



CASE STUDY

Snell & Wilcox Technologies Support Live Broadcast Coverage of the 2006 FIFA World Cup

"We provided front-line support on the ground in Germany...to guarantee these systems operated without a hitch," said Joe Zaller, vice president of marketing at Snell & Wilcox.

Kahuna™ multiformat switcher, converters, and infrastructure gear helps broadcasters deliver 64 matches around the globe

The Customer

Global broadcasters with plans to telecast what is the most watched single sporting event on earth, with a cumulative television audience numbering about 30 billion. Included were leading media companies, including major U.K. and German broadcasters, and Televisa, one of the largest Spanish language networks.

The Challenge

To simultaneously broadcast 64 matches of the 2006 FIFA World Cup in both standard and high-definition formats to a global audience from multiple venues across Germany.

The Snell & Wilcox Solution

Kahuna, the world's first and only production switcher to enable simultaneous standard (SD) and high-definition (HD) operations on the same control surface and in the same mainframe. Kahuna enables the user to integrate any SD video including live cameras, graphics or archives into HD productions, seamlessly, without the need for upconversion.

It also allows HD material to be incorporated into HD productions without the need for downconversion.

For live sports and music events, Kahuna meets the requirement for SD and HD outputs of the same program material. Kahuna makes it easy and cost effective to output simultaneous SD and HD versions of any program feed. Operators can use captions, graphics, hand-held shots, and archives without having to worry about the compatibility of formats or standards. No other switcher now available in the world can do this without outboard equipment.

For the industry's finest outboard standards conversion, the Alchemist Ph.C™ standards converter (12-bit, 4:4:4 and 'transparent') is the only conversion system capable of handling extensive frame rate changes. It offers both analog composite and digital video I/Os, accepting and outputting SDI with embedded audio and composite analog in, NTSC, PAL, NTSCI, PAL-N, PAL-M, and SECAM formats.

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► The Alchemist produces high-quality, noise free, standard-definition masters that flawlessly upconvert to HD.

Snell & Wilcox's IQ Modular™ system meets broadcasters general purpose infrastructure requirements for features, flexibility, reliability and built-in futureproof "intelligence." IQ modules are ideal "bridges" to interconnect "islands" of broadcast technology no matter whether analog, digital, high-definition or the most advanced file-based IT systems.

IQ modules handle analog and digital audio and video distribution, analog-to-digital and digital-to-analog conversion, video decoding and encoding, frame synchronization, audio conversion, subframe remapping, digital proc amp control, gamut legalization, and standards conversion for international program exchange.

The Result

Backed by a dedicated support team from Snell & Wilcox, FIFA World Cup broadcasters used ten Kahuna SD/HD multiformat production switchers, along with Alchemist Ph.C standards converters and a variety of Snell & Wilcox distribution, processing, monitoring, and control solutions to mix HD feeds of the game with other HD and SD sources for worldwide delivery (PAL and NTSC) in HD, SD, and analog formats.

Continuous technical support throughout the tournament was complemented by the availability of service spares at Snell & Wilcox's German offices in Wiesbaden/Frankfurt and also in Munich. The BBC used Kahuna switchers at facilities in Munich and Berlin to produce simultaneous SD and HD coverage of World Cup events.

A 4-M/E (mix/effects banks) Kahuna was located in Berlin and a 2-M/E unit in Munich. This allowed the BBC production team and switcher operators to choose from a wide variety of sources - SD and HD cameras, VTRs, graphics systems, etc. - regardless of their format.

For Spanish-language broadcaster Televisa, the Kahuna's unique ability to integrate SD and HD sources seamlessly into productions without the need for external up- or down-converters enabled the use of existing SD equipment and newer HD technology to deliver high-quality broadcasts to viewers across Mexico on the country's first two HD channels.

With its Ph.C phase correlation motion estimation technology, the Snell & Wilcox Alchemist™ Ph.C™ allowed broadcasters to produce near-transparent conversion between frame rates, a particularly important capability for a prestigious, high-value event like the FIFA World Cup.

Although noise would not normally be considered an issue with modern cameras, it can be a problem when shooting areas in bright sunlight and shade. The Alchemist Ph.C is immune to noise and changes in lighting levels, giving broadcasters a reliable tool for delivering crisp, clear pictures.

"By providing exceptional levels of support during the install phase, we were able to ensure that issues did not arise during the actual tournament. Then, during the five weeks of World Cup play, we provided front-line support on the ground in Germany, as well as 24-hour phone and e-mail support, to guarantee these systems operated without a hitch," said Joe Zaller, vice president of marketing at Snell & Wilcox.



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info@snellwilcox.com

Snell & Wilcox Inc. 3519 Pacific Ave, Burbank, CA 91505 Tel: +1 818 556 2616 Fax: +1 818 556 2626
Snell & Wilcox Ltd. Southleigh Park House, Eastleigh Road, Havant, Hampshire PO9 2PE, UK Tel: +44 (0)23 9248 9000 Fax:+44 (0) 23 9245 1411
Snell & Wilcox (Hong Kong) Ltd. Room 603, Tai Tung Building, No.8 Fleming Road, Wanchai, Hong Kong Tel: +852 2356 1660

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