

## **W&W Communications Powers Broadcast Sports, Inc.'s On-Board Wireless Camera Systems For First Ever Daytona 500 Live HD Broadcast**

*Broadcast quality HD video, low bit rates and low delay delivered by the WW20000BA H.264 encoder from W&W Communications provided live coverage from within Daytona 500 racecars*

**Santa Clara, California, February 28, 2007** – W&W Communications, Inc., the leader in H.264 HD codecs, today announced that its WW20000BA H.264 HD encoder was successfully used by Broadcast Sports, Inc. inside their on-board wireless HD cameras for transmission of live video feeds from racecars in this month's Daytona 500 race. The race made history as the first ever Daytona 500 race broadcasted in HD.

Broadcast Sports, Inc., a wholly owned subsidiary of L-3 Communications/WESCAM, delivered the compact, wireless HD broadcast camera systems that were mounted in the cockpits of several cars in the race. A COFDM microwave transmission link provided non line-of-sight transmission of the AV bit stream to production and satellite uplink units. The WW20000BA video encoder was used in these camera systems to compress the video in HD broadcast quality at bit rates low enough and with very low latency, to make live coverage in HD over wireless links possible from cameras within the racecars.

“The successful broadcast in HD of this month's Daytona 500 race was a major milestone for the live broadcast industry. Without the WW20000BA H.264 HD encoder from W&W Communications and their commitment in supporting us, we would not have been able to achieve this milestone. This first success is opening the door for BSI to bring viewers world wide live sports coverage in HD,” said Adam Toner, Engineering Manager at Broadcast Sports, Inc.

The H.264 standard produces superior results at lower bit rates compared to the older MPEG-2 and MPEG-4 video compression standards. However, the significantly higher computational complexity of H.264 poses a major challenge in terms of power and footprint. BSI found the solution to this dilemma in the WW20000BA encoder from W&W Communications, Inc, which runs at 110MHz only and comes in a single chip implementation. The WW20000BA encoder compresses 1080i/p HD video at 2x lower bit rates and 15% better PSNR than MPEG-2 HD encoders.

“The combination of our video encoder expertise for low delay applications, combined with BSI's HD camera and microwave transmission expertise made it possible to achieve this milestone. W&W Communications is proud to be partners with Broadcast Sports, Inc. and to supply the company with industry's best H.264 HD broadcast quality encoders,” said Kishan Jainandunsing, Vice President Marketing at W&W Communications.

The WW20K H.264 codec chipset from W&W Communications consists of the WW20000BA encoder and the WW200001BA decoder. Encode-decode tandem delay is less than 35ms or about 1 frame at 30 frames/second with performance very close to the H.264 Joint Model. The WW20000BA encoder integrates an advanced context-adaptive noise reduction filter. This not only

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reduces noise in the source video, but also improves the encoder's compression efficiency significantly depending on the video content. Accurate constant bit rate control guarantees video quality versus available channel bandwidth over broadband wireless transmission links. Software upgradeability of the chipset makes it easy to apply field upgrades. For more information about the WW20K H.264 HD codec chipset, please visit [www.wocom.com/products/](http://www.wocom.com/products/).

**About W&W Communications, Inc.**

W&W Communications develops video compression software and hardware solutions for video-enabled consumer, professional, enterprise and infrastructure platforms. Its innovative product line includes highly optimized, low-delay, power-efficient, high-definition H.264/MPEG-4 AVC encoders and decoders, as well as multi-format, multi-channel transcoders. The company is headquartered in Santa Clara, CA with offices in Beijing, China and Madrid, Spain. For more information visit [www.wocom.com](http://www.wocom.com).

**About Broadcast Sports, Inc.**

Broadcast Sports, Inc., a wholly-owned subsidiary of L-3 Communications/WESCAM, is the North American market leader in providing microwave transmission and custom remote controlled miniature camera systems to the broadcast industry. We have been providing incredible point-of-view coverage of live sporting events for over 20 years. Our systems are constantly redesigned and updated as newer technology is developed in-house or becomes available. Since its inception in 1983, BSI has prided itself on providing turnkey solutions. Whether it is onboard camera coverage of an event or a host of wireless cameras and communication solutions, BSI has in-house engineering and production departments that will work with you to develop camera and/or transmission systems to meet your needs.

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