.5% Yellow > 99% - < 99.5% Red ≤ 99%	Green ≥ 99.5% Yellow > 99% - < 99.5% Red ≤ 99%	Green ≥ 99.5% Yellow > 99% - < 99.5% Red ≤ 99%

Carrier 2 is losing intracarrier and intercarrier SMS at an alarming rate, potentially leading to lost revenue and more calls to customer care.

SMS is the world’s largest data application, providing rich revenue streams to carrier, aggregators, and infrastructure providers alike. Maintaining high performance levels is the key to both protecting and growing your customer base.

MCMA gives you actionable performance data from an independent third party that will enable you to establish and protect your position in the market.

When poor performance is seen in a particular market, carriers, infrastructure providers, and aggregator partners can work together to make improvements.

Companies can also evaluate how well their competitors’ partner relationships are functioning. Intracarrier SMS subscriptions will help identify when SLAs are being met.

Most important of all, Keynote MCMA gives the perspective of the end user. When messages are slow or aren't being delivered, immediate revenue is lost *and* the customer is frustrated—and the result is lower data ARPU. Customer frustration also drives unwanted complaints to call centers. After enough frustration, low-frequency users will cancel SMS plans and high-frequency users may leave for a competitor. By establishing best-in-class service, MCMA subscribers can minimize defections and gain the customers who leaving the competition.

Get the Competitive Advantage

Keynote's Mobile Competitive Monitoring and Analysis gives a unique perspective on the performance standards of the mobile industry. Comprehensive data is matched with the insights of Keynote's consulting team, allowing mobile carriers, aggregators, infrastructure providers, and enablers to maintain the service levels their end users expect.

About Keynote

Keynote Systems (NASDAQ "KEYN") is the global test and measurement company for mobile communications and online business performance. 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, we have been providing measurement data and testing capabilities that allow companies to understand and improve their customer's online and mobile experience.

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