

## Digital Rapids Clears Hurdles Behind Unprecedented Summer Games Streaming Experiences

Digital Rapids encoding and streaming solutions were key enablers of the unprecedented live Internet coverage of the Beijing Olympics. Internet audiences in the United States, China and many other countries enjoyed live online streaming of the Olympics powered by Digital Rapids systems. Delivering reliable, high-quality web video experiences at this scale created new challenges beyond typical streaming scenarios.



In the past, live Internet streaming of major events typically started with the transmission — via mechanism such as satellite — of a single main feed from the event locale back to the content distributor's operations center, where that single feed would be encoded, streamed and distributed. The content of the feed — such as switching between concurrent events and storylines — was controlled by the producer at the source. With the Beijing Olympics, however, broadcasters including NBC delivered multiple simultaneous events to their online audiences, with viewers choosing which events to watch.

Over 2200 hours of video were streamed live at NBCOlympics.com using Digital Rapids' DRC-Stream encoding and streaming systems. Dozens of simultaneous live event feeds were encoded in Beijing and streamed to the U.S. for distribution to web audiences. By doing so, NBC Universal put the control in the hands of the viewer, letting users watch multiple events concurrently while interactively switching between streams through a rich media experience enabled by Microsoft Silverlight technology.

Bringing this large number of streams to audiences at high quality all started with an array of Digital Rapids' DRC-Stream systems deployed at the International Broadcast Center in Beijing, which encoded dozens of concurrent live video feeds into web-friendly streams in the VC-1 compression format. Each source was encoded in three combinations of resolution and bit-rate, tripling the amount of encoding to be performed. The high volume of streams to encode in a limited number of systems, combined with the varying visual nature of the content and constrained bit-rates for broad web accessibility, created numerous encoding challenges that the DRC-Stream systems overcame.



Digital Rapids' DRC-Stream solutions combine powerful hardware with the flexible and robust Stream software, delivering high-quality, multi-format media encoding and streaming for professional applications such as high-end Internet TV and IPTV.

The combined quality, quantity, and user experiences of online Beijing Olympics coverage far exceeded anything that had preceded this event, and will raise consumers' expectations of future online live event coverage. Digital Rapids is proud to have been part of this success.



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