# Home run

MLB.com delivers immersive baseball experiences to millions of fans using the Adobe® Flash® Platform

With more than 2,500 games played each season, Major League Baseball (MLB) fans worldwide rely extensively on the Internet for play-by-play action, scores, original content, MLB trade rumors and analysis, fantasy news, and real-time statistics. Through a subscription to MLB.TV, baseball enthusiasts gain access to HD-quality live video where available, live audio broadcasts, DVR functionality, picture-in-picture technology, in-game highlights, multi-game viewing options, and more—all delivered to their personal computers. To deliver America's favorite pastime over the Internet in an interactive, engaging environment, MLB.com—the official website of Major League Baseball—relies on the Adobe Flash Platform.
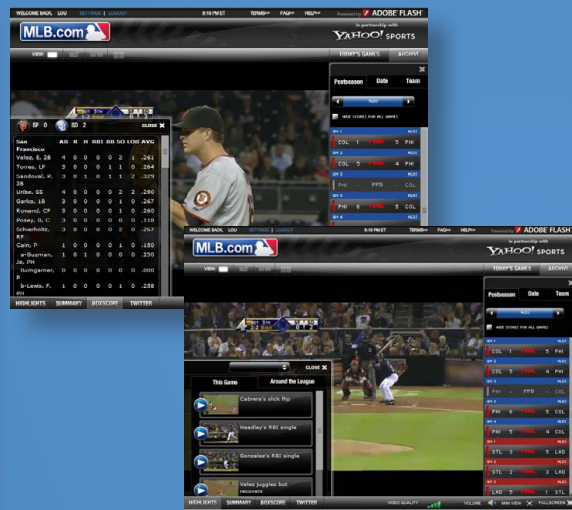
MLB.com manages the largest subscription service for live events in the world via its MLB.TV service, streaming over 10,000 live events annually, including every available Major League Spring Training, regular season, and post-season game, as well as thousands of events for business partners. To deliver America's favorite pastime over the Internet in an interactive, engaging environment, MLB.com relies on the Adobe Flash Platform.

"When we launched our new service based on Adobe Flash Media Server and player technologies in 2009, we knew we would be providing an exceptionally positive experience for fans."

Joe Choti, chief technology officer, MLB.com

"Our goal is to enable a fully immersive baseball environment with stats, news, and a live pitch tracker that depicts pitch trajectory and location, pitch type, and speed," says Joe Choti, chief technology officer for MLB.com. "The Adobe Flash Platform helps provide fans with a deep dive into the game of baseball that complements the live game experience—all through an instant-on, seamless, and high-quality experience that just works, regardless of our fans' platforms or Internet connections."

Millions of passionate fans
To stay ahead of the game, MLB.com powers Adobe technologies to provide live streaming content to action-hungry fans. Stringers attend every Major League game, log statistics, and send back pitch counts and other data; all in real time. The strategy has paid off.

MLB.com, which has built one of the world's largest and most dedicated Internet audiences, streamed live video of a full-length baseball game on the Internet for the first time on

August 26, 2002, with 30,000 fans watching the Texas Rangers and New York Yankees from Yankee Stadium. Today, MLB.com streams live every available Major League Spring Training, regular season, and post-season game; more than 2,500 annually via its out-of-market subscription product, MLB.TV. In 2009, MLB.com also introduced in-market live streaming online for the first time ever through several agreements in the broadcast territories of the New York Yankees and San Diego Padres. Based on Flash technology, the media player enabling these capabilities was built during the 2008-09 off-season and introduced through a first-ever public beta for the 2009 World Baseball Classic and Spring Training.

Since its full-season debut on Opening Day 2003, MLB.TV has seen more than 1.5 million total subscribers; a major increase for the sports franchise. Fans have accessed more than 1.8 billion streams of live and on-demand multimedia offerings, representing nearly 200 million hours of participation. MLB.com manages the largest subscription service for live events in the world and streams over 10,000 live events annually, including Major League Baseball games and thousands of events for various business partners.

A rough inning
The inroads to delivering live baseball over the Internet, however, were not always smooth. When MLB.com launched its streaming service, it was a relatively new experience for its

To deliver all of its live and on-demand video offerings, MLB.com selected the Adobe Flash Platform, including Adobe Flash Media Server for streaming video delivery. A custom player based on the ubiquitous Adobe Flash Player was developed using Adobe Flex Builder software and the Flex framework. MLB.com's Adobe solution enables the site to reach the largest possible Internet audience on virtually all major platforms and browsers, and provides advanced features such as multi-game viewing and DVR functionality.

customers. With hundreds of thousands of users attempting to access live video from a wide variety of personal computers with different operating systems and Internet connectivity speeds, MLB.com needed to find a player and Internet video streaming technology that a great majority of fans—especially Mac users—had ready access to and would find easy to use.

Hitting it out of the park

With the goal of providing a smooth, seamless customer experience and introducing engaging new features quickly and easily, MLB.com selected the Adobe Flash Platform to deliver all of its live and on-demand video offerings beginning in 2009. MLB.com created and delivered a custom player based on the ubiquitous Adobe Flash Player—already installed on more than 98% of Internet-connected desktops—to enable MLB.com to reach the largest possible Internet audience on virtually all major platforms and browsers.

For playback, MLB.com works with Akamai, a Content Delivery Network (CDN), which uses Adobe Flash Media Server as the streaming engine driving video delivery. The software provides dynamic, adjustable bit rate streaming—a quality of service monitoring feature—to automatically manage the flow of multiple bit-rate video streams for both live and pre-recorded content delivered through the custom player. It also provides high-end features such as DVR functionality.

"We needed a media player and a delivery platform that would cater to all of our fans, regardless of their computer systems and browsers," says Choti. "We chose the Flash Platform because of its ubiquitous reach and trouble-free operation. When we launched our new service based on Adobe Flash Media Server and player technologies in 2009, we knew we would be providing an exceptionally positive experience for fans."

New functionality in almost no time

To create its custom streaming video player, MLB.com used Adobe Flex® Builder™ software and the Flex framework. According to Choti, Adobe's development tools make it fast and easy to add new features that fans appreciate.

Viewers' favorite features include multi-game viewing, which enables fans to watch up to four games at once or listen to one game while they are watching several others. They can use picture-in-picture technology to watch one game on the main screen and another in a smaller screen. Or they can tap into both home and away video feeds to get different commentary about the game.

DVR functionality lets viewers pause live feeds and replay them to re-experience exciting game moments such as home runs, or stolen bases. Subscribers can also use an integrated fantasy player tracker to see how their fantasy baseball team is performing. They can also view highlights of those players from other games with real-time video alerts.

MLB Advanced Media, L.P.
New York, NY
www.mlb.com
www.mlb.tv

Challenge
- Provide an immersive online video experience for baseball fans
- Scale services and ensure trouble-free operation across platforms and devices
- Roll out exciting new services quickly and with minimal disruption
- Remove technical barriers to improve the viewer experience

Solution
- Use the Adobe Flash Platform for development and delivery of online video and interactive content
- Create innovative new media players based on Adobe Flash Player and Adobe AIR®

Benefits
- Provided exciting functionality such as multi-game viewing, picture-in-picture, highlights, and fantasy tracker
- Scaled to reach millions of subscribers worldwide, across platforms and devices
- Provided instant-on, seamless experience
- Delivered innovative new services and media players with speed and ease
- Virtually eliminated service issues, improving the viewer experience and reducing costs

Toolkit
- Adobe Flash Platform. Components used include:
  - Adobe AIR
  - Adobe Flash Media Server
  - Adobe Flex
  - Adobe Flex Builder
  - Custom player based on Adobe Flash Player

MLB.com has one of the world's largest and most dedicated Internet audiences, providing baseball fans with not only thousands of live and on-demand multimedia offerings powered by the Adobe Flash Platform, but also MLB ticket information; official team merchandise; real-time scores, statistics, and standings; news and analysis; fantasy baseball games and information; and more.

"OnBase gives us another tool for putting baseball at fans' fingertips. By using Flex and AIR and working closely with Adobe, we delivered another rich avenue for interaction, and in a very short development time frame."

Joe Choti, chief technology officer, MLB.com

"Adobe provides a powerful platform that lets us quickly add new features by leveraging reusable components and developing widgets," says Choti. "The Adobe Flash Platform has made it a lot easier and faster to deliver the functionality that our fans are hungry for."

In addition to the browser-based player, MLB.com offers MLB.com OnBase, an Adobe AIR desktop application that lets users track their favorite teams and players outside the browser. OnBase is integrated with Twitter so that friends, peers, and adversaries can stay up-to-date on the latest baseball buzz with news delivered from MLB.com, as well as tweets from fellow fans, right to their computer desktops. With OnBase, subscribers can instantly know when exciting events are taking place, or when there is high activity around a player, team, or topic.

"OnBase gives us another tool for putting baseball at fans' fingertips," says Choti. "By using Flex and AIR and working closely with Adobe, we delivered another rich avenue for interaction, and in a very short development time frame."

Ahead of the game

According to Choti, MLB.com now has a solid, scalable platform based on Adobe solutions for delivering ever higher quality video and more functionality to millions of fans. "With Adobe, we've found a solution that helps us deliver interactive media experiences on a huge worldwide scale with exceptional quality," says Choti. "Plus, we're now able to reach all of our fans regardless of their computer platforms and provide them with reliable, instant-on service. We are genuinely excited about what we have been able to build and deliver using the Adobe Flash Platform. It has put us further out on the leading edge."