



CASE STUDY AMERICA'S CUP

SIS LIVE provides stunning coverage for the America's Cup Event Authority

Throughout 2011 SIS LIVE has worked to deliver High Definition agile cameras and digital RF microwave links for the 34th America's Cup. The multi-million pound contract sees SIS LIVE working with the America's Cup Event Authority (ACEA) for three years, covering two America's Cup World Series, and including 12 regattas around the globe; the Louis Vuitton Cup, the America's Cup Challengers Series held July 13 – September 1, 2013 in San

Francisco; and the America's Cup Match to be held September 7 – 22, 2013 in San Francisco. Gary Lovejoy, head of media production, ACEA, says: "We are transforming the television coverage of the 34th America's Cup to make it more comprehensive, more dynamic and more engaging for our viewing audience. We want to enable viewers to feel like they are on the boats - feeling the power of the wind, seeing the

split-second decisions being made, seeing these athletes in action - so on-board cameras are a key part of our strategy."

The opening race of the regatta series began on the 6th August 2011 in the port city of Cascais, Portugal, a location world-renowned for its magnificent sailing conditions. The week-long competition featured the AC45 wing-sailed catamaran in its first-ever competition. In taxing conditions SIS LIVE delivered a resoundingly successful service, utilising 36 newly developed, agile robotic cameras and 7 control units across the 7 live and 3 backup yachts.

16 dedicated SIS LIVE engineers multiplexed two vision circuits from each yacht, plus one from each of the three helicopters, one from each of the two TV catamarans, one from the Mark boat and one from the Committee boat to provide 21 simultaneous HD RF links in all. All vision circuits had full camera data control systems which were developed in-house to aid with





the capture of images from water and airborne sources. Combined with two radio cameras on the shore SIS LIVE were able to produce exciting coverage of the event and intimate footage of the crews in action.

David Meynell, managing director, SIS LIVE, says: "After months of planning, design and product development, it is exciting to see our cutting edge technology in action. The SIS LIVE team has shown great creativity

and invention and delivered a faultless service to the America's Cup Event Authority. SIS LIVE is unique in its ability to offer a complete solution including the design, build and delivery of the highest specification HD agile cameras and RF microwave links. We also have the technical and operational personnel to operate the cameras in race conditions."

As well as providing the cameras, SIS LIVE handled receive signals from the helicopters and chase

boats and, for the first time ever, connected the cameras by the use of IP. By rigging the ariel and power amp at the top of the mast on each boat SIS LIVE were able to employ a land based diversity receive system. This method provided a faultless system with no break-up of pictures whatsoever in the ten days of the regatta.

Paul McNeil, head of the onsite special cameras team explains, "the second regatta in Plymouth UK served up a whole new set of variables, namely the English weather. The conditions could not have been more different from the moderate seas of Portugal. During the week-long regatta four of the yachts capsized at various times, which made for some of the most exciting live TV coverage of a yachting event ever. All the yachts when righted carried on with fully functioning systems, proving just how robust our systems designs were. One yacht "poled in" live on air - this is where the bow of the yacht goes underwater, and, as one of the agile cameras is portioned at the bow, this also went for a swim. The director stayed with the shot as it submerged to at least a metre and then returned to the surface. Coupled with replays from every angle this made for great TV."



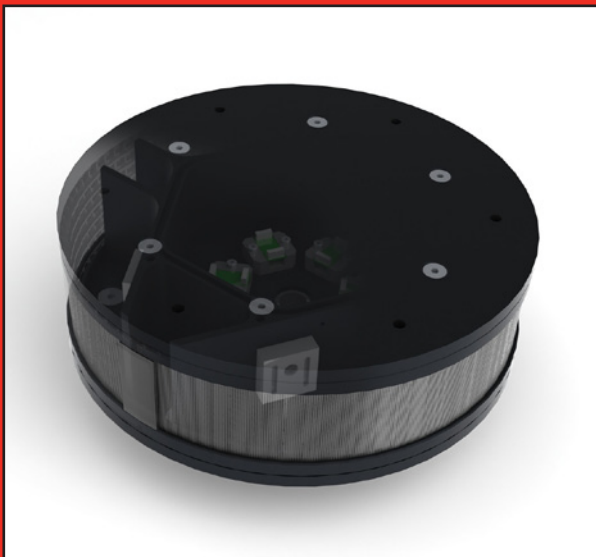
The third regatta of 2011 took place in San Diego USA, and for this event SIS LIVE had to work in the 3ghz band for all the waterborne systems. This was simply because there was not enough spectrum available in the 2ghz band for this event. Although licensed channels had been booked there was a large amount of radar interference detected in the area, potentially related to the presence of a nearby US Naval base. Despite discussions with senior ranking

naval officers including the fleet admiral no cause was uncovered, which meant that a workaround solution had to be found at short notice. The SIS LIVE Comms specialists made intelligent use of the available bandwidth by filtering the helicopter frequencies, moving the live line helicopter to a quieter section of the spectrum, and using remote switching to switch yacht signals on and off as needed. The result was a flawless transmission, proving

once again the versatility and agility of the SIS LIVE designed RF systems.

Paul McNeil, head of the onsite special cameras team says, "It was a tremendous undertaking to develop and deliver these market-leading systems and solutions for such a prestigious event. We were proud of the results and amazing feedback from the customer and general public, and are looking forward to the 2012 season."

SIS LIVE'S CUSTOM BUILT SURROUND MIC



SIS LIVE have designed and built in-house a unique rugged waterproof surround microphone designed to mount underneath an HD Pod Camera so that it is almost invisible. Currently 5.0 as specified by America's Cup, this can be easily modified to 5.1. The circular casing is milled from solid aluminium and contains 5 waterproof omni shock mounted capsules along with 5 preamps. The windproofing has been custom built and features an easily removable 'headband Windjammer'. As it is 48V Phantom Powered, and is delivered as 5 discrete audios, it is easy to use with any sound desk or recorder. Its size means it is easy to mount almost anywhere. Five additional audios were also provided for Crew Radio Mics and 3 Audios for Spot FX Mics on the Yachts.

TECH SPECS:

- Bandwidth: 40Hz-20kHz
- 16 Mono Audios/8 Stereo Audios
- Mic/Line Level (0/12/20dB)
- Analogue Gain (30dB to -12dB)
- HP Filter (4/120/240Hz)
- Notch Filter
- 3-Band Tone Control (100Hz/1kHz/10kHz)
- Phantom Power available
- All above controllable by IP

