

## REI

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### Impact Highlights:

- REI did not want customers to experience any performance degradation on their site.
- Keynote provided the insight REI needed into their customers’ quality of experience—from the outside in.

### REI.com: Site Performance= eBusiness Success=Keynote

For Recreational Equipment Incorporated (REI), a national retailer of quality outdoor gear and apparel, high Web site performance is vital to its e-business success. REI.com, which celebrated its six-year anniversary as an e-business Web site in September of 2002, has used Keynote services for over half that time and attributes to Keynote the consistently blazing site speed it maintains. “Site performance and stability are critical for successful e-business on REI.com,” said Rod Ketchum, systems architect, Recreational Equipment Incorporated. “Keynote’s services are strategically critical in helping us to meet this goal.”

“Customers have high expectations. They don’t want to have to wait on the Internet, and they shouldn’t have to,” continues Ketchum. “Site reliability is essential in promoting and delivering goodwill to customers.” To that end, REI.com sets performance goals for the site: one second for the home page, three seconds on other pages; and 100 percent uptime. As further evidence of the mission-critical nature of site performance and Keynote’s services to REI.com, Keynote’s results, which indicate how well the site’s performance

objectives are met, serve as the basis of the bonuses paid to REI.com’s IS managers. According to Ketchum, “Keynote is a daily necessity for us.”

“REI’s mission is to provide high quality goods and exceptional service. Our Web presence is an important part of our business and it is critical that our Web site perform at optimal levels. REI sets the standard in Web performance and Keynote helps us provide our visitors with a superior customer experience which is a priority,” said Ketchum. “As a longtime supporter and customer of Keynote, we believe that the diagnostic and operational enhancements Keynote continues to add to its benchmarking services are a quantum leap in our ability to isolate problems and address them quickly.”

### The Challenge: Gain Control and Ensure Customer Satisfaction

REI self-hosts its Web site, and operates over a DS3 line brought into its building, with built-in redundancy throughout the system to help ensure 100 percent uptime. A spike in traffic to the site always follows email campaigns that are distributed to about half a million subscribers. It is imperative that online customers not notice any

performance degradation. “If your site isn’t up, you’re not doing business,” observes Ketchum.

“Therefore, it is strategically necessary for us to know what our customers are experiencing online, 24 hours a day all over the U.S. Once our site content leaves the building and the ISP, it’s out of our hands. Internet performance still is not perfect, and if you don’t know how long your site is taking to load, or how long a transaction is taking, you have a real bottom line problem.”

Ketchum continues, “Monitoring a complete purchase is hard to do, especially outside of REI. Keynote gives us the insight we need into our customers’ experience—from the outside in. Keynote helps to ensure the satisfaction of our customers, upon which our business depends.”

### **The Solution: Site Management, from Page Design to Network-Level Performance**

REI.com’s quality assurance (QA), production and creative teams all use Keynote’s Web Test & Measurement products such as Transaction Perspective® to measure how long it takes to complete a transaction—REI’s only way to know if a transaction is failing, according to Ketchum.

“Site management is difficult when a large group of people is adding content, but Keynote helps us tremendously with this,” said Ketchum. QA uses Keynote to verify that new pages and content changes meet the performance baselines they’ve set before being posted. Once content goes live, production continues to monitor site page, among other things being able to monitor how speed is affected by using particular HTML or JavaScript code. “Keynote’s instant diagnostic capabilities let us design

good web pages and help us make sure that they load quickly before they go live,” said Ketchum.

Ketchum is notified by alarms, via either email or beeper (depending on failure level) when performance declines to the thresholds he sets, and says it is very handy to be able to set different alarming levels. For example, page level alerts are sent directly to the creative department so that page design problems can be immediately fixed. Using Keynote’s easy to use recorder, REI.com has records and monitors the performance of 24 five-page transactions an hour placing orders on the site. Any problems with those incoming measurements indicate a problem in the system, whether on the network, in the servers or in page design. Transaction Perspective has also helped them identify and solve database problems affecting performance.

Keynote’s easy to use yet rich interface and the level of detail it provides is key to the widespread use of its services throughout REI.com’s IS department. Ketchum likes in particular the ability to see both performance and availability together in Transaction Perspective; the ability to easily see page error details; and the ability to see where slowdowns are located, measuring any type of code. Said Ketchum, “Just run the cursor down the page and the image pops up.”

### **The Results: A Lightning Fast Site, Without Sacrifice**

According to Ketchum, “Using Keynote, we’ve learned how we can create a fast site. That does not mean we have to sacrifice quality, but we may need to do things differently to optimize the site.” For example, Ketchum says, “We’ve learned that we can still have intensive graphics that are fast.” REI.com discovered that JavaScript

## 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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ran very slowly on their own boxes, but when they ran those images on Akamai they could still maintain their performance goals. "Keynote data has shown us how valuable Akamai is to us in being able to keep and still serve up images very fast," said Ketchum.

Illustrating how important Keynote's services are to REI.com, Ketchum points to a recent upgrade during which Transaction Perspective indicated improvements that needed to be made. REI.com's development partner in the upgrade, at first leery about entering into a service level agreement assuring the performance of the site, is now, according to Ketchum, touting the sub-second response time they were able to achieve through continual measurement and subsequent improvement based on Keynote's results. Keynote diagnostics indicated that new pages were too fat and slow. By trimming down the size of those pages, REI.com and its partner were able to make them twice as fast to access. According to Ketchum, "Keynote can pinpoint exactly where a problem is on a page, whether it's a problematic image, code or something else."

At the network level, Keynote's geographically distributed measurements indicated to REI.com that its ISP was using slower routing in some locations (probably to help contain costs), and have given REI.com quantitative verification to discuss improvements with the ISP.

REI.com finds it handy to use Keynote's instant measurements to measure and compare its performance to that of its competitors. Keynote's indexes serve as a further benchmark for comparison, particularly during the holidays, when REI.com compares its performance against the top performing holiday e-commerce sites that Keynote measures. REI.com equates site performance and stability with successful e-business, and directly attributes a great deal of the recognition it has achieved over the past six years as a very successful e-business to its use of Keynote services. Keynote services are used throughout the IS department at REI.com, from QA and production to creative, to design and verify the performance of new content and monitor the existing site. And, as further testament to the critical nature of Keynote's services, Keynote results serve as the basis of internal bonuses, as well as service-level verification for REI.com's relationships with ISPs and other providers.

