## **BBG SPORTS "HEATS UP" CRICKET AND TENNIS WITH BLUEFISH444**

Based in Melbourne Australia, BBG Sports is a small innovative company that specializes in professional IT solutions for the Sports Broadcasting industry. With 22 years experience in the industry, BBG Sports has been involved in a range of events and sports such as Wimbledon, Australian Open Tennis and US Open Tennis. For the past 10 years BBG Sports has primarily worked in Cricket with a variety of broadcasters, including the Nine Network of Australia and BSkyB in the UK.

The challenge has always been to capture as much information about a sporting contest in realtime and find the relevant "pieces of gold" in that information as quickly as possible. BBG Sports rationale is that better information will enhance the entertainment.

BBG Sports developed the Hot Spot camera system, which has been used extensively in cricket coverage by broadcasters.. Hot Spot, based on military technology and customized for sport, uses infrared camera technology to identify contact between two objects, either bat-on-ball for cricket or ball-on-ground for tennis. The cameras, operating at between 92 and 115 frames per second, remotely sense and measure the miniscule amount of heat generated by the contact of ball on pad, ball on bat or ball on ground so enabling an exact decision in a historically inexact environment. Dynamic infrared red camera technology is changing the way viewers are watching and analysing elite cricket and it is gaining markedly wider acceptance than predictive technologies which are also in play.

Warren Brennan, developer of Hot Spot, comments, "The greatest thing about the technology is that it's real and people believe it." Cricket's most decorated umpire, Simon Taufel, has said about Hot Spot, "I'm a big fan of not using technology unless it is 100 per cent accurate 100 per cent of the time and the only technology I have seen do that is Hot Spot."

BBG Sports has incorporated a variety of Bluefish444 video cards within its Hot Spot system, upgrading as Bluefish444 released new cards with more powerful features. Having reviewed a variety of cards on the market, BBG Sports ultimately chose Bluefish444 because it needed a solution that had multiple input and output formats such as RGB, ARGB, YUV, BGR, RGBA; on-board keying as standard; frame or field mode; and on-board scaling. Bluefish444 met all these requirements and more.

Utilizing Bluefish444's Dual Link Pro SD, Fury HD, and Epoch HD in a single system enables six simultaneous captures from cameras around the ground. And Bluefish444's Jetstream high quality, real time video scaling up, down and cross conversion from live feeds is of particular benefit within the Hot Spot system since speed and accuracy is of the essence.

Warren Brennan states, "We've had a superb relationship with Bluefish444 both in terms of product capabilities and support. Having the same SDK for all the cards has been great, as has been the on-board scaling with up and down converting. Bluefish444 listens to us, and many recommendations I make end up in future releases. We intend to add 3D capabilities to our technology as this is the way the industry is moving and Bluefish444 adding 3D to its cards makes it easier for us to transition quickly".

