

AV

MAGAZINE

Survey: AV training in crisis 15

AV100: Trends for 2014 31

Co-op HQ: Sustainable success 45

AV Award winner: Behind the tech at JCB 61

Control systems: Who's selling what? 73

SPECIAL FEATURE: Collaboration 87

F1 champions world-class AV

PAGE 67





Left: screen set-up in hospitality area
Above & below: screens showing race progress in public areas



Supporting F1's winning formula

» AV makes F1. To really appreciate the F1 experience you've got to see, smell and almost taste the atmosphere at the track, but everywhere you look, and almost every interaction you have with the sport, as a spectator, guest or team professional, you're using or benefiting from AV in one form or another.

Screen, computing, wireless and satellite technologies are used extensively throughout the circuits, paddock hospitality areas and garages with fully integrated Cat 6 infrastructures, data ports and goodness knows what else linked to the teams' own networked set-ups.

Modular complexes used by the teams as their working spaces or for guest/client hospitality are constructed and transported to each of the Grand Prix venues by trailer. Once on site they're interconnected to create offices, meeting rooms, and open plan areas all with access to integrated AV systems.

Each team's paddock complex can feature around 40+ screens capable of

Formula One inspires with its mix of cutting-edge technology and high drama. *Clive Couldwell* discovers the role AV plays at Red Bull Racing.



showing a range of sources which include local circuit camera feeds and satellite channels, DVD players and digital signage.

But it's outside on the track where you'll get your first taste of AV.

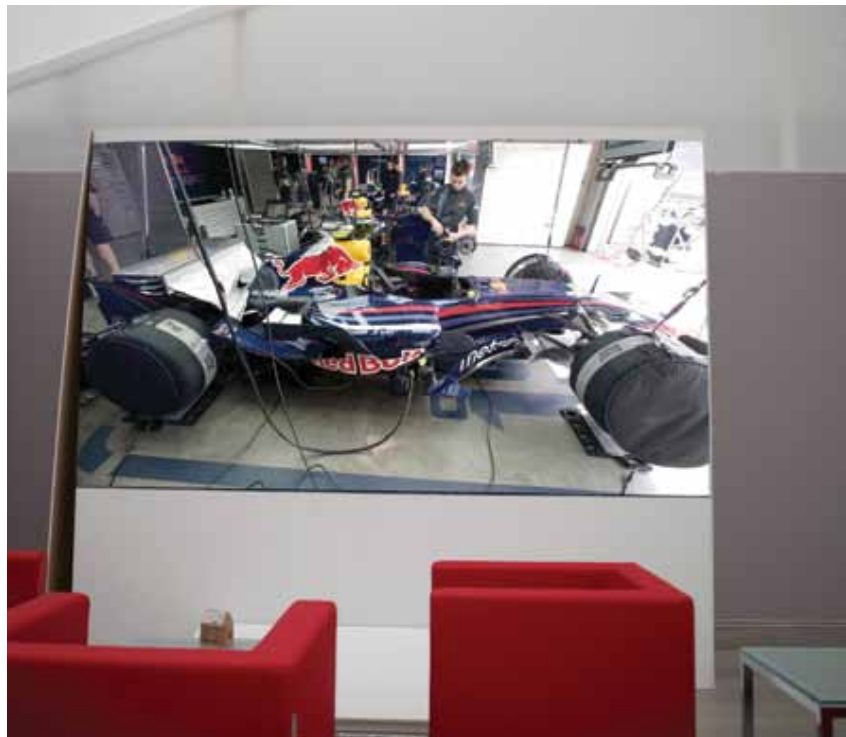
Mediatec supplies outdoor screens to a range of high profile events at the Silverstone racing circuit throughout the season. Across all the events providing the screens and then placing them at key points around the circuit has progressed from being a nice-to-have to a must-have facility.

"Large screens enhance the paying spectators' experience by affording them the opportunity to watch the action live from the circuit, and be part of the whole event. They also enjoy the benefit of keeping up with the detail of a specific race from areas of the track that are out of view," says Mediatec project manager, Mark Gent.

The screens enhance the spectators' experience and offer a medium through which a full, live and professionally produced TV programme can be »

TECHNOLOGY AV IN FORMULA ONE

INFRASTRUCTURES SUPPORT SCREEN, WIRELESS & SATELLITE



Screen in team lounge

screened along with messages such as race updates, interviews and advertising broadcast straight to an involved and captive audience.

By far the largest of the projects Mediatec works on at Silverstone racing circuit is, perhaps not surprisingly, the British Grand Prix, the jewel in the crown of the events staged by Silverstone throughout the annual UK motor racing season.

The project itself incorporates a range of screens across the circuit ranging from 15sqm up to a full 88sqm. These are comprised of six modular screens; three flown above the main pit lane for the audience in the grandstands directly opposite, two on either side of the track on and around the old pits building and a single modular screen used for the main stage with music and entertainment during the evenings once the main event has finished.

The rest of the screens - 18 in total - are mobile units placed strategically around the circuit at points that allow the paying audience to benefit from the content provided.

This screen content takes the form of an onsite generated TV programme - Silverstone TV - which when broadcast along with its sister Silverstone Radio offers the onsite audience a full day's live television programme created to include and complement the days' live racing.

"But it also offers the viewer an additional dimension to the Formula One

experience with live interviews, behind the scenes information and a whole range of other content fully relevant and related to the live action happening from the circuit," says Gent.

Content is a mixture of the host broadcaster's feed (cameras situated around the track) and VT showing sponsors' ads. It's distributed to all screens from a central point inside the main race circuit via cable and wireless links.

A range of other technologies deployed around the tracks include Camera Corps' Q-Ball cameras used by broadcasters worldwide, and by the Red Bull Racing production team itself to generate high-quality video coverage of sports events. Each Q-Ball incorporates a 10:1 zoom lens which a remote operator uses for wide angle and close-up shots while retaining full live-action control of pan and tilt.

But it's in the guts of team operations where AV shows its value. Exterity for example has enjoyed a long relationship with F1. "Teams wanted to integrate all their telemetry data - weather, track map, GPS, everything - all on to one screen. Working with Exterity we came up with a solution to use IPTV as a window. Each engineer could tailor make their own window on a PC screen. This was important because they needed more and more room on screen for information so flexibility with sizing up on screen was crucial," says Paul Jones, probably F1's most

Digital A/V solutions that work for you.



MEET OUR WINNING LINE-UP:

HDMI Plus Extender
Part# 500401

HDMI/LAN Extender
Part# 500453

HDMI Over Coax Extender
Part# 500465

HDMI Plus Wall Plate Extender
Part# 500401-WP-US

HDMI/RS232 Extender
Part# 500454

Multimedia 16 x 16 Matrix Switch
Part# 500470

HDMI Mono Extender
Part# 500451

HDMI/RS232 PoE Extender
Part# 500454-PoE

HDMI over IP Extender
Part# 500752



videoease@muxlab.com
www.muxlab.com

©2013 MuxLab Inc. All rights reserved.



IPTV in action



Mediatec's large spectator screens



Eyeing up the Red Bull garage

experienced AV engineer who's been running his own company servicing the needs of Ferrari, McLaren, Red Bull, Force India and Williams for over 10 years with pitwall, garage, racetruck and motorhome AV, satellite communications and IPTV integration.

"Three to four years ago Mercedes developed some software when they first bought Exterity. It's running on their pitwall currently as a one-click solution that integrates all their IPTV. Icons sit at the top of the screen. Their TV runs on a separate screen and they have options for quad split - one large and three small - all different ways of viewing the video, with the engineer clicking on whichever icon he wants," adds Jones.

Other teams use Exterity's software to view video or use proprietary IPTV software, so a timing screen sits in one window with the host feed in another, plus telemetry data screens that are relevant to a particular engineer.

"Red Bull is working with us on a system where the telemetry data can be viewed in sync with the video as one whole picture," says Exterity CEO, Colin Farquhar.

As part of the sport's desire to cut costs so enabling the smaller teams to compete on a level footing with their larger rivals, in theory at least, the number of team engineers attending races has been much reduced in recent years.

However, as is so often with a sport where teams learn how to get around

the regulations, many of the GP outfits have created war rooms back at the factory where the engineers who were at the circuit are now sat in 'operations' using IP technology to transmit video directly from the pitwall and the garage for analysis.

Having worked on Force India and Williams' ops environments, Jones has just finished integrating IPTV into Red Bull's headquarters at Milton Keynes.

"They have all the F1 channels streaming into their ops area. Sometimes they see more useful analyses on Sky than they'd receive themselves via their own system, so they record every second of every channel and if there's anything that the engineers or the drivers need to look at, the guys in the ops room crop it into a different format and email it over to the track," he says.

"They're mainly analysing the video second by second so if there's something an engineer sees on another car, or if he spots a problem, there's an extra set of eyes to Hoover it up."

Ops engineers also manage two-way communications, wearing headsets as they would do on the pitwall, so they can talk to a driver or an engineer as if they were sat in the back of the garage.

"So instead of your engineer sitting in the back of the garage looking at telemetry data, he can be sat back at home doing the same job remotely and you haven't had to pay for hotels and flights. Makes sense really," adds Jones.

SQUARE1
PRODUCTS
established 1991

**"...those who learned
to collaborate..."**



...have prevailed."

- Charles Darwin

Collaboration and Convergence Solutions

**Contact us to discover our tailored
approach for your end-user projects**

UK +44(0)1925 530 156

Europe +33(5)56 211 619

enquiries@square1products.com

twitter.com/Square1Products

TECHNOLOGY AV IN FORMULA ONE

INFRASTRUCTURES SUPPORT SCREEN, WIRELESS & SATELLITE

www.avinteractive.com

BUSINESS AND F1

Companies, especially those selling technology, also like Formula One because of the link with technology and pioneering excellence. The teams are working on the edge of design and materials performance, so they're looking for new technologies all the time. Businesses get involved with Formula One because they also want to demonstrate that they are big players and desire exposure for their brands globally.

Let's face it, there are few other sports which deliver this kind of branding so many times a year, attracting the kinds of audiences they do, and delivering a consistent message to over 200 countries and millions of viewers who are potential buyers of their products.

Exploring markets, continually innovating and striving for excellence AV and F1 is therefore a natural match.

Infiniti Red Bull Racing has dominated the Formula One World Constructor's Championships for the last four years, still has the car to beat in spite of next season's radical design changes and a red-hot property in the form of current World Champion, Sebastian Vettel.

Innovation, precision engineering, a passion for excellence, and a determination to be the best – Red Bull Racing has epitomised these qualities. So too has Sennheiser which has been at the forefront of high quality sound for over 65 years

Throughout the season, the companies worked together on a number of projects, the first of which was creating a special



World champ Sebastian Vettel's Monaco GP press conference

Infiniti Red Bull Racing edition of Sennheiser's Momentum headphones featuring the colours and logo of the F1 team.

While Red Bull Racing took winning performance to the track, Sennheiser took premium sound backstage as the team's first ever Official Audio Supplier. Sennheiser's audio equipment was used by team principal, Christian Horner during his team debriefs and its wireless 2000 microphone series were used for Paddock Club driver interviews.

The new relationship between the two organisations was launched amid much fanfare at last year's Shanghai Grand Prix. Crowds were wowed with a very special DJ set by Chinese superstar, Jamaster A



Sennheiser's Special Edition Momentum headphones

performing for race visitors at the site entrance, using Sennheiser kit.

Later the party became exclusive as Jamaster A layed down the grooves for VIPs backstage in the Paddock Club taking to the decks in the Sennheiser-powered DJ booth. At the European Races, Red Bull's special guests partied away in the team's popular Red Bull Energy Station – a prestigious hospitality forum, equipped with a Sennheiser wireless microphone system.

The challenge within F1 has always been making sense out of huge volumes of complex information. The use of this statistical information has rocketed over the last 10 years as the amount of data has mushroomed.

"We're part of this process of getting information out so people can use it well.

People want to import these feeds into their PC environment as part of their videowall and control room system. This is where the AV and IT elements are really coming together to create tightly integrated solutions," says Jones.

"A lot of AV kit on the market is over complicated whether you're fitting it into a domestic or professional environment.

"Once you've got Exterity on the network you don't have to be an IT specialist to operate it."

Teams have dedicated WAN links between the circuit and the factory. Every night they send the video footage of every second of footage they've recorded in the ops rooms – this accounts for 90 per cent of the data that flows between the circuit and team HQ.

"This is how useful video is for the teams analysing competitors' cars and their performance around the track in slow motion.

"Viewing videos is such a useful tool for the engineers, it has become one of their top priorities. They want to see what their car is doing as it goes around the circuit," concludes Jones. ■

CONTACTS

pjav.co.uk
www.exterity.com
www.mediatecgroup.co.uk
www.sennheiser.com
www.cameracorps.co.uk



Exterity IPTV systems are selected by world leading organizations to deliver unified communications and content to any screen.

Visit Exterity at ISE 2014, Stand 11 - D58

Talk to us about becoming an Exterity Partner. Exterity Resellers and System Integrators Receive:

- Free technical and sales training
- Exterity marketing support and lead generation
- Project specification and design assistance

www.exterity.com info@exterity.com

Integrated Systems Europe

Video over IP Solutions for Every Market

Customizable UI's	Network Video	HD Streaming
Digital Signage	Live & Scheduled Play	Video On Demand