

OUT OF RANGE

The reception issues at Le Mans are always challenging due to the length of the circuit but they can be got around if tackled correctly. According to Robert Cull, senior support engineer at Cosworth Electronics, there are typically three things that need to be addressed. The first is the pit installation of the antennas and the drop cables – at a short-range track it does not become an issue, but at Le Mans it can lose tens of per cent. Next comes the installation in the car and making sure the cables between the radios and the antennas are up to scratch. Finally, with so many teams around, it is important to make sure you do not have people close to your frequency or actually sharing it.

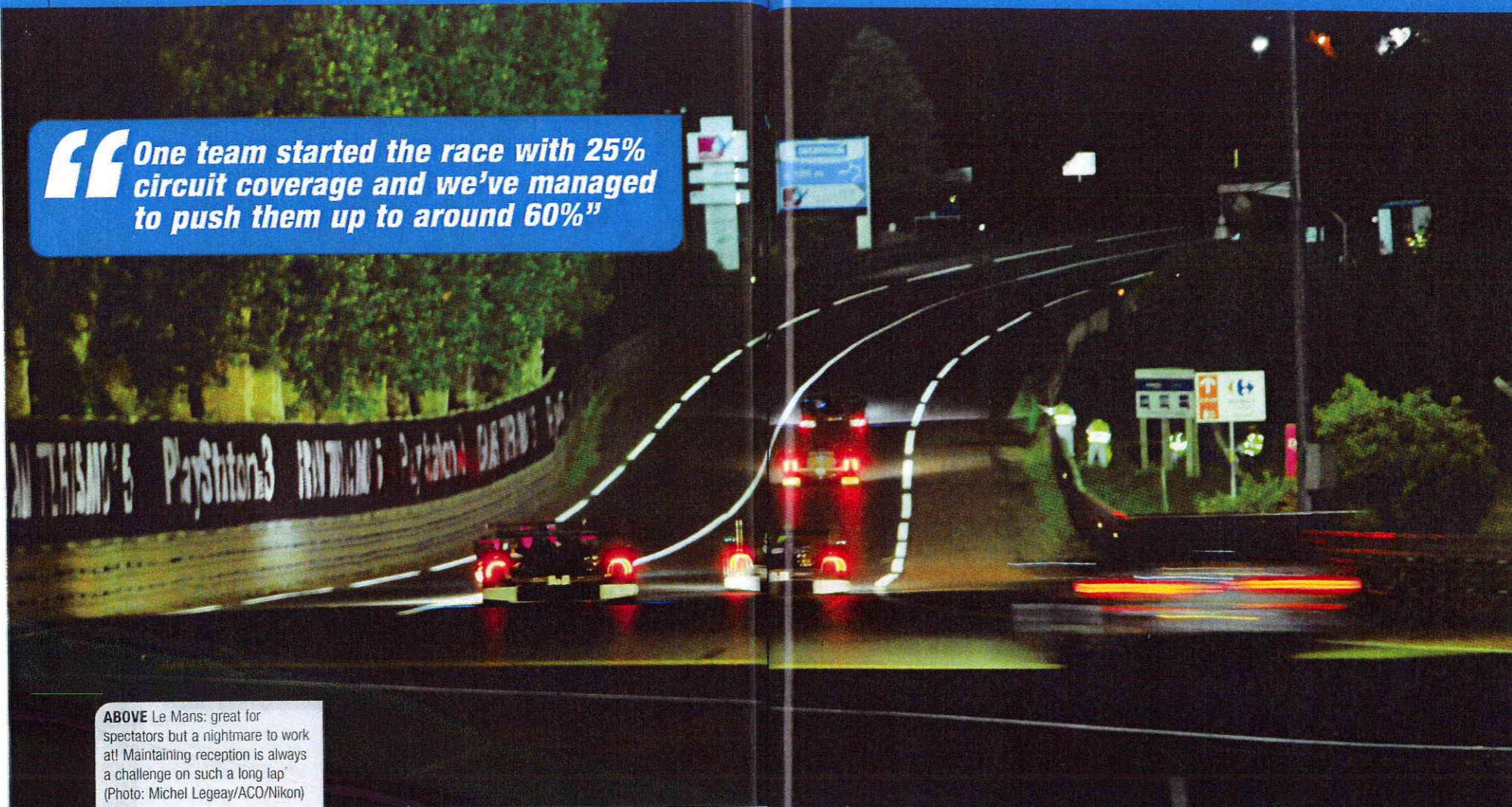
"One team started the race with 25% circuit coverage and we've managed to push them up to around 60%, which is about the most you'll get from a single-receiver system around this circuit," said Cull.

The only way to get full coverage around the track, we're told, is to install repeaters at various points, as indeed the Corvette Racing team did now telemetry has been introduced in GT2. Another approach, employed on the McLaren Electronics system used on the HPD cars, is to cache the data and back-fill it once transmission is restored after a black spot. Although some Cosworth systems have done this in the past, the one currently offered in sports car racing does not.

"It is useful, but we get all the car data when we download during the pit stops and it doesn't help a great deal if your car stops in one of the black spots," said Cull. Furthermore, by clever use of maths channels, he argues you can achieve much the same functionality. By calculating running statistics like minimums and maximums and transmitting them you can infer a certain amount of historical data from what is effectively a real-time transmission. These can then be sent at a very low frequency, minimising the use of bandwidth.

INTERNATIONAL BUSINESS DAYS

For the third consecutive year the Institut Automobile du Mans hosted the International Business Days, the hot dating system where companies can get to know each other on neutral territory. Organised by the Institut along with FL Consulting and Invest in Western France, the two-day



ABOVE Le Mans: great for spectators but a nightmare to work at! Maintaining reception is always a challenge on such a long lap (Photo: Michel Legeay/ACO/Nikon)

event featured a number of motorsport companies, mainly from Europe but also from Canada and the US.

The principal aim is to find new customers and/or distributors but it is the participation of race teams that is so vitally important to the event's success. The organisers were therefore delighted that people from the purchasing department of both Citroën Sport and Peugeot Sport were present.

The range of companies that sent delegates varied in terms of business with one of the more unexpected being

Faurecia, the automotive seating company. Other more motorsport-focused businesses included Alcon, the brakes and clutch manufacturer from the UK, Cerobear, the German manufacturer of hybrid and ceramic bearings, the foundry Howmet CIRAL and Texys International.

The first day consists of a visit to different teams in the paddock, each company allowed to select just one team, followed by a gourmet dinner at the Auberge de Mulsanne. The second day, though, is entirely devoted to the hot



LEFT Hot dates: the business-to-business format worked well

dating system, a klaxon denoting the end of each half-hour session.

Reactions to the event were very positive with Cerobear's Christian Klatt saying that he had attended good meetings during the day. "I also like the B-to-B concept very much," he said, "and would like to have an event like this in Germany as it's an ideal chance to make new contacts and have intense discussions to generate business and build relationships."

As the commercial representative from the Canadian Embassy attending the event for the first time, Stefan Mazaraenu was very impressed with what he found. "It has been a very interesting experience with many opportunities with companies that I didn't expect had anything to offer, while at the same time they were surprised to discover the automotive opportunities and the size of the industry in Ontario," he reported. "There will be people who visit Toronto as a result of this event."

Peter Carter of REM was another first time visitor, attending at the invitation of the EMC, the company's French distributor. "We supply the coatings to many LMP1 and P2 teams," he said. "We

wanted to get feedback from the people who actually use our product, with one of the organised visits being to the ORECA pits where I noticed an exhaust sporting our coatings. I also attended 10 meetings on the B-to-B day, which is a bit busy but well worth it, talking to people in Spain and Germany where we are looking for representation. We will definitely return next year as it's been so good."

"Overall, we are very satisfied with the results," said Jean-Luc Firmin, executive director of Invest in Western France, "and what we have seen here over the two days is exactly what we want to develop. The job of our agency is to convince companies from all around the world to develop their European business in this part of France, using the build-up to the 24-hour race as a hook to encourage those businesses in the motorsport industry to attend this networking event at the circuit."

"The high-end requirements of motorsport companies can be good resources for other clusters like aerospace and bio-tech we already have in the region which is why we want to encourage them here. We see that the technologies they develop can be of

some benefit to other industries."

"I am also extremely pleased with how this year's event went," said Francois Lassalle of FL Conseil, "and would say it's a good vintage for different reasons. In spite of the economic problems that have affected everyone, we had the same number of companies attend as last year. According to initial feedback, everyone is very satisfied with the quality of the meetings. It has also provided very valuable contacts for Invest in Western France, particularly from Canada this year, the first year we've had a representative from that country."

"The intention next year is to have more companies. We already know that we will have a delegation from Canada, whilst British, Italian and Spanish companies have already registered an interest to attend."

AERO TRADE-OFF

Aerodynamic efficiency is always a key property at Le Mans and the LMP2 class was another good demonstration of this. The Pescarolo 01s, such as those run by Oak Racing, have always been quick cars in a straight line, but they have traditionally lacked the downforce for slow and medium-speed corners. Mindful of the impact this had at the slower circuits of the Le Mans Series races, the team began an aerodynamic development programme at the RUAG wind tunnel facility in Switzerland. With Le Mans only accounting for a single race, resources had to be focused on the championship as a whole and this left the 2010 car in quite a high downforce configuration by Le Mans standards, which, in turn, made it relatively high-drag.

"We're faster than the Porsches were last year but since the Acuras turned up, the goalposts have moved," senior engineer Ricardo Divila explained before the race. "If you look at the Acuras' lap times they're extremely impressive, we have no pretensions of winning the race outright if they survive to the end."

The number 35 Oak car suffered power steering control problems during qualifying that Divila believes deprived it of third place in class behind the Acuras (instead starting fifth). Solving the problem cost valuable minutes, which denied the team a repeat attempt in the daylight. "If you have very good lighting, like the Peugeots and the Audis, you can set fast times at night, but we can't do that in LMP2," said Divila. **RT**