

## Mobile Application Perspective

### Monitor mobile Web content and SMS services for quality—enriching the overall subscriber experience

Keynote Mobile Application Perspective empowers you to ensure mobile Web content and SMS service quality across 1,600 mobile device profiles, on any live network.

#### Mobile Application Perspective Highlights:

**Monitor** mobile Web content and SMS services for performance and availability

**Check for content compatibility** across 1,600 different device profiles

**Analyze** content performance activity from a unified portal

**Conduct** competitive benchmarking across multiple networks

**Leverage** the largest hosted test and measurement network

The demand for enhanced mobile applications, content and services is growing. Mobile Application Perspective gives you a powerful mobile monitoring solution to keep up. As a real-time on-demand solution, Mobile Application Perspective allows you to ensure the on-going performance of your dynamic content and mobile Web services in live environments.

transactions from the handset you choose across a live network. You can use the worldwide carrier profile to direct transactions across your mobile network of choice. Within minutes you can report on component details for any transaction, using any handset model, around the world.

#### How it Works

Mobile Application Perspective uses virtual handsets deployed across Keynote's Global Test & Measurement Network to monitor mobile Web content and SMS services on operator networks around the world.

Mobile Application Perspective relies on a comprehensive handset library and a worldwide carrier profile database, containing handset model characteristics and carrier profile details respectively.

The first step in monitoring content and mobile Web based services is to pick a desired handset model from over 1,600 available in the library. Mobile Application Perspective will then simulate



**Quickly learn how Customer A's homepage would have been rendered using a Nokia N95 handset model. Most importantly, view the timing information for each step (i.e., DNS lookup, SYN, Get Response, Redirection, Connect SSL, SSL Handshake, render time) making up the transaction. Optimize your content based on this rich information.**

With Mobile Application Perspective you can monitor more mobile content by choosing multiple handset models, or carrier networks. This way you can cover more devices and networks all from your desktop.

The results gathered are a very accurate approximation of real handset content and WAP service rendition.

### Smart Mobile Web Monitoring

With Mobile Application Perspective you can access mobile Web content over the internet or over live networks and share results with coworkers without having to leave your office.

Behind the scenes, Mobile Application Perspective uses an advanced scripting engine to implement sophisticated test cases. These test cases are then executed on a regular basis delivering instant results through one unified Web portal.

Results are displayed in the intuitive MyKeynote portal allowing QA staff to validate SMS and WAP based services, check for compatibility problems or rendering issues.

### Multi-Step Browsing

Your script can navigate many steps on a mobile Web site or other content and test each link, page rendition or response times.

Navigation through a mobile Web site is important when you want to capture the experience of your end users.

While navigating, Mobile Application Perspective provides you with valuable information such as the source code, protocol details, page preview and detailed timing information.

### Mobile Web Content Detail

Mobile Application Perspective gives you extremely powerful features for analyzing mobile Web content –

- Track Site redirections
- Capture Headers sent and received
- Check spellings on mobile Web sites
- Catch broken links and missing images
- Check content-device compatibility.

### Efficient End-User Monitoring

Mobile Application Perspective verifies the availability of your service and measures its performance constantly, alerting you when service level thresholds have been violated.

Measurements are taken over a Keynote shared network consisting of virtual mobile handsets in the form of wireless modems placed in cities all over the world. By monitoring and benchmarking performance and availability of mobile services down to each step of a transaction, you can ensure the quality of your subscribers' mobile experience.

Use Mobile Application Perspective's information on real-time measurements of transactions for:

- root cause analysis,
- benchmarking against your competitors and
- setting alerts when service is poor

Use MAP to monitor WAP content and SMS applications.

For WAP content, MAP can be used to monitor redirection time, time to download base page and time to download each individual

### Monitoring Key Features

Take Active Measurements through an intuitive Web portal interface

**Trend** the performance and availability of mobile services, applications, devices and infrastructure

**Benchmark** your performance against your competitors

**Perform** diagnostics, view error logs and run trace routes or Pings from live mobile devices

**Receive** customized real-time alerts

**Integrate** with your mobile operations center

**Automatically generate** saved customized reports

**Feed** mobile performance and availability data to your own software analysis tools

### Supported Services

- Mobile Web Sites
- WAP based applications
- SMS

component on the mobile Web page.

For SMS monitoring, MAP can be used to track time to send and receive SMS messages. MAP can be used to measure the round-trip delivery time of SMS messages for common short codes. This helps common short code providers to get a better understanding of their end user experience and enforce SLA's with their SMS aggregators.

### Root cause analysis

When mobile service is down or performance is rapidly degrading, how can you determine if it's the handset, the carrier network or your content portal that is causing the problem?

Mobile Application Perspective can quickly show you through an intuitive portal if your service across every location is down; if the problem is local to one city; or if

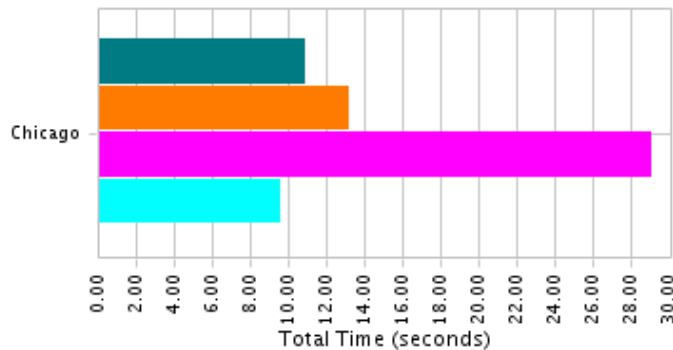
the problem is resulting from a specific transaction. You can even drill further into the components that make up that transaction to determine exactly which step caused the glitch.

### Benchmark against Your Competitors

With Mobile Application Perspective you can compare your service quality against your closest competitors. Measure your performance across any available carrier network.

Mobile Application Perspective uses an on-line portal that provides a comprehensive scorecard ranking how your mobile services compare with each other.

Mobile Application Perspective gives you the ammunition to conduct outage analysis and mobile competitive intelligence.



| URL                                       | Included Data Points | Trimmed Data Points |
|---|----------------------|---------------------|
| AOL_CHI_AT&T_3G -Total Time (seconds)     | 115                  | 0                   |
| AOL_CHI_SPRINT_3G -Total Time (seconds)   | 113                  | 0                   |
| AOL_CHI_T-MOBILE_2G -Total Time (seconds) | 110                  | 0                   |
| AOL_CHI_VERIZON_3G -Total Time (seconds)  | 98                   | 0                   |

*Quickly learn which carrier had the best and worst performance and availability over a given hour, day, week or month.*

### Mobile Application Perspective Can Help You Answer:

How do mobile carriers, mobile websites and SMS applications differ in performance and availability across multiple markets?

How do you know if all content is accessible to users?

How long do SMS messages take to deliver?

Which images exceed the maximum display width of popular mobile devices?

Which pages cause performance bottlenecks?

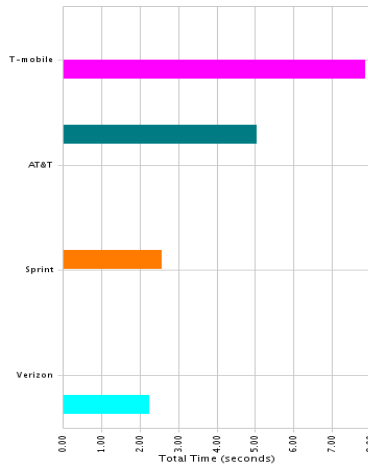
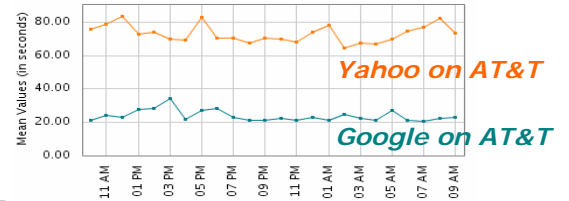
What effect does the wireless network have on availability?

### 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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*Compare your service to your closest competitor on the same network in the last hour, day, week or month.*



| CNN_CHI_Verizon_3G - Performance |               |
|----------------------------------|---------------|
| Name                             | Value         |
| Carrier                          | Verizon       |
| Total Time (seconds)             | 2.249 seconds |
| Availability                     | 96.55%        |

*Stop guessing and determine whether the problem is carrier or service related and which cities are affected.*

### Alerts

You can set up active alerts based on thresholds or outages to proactively monitor network and service problems before they escalate into major outages. Alerts can be sent via email, SMS or SNMP traps to integrate with your systems management tools.

### Reporting

Access all your data through one portal. With Mobile Application Perspective, you can easily customize and save report templates. The generated graphs offer drilldown capability into transaction performance and availability up to the hour or over a longer period of time for trending.

### Mobile Application Perspective is Your Competitive Advantage

Mobile Application Perspective lets you monitor mobile Web content and SMS applications with confidence. Whether you are a large carrier, a content provider or SMS provider, Keynote Mobile Application Perspective is a complete solution for monitoring mobile Web content and SMS based services across any handset on any network, anywhere in the world.

