

## MACHINE WORLD

Your car is now a better driver than you, so is it time to hand over the keys?

## MEXICO READY TO MAKE WAVES

Carlos Slim Domit on putting the heat back into Formula One

## FLAT OUT IN BONNEVILLE

The FIA's Land Speed Commission hits the home of record attempts

## REINVENTING THE WHEEL

How Malaysia's Tony Fernandes plans to change motoring in Asia

# INMOTION

The international magazine of the FIA



## THIS IS WOMEN'S WORK

F1 team boss MONISHA KALTENBORN on why modern motor sport no longer has time for sexism

### PLUS

#### TAXIS RANKED

Cab standards under the microscope

#### LATIN LESSONS

How Jean Todt's tour of the Americas raised road safety awareness

#### SHE IS THE LAW

Meet F1's only female race steward

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\*\*\*Estimate of average saving with MICHELIN ENERGY™ Saver tyres compared to main competitors for petrol vehicles. TÜV SÜD Automotive 2009 rolling resistance tests on 15 key sizes for the European market (Michelin was first in 13 sizes and second in 2 sizes). Calculated over the average life span for Michelin tyres i.e. 28,000 miles (internal source).

# INSIDE

## Dear Friends,

Women in motor sport: the general consensus, at least among men, has long been that they were not suited to racing, maybe in some predisposed way, ie not strong, or tough enough, to compete with the 'boys'. Our cover story is a loud and clear refutation of this stereotype.

Through the Women in Motor Sport Commission, the FIA is clear in its intent that motor sport is open to all. The women featured in our story are admirable, strong, dedicated, and professional. There are many more - such as F1 Steward Silvia Bellot, who, we profile in our InPerson section - who, with great skill, have seamlessly moved into areas previously deemed 'unsuitable' for them.

Taking a taxi can sometimes be, shall we say, a varied experience and our Brussels office has shared some interesting research with us on standards across Europe. Read for yourselves where and when not to hail a cab.

One of the parameters of a good journey is feeling safe. In this respect we have spoken to a number of experts, who have all told us that as the major cause of accidents is still human error and, as we report, the car industry is moving swiftly towards vehicles which will largely dial the human out of the error.

You will also enjoy the profile of Tony Fernandes, a remarkable entrepreneur, as well as the strong opinion piece by Carlos Slim Domit on why a Mexican Grand Prix is the missing link for F1 in the Americas. There is also a feature on the speed kings of the Bonneville Slat Flats, as well as an account of my trip to Latin America, during which I managed to convey the subject of road safety to a number of country leaders.

This is a subject I feel strongly about and it was an honour that Rosario Alessi, President of the FIA Academy, handed over to Archbishop Emeritus Desmond Tutu the FIA World Prize for Road Safety, the Environment and Mobility for his unstinting work on behalf of road safety.

I hope you enjoy this latest edition of InMotion and I look forward to meeting many of you in Delhi for our Annual General Meeting and the Prize-giving Gala.

Best wishes,



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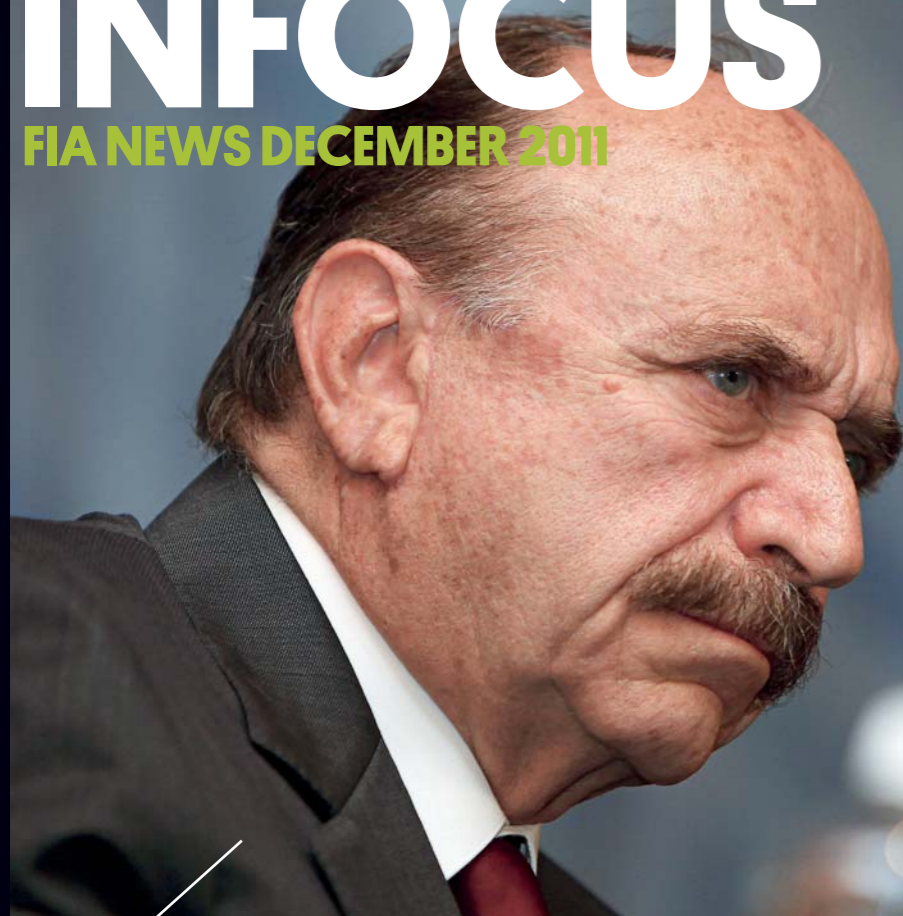
**54 Kees Van de Grint** After a hugely successful career in F1, the former Bridgestone man has gone back to his first love, karting, and as Vice President of the CIK-FIA is helping to reinvent the sport.

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# INFOCUS

FIA NEWS DECEMBER 2011



**“My dream is that at the end of the Decade of Action in 2020, when everyone is looking to see what has been achieved in global road safety, I would like it to be commonly accepted that but for the FIA and its Clubs around the world, the Decade of Action for Road Safety would not have been so successful.”**  
 Jean Todt to the American Congress

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**“The President’s visit to South America, was a fantastic opportunity for the people of each country. For the first time a president was travelling to each country, and meeting with senior state officials in all of them.”**

Jose Abed,  
 FIA Vice President



*“I have no doubt that the FIA’s Action for Road Safety initiative will make a great contribution to reducing the number of fatal accidents, which is one of the gravest problems the developing world faces.”*

Jorge Tomasi, President  
 FIA Region IV



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## India ready to welcome FIA AGA

**DELHI** After the success of Formula One's first visit to India, the country is ready to once again impress as it prepares to host the Federation's Annual General Assembly and Gala Prize-giving ceremony.

"These are two mega-events happening within a few months of each other," said Vijay Mallya, chairman of the Federation of Motor Sports Clubs of India (FMSCI) and team principal of the Sahara Force India F1 team.

"At the World Motor Sports Council meeting, I suggested that the FIA General Assembly be held in India and that the annual prize-giving also be held in India, and the World Motor Sport Council accepted it, so this is going to be a huge event as well; high profile. The Indian Government's Ministry of Tourism has kindly got involved, and is giving us its full support.

"It's an event that will obviously serve to boost motor sport to a far greater extent in this country, and I think this is all great because this country really has great potential," he added. "India is a modern, vibrant nation, we have a huge number of talented young people here."

FIA President Jean Todt concurred, saying that staging the Annual General Assembly and the Gala in India in the wake of the inaugural Indian Grand Prix

represented a successful blend of mobility and sport.

"Since my election we have worked together to forge stronger links between Sport and Mobility," he said. "Holding these two, premier FIA events in a country that will also host its first Formula One Grand Prix this year, is bound to strengthen these synergies.

"India is one of the most dynamic countries in the world," he added. "As one of the BRIC countries [Brazil, Russia, India, China], it is a rapidly evolving economy that drives global growth. India is also a beautiful country, with a rich and colourful culture. We are pleased to provide this opportunity to experience India, as part of the AGA and Prize-Giving."

The week-long programme from Monday, 5th to Friday, 9th of December features a range of key meetings including gatherings of the World Council for Automobile Mobility and Tourism and the World Motor Sport Council. The Assembly will also consider a number of major changes to the FIA Statutes, recommended by the Statutes Review Committee. The FIA Institute and FIA Foundation will also hold their annual assemblies.

The week will conclude with the FIA's Gala Prize-giving evening. It is the first time the AGA and the Gala have been held at the same time and the annual distribution to the year's most successful sportsmen and women is sure to be a memorable occasion. *More information on the FIA AGA 2011 can be found at [www.fiaaga.com](http://www.fiaaga.com)*



## Breen takes FIA's WRC Academy title

**WALES** Ireland's Craig Breen has claimed overall victory in the inaugural WRC Academy series, landing the title - a joint venture between the FIA and Pirelli - at the final round of the series, Rally GB.

Sixteen young drivers were selected to get behind the wheel of identical M-Sport Ford Fiesta R2 cars in the series, which took place on six asphalt and gravel rounds of the WRC Championship. And with a class victory at Rally GB, Breen secured the title and the €500,000 winner's prize. It was, however, a close-run thing.

The Wales win saw Breen draw level on points with Estonia's Egon Kaur but under the series' tie-break rule Breen took the title based on a greater number of stage wins.



"I can't find words to describe this moment," said the 21-year-old driver from Waterford in the Republic of Ireland. "It's the most amazing feeling to finally get here after all the effort we've put in all year, and for it to go down to the last stage of the last rally is incredible.

"The prize has given me most part of next year's budget, and I can put my own budget to the following year, so it's guaranteed two more years in the sport I love."

Rally GB brought the curtain down on the first year of the WRC Academy and Pirelli motorsport director Paul Hembery branded the programme a success.

"It doesn't get more exciting than this, with the result going down to the last stage of the last rally and the top two tied on points," he said. "Both drivers have been very impressive throughout the season, underlining our philosophy of bringing on young talent. It's not just Craig and Egon who have impressed but all the drivers in the academy, demonstrating that the future of the sport is in safe hands."

## Fund applications up by 40% says FIA Institute

**PARIS** The FIA Institute has revealed that applications for the Motor Sport Safety Development Fund for 2012 are up 40 per cent on last year, a figure Institute President Sid Watkins put down to greater engagement with areas most in need of funding.

The Fund's grant programme, managed by the FIA Institute, aims to distribute funding to help ASNs with grass roots motor sport projects, covering vital development activities in safety and sustainability around the world, and since the application process began in September the Institute has received almost 100 applications from ASNs from all over the globe.

Applications have increased from every continent and this year include a number of applicant countries that have not previously received a grant, including Kuwait, Algeria, Bolivia, Estonia, Jamaica, Morocco, Lithuania, Madagascar, Serbia, Peru and also from South Africa.

"I'm delighted to see that our concerted efforts to engage ASNs in developing motor sport markets has led to so many first-time applications," said FIA Institute President Sid Watkins. "I look forward to the decision of the Fund Management Committee and to continuing to offer development support where it is needed most."

FIA Institute Director General Richard Woods concurred.

"Increasing engagement with the Fund was one of our key goals for 2011," he explained. "Our outreach work, targeted at areas in need of most help, has not only achieved this but has helped focus ASNs on the wider role and work of the FIA Institute. We look forward to growing this direct engagement and partnership with ASNs in the coming years."

The FIA Institute will now review each application and make recommendations to the Motor Sport Safety Development Fund Management Committee, which will decide on grant awards in mid-December.



## Stoker competes in London to Brighton run

**LONDON** The FIA's Deputy President for Sport, Graham Stoker (above, right), recently took part in this year's London to Brighton Veteran Car Run, alongside co-competitor Ben Cussons, a member of the Historic Commission Member and Chairman of the RAC Motoring Committee.

The 60-mile event, first run 115 years ago, is the oldest in the world and welcomed 500 vehicles built before 1905. The vehicle entered by Stoker and Cussons was a 1900 MMC 6hp Albany Dog Cart - a true 'Horseless Carriage'.

Matt Roberts, riding a 1897 Marot Gardon Tricycle, was the first to arrive in Brighton, three hours and 25 minutes after leaving London's Hyde Park in the first sector group. In a remarkable feat for vehicles ranging between 106 and 117 years old, an astonishing 420 veteran vehicles completed the historic route.

The run was preceded by the RAC Future Car Challenge, an event showcasing new, sustainable vehicles. It was part of a weekend that supported the Decade of Action for Road Safety in the UK and which was attended by the British Transport Minister Mike Penning.



## Italian club to teach English to taxi drivers

**MILAN** The Automobile Club Milano has responded to a recent FIA survey of European taxi standards by insisting that it wants to attain Europe's first Very Good rating in time for Expo 2015, which is being hosted in the Italian city.

The FIA study, conducted by EuroTest, looked at a number of criteria, including the quality of driving and condition of the taxi itself, and gave Milan a rating of Good. The northern Italian city was one of only seven to get such a rating, alongside Barcelona, Munich, Cologne, Berlin, Paris and Lisbon. It now plans to become the first European city to get a Very Good rating by investing in English lessons for the city's taxi drivers in order to create a more efficient and welcoming environment for the Expo.

*For an in-depth look at EuroTest's taxi survey see pages 20-21*

## FIA launches parking guide for disabled travellers

**BRUSSELS** The FIA has launched a new guide to disabled parking schemes in 130 countries, which it hopes will boost mobility for disabled travellers everywhere.

"The FIA's guiding principle is to ensure safe, affordable and clean mobility for all," said Jacob Bangsgaard, Director General of the FIA's Brussels office. "Mobility is one of the most important pre-conditions to social inclusion as it enables citizens to remain independent and active. Bearing this in mind, we have compiled a

comprehensive online guide on parking concessions for disabled drivers. The disabled should face no additional burdens in their day-to-day cross border mobility."

The guide informs people with disabilities of parking card privileges in their country and in almost 130 other countries around the world. It attempts to answer many of the questions disabled travellers have, such as whether a card from their home country will work in other territories and whether the concessions will be the same in countries they visit.

The guide has been translated into Italian, through the ACI, and versions in Spanish and German will be available soon.

*The FIA Guide for the Disabled Traveller is available at: [www.fiadisabledtravellers.com](http://www.fiadisabledtravellers.com)*



TAXI PHOTO: ANDREA SOSIO



## Tutu pledges to support Action for Road Safety

**CAPETOWN** On the occasion of being presented with the FIA World Prize for Road Safety, the Environment and Mobility, Nobel Peace Prize-winning human rights campaigner Archbishop Emeritus Desmond Tutu also pledged his support for the FIA's Action for Road Safety campaign.

The FIA World Prize is presented annually by the FIA Academy in recognition of exceptional merit or endeavour by individuals or organisations involved in motoring and mobility. The silver and crystal trophy was presented to Archbishop Tutu in Capetown by Academy president Rosario Alessi.

Archbishop Tutu, who is also a recipient of the Albert Schweitzer Prize for Humanitarianism and the Presidential Medal of Freedom, thanked the FIA Academy for the award and added that road safety

is of crucial importance in developing regions, with road deaths now representing "a new health emergency for Africa".

Aside from highlighting the terrible loss of life involved in road accidents, Archbishop Tutu has in the past outlined the huge burden placed upon healthcare services by serious injuries on the roads. He has also raised awareness that it is often the poorest who are most affected, either through the loss of income or the costs that come with the full time care of a family member.

As chairman of The Elders, a group of a dozen influential senior statesmen and women that includes a former President of the United States and a Secretary General of the United Nations, Archbishop Tutu's commitment to humanitarian causes is unstinting. His support for Action for Road Safety will be of invaluable benefit to the FIA.

The AA of South Africa has also been in the vanguard in matters of road safety, initiating many life-saving campaigns in a bid to stem the high number of road-related fatalities.

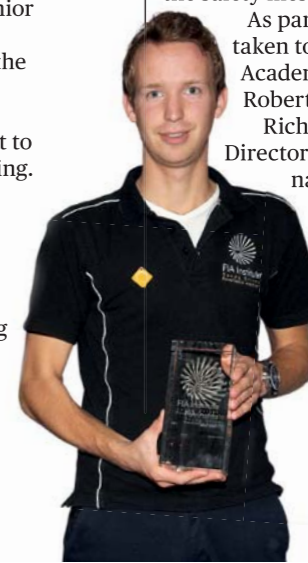
## Abbring Takes 2011 Academy Prize

**TEESDORF** Dutchman Kevin Abbring has won the Driver of the Academy award at the inaugural FIA Institute Young Driver Excellence Academy. The 22-year-old rally driver was presented with the trophy at a graduation ceremony following the final academy workshop in Teesdorf, Austria.

Abbring's ability on the track and his understanding of the safety elements of the curriculum impressed the Institute and he has now expressed his commitment to be an ambassador for the Institute, advocating the safety messages learned at the academy.

As part of his prize, Abbring will be taken to a World Rally event by Academy Performance Managers Robert Reid and Alex Wurz.

Richard Woods, FIA Institute Director General, said: "Kevin's natural ability helped him to get onto the programme, but his determination to learn more about the safety aspects of motor sport, allied with leadership and motivation, have earned him the Driver of the Academy award."





## Schuberth and the FIA set the gold standard for helmet safety

**PARIS** When the FIA launched its Action for Road Safety campaign earlier this year one of its key messages was that measures must be taken to reduce the number of road deaths in developing countries. Some 90 per cent of traffic fatalities occur in these countries, with many of these accidents involving motorcyclists riding without a helmet.

As such the FIA has joined forces with one of the world's leading helmet manufacturers, Schuberth, to promote education and awareness of the benefits of wearing the right kind of headgear when riding motorcycles or competing on the track.

The first fruits of the partnership are the stunning helmets featured here. On the left is a special 21-karat, gold-plated



Michael Schumacher helmet built specially for the 20th anniversary of the seven-time champion's first Formula One race, the 1991 Belgian Grand Prix at Spa-Francorchamp.

Just 20 of these amazing replica helmets were built and each comes with an almost €6,000 price tag. Schuberth has donated one to the FIA to aid the Federation in furthering its

helmet awareness campaign as part of Action for Road Safety.

To its right is the official Schuberth Action for Road Safety helmet, from the company's premium C3 range. This features Schuberth's special Anti-Roll-Off System that, with the chin strap properly closed, ensures that the helmet cannot pivot off the head from behind and that, in the event of an

accident, the risk of contact between the chin section of the helmet and the chin or neck of the rider is greatly reduced.

A number of Action for Road Safety branded helmets have been given to the FIA for use at a wide variety of motor sport events to promote the campaign's message that whether on a bike or on the track, helmets are for heroes.



## Nicaraguan Automobile Club rewarded for Helmet Campaign

**MANAGUA** The FIA Region I Legal & Consumer Affairs Commission has presented the Nicaraguan Automobile Club with its Legal and Consumer Affairs award for 2011 after the club successfully campaigned for its government to introduce strict laws governing the wearing of motorcycle helmets. In Nicaragua, nearly a quarter of all crashes on the road involve motorbikes.

The NAC, in cooperation with the Inter-American Development Bank and the National Police, have engaged with government, non-government and private sector partners to promote higher helmet standards. This included distributing 1000 helmets to the local police force to serve as an example to the public. Before the club's campaign just one in ten motorcyclists wore helmets, but the club now believes that almost everyone wears a helmet while riding a motorcycle.

## Desert Challenge of value to Abu Dhabi



**ABU DHABI** Organisers of the Abu Dhabi Desert Challenge have revealed that the media value of the cross-country rally is worth AED 6 million (€1.2m) to the region from broadcaster Eurosport, with an estimated 47 million people worldwide having the opportunity to tune in to the event. Additionally, more than 23 million people world wide were able to read about the rally.

The research was undertaken on behalf of the Institute of Sport Research of the UAE by Dr David Hassan from the University of Ulster in the UK, one of the world's top researchers in major events including motor sport.

The figures were welcomed by Mohammed Ben Sulayem, President of ATCUAE (pictured left, with Dr Hassan) who said: "This is a very significant milestone in motor sport research in the UAE and the series on a global basis. I want to pay tribute to Dr David Hassan and his research team for this fine report."



## FIA encourages African affiliates to become mobility clubs

**GABORONE** The FIA has called on African motor sport clubs to become mobility clubs to increase its presence across the continent.

Speaking at the opening of the annual FIA African Council (ACTA) in Gaborone, Botswana - which was attended by FIA President Jean Todt - FIA Region 1 President Werner Kraus said that while membership of ACTA clubs is stable at around 300,000, numbers could be increased.

"The past year has been marked by the continuing development of African clubs," he said. "New and expanded services are being established as clubs continue to broaden the range of services they offer. In order to build on that, the FIA would like to encourage more African motor sport clubs to become mobility clubs, offering a full range of services to their members including breakdown repair services and travel advice."

Mr Kraus added that the development of such services offered great potential for clubs.

"With its remarkable nature reserves, Botswana has huge potential as a tourist destination, and this is an area where many African clubs are eager to develop their services," he said.

The future of African Clubs in the FIA was also on the agenda, with ACTA clubs seeking a seat on the World Council for Automobile Mobility and Tourism. The issue will be discussed again when the FIA Statutes Review Commission meets at the FIA Annual General Assembly in December.



## Toyota to race in FIA's World Endurance Championship

**TOKYO** Toyota has announced that it will contest a number of events on the FIA's 2012 World Endurance Championship calendar including the series' flagship 24 Heures du Mans race. The Japanese company, which last competed at Le Mans with its pole-winning GT-One car in 1999, will return to top-flight motor sport with a petrol-electric hybrid LMP1 class car.

FIA President Jean Todt welcomed Toyota's participation. "The arrival of Toyota and its hybrid engine to the pinnacle of endurance racing is one that I applaud warmly," he said. "The proven technological excellence allied to a strong and tested competitive streak make Toyota a formidable opponent." The eight-race series begins at Sebring in the USA on March 17, 2012.

## ADAC calls for action on mileage fraud

**MUNICH** ADAC, Germany's largest automobile club, has launched a campaign to raise awareness of mileage fraud in the used car market after police raids carried out with the club's assistance revealed that up to a third of used cars sold in Germany may have been tampered with.

The raids, co-ordinated by the Munich police, involved 500 officers across a number of European countries and resulted in some 30 arrests and the confiscation of around 300 vehicles.

Now ADAC is calling for renewed action on a problem it says costs European economies anywhere between €5.5 and €9.5 billion per year through increased vehicle depreciation and higher maintenance costs.

The club says it will press for better protection against odometer tampering, which it believes is increasingly easy

thanks to technology that surpasses any safeguards put in place by motor manufacturers.

"According to chip manufacturers and ADAC experts, today's technology makes life too easy for fraudsters," said a club spokesperson. "Odometer tampering via a car's Onboard Diagnostic Socket (OBD) is almost impossible to detect, unless the manipulator is caught in the act."


"The built-in protection against tampering is way behind the current standard in other branches of industry, for example decoders of pay TV stations.



We are now calling upon the car manufacturers to prevent manipulation by using state-of-the-art technology."

The situation is made more complex by the fact that such tampering is not illegal in many countries, with only Belgium and Germany having legal prohibitions.

In response ADAC now aims to tackle the issue on a number of fronts. Firstly, it will attempt to raise awareness of the issue among consumers with a warning on used car marts on the Internet. This will be followed by the introduction of a security certificate for odometers similar to the digital tachographs in HGVs. It will also investigate manipulation techniques used in Germany's best-selling cars.

Finally, the club will establish a working group against such fraud that will regularly meet with manufacturers, sub-contractors and security experts and it will also attempt to increase awareness among political bodies at national and international level. 

# LATIN LESSONS

FIA President Jean Todt's tour of Mexico, Central and South America has been branded a major success in helping raise road safety awareness in the region

FIA President Jean Todt's summer tour of South America has been labelled a major success by both the President and by key figures from the region.

Starting at the end of July, the President, visited Venezuela, Colombia - for the 13th American Congress - Nicaragua, El Salvador, Panama, Costa Rica, Guatemala and Mexico, meeting senior FIA and government figures on each stop in a bid to promote road safety and sporting agendas throughout South and Central America and Mexico.

"Everywhere I went I found total enthusiasm for addressing issues relating to road safety as well as excellent travel and logistic arrangements," said President Todt.

"In Latin American the agenda of road safety is so key to infrastructure that I was afforded the opportunity of exchanging views and examples of best practice with a number of heads of state and government officials," he added.

"They all assured me these issues would be treated as priorities and therefore clubs and local organisations would get the support of the proper national and regional authorities. These are huge steps forward, as our FIA Action for Road Safety initiative was launched only three months ago. That it is on the agenda of governments is a clear indication of the role the FIA has had in spreading this vital message and the growing influence of our clubs."

The success of the trip was underlined by FIA Vice President Jose Abed, who travelled with the president for much of the tour. Mr Abed also hosted the presidential party when it arrived in his native Mexico.

"The President's visit was a big success and a fantastic opportunity for the people of each country," said Mr Abed. "For the first time a president was travelling to each country, and meeting with senior state officials in all of them."

"Part of the difficulty for the clubs in the region has been how to decide how to get 100 million people in Mexico and 500 million throughout South and Central America to get involved with road safety schemes and in particular the FIA Action for Road Safety programme, in connection with the FIA centrally. But having met with the



**CARACAS, VENEZUELA**  
26.7.11



**COLOMBIA**  
28.7.11



**NICARAGUA**  
30.7.11



President Todt and Michelle Yeoh catch up on correspondence during an internal flight. With so much on the agenda during the three-week tour, every moment was taken up with work.



**EL SALVADOR**  
31.7.11

**PANAMA**  
1.8.11



President Todt, I think we have moved on this quite a lot. It was successful from the point of view of bringing people together and trying to establish links between clubs and countries."

The President began his journey in Venezuela, where he was welcomed by Mr Enzo Spano and later met with the Deputy Sports Minister Yuri Quinones. From there he journeyed to Colombia and one of the key events of the trip, the 13th American Congress in Cartagena.

Speaking at the Congress President Todt noted that the presence of Canada's CAA for the first time, and also the attendance of Mexican clubs from Region III, was a sign of greater co-operation between clubs and an indicator that the FIA is heading in a new direction with regard to "developing ways to leverage sport and mobility to achieve FIA objectives in safety, the environment, and access."

The presence of so many clubs from across the whole of North, South and Central America made it, he added, "a truly American Congress".

One of the major items on the agenda of the two-day congress was the FIA's Action for Road Safety campaign in response to the UN's Decade of Action for Road Safety and the President welcomed the efforts of American clubs in support of both programmes.

"My dream is that, at the end of the UN Decade of Action in 2020, when everyone is looking to see what has been achieved in global road safety, I would like it to be accepted that had it not been for the involvement of the FIA and its clubs around the world, the UN Decade of Action for Road Safety would not have been so successful," he said.

The President also congratulated Mr Jorge Tomasi on his election as President of Region IV and assured Mr Tomasi that he would have his full support.

Following the Congress, the president's party left Colombia for a five-day tour of Central America, starting in Nicaragua, where Mr Todt met with President Daniela Ortega for talks on a number of road safety issues affecting the Central American state.

President Todt then visited the El Jabali Autodrome near to the Nicaraguan capital San Salvador to greet local drivers and later met with the Mayor of San Salvador, Dr Norman Quijano, ministers from the departments of tourism and roads as well as the French Ambassador, Ms Blandine Kreiss.

Next was Panama, where President Todt was given a tour of the canal by President Ricardo Martinelli. Following further stops in Costa Rica, where he met with a number of local dignitaries





With an intense schedule to adhere to, much of the travel was taken by small jet, organised by FIA Vice President Jose Abed.



MEXICO 5.8.11



The President's visit to Mexico included meeting with the country's clubs, co-hosted by FIA Vice President Jose Abed (top), and a visit to the Carlos Slim Health Institute.

COSTA RICA  
3.8.11



GUATEMALA  
3.8.11

BRAZIL 17.8.11



including Ms Maristella Vaccari Gil, the Government Manager of the UN Decade of Action for Road Safety, and Guatemala, for a meeting with that country's sports minister, President Todt journeyed to Mexico.

Central to his visit to Mexico City was a meeting with President Felipe Calderon. The Mexican head of state welcomed President Todt, Michelle Yeoh, Mr José Abed, Carlos Slim Jr and other high-ranking officials to discuss road safety in Mexico. And according to Mr Abed, much headway was made.

"President Calderon was very impressed with Mr Todt and the programmes he and the FIA are talking about," said Mr Abed. "What the FIA is doing is especially relevant, as in Mexico we have started an alcohol awareness programme. Also on all the highways across Mexico you can see the emblem of the road safety programme. And when you pay your toll to use the highways, 1c goes towards that campaign."

During the Mexican visit President Todt was frequently quizzed about the possibility of Formula One racing returning to a country the series last visited in 1992 and he admitted that the country could host a grand prix again.

"Today, Mexico is an economically strong country and I am convinced that in the future [an F1 return] is possible," he told Europa Press. "However, we know that the races have a cost, [and] there are also a number of criteria for the approval of an event, especially in terms of safety."

The presidential party then left Mexico for Brazil. Arriving in São Paulo, the FIA President met with the promoters of the Brazilian Grand Prix and then visited the São Luiz Hospital, a leading emergency medical treatment facility, for a presentation on the prevention of road accidents. Then it was on to Rio to meet with the presidents of clubs affiliated with the Confederação Brasileira de Automobilismo and also to speak to road safety experts about the FIA's dedication to reducing road deaths by five million over the next 10 years.

"The FIA's Action for Road Safety campaign sees its global family working together, drawing on its unique resources and reserves to unleash a wave of support to reduce traffic related deaths and injuries worldwide." he told his audience. "It will see every FIA club and federation make a commitment to address a critical road safety problem in their country. It is the FIA's objective to commit all of our members to projects which will heighten the importance of further reducing the numbers of those killed on the roads around the world."

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# CERTIFIED FOR SAFETY

Motorsport medicine needs a coherent certification programme for trackside doctors if the safety of competitors is to be ensured, says DR PAUL TRAFFORD, the newly-appointed Medical Advisor to the FIA Institute

Despite the advances in safety motor sport has enjoyed over recent decades, accidents still happen. The FIA Institute has, for some years, been at the forefront of efforts to reduce the consequences of accidents and to improve, through education and training, the challenge of responding to them.

Motor sport accidents require an adapted medical response, and one of those with more experience than most in this uniquely specialised field is Dr Paul Trafford - a veteran of the World Rally Championship, the British Touring Car Championship, AIGP, British and World Superbikes among other top-line motor sport categories.

Newly appointed as Medical Advisor to the FIA Institute, Dr Trafford, has been tasked with developing and implementing best practice frameworks for motor sport medicine, with the aim of accrediting motor sport-specialist doctors as recognised experts in this demanding field and encouraging them to roll out their knowledge throughout the wider motor sport community.

Happily, says Trafford, there now exists agreement among some of the most senior practitioners of motor sport medicine about how best to proceed and what criteria certification should include. Crucially, too, funding and expertise from the FIA Institute have ensured that plentiful goodwill can be translated into a rigorous, structured training programme.

"It's very exciting," says Trafford, an anaesthetist by training and a racing enthusiast at heart. "I attended my first motor sport event as a doctor in 1984 and since the 1990s I've been trying to get some method of training for doctors who want to work in the sport. It's amazing to consider that to work as a doctor at a motor sport event you don't need any qualification other than being registered, yet doctors attending far less dangerous sports have to be specifically certified."

One of the challenges Trafford has faced in reaching the point he describes as being "at the top of a ski jump and just having gone over the edge" has

been to find consensus among his peers about what a motor sport medicine certification should be.

Key allies have been President of the FIA Institute Professor Sid Watkins, FIA Institute Deputy President Professor Gérard Saillant, and FIA Institute Director General Richard Woods. Trafford also credits other experts, such as FIA Formula One Medical Rescue Coordinator Dr Gary Hartstein and FIA Institute Fellows such as Australia's Michael Henderson, as having been essential to the process of building consensus and generating momentum.

But perhaps the key 'tipping point' was the establishment earlier this year by the FIA Institute of a Medical Advisory Panel, at which, says Trafford, "it became obvious that the necessary consensus existed to get things done".

For Trafford, what that means is they now it is possible to bring together as many relevant figures as possible to crystallise proposals into a definitive best practice guide that will ultimately lead to certification.

"The plan," he says, "is to produce a training policy across the world and start to roll it out."

A programme of workshops will be scheduled - in all likelihood to be held at circuits in order to replicate 'real life' incidents - and doctors will be taken out of their comfort zones.

"The aim will be to ensure that people are disconnected from the familiar surroundings of a hospital, where everything is to hand - and taught how to react and work effectively on a cold race track, perhaps on an unfamiliar car, perhaps not having a clear view of what

**"The plan is to produce a training policy and roll it out across the world."**

they're trying to achieve. That's a very different experience," Trafford explains.

All aspects of medical work at a motor sport event will be covered, from the mundane-but-essential - such as how to avoid putting yourself in danger when assisting a competitor - to the advanced, such as extrication techniques using the latest emergency trauma equipment.

Unexpected challenges will also be addressed, such as the difficulty of cutting through the high-tensile steel structures incorporated into the bodywork of many modern production vehicles before they're tuned for competition and the extrication difficulties presented, for example, by the tough wrap-around carbon seats now compulsory in the WRC.

But these and other, unforeseen, problems can be resolved, Trafford is certain, by the simple expedient of "getting people together". He cites the 'multidisciplinary approach' adopted by the BTCC in his early days as medical delegate, when difficulties experienced by rescue crews in opening the doors of saloon-car racers were solved by engineers building quick-release pins into the cars' door hinges.

"Once we got them talking to each other, a solution was found almost immediately. Often, simply knowing what others want can be the start of a solution," he says.

Under the new programme, which will initially be structured

upon the contents of the FIA Institute Medicine in Motor Sport guide, Trafford envisages expertise being passed on, in the first instance, to doctors attending workshops. From there knowledge will spread to other medical staff, marshals, competitors and perhaps even to media covering events.

"If we think of the amount of road miles some of the media cover in a season, it's huge," Trafford notes. "For something like the WRC, the media are often at the scene of an accident filming or travelling on the road; they are equipped to communicate from an incident, but they may lack even the most basic first-aid skills."

As motor sport continues to spread across the globe, frequently with high-

profile 'headline' events blazing a trail into a new country with little motor sport heritage, the need for a structured medical training programme is greater than ever, Trafford says: "Many countries are now getting big motor sport events without the experience of having run little events first, so getting experienced people to pass on their knowledge in a structured way is essential."

But while he is under no illusions that decades worth of expertise can be passed on globally overnight, Trafford is absolutely convinced of the immediate benefits the new programme will bring.

"There's no doubt this will be very time-consuming," he says, "but the benefits will be enormous once we have it working properly."



Dr Paul Trafford: "It's amazing to consider that to work as a doctor at a motor sport event you don't need any qualification other than being registered."

# OPINION

## Mexico Makes Sense

As Formula One's expansion into North America gathers pace with the recent announcement that New Jersey will host a race, **CARLOS SLIM DOMIT** explains why a revived Mexican Grand Prix is a 'no-brainer'

Earlier this year FIA President Jean Todt visited Mexico as part of a trip through South and Central America. As a consequence of his trip, speculation was rife as to whether Mexico would once again take its place on the Formula One calendar, as it had from 1961-'70 and 1986-'92. Perhaps naturally I embrace the idea and believe that a new race for Mexico is what, in colloquial English, is referred to as a "no-brainer".

Mexico has long been close to Formula One, closer to it indeed than it has been to many other racing series that have visited the country. From the non-championship 1962 Mexican Grand Prix, which claimed the life of the talented local hero Ricardo Rodríguez, through following his brother Pedro's illustrious career in the sport and on to the series' last visits to the Autódromo Hermanos Rodríguez in Mexico City in the late 1980s and early '90s, Mexicans have always followed Formula One with intense interest. Even when Formula One left our shores in 1992, passion for the sport was undiminished and the seasons since have been watched avidly on TV by a sports mad nation.

The rise of a new generation of Mexican racers has only served to boost interest in Formula One. We not only have Sergio Pérez impressing at Sauber, but waiting in the wings is another rising star, Esteban Gutiérrez. This young racer from Monterrey, in the northern Mexican state of Nuevo León, won the Formula BMW Europe title in 2008, was GP3 champion in 2010 and this year has been establishing himself in GP2. He is a Formula One star in the making.

The potential of these young drivers has reawakened interest in F1 beyond hardcore fans and the huge crowds who flocked to see Pérez's F1 demonstration in his home town earlier this year attest to a new-found popularity for the sport that should be capitalised upon. It is after all, a ready-made audience, unlike at some of the venues currently featuring on the F1 calendar.

It is not just the public appetite for F1 and the appeal of local racers that makes

a new Mexican Grand Prix an attractive prospect, however. The country is perfectly sited geographically to host a new race.

With news that New Jersey is to stage a race from 2013 onwards - joining Montreal in Canada and potentially Austin, Texas as host cities for races - North America is once again a vital sphere of influence for Formula One.

Linking races in Canada and the US with a Mexican round would perfectly consolidate Formula One's footprint in North and Central America and provide a viable bridge to the race in Brazil.

North America is a massive marketplace for Formula One's motor manufacturers and Mexico remains a key manufacturing and marketing base for those companies. And while the number of manufacturers in F1 has declined in recent years, the number of US-based sponsors, such as GE and others, has increased. A fifth GP in the North and South American time zones would benefit those sponsors greatly.

Indeed, speaking of time zones, that of, say, Mexico City - seven hours behind Central European Time - would, with a standard start, put a Mexican race on television at prime time in Europe, an aspect pleasing to both the sport's commercial rights holder and team sponsors.

Economically, too, the country is more than ready. When F1 last left Mexico in 1992, it was at a time when the country's economy was entering a troubled period. That is no longer the case, a fact alluded to by President Todt during his recent visit. "Today Mexico is an economically strong country and I am convinced that in the future it (a grand prix) is possible," he said.

The President wasn't simply indulging in idle

speculation or rhetoric. Earlier this year the Mexican finance ministry increased the economic growth forecast for the country to 4.3 per cent, with the OECD going a point higher at 4.4 per cent, which in a period of global economic instability is a major achievement. The increase was on the back of figures showing that more than 230,000 new jobs had been created in the first three months of 2011 and that non-oil exports from Mexico had risen by 23 per cent from the same period in 2010.

While it would be hubristic to suggest that the country is enjoying a boom - most major economies are too fragile to claim this - Mexico is in a period of growth, with only a 7 per cent contraction in 2009 interrupting steady improvement, and that was largely the result of the global economic meltdown of the previous year. Last year, GDP grew by a more than healthy 5.5 per cent.

So where would the race take place? The obvious choice is Mexico City's Autódromo Hermanos Rodríguez, though this would of course need remodelling to bring it up to the standard of the circuits now gracing the F1 stage, but several design agencies have been consulted and the possibilities for the circuit are good. Of course, the circuit also has enormous heritage value and features such as the legendary banked Peraltada corner would make the track a fine addition to any calendar.

Beyond that there are numerous choices for a new circuit, with the second city of Guadalajara, which recently hosted the very successful Pan-American Games, being an attractive option. Cancun, too, with its superb tourist infrastructure also remains a possibility. There is, in fact, no shortage of viable host cities nor of capable promoters.

That much is clear from the hugely successful motorsport events Mexico already hosts. From the enormously popular World Rally Championship round centred around the beautiful town of Guanajuato to the World Touring Car Championship events staged in the World Heritage Site city of Puebla, motorsport is a huge draw here. As an example from further back, the 2005 ChampCar race at the Autódromo Hermanos Rodríguez



Carlos Slim Domit believes the arrival of homegrown stars such as Sergio Pérez (left) makes Mexico a viable race location for Formula One once more.



reportedly attracted a raceday crowd of some 159,000 people and an event weekend total of 271,000 fans. These are figures that would be the envy of any F1 circuit.

Perhaps the final argument though is one of sheer numbers. As mentioned earlier, in February this year, Sergio Pérez blasted through the streets of his home town of Guadalajara in his Sauber C30 in celebration of becoming Mexico's first F1 driver since Hector Rebaque raced a Brabham BT49C around a car park at the 1981 Caesar's Palace Grand Prix in Las Vegas.

Formula One demonstrations such as this are nothing new. Most teams have a show car programme that takes F1 to territories that don't host grands prix in

a bid to raise awareness of the sport and of the teams' sponsors.

What was different about Pérez's display, however, was the sheer number of people who poured onto the city's streets to cheer on their new hero. While most F1 show car runs can expect to attract crowds numbering in the tens of

**"The rise of a new generation of Mexican racers has boosted interest in F1"**

thousands, the attendance estimates for the Guadalajara event were reckoned in the hundreds of thousands. The city's own figure was between 150,000 and 200,000, an enormous number for what was a non-competitive sports event featuring a single car and driver.

The bottom line is that Mexico's loss of Formula One in 1992 was an unfortunate occurrence. However, the loss of Mexico to Formula One can now be seen as something more than unfortunate. With a committed, educated fan base, local involvement at driver level, first class infrastructure, tourism potential and solid marketing imperatives all within easy reach, it is, in fact, a wonder that Mexico has been absent from the calendar for so long.

# TAXIS RANKED

Taking a cab should be a straightforward transaction in which the customer pays to be transported to a destination in a timely and safe manner. A new Europe-wide FIA study shows, however, that hailing a taxi is not quite that simple

EuroTest, the consortium of European automobile clubs, which examines the quality of mobility services, has turned most recently to a survey of taxis in major European cities. A total of 220 trips were undertaken by EuroTest inspectors in 22 cities. The result was that no city received a rating of very good, but there were seven rated as good and a further eight as acceptable. But if you are a regular taxi user be wary in Ljubljana (Slovenia), which was the only city to warrant the very poor status.

At first glance, 15 cities with positive ratings and only seven with negative ratings might seem like a good result and the EuroTest inspectors reported that they did come across some excellent drivers in high standard vehicles who made the journey a pleasure. However, a closer look at the ratings revealed that not one single journey met all expectations of the test.

In Amsterdam, for example, the EuroTest inspector took a trip from the main train station to the city's exhibition centre. Without asking permission, the driver picked up a second passenger, saying that the destination was en route. This added one third of the distance to the journey. He also failed to switch on the taximeter. He charged the other passenger €15 and the inspector €30, although he accepted only €25 when

the inspector objected. During these discussions the driver argued that the inspector would get the money refunded by his company so there should be no problem. The inspector reported that in addition to all of this the driver changed lanes frequently without indicating, made several phone calls without a hands-free device, failed to offer assistance loading and unloading the luggage, ignored a request to lower the air-conditioning and when the inspector got out off the taxi he remained calmly seated. The taxi had large and small dents and rust on the body, it was dirty both inside and out, and items in the boot restricted the room left for the inspector's luggage. EuroTest concluded that "this driver managed to get almost everything wrong", although the trip did illustrate the key finding that the quality of a taxi journey is for the most part down to the driver.

Some of the most serious shortcomings included detours of up to 213 per cent, speed and red light violations, aggressive driving and abuse of other motorists. Almost half the drivers were unable to communicate in English and there was little information about tourist attractions or restaurants; more than a third of drivers did not accept credit cards; the fare sign, driver ID or company address were often

missing. In some cases drivers delivered the inspectors to the wrong destinations or dropped them off up to 500 metres from the destination. The worst driver rating went to Rome, while the best - a rating of acceptable - went to Munich.

The best single journey was in Barcelona, a trip from the airport to the main train station. It received almost full marks. The worst journey was a daytime trip in Rome from the main train station to the exhibition centre. The EuroTest inspector awarded the trip just 11 per cent of the possible score. In this case, the unkempt driver lost his way twice, resulting in a detour of almost 60 per cent. He then demanded €69 instead of the €62.90 on the meter. This was higher than the approximate €50 listed price for the trip. The vehicle had no air-conditioning, a broken window and there were used tissues lying about.

Half of the journeys taken by inspectors in Ljubljana failed to score an acceptable rating. Two drivers refused pick ups as they said the destination was not far enough away. Three journeys included detours of up to 150 per cent of the route and one driver expressed his annoyance at the short distance to the destination by making an offensive gesture! Barcelona emerged with the highest overall scores, followed closely by Munich and Cologne.

### CITY RATINGS

**VERY GOOD:** No city rates as such

**GOOD:** Barcelona, Munich, Cologne, Milan, Berlin, Paris, Lisbon

**ACCEPTABLE:** Salzburg, Oslo, Rotterdam, Hamburg, Geneva, Brussels, Zagreb, Zurich

**POOR:** Madrid, Prague, Vienna, Amsterdam, Luxembourg, Rome

**VERY POOR:** Ljubljana

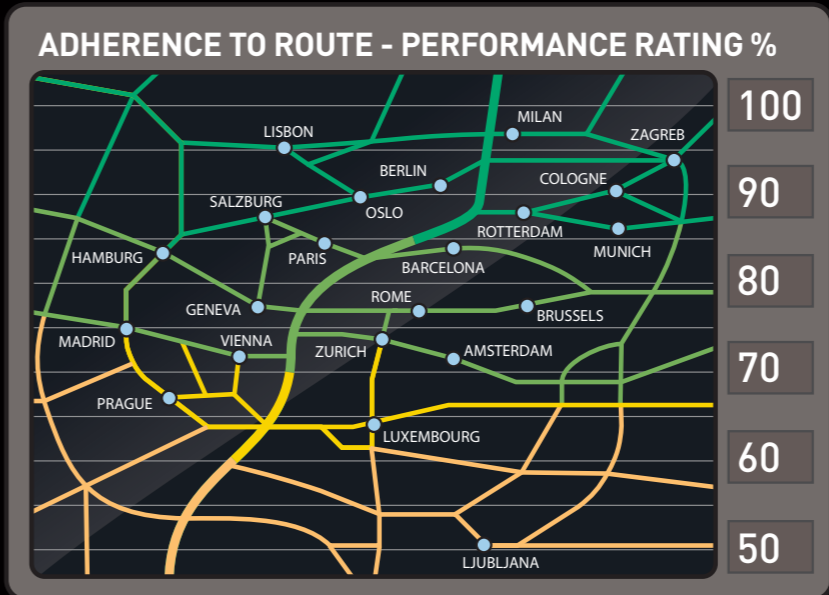
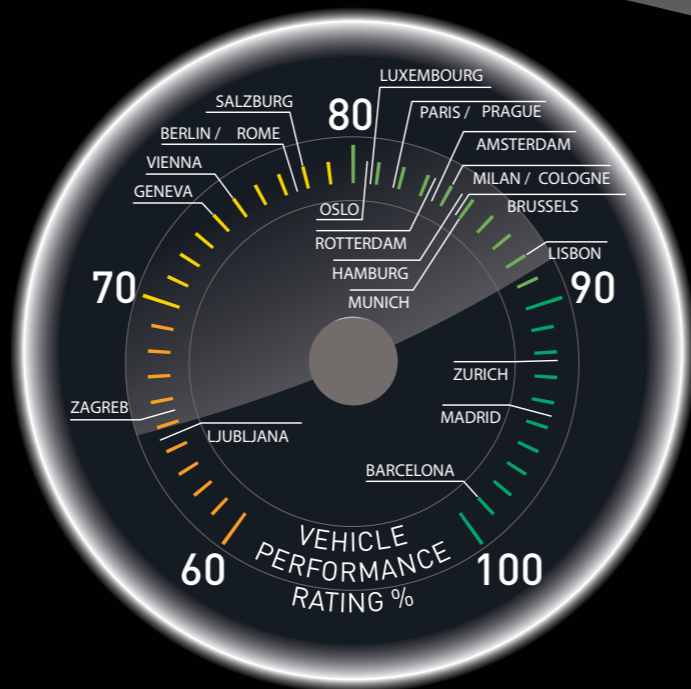
*EuroTest is a consortium of 18 automobile clubs in 17 countries, which is coordinated by the FIA Brussels office.*

### YOU'RE OUT!

The EuroTest inspectors used a 'knock-out criteria' if the shortcomings of a trip were so serious that points in a given category were reduced to zero. This was applied to 21 of the 220 journeys undertaken. On 12 occasions this was in the Driver category; three of them in Ljubljana, three in Amsterdam, two in Madrid and Rome and once each in Vienna and Lisbon. In the Adherence to Route category the knock-out criteria was applied once in Hamburg, Ljubljana, Madrid, Munich, Salzburg and Zurich and three times in Prague. In one of these cases the driver had no taximeter and wanted 900 Czech Crowns, which was lowered to 600 when the inspector protested, still more than the list price for the trip. The driver also had to ask a colleague the location of the destination and even had to consult a map. The result was a detour of 46.5 per cent. Of the 220 trips undertaken only 138 of them were free from detours.



GRAPHIC BY JOHN RIGBY



WORST DEFICIENCIES	
RECEIPT NOT COMPLETELY FILLED OUT	69.5%
DRIVER'S ID NOT DISPLAYED	58.6
NO CREDIT CARD PAYMENT	37.7
HIGHER PRICE FARES FROM DETOURING	37.3
DRIVER COMMITS TRAFFIC OFFENCES*	29.1
COMPANY ADDRESS NOT DISPLAYED	25.5
NO FARE SIGN DISPLAYED	17.7

# WOMEN'S WORK

Is motor sport the last bastion of male chauvinism or is it really the one business where there is no glass ceiling for women? F1's first female team principal, **MONISHA KALTENBORN** gives us her view and we look at the experience of women at all levels of the sport.

# One might be forgiven for thinking that there's little place for women in motorsport,

that it's a sport founded upon machismo and chauvinism, an environment in which the competitors project a sense of hyper-masculinity and where women are often simply meant to be decorative accessories. That, though, would be to view motor sport through a lens many decades old. The sport has moved on and while it is true that there are no female Formula One drivers, indeed there has not been one for 20 years, one need not conclude that this is because of an attitude within the sport.

However, the continued deployment of grid girls at events across the world

does not help the image. They are hardly a sign of sexual equality and equal opportunity. They are not, however, the whole story. Away from the spotlight women are increasingly important players in motor sport. Within the FIA the role of women has been growing in recent years, with figures such as Michèle Mouton and Frédérique Trouvé being key members of Jean Todt's team. The Formula One group is another area in which there are more women that one might imagine.

Bernie Ecclestone, too, understands the value of women executives. Among

his closest advisors is Sacha Woodward Hill, his legal counsellor, who is also a director of the Formula One group. Her predecessor in that role, Judith Griggs, is just as low profile, but has even more of a key role these days. She left Ecclestone and became chief executive officer of the Australian GP (and also Australian Businesswomen of the Year) back in the 1990s, but for the last 11 years has been working quietly in Switzerland as the Chief Operating Officer of Allsport Management, the company that sells and manages all of the advertising rights associated with Formula One. In addition, Allsport manages the VIP hospitality, known as the Paddock Club, with that entire division run by Switzerland's Isabelle Kaufmann.

Earlier this year Ecclestone said in an interview that a woman could replace him as Chief Executive Officer of the Formula One group "within three to five years". And he was not joking.

"Not so long from now 50 per cent of the decision makers in the economy and politics will be women," he said. "Women have always had a strong influence, and have probably been in the background for too long. I think that women don't get trapped so easily by their own ego. Women don't have to play golf to make deals, they simply have to work harder to get the same acceptance as men. As their egos don't stand in their way they decide things less emotionally and in the end that serves the cause."

In the Formula One team world, there are other success stories. One of the partners of Brawn GP, which won the World Championship in 2009, was Legal Director Caroline McGrory. She now holds the same job with Mercedes GP Petronas. Ross Brawn and Nick Fry may have got all the glory, but McGrory shared in the success when the team was sold at the end of their debut season.

At the start of 2010 there was another significant event when Sauber named Monisha Kaltenborn as its managing director - and the first Formula One team principal.

Kaltenborn is surprising in many ways. She's Indian by birth, an Austrian national, a resident in Switzerland, and married to a German. And she has two young children.

Born in the state of Uttarakhand, 150 miles to the north of New Delhi, Kaltenborn grew up in a family that enjoyed the benefits of a successful bicycle manufacturing business. Her father did not want to join the family company and when she was young he set off on a tour of the world - to look at alternative ideas. His brother worked for the International Atomic Energy Agency

in Vienna, Austria and during the visit, Kaltenborn's father decided that he liked the place and vowed to settle there with his young family.

"You would not really think of settling in a German-speaking country if you do not know German," she laughs, "but that is how it happened. I went to school and learned to speak the language. People sometimes ask me whether I wanted to be in Formula One when I was a child. I didn't. I wanted to be an astronaut. I used to look up in the sky and wonder what was going on up there. That was where I wanted to be."

"I didn't realise at the time that in order to be an astronaut you had to be either an American or a Russian and I wasn't either of those things, so in the end I gave up on that and went more into sciences. I was not bad in school and I was looking at a career in chemistry and things like that. Formula One was just a general interest. They used to broadcast all the Formula One races on Austrian television so I knew all about it. I used to quite like rallying and to annoy my mother I used to say that once I got my driving licence I would become a rally driver."

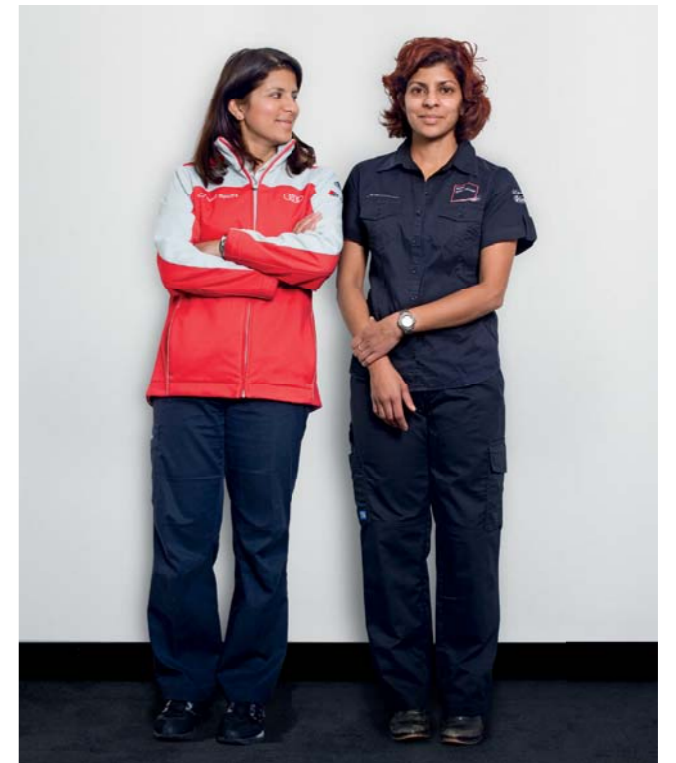
"In the end the idea of spending six to eight years studying biochemistry was quite daunting and law was a bit quicker, so I decided to study law."

She won a place at the Universität Wien and once she graduated went to do work experience as a researcher with the United Nations in Vienna before enrolling for a Masters degree in international business law at the celebrated London School of Economics. She then joined a law firm in Stuttgart, Germany, where she met Dr Jens Kaltenborn, a fellow lawyer. Although she would soon move back to Vienna, 400 miles away, the relationship developed and the pair were married, despite the fact that there were living in different countries.

"I did not want to be a lawyer working in a law firm," she says, "but I had to at least understand what it was all about. And then out of the blue I got an offer to join the Fritz Kaiser Group in Liechtenstein."

The tiny principality, squeezed between Austria and Switzerland, has long been a tax haven and registering a company there is a favourite means of minimising taxation. Indeed the country often had more registered companies than it had citizens and there was plenty of work for the legal fraternity. Her boss was Fritz Kaiser, at the time the co-owner of the Sauber F1 team.

"He had many projects, ranging from that to the classic trust work that one



## CASE STUDY 1 THE RACE ENGINEERS

Leena and Teena Gade are both accomplished motor sport engineers. This year Leena became the first woman to work as lead engineer on a Le Mans 24 Hours-winning car with Audi, while Teena is an engineer with the Mini World Rally Championship team, which is beginning to challenge for victories. The pair have wanted to be engineers since they were in their early teens.

"We got interested just from watching F1 on TV," says Leena. "Ayrton Senna was still racing and Nigel Mansell was at Williams at the time. Senna was my ultimate hero and inspiration and if it had not been for him we would not have been as interested as we were."

The siblings were encouraged by their parents to follow pursue careers in motor sport. "They always had the attitude that we could do whatever we wanted to do, as long as we had an education and applied ourselves and tried to be exceptional in whatever it was we wanted to do," says Teena. "I wanted to be a racing driver but we didn't have the money to do that, but still my father never said 'No, that's impossible'. His view was always 'Why not?' So when Leena and I said that we wanted to be motor sport engineers, the response was simply 'go for it!' I worked hard and ignored everyone else. It was irrelevant what they thought."

Despite encouragement at home, however, the outside world wasn't quite as welcoming of the idea of women at the business end of racing.

"When I was 17 and trying to get work with a Formula 3 team I was told that 'being a mechanic isn't for girls'," says Leena. "But I just thought: 'Well, I'm going to prove you wrong'."

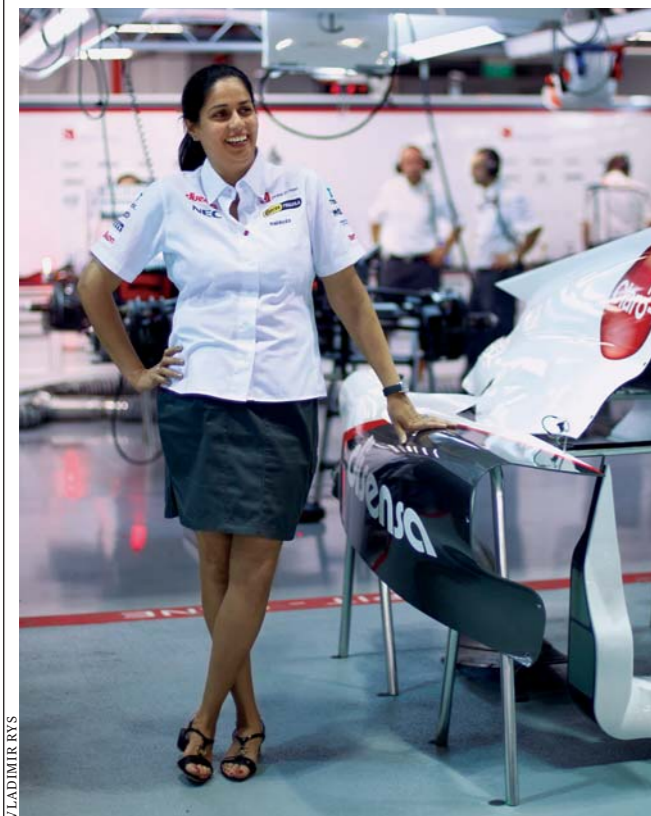
Her sister, however, found that resistance was more often unspoken.

"There was a sense that things were not said, but some people obviously thought: 'You're never going to do that'," says Teena. "I think that when a girl talks about going into engineering the response is often 'why on earth would you want to do that?'"

That resistance has made the women tougher and more determined, however.

"If it is something you want to do you have to really push yourself and every time you get a knock back, you must not take it as a negative," Leena says. "You need to use it and keep pushing. This is what we're always wanted to do and every time someone said you cannot do that or you don't have the experience, we went off and we got that experience."

**"EVERY TIME YOU GET A KNOCK BACK, YOU MUST NOT TAKE IT AS A NEGATIVE."**



Monisha Kaltenborn, F1's first female team principal, believes more women should be involved in the sport. "Women are more capable of giving up a bit to gain something bigger," she says.

VLADIMIR RYS

THOMAS BUTLER

does in Liechtenstein to Formula One and I found the sport very interesting," she says.

At the time Kaiser and Peter Sauber were discussing the future of the team and were disagreeing. Kaiser believed it was necessary to move operations to England. Sauber said no. In the end Kaiser sold his shares and left the team. Peter Sauber, however, had been impressed by Kaiser's lawyer and asked her to join the team as head of his legal department.

"I accepted the challenge not really knowing what I was getting into," she explains. "I had a great deal of curiosity to know what behind the sport and how it all worked. It is a very fascinating world at many different levels. You have, for example, the goings-on inside each team and you can begin to understand what is happening when you see a whole department working on a tiny technical thing just to get that right.

"There is now the challenge of doing the same thing but with a lot more restrictions, so you have to see what you can do with the resources available. And then you have the next level, which is all about how you interact with the other teams, and nowadays how we work together to get what we want. It is not at all like it used to be when it was everyone for themselves."

The work took Monisha into contract negotiations with drivers, suppliers, sponsors, the FIA, Formula One Administration and the Formula One Teams Association. She rarely appeared in public on F1 radar screens, but gradually she became an accepted member of the very exclusive club of F1 decision-makers. She took time out along the way to have two children, a son who is now seven and a daughter aged four. This meant that she had to take a step back and look at how her life was organised and change her priorities.

"You have to have efficient organisation," she says. "It is very challenging to get the family side of life together. You have to take the time out to do it. I did have the luxury of not having to go to all the races and I do need to be at home weekends and at night as much as I can. One has to be flexible. I have a patient husband but he is not at home all the time, he has his own job, he is a lawyer. And he still works in Stuttgart.

"I have a good support system around me, starting with the kids themselves who know what I am doing and accept it. They don't feel I am leaving them alone and I have close contact with them when I am at the tracks. This year, I have been to all the races, but it is the first time that I have done that, but I have had a lot of

**"I DON'T CARE IF THE OTHERS ON TRACK ARE BOYS OR GIRLS, I JUST WANT TO BE THE BEST."**



## CASE STUDY 2 THE DRIVER

As part of the FIA Women in Motorsport Commission's partnership with Volkswagen 20-year-old Danish racer Maiken Rasmussen was this year selected by the manufacturer to race in the Scirocco R-Cup, having showed the most potential from a group of 11 women racers tested at the end of last year at Oschersleben in Germany. Introduced to karting by her father when she was 11, she found the competition tough as she rose through the ranks.

"Being pushed or treated really badly by other competitors is a thing I've experienced a lot in my years in karting, especially after moving to the international categories," she admits. "If it is because of being a girl and actually being fast, I don't know. But my fellow women drivers have exactly the same experience. That says a little bit about the taboo it is for some men to be overtaken by a girl.

"The only reason why the mentality has turned that way is because there are not enough women [in motor sport]," she adds. "I'm saying this because I know that I'm not the only girl who has experienced the 'unwelcome' feeling. It's something that is hard to do anything about, but I'm just sure that if there were more girls racing on a regular basis then the mentality would be different too.

"I don't feel like a little thin girl with big blue eyes sitting behind the steering wheel," she insists. "I'm a racing driver and I don't care if

the others on the track are boys or girls, I just want to be the best driver!

"I haven't experienced much resistance from people when I say that I am a racing driver. Most people outside the world of motor sport think that it's cool. What I have experienced is just that a girl in motor sport needs to be fast to be accepted. If fast, then you are cool, if not then you are just stupid for trying." Rasmussen says, however, that the criticism has tailed off somewhat since she made jump into racing cars proper.

"Since moving into racing cars I have not experienced being pushed off to the same extent," she says. "I have been really lucky that I have been given the chance to make the step into touring cars and develop my skills behind the wheel thanks to the Women in Motorsport Commission and Volkswagen Motorsport.

"It's my first year in a real racing car so I need to learn and nothing is done without practice and hard work. My dream is to become a professional racing driver in touring cars or GT and I will work hard and do everything that I can to reach my goal.

"I hope that we will see a woman in F1 someday," she continues. "I am sure that a woman can have as much talent in a car as a man. The only thing different is physical strength. That's a point that we can't do anything about and that's maybe the reason why there are no women in F1.

"In the States we see more and more women in IndyCar and so I think it is only a question of time before we will see a woman on the Formula One scene."

THOMAS BUTLER

## CASE STUDY 3 THE AERODYNAMICIST

As Chief Aerodynamicist for Formula One's Team Lotus, Marianne Hinson's task is to get the maximum aerodynamic performance from the team's wind tunnel programme in Italy, and from now on at the second Williams F1 wind tunnel in the UK, which Team Lotus has leased now that the Resources Restriction Agreement stops teams using more than one wind tunnel. Hinson grew up in a family passionate about motor sport. Her father is a software engineer but in his spare time he raced a Caterham and so she spent a lot of time around racing. She studied for a degree in astrophysics and only dreamed of one day being involved in Formula One. When she started making enquiries about studying for a master's degree she discovered that Cranfield University had a course focused on motor sport engineering and applied.

The tutors at Cranfield were well connected in the sport and as a result she was able to complete a thesis on F1 computational fluid dynamics, with the assistance of British American Racing.

Once her Master's was completed she applied for a job as a junior aerodynamicist at Jordan Grand Prix and suddenly found herself in F1, working for John Iley, who would go on to head the aero department at Ferrari, and later for Mike Gascoyne. After two years she was head-hunted to join Toyota F1 in Cologne, Germany.

She went along to see what Cologne was like and liking what she saw, spent the next five and a half years working for Toyota, as the team built up its performance.

The team bowed out of F1 at the of 2009, however, as the global recession bit and Hinson soon found herself working back at the old Jordan factory, now renamed Force India. She worked there for two years there before Gascoyne asked her to join him again at the new Team Lotus.

"My parents always encouraged me a lot," she says. "When I was at school I was always involved in very male-dominated subjects, such as maths and physics and it really did not make any difference to them when I decided that I wanted to go into motor sport. Actually I don't think it even crossed their minds to question what I was doing.

"I certainly did have a couple of sexist teachers early on. They thought it was amusing that a girl might want to study technology and science, but that was more from bemusement than anything else. At that point I just wanted to be an engineer and I was not set on being in Formula One."

**"THEY THOUGHT IT AMUSING THAT A GIRL MIGHT WANT TO STUDY SCIENCE."**



travelling in the past as I was going to Malaysia a lot in the days before BMW took over as we had a joint venture with the Malaysians. It is really just a question of how to organise it all."

What is it like being a woman boss in the F1 world?

"It's a great feeling," she says. "With the team I have never had any situation when I felt I was not being treated with respect, because I am a woman. Even with the other teams there were no real problems. There was someone early on who thought I was Peter's translator, but he was from a different generation and in that generation they did not understand it as much they do now. I do know, though, that he felt really bad about it afterwards, when he found out what I did.

"I have been around a long time now and they all know that when I come along I know what I am talking about."

When she was named managing director of Sauber, she was already established in the industry. She did not have to prove her credentials.

"In my new position most things weren't new for me," she explains. "I think in many areas you still have to work twice as hard because you are a woman in a man's world, and it is not only surroundings that will dictate that, it is also a question of your own targets, because you think that if you mess it up they are also going to say 'it is because she is a woman', so you make it difficult for yourself.

"I can see a lot of positions where it would be very difficult for a woman, but you can grow into it like I did and that makes it easier to be accepted. I think if a woman came into the top echelon of Formula One today as an outsider, she would have a really tough time. Having said that, even if the teams have not had many women in top positions, Bernie [Ecclestone] has always had a lot of women in important jobs around him."

Kaltenborn thinks that Formula One would benefit from more female input.

"I think it would be good to have a higher percentage of women," she says. "We sometimes see things differently to men and we know how to solve problems. Of course, one should not generalise but I think we think more pragmatically and are more willing to find a solution that helps all of us. I think we are more capable of giving up a little bit to gain something much bigger.

"We can look at a lot of aspects and see a bigger picture and bring everything together in a different way," she adds. "A lot of F1 people are focused only on their thing and cannot take that step back and look at the whole topic.

"But, maybe it would get ugly with two or more female team principals," she laughs.

She must feel very proud of what she has achieved?

"If I think about it in retrospect I do feel proud," she admits, "but I did not think of all these steps and plan for them to happen. I did not plan to be the first woman to be in charge of a F1 team."

Coming from India is also quite a breakthrough given that F1 is still just beginning its growth in Asia.

"You must remember that India had Indira Gandhi as Prime Minister back in the 1960s, she was one of the first women to have such a role, so there is a surprising level of acceptance when a woman pops up in an important position."

And what about the prospect of top-level female racing drivers?

"I don't see any reason why they cannot be as competitive as men," he says. "If you look at racing in the United States there are quite a few competitive women racers nowadays with the likes of Danica Patrick, Simona De Silvestro and others, and I really don't believe that there is any physical or mental reason why women cannot be successful."

"I believe that the problem is one of acceptance and getting the right support. In racing these days people are willing to accept that women can be competitive with the very best drivers, but very few women are coming up the racing ladder. I think this is because there is a point in their careers when they need the right kind of support and they are simply not getting it."

"That moment comes when they are trying to make the jump from karting - where women have long been quite successful - and getting into racing cars. That is a big step but when a boy says: 'I want to go racing', there is a certain amount of caution from his family, who may think that it is important to get a proper education and things like that."

"When it comes to a girl saying: 'I want to race', there is no support at all," she adds. "It is treated like something ridiculous and impossible and the girls do not have the means to fight against that attitude, because they need money to go racing and usually at that age money comes from the family or from friends of the family. They also need support as they try to prove themselves in cars and that is quite an intimidating thing as well."

"I am sure that if we can get over that problem there will be plenty of women capable of racing F1 cars, but that is obviously going to take some time to overcome the problems that exist."

# Can women race at the highest level?

Top level motor sport is often seen as a testosterone-fuelled boys' club in which women racers are scorned. So can a female driver ever make it to the top in F1? Two key players on the Women Motorsport Commission voice their opinion



MAGALI DELPORTE

**MICHÈLE MOUTON**  
**"On a circuit you are in direct confrontation with men and there is always the chance that, rather than letting themselves be beaten by a woman, the men will push you out!"**

Can a girl get to Formula One? Sure, if it is the right girl, with the right skills and the right opportunities. It is a simple truth that women do not often get a chance with a top car; they do not get sufficient testing. You need all of that but I am sure that a girl can do that.

That, though, is not the real question. The big question is whether a woman can win in Formula One and I am not so sure about that. Men and women are different. We are not built the same way and I think the biggest difference is in terms of emotions and sensibilities.

I never had a problem going at top speed with a 300ft drop right next to my car, but on a race track when you are doing 300kmh down a straight you feel lighter, more exposed, or at least I did.

I think that women have a stronger sense of self-preservation than men. It is an instinct that is more developed in the woman than in the man. And I think this is important when you come to that last hundredth of a second. A woman can work up to the top level but men will just do it. Boom. Flat out. I hope that I am wrong in my analysis and that it is not really like that but that is what I think.

The other important point is that circuit racing is different to rallying. On a circuit you are in direct confrontation with men and there is always the chance that, rather letting themselves be beaten by a woman, the men will push you out!

I have talked to Cathy Muller a lot about this and in her career this was a real problem. It was very frustrating for her. In rallying it is different. You are fighting against yourself and against the clock, so it is much easier. I never had any problems like that. I was able to build up my speed and get closer and closer to the top.

I don't think it is a case of men not recognising or appreciating what a woman driver can do, it is more basic than that. There is a point at which, when a man and a woman go head to head, it is easier for a man to push you off than to lose. I always joke about a day coming when I hear a man say that he

appreciates being beaten by a woman, but when I hear that I'll know that he is not really a man!

Michèle Mouton enjoyed a distinguished rally driving career and was the first, and so far only, woman to win a WRC round with victory in the 1981 San Remo rally. The following year she added wins in Portugal, Greece and Brazil to finish second in the championship. She has also competed in the 24 Heures du Mans and won the Pikes Peak Hillclimb in 1985. She stopped rallying in 1986 to begin a family but returned to the world of motor sport to organise the Race of Champions in 1988, a role she continues to fulfil. She became the first President of FIA's Women & Motor Sport Commission in 2010 and was also named Manager of the World Rally Championship earlier this year.



**FREDERIQUE TROUVÉ**  
**"There have been some successful women in karting, but when they reach adolescence at 13 and 14, there are a lot of other interests. Motor sport does not seem like a world that is easily accessible to women"**

I believe that women can become Formula One drivers in the future, but it is not going to happen overnight because there needs to be the right kind of support for them, the right opportunities. Above all, though, we need to find the right girl!

It is a good time to be looking, however, as the stakeholders of the sport are keen to see it happen as it would help them open up new markets.

So we need to find the right girl and then convince a team to create the right development programme around her.

There are a lot of sponsors who would be interested in women racing at the top level, so I think it could happen.

If you look in American racing you have Danica Patrick and Simona De Silvestro racing at the top level over there. They are doing a difficult kind of racing, in cars that are not easy to drive, so I don't believe there is any reason why it could not happen in Formula One.

I know Danica was in contact with Bernie Ecclestone sometime last year to discuss the possibility of driving in the series but the problem was that in her position she did not want to come to Formula One because she had more to lose than to gain and was at a different point in her career.

Meanwhile, this year we also had a test organised for Maria de Villota with a Renault F1 car, but in truth she is too far away from Formula One. So we must now try to think how we can create things that help women to get to the top level of motor sport in the future.

For me, the reason we have not so far not seen a woman make it in top-level motor sport is down to a number of different factors.

There have been some very successful women in the world of karting, but when the girls reach adolescence, at 13 and 14, there are a lot of other interests. Also, motor sport does not seem like a world that is easily accessible to women. It is part of our work with the FIA Commission to accompany them and show them that it is possible to have a career in motor sport.

As such, we need to change attitudes, not just inside the sport, but also with parents and also with the girls themselves. We have to show them what is possible and then perhaps more of them will try to make it.

At the moment the teams are not that interested because the men running them come from an era dominated by men. But it is going to happen in less than five years. I am sure of that. There are still a lot of girls in karting, although they are still relatively rare compared with the boys. The key is just to find the right one.

Frederique Trouvé has been the manager of the FIA GT, Touring Car and Truck Racing Commissions since 2001. She has a Masters degree in sports law and economics and in recent years has been involved with the Lausanne Network for Women in International Sport, an organisation that involves the International Olympic Commission and a number of international sporting federations based in Switzerland. This work inspired her to propose the Women & Motor Sport Commission, as part of her role as the FIA's Commission Manager. 🏆



# THE NEED FOR SPEED

They might have been usurped as the location where ultimate land speed records are broken but the Bonneville Salt Flats remain the spiritual and actual home of speed attempts, as the FIA's Land Speed Records Commission found out on a recent visit Photography by Erik Seo





032 “It’s the first time I’ve seen smoke in the cockpit,” George Poteet says matter-of-factly, after bringing his 2200 bhp Speed Demon streamliner to a premature halt following an all-too-brief scorch down the Bonneville Salt Flats - at close to 400 mph.

“I’ve been on fire before,” he adds, still nonchalant. “But I’ve never seen smoke in the cockpit. I guess it’s oil from a turbo, or something... The salt was great up until then, like glass. I put it in third and it really liked it! I’ve no idea of the speed, but it wasn’t fast enough and it wasn’t as fast as it was gonna be...”

The incident is just another blip on the radar for George, 61, stocky, greying, a veteran of such things. Another of Bonneville’s hurry up and wait lessons. If legendary pilot Chuck Yeager ran here, this would be him. “I’ve” comes out as “ah’ve”, “oil” as “awl”. Poteet’s homilies are delivered in a down-home drawl that would do the iconic flier proud.

Speed Demon engineer Ken Duttweiler listens to his friend’s comments on their stricken machine, and chuckles wryly at the man from Tennessee. “We gotta retrain him from the tractor and the long plough!”

“That was a good tune-up,” chips in Mike Cook, whom the FIA’s Land Speed Record Commission honoured the previous evening in a Montego Bay

Hotel finger-food gathering laid on by Commission chairman Dennis Dean, an ex-Navy captain who describes himself as “a retired ship driver” but who actually commanded the USS William V Pratt during Desert Storm, and the USS Chosin, a Ticonderoga-class guided missile cruiser generally believed to be the most powerful class of warships in operation after aircraft carriers.

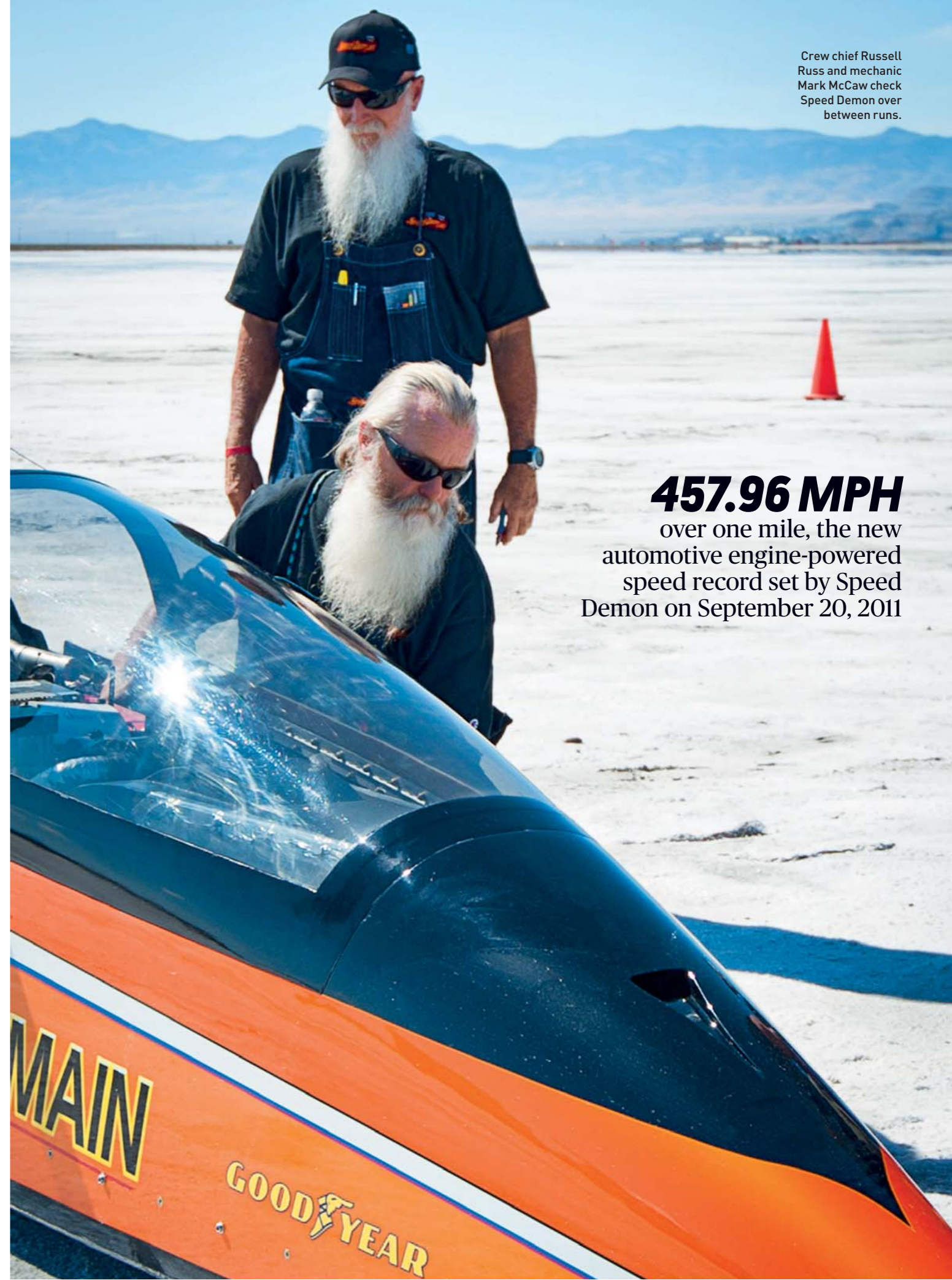
Cook is a prince of a man, steeped in Bonneville history. His father Doug was a great drag racer (‘rivals find Cookie won’t crumble’ is but one headline in the scrapbook Mike has brought along in a pick-up that is white more because of its coat of salt than its original paint job). No mean racer himself, and the father of Mike Cook Jnr, who drives a beautifully prepared 252 mph contender in the Highboy class, he’s the man behind the FIA-sanctioned Mike Cook Shootout that’s the subject of our visit.

We haven’t seen each other since the JCB DIESELMAX programme in August of 2006, having met the previous month at Russ Wicks’ successful NASCAR speed record run at Bonneville, but his greeting is warm and full of the friendship that is the hallmark of this band of racers. They’re here not because of the glamour, the reflected glory or the chance of bumping into the occasional A or D lister, but because they want to be



“I’ve no idea of the speed, but it wasn’t fast enough, and it wasn’t as fast as it’s gonna be.”  
George Poteet,  
Speed Demon

Crew chief Russell Russ and mechanic Mark McCaw check Speed Demon over between runs.



**457.96 MPH**  
over one mile, the new  
automotive engine-powered  
speed record set by Speed  
Demon on September 20, 2011



Mechanics prepare Charles Nearburg's Spirit of Rett streamliner for another run. Nearburg boosted his 2007 A-II-10 class record of 359.245 mph with an average speed of 366.374 mph.



here, to indulge their passion and follow their dreams. Cook is a great dream maker, frequently renting out fast cars so that the uninitiated can make their debuts on the salt. Supersonic record holder Andy Green's wife Emma - 'Mrs Bonneville' - has never forgotten her rookie ride here a few years back when she pushed a Honda to within a few mph of its class record, thanks to Cook.

Touchingly, Cook has arranged for each of the attending Commission members - Dean; vice president Swede Bo Swaner; the author, representing the UK's MSA; legendary timer and record-breaking sage Dave Petrali, whose father Joe succeeded Art Pillsbury in the role back in 1960; Jost Capito of Ford, representing the US manufacturers; Shinichiro Yoshigawa of Subaru, representing the Asiatic manufacturers; Pierre Caporal of the FIA; and accompanying FIA Senate President Nick Crow who is also President of ACCUS, the US ASN, to be presented with plaques commemorating the visit.

The Commissions' trip to Bonneville is Dean's brainchild, but far from being a jolly it has a serious purpose: to enable those members who had not visited previously to gain first-hand experience of the atmosphere and the passion of the racers. In the past the FIA has been criticised - rightly - for delays in getting record holders their speed certificates. No case was less forgivable than that of legend Don Vesco. By the time the certificates for his career-topping wheel-driven record had finally been prepared, he had succumbed to cancer.

Things have changed dramatically since then, and the current Commission takes a different view of such matters and is in Utah to learn more and to assure the racers that they are appreciated. Events such as the Southern California Timing Association Speed Week, which was first staged after lengthy negotiations with the BLM back in 1949, or Cook's FIA-sanctioned Shootout, are their equivalent of the Monaco Grand Prix or the Indianapolis 500. These are their Holy Grails.

Of course, the Commission's remit ranges far beyond Bonneville. Its role is about making sure that nothing will be left to chance when Andy Green finally pushes Bloodhound SSC through the 1000 mph barrier sometime after 2013. It is the keeper of the flame lit at 39.24 mph in 1898 by Count Gaston de Chasseloup-Laubat. But it's also as much about protecting the integrity of less esoteric records set all over the world and at all sorts of class levels, as well as fostering interest in this oft-underrated branch of motor sport and making it as

easy as possible for contenders to have their day in the sun.

It exists to examine and assess every FIA-ratified record attempt, in all categories, to issue precise guidelines and then ensure that they were adhered to before a record is approved or rejected. Its role is thus to make sure that competitors, and their relevant ASN, play by the rules.

It is also there to provide strategic direction for land speed record rules, and in Bonneville one of the hottest topics the racers want to discuss is the one-hour turnaround time allowed between FIA record runs; this starts when the timing beam is cut on the first run, and ends when it is cut as the vehicle exits the measured mile or kilometre on the return run.

Betty Burkland, widow of legendary Bonneville figure Gene Burkland and mother of Tom, who set the fastest-ever piston-engined terminal speed mark of 450.225 mph with their Burkland Special in September 2000 (the mark that Poteet beat in the week of the Commission visit), leads a strident chorus pleading for a two-hour period. Terry Nish, whose family-run Nish Streamliner, is another 400 mph contender, adds his voice.

It's a subject the Commission has discussed at great length in the past and the case for an extension is acknowledged to have been weakened by the fact that the ThrustSSC and JCB DIESELMAX teams, with arguably more complex machines, were able to complete safe turnarounds well within 60 minutes. But the subject will doubtless be discussed again in light of the conversations and the evidence gathered on site. And what a site it is.

The Bonneville Salt Flats are other worldly. Imagine a place where you can actually see the curvature of the earth. Where you can double or treble every estimate of distance you might make. Where you can get sunburned up your nose - or up the leg of your shorts - because of the reflection of the sun's rays from the baking white surface. It's a place where life falls into very different - and insignificant - perspective. Where speed seekers such as Poteet and Ron Main come to live out their dreams.

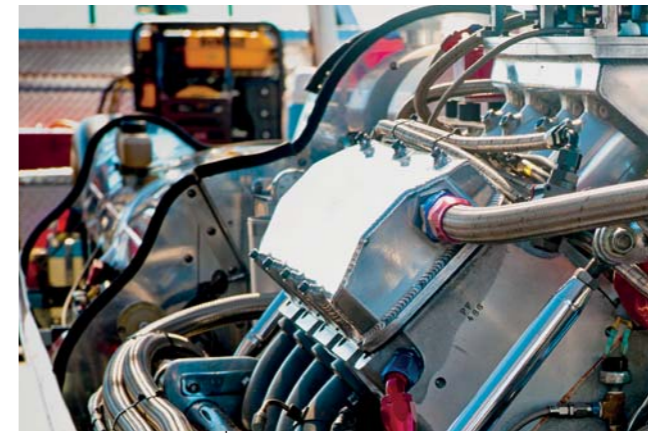
The salt flats were named for the explorer Captain Benjamin Louis Eulalie Bonneville, and stretch for 30,000 acres close to the Utah/Nevada border. Today, they are a 110-mile drive west on Interstate 80 from Salt Lake City airport, but they were once infamous as the place where the Donner-Reed migrant party, seeking a shortcut to California in 1846, suffered privations that forced them to resort to cannibalism.



The FIA-sanctioned Mike Cook's Bonneville Shootout in September saw a variety of records broken. George Poteet (top left) landed a new record for automotive engine-powered machines with Speed Demon (middle right); Mike Nish drove his Royal Purple streamliner (middle left and right) in pursuit of the FIA's Category A-II-9 record, while Richard Assen (top right) set a new FIM Class II, Type II record of 261.240 mph.



Land speed records don't just mean turbofan-powered machines such as Andy Green's ThrustSSC, but encompass a wide array of power types and vehicle configurations. During the LSR Commission's visit to Mike Cook's Land Speed Shootout, George Poteet clocked the fastest speed ever recorded by an automotive engine-powered vehicle (457.964 mph over a mile). Also making record attempts at the event was the Nish Motorsports Purple Royal Streamliner (pictured this page). Run by Mike Nish and his family, the current Royal Purple car last year broke the land speed record for its class with an average speed of 285.305 mph over one mile.



Promoter William Rishel was the first man to appreciate the salt flats' potential while scouting a cycle race course from New York to San Francisco in 1896, but international fame came in the 1930s through the efforts of Salt Lake City endurance record setter Abner 'Ab' Jenkins and his Mormon Meteor.

Tales of the firmness of the surface attracted Sir Malcolm Campbell, who had been desperately frustrated in March 1935 to find that significant modifications to his Bluebird added only four miles an hour to his 272 mph record of 1933 because of the wheelspin he encountered on the sands at Daytona Beach. On September 3, in the same car, he became the first man to top 300 mph with a speed of 301.129 mph on the firm salt, and a new era dawned.

He was succeeded later that decade by fellow Britons Captain George Eyston in his twin-engined, eight-wheeled Thunderbolt and John Cobb in his similarly twin-engined but four-wheel-drive Railton Special, as they duelled the record closer to 400 mph.

Meanwhile Wendover, the closest town, became famous during World War Two for another reason: Out by the airfield lies Atomic Hangar 1831 from which Colonel Paul Tibbetts and the 393rd Bombardment Squadron of the 509th Composite Group prepared for the historic Enola Gay mission to bomb Hiroshima. The hangar remains, and was used as a base by Donald Campbell's Bluebird CN7 campaign in 1960, and later by Thrust2 in 1981, and the Honda F1 effort and JCB DIESELMAX in 2006 to earn a more benign place in history.

Until 1982, with the exception of Campbell, who fatefully went to Australia's Lake Eyre after his crash at Bonneville wrecked Bluebird in 1960, the salt flats became the choice of all record seekers. In an explosive outbreak of landbound jet warfare in the mid-Sixties, Art Arfons, the 'junkyard genius of the jetset' fought rival Craig Breedlove; Green Monster versus Spirit of America. Each broke the record several times, as Breedlove became the first man to average 400, 500, and 600 mph. But their successes were fraught with the same sort of risk that killed rivals Athol Graham, who crashed his City of Salt Lake in 1960, and Glenn Leasher, whose Infinity jetcar rolled and exploded two years later.

At the end of his 526 mph record in October 1964, Breedlove lost his braking parachutes, burned out his wheel brakes at 400 mph, sheared a telegraph pole and nosedived into a brine lake. His real-life drama placed him firmly ahead of Clint Eastwood and Steve McQueen



“It was a long, miserable ride to the hospital in Salt Lake City but I was happy that I was still around to feel the pain.”  
Motorcycle LSR Holder  
Rocky Robinson

in the all-time cool stakes as he swam ashore, climbed a bank and, while terrified friends and crew rushed to greet him, raised his arms aloft and declared: “For my next trick... I’ll set myself afire!”

Two years later, seeking to regain his record from Breedlove, Arfons crashed his Green Monster at more than 600 mph when a wheel bearing seized. He was able to walk away after scattering his car over miles of the salt.

“When I’m at Bonneville I can’t wait to get away,” Arfons said. “But once I’m away, I can’t wait to get back. Bonneville is like a woman you keep quarrelling with but can’t stay away from.”

In 1970, American Gary Gabelich went faster still in Reaction Dynamics’ rocket-powered Blue Flame, ushering in a new scientific era with 630.388 mph in the most ecologically benign Land Speed Record car of all time. But his remarkable achievement marked the last time that Bonneville yielded the outright land speed record.

After struggling at the salt flats on metal wheels in 1981, and being rained out in 1982, Noble relocated to Black Rock Desert. His 633.468 mph there in 1983 made the Nevada play desert the new Mecca of speed.

Bonneville, however, remains the ideal venue on which to challenge for wheel-driven honours. Vesco took the outright record with 458.440 mph in his Turbinator on October 18, 2001, while Rocky Robinson regained the motorcycle land speed record at 376.363 mph at the Cook Shootout on September 25, 2010.

Russ Wicks’s 220 mph NASCAR record and Andy Green’s 350 mph mark with JCB DIESELMAX came in 2006.

“I wanted to run there,” said Green of his achievement, “because until I had set a record at Bonneville I didn’t feel like I was a proper record breaker.”

The FIA’s Land Speed Record Commission gets to grips with the agenda at its annual meeting, this year held for the first time near the Bonneville Salt Flats where members had the opportunity to get up and close and personal with the unique environment and its legendary ambience, including Dave Petrali’s timing truck (left).

This from the only man ever to have travelled at supersonic speed on land while establishing ThrustSSC’s 763.035 mph record back in 1997.

The salt usually floods in November, and it takes until around June for it to dry out. As the water evaporates, the action of the wind creates a flat, hard surface often perfect for racing.

This year the southern end of the course is nowhere near as good as the salt was when the author first visited in 1981 with Noble’s Thrust2 endeavour, or again, twice, in 2006. Now it’s brown and muddy, like it was in 1994.

It is one of the great environmental scandals of our age. The extraction of the valuable minerals from the surface has left the crust of salt thin and enfeebled. While potash mining companies boast in prospectuses of extracting more salt in 2009 than ever before, the Bureau of Land Management (which gave Noble a hard time on environmental issues when he relocated to Black Rock and which no longer allows Bonneville racers to lay down a black line for down-course sighting) has been accused of sitting back and counting the mining fees.

It’s been left up to the racers themselves to organise a Save the Salt campaign, where restorative brine is washed back on to the flats annually, in an effort to preserve their raceway and one of the world’s great wonders.

But for all its muddy and wet external appearance at the pit end, this year’s course yields Poteet 395 mph by the four-mile on that first aborted run, with another mile left, after he starts from the northern end. Later that day he beats his own 436 mph best, albeit only one-way before transmission problems intervene, with an all-time high piston-engined run through a mile at 442.854 mph. Then he beats that with an incredible one-way 457.964 mph in the mile (exit speed

462.345 mph!), before more driveshaft problems call a halt. The next day the 347 cu.in engine eats itself.

Meanwhile, historic racer Charles Nearburg ups his 2007 A-II-10 class record of 359.245 mph as he averages 366.374 mph through the mile in his superb Spirit of Rett streamliner, named after his son who succumbed to cancer.

Sunday morning’s Commission meeting has little to do with such matters, however, reflecting its broad range of responsibilities. Over the course of five hours myriad topics are discussed, ranging from the safety protocols being adopted by Noble’s upcoming Bloodhound SSC programme in relation to its handling of the high-test hydrogen peroxide for its supplementary rocket motor, through debate over nuances in recent record attempts by Volvo, an electric-powered BMW, a Croatian kart and the precise definition of a hybrid vehicle.

The visit is adjudged to have been a significant success, both in public relations and human bonding terms, and those Commission members who are salt rookies leave with a deeper insight into the whole record breaking genre and why it is so important that the FIA provides a recognised and respected structure capable of ratifying and validating success globally when records are broken.

Bonneville is a magical, spiritual and oft-times dangerous place, which has seen triu mphs and tragedies in equal measure. It has yielded Robinson three motorcycle records, but sent him pencil-rolling his Top-1 Ack Attack machine at just 80 mph the Monday of our visit. He was badly beaten up, suffering a damaged shoulder, but thankfully Robinson was not more seriously injured.

“It was a long, miserable ride to the hospital in Salt Lake City,” he reported, “but I was happy that I was still around to feel the pain and as Burt Munro would say, ‘I lived to tell the tale.’ I can live with that.”

The camaraderie of the racing community sees it through such incidents. Like everyone else, Mike Cook relies, at such times, on dry or black humour to defuse tension, but the true inner man peeked out as he watched Poteet accelerating on that 395 mph run and gave a quiet private commentary of the run, just as he would have had it been Mike Jnr wheeling his Highboy down the long white highway.

“Ease it down, George, don’t push it,” he counselled, sotto voce, as if reciting a universal prayer for Bonneville racers. “Ease it down, that’s it. Go buddy!”



# REINVENTING THE WHEEL

The Caterham Super Seven might be best known as an amateur racer's track-day plaything, but for the company's new owner **TONY FERNANDES** it's the key to bringing affordable fun to the masses in Asia, and a whole lot more besides...

Caterham boss, Tony Fernandes, who intends to bring affordable sports car fun to a whole new market in Asia.

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# IN

the automobile world not too many people know much about Tony Fernandes. A Malaysian aviation magnate, he has been making a name for himself in recent years with a rapidly-expanding business empire that now includes a Formula One team, a Premier League soccer club and even a niche sports car company. These, though, sound like the traditional playthings of the über-wealthy dilettante: fast cars, football and fun. The question is, then, is there any method in all of this apparently extravagant madness? Fernandes is sure of it. Very sure.

At heart he is a salesman - and a very good one. He says this is thanks to his mother, a Malaysian entrepreneur, who made a fortune by introducing Tupperware to the country. "She could sell ice to an Eskimo," he says. His father was an Indian doctor.

Fernandes spent his first 12 years in Kuala Lumpur, at which point his parents sent him to boarding school in Britain. He rarely went home for the holidays as flights were simply too expensive and the budding entrepreneur dreamed as a teenager of having his own airline.

He stayed in England for his university career, graduating from the London School of Economics in 1987. He started his professional career working as an auditor for the Virgin Atlantic airline,

but his passion was music and he soon moved within Richard Branson's empire, becoming a financial controller at Virgin Records.

Having made contacts in the business he was, while still in his 20s, hired by Warner Music Group to be the managing director of its Malaysian operations and was subsequently promoted to the post of regional vice-president of WMG. However, dismayed by the wildly-inflated market capitalisation of AOL, the internet company that took over the much bigger WMG in 2000, Fernandes lost faith in the industry and began searching for a way out.

Fernandes was 36 and wanted to do something else. A believer in what he calls "big dreams", he decided to buy the debt-ridden AirAsia airline from the Malaysian government-owned investment company DRB-Hicom. His dream was to turn the business into a low-cost airline and having worked for Virgin Atlantic and seen the success of Stelios Haji-Ioannou, who had been at college with Fernandes before launching Easyjet, he reckoned he could do the same thing in Asia.

Market research revealed that if he could half the price of tickets, an airline would strike gold, with millions of new customers across Asia who could then afford to travel - and wanted to.

Fernandes mortgaged his house, started a company called Tune Group Sdn Bhd, and bought AirAsia for a single symbolic Malaysian ringgit (about 30 US cents). The receipt he received is a source of great pride for him today, and sits in a display cabinet at his headquarters in Kuala Lumpur.

His chances of success were slim. He had bought two old Boeing airliners and \$11 million of debt and within a few days the airline business was turned upside down by the September 11 attacks in New York. In the western world, airlines hit trouble but in Asia Fernandes was able to cut the cost of operations because of the downturn in the industry and was able to hire experienced staff, who found themselves looking for work.

As predicted, demand was brisk and within 12 months AirAsia had broken even and paid off its debts. It grew rapidly, soon eclipsing Malaysia's national carrier, MAS.

Its growth since has been spectacular, to the extent that in the summer of 2011 - 10 years after he had signed on the dotted line for the company - AirAsia reached the top of the pile in the aviation world, placing the largest commercial aircraft order in the history of the industry, with a request for 200 Airbus A320s over the course of the next

five years. It was swiftly followed by the announcement that the Malaysian government had agreed to let Fernandes take over 20 percent of MAS.

Fernandes realised early in the development of the business that the rapid economic growth in Asia had created a huge opportunity for an entrepreneur who had products that the new consumers of Asia would want to buy. As the airline grew, Tune began to diversify into other product lines that could be sold to newly Internet-savvy consumers of Asia. Cutting out the middle men and doing much of its business on the Internet, Tune opened hotels to provide affordable accommodation for its customers at AirAsia destinations. Soon there were Tune pre-paid mobile phones and then Tune Visa cards and affordable insurance protection, all provided without frills and hassles.

"We have fun coming up with great ideas for fun products and services that can change lives everywhere," he says.

Tune also dabbled in sport, seeing it as a way to promote the group's other businesses, while also making money and engaging with, and providing entertainment for, customers. It was with this in mind that Fernandes established the ASEAN Basketball League, which was soon sponsored by AirAsia. He then did a deal to revive the Team Lotus name in Formula One, the celebrated car brand being owned these days by Group Lotus, a subsidiary of Malaysia's Proton government-controlled car company. Indeed, it is often hard to keep up with Fernandes' progress, which now includes his most recent purchase, Queens Park Rangers soccer club in London.

Progress wasn't entirely smooth, however. Much-publicised wrangling over the Lotus name in F1, with Group Lotus trying to take back the name (and recently succeeding), led to Fernandes seeking alternative assets in the motoring world and the April announcement that he and his Tune Group partners had bought the British niche sports car company Caterham Cars. Fernandes was going into the motor car business.

"Apart from my passion for Formula One, and the fact that I loved doing something with the Lotus name, the reason I got into the sport was that I wanted to get into the car business," Fernandes explains. "People who follow F1 sometimes forget that I am already in the transportation business with my airline. What they don't realise is that I am interested in the automobile business as well."



**"Asian consumers can afford a bit more, and with their disposable income going up, small, fun, sports cars will become affordable."**



"It is no great secret that Asians like the thrill of speed, but up to now they have never been able to afford much. Their passion has evolved as they have been able to afford motor scooters, then motorbikes and, more recently, smaller cars such as the ones that have been produced by Proton and its [Malaysian] national rival Perodua.

"But now the new Asian consumers can afford a little bit more and I believe that with their disposable income going up, small, fun, sports cars will now become affordable. And that's why I am involved in the sport."

Fernandes makes no claims about wanting to save the world. He wants to make money, but he also believes that the best way to achieve that goal is to drive forward cost-effective green technologies and to provide mobility options that simply do not exist in Asia. He believes that by democratising automotive technology, he can build another profitable business. It helps that his business success in Asia has made him a very popular and much admired figure - and one that the car manufacturers are keen to associate themselves with.

Fernandes himself remains down to earth and is rarely seen in anything other than the uniform of his F1 outfit or jeans and a t-shirt. He is not very keen on jackets or ties but always wears a red AirAsia cap.

"People recognise me because of the cap," he says. "If I take it off, people see me as just another Indian guy."

What is fascinating is that European car companies such as Renault recognise the value of Fernandes for the Asian market. The agreement between Team Lotus and Renault this year for a supply of F1 engines, was one that the French company wanted in order to help its Asian expansion plans. Fernandes is a name that the company wants to be associated with.

In the summer Fernandes stunned the F1 world when he announced a major sponsorship with General Electric (GE), one of the strongest brands in the world. Rival teams, who have chased big brands for years, concluded that such an agreement must be part of a \$600 million aero-engine deal. In short, a massive 'B2B' deal. It was ...but for Fernandes it is much more.

GE is one of the world's largest companies and has long been a market leader in electrical systems, power generation, lighting, automation, imaging, motor technology, locomotives and jet engines. It is also involved in media and is a major player in the world of finance.

Tony Fernandes' interests include EPL football club, Queens Park Rangers, which he bought in August, but it is motoring and aviation that remain his major concerns, via Caterham and AirAsia.



In 2000 the company's legendary CEO of 20 years, Jack Welch, retired. His replacement was named as Jeff Immelt and under his leadership GE has refocused some of its activities, notably in relation to alternative energy.

In 2005, Immelt launched a green-focused research and development programme called 'Ecoimagination'. This has used up more than \$5 billion in investment but the company says that it has generated \$70 billion in revenues in

that period. This has been so successful that GE last year decided to double that investment for the next five years. The programme has enabled the company to reduce its greenhouse gas emissions by 22 percent since 2004, and its water usage by 30 percent since 2006.

As part of the project, GE has committed itself to trying to help create a total electric vehicle ecosystem, which will range from more efficient electricity generation, better transformers and efficient charging stations to developing cutting-edge technology for the vehicles. This includes heavy investment in battery technology and hybrid systems, with the goal being to produce vehicles that can travel farther, perform better and release fewer emissions.

It is a business proposition Fernandes is keen to be involved with. Not long after his deal with GE had been inked, Tune Hotels announced a deal to use GE's knowledge and expertise of low-cost operational modelling, sustainable development, cost-saving infrastructure, energy efficiency and green technology to create properties that are as efficient as possible. At the same time, GE is looking to Formula One to learn more about how fast-moving engineering

businesses operate and to see what technologies can be useful. It also wants to use the relationship to raise its profile in the automotive world.

"I have always said that Formula One should be as closely related as possible to the car business and that was one of the reasons that I got involved in Caterham Cars. It is not going to be a mass-market business but we hope that we will work with partners who are involved in the mass markets so that some of the technology that we have in F1 can flow down to the mass market consumers.

"At the moment this kind of technology is arriving in the super-luxury sports car markets, such as with Ferraris, McLarens and high-end Porsches, but we think we can do the same in the affordable sports car bracket. This is the space that Lotus founder Colin Chapman originally created with the Lotus Seven, which is the car on which the Caterham Super Seven was based."

When Chapman's ambitions moved him towards more luxury cars in the 1970s, he decided to sell the rights to the Seven to Graham Nearn, who had been one of his major dealers, and his Caterham Cars organisation took over manufacturing and development of the car. This resulted in the Caterham Super Seven, which continues to sell well despite having been in production for 50 years.

"We will try to make lightweight sports cars that are still affordable but that will incorporate as much F1 technology as we possibly can," says Fernandes. "And we will take our experience in biofuels from the aviation industry and put that in there as well. So, in effect, we are trying to see whether we can take technology out of other interests and monetise it by making it available to a much bigger

## SEVEN UP

In early November 2011, Fernandes and his partners in Team Lotus announced that they had amicably settled their legal wrangles with Group Lotus and, having days earlier received the approval of the FIA to change its name, the team would go forward in 2012 as Caterham F1. Fernandes, though, admits that his interest in Caterham was something of a happy accident. "All the messing around with Group Lotus put paid to our initial plans of using F1 to build a car company and to rebuild a great brand. I was looking around and searching for something and I came across Caterham," he says. "I started going to websites and stuff and then weirdly Team Lotus Chief Technical Officer Mike Gascoyne's PA rang through to me and said 'the CEO of Caterham wants to see you'. And I thought: 'Wow! There is such a thing called fate!'"

I thought, here's a company that's got a great heritage," he adds. "It's a good brand, an undervalued brand, and one that has lots of potential for growth. It's a clean company. It's debt free and there's no massive requirement for new capital. It reminded me of AirAsia, which we took from a two-plane operation and built into a 100-plane one. We can do the same here."

With the future of Caterham now mapped via F1, Fernandes is convinced that the company has good potential beyond the little company's European heartland. "It's a phenomenal brand - one that has great history and heritage and potential to grow. And it has been under-exploited internationally. It's a niche brand, yes, but it has a lot of goodwill attached and has great potential. The similarity between Caterham and AirAsia is uncanny."

audience. There are millions and millions of people in Asia who watch the racing on television, but they cannot experience the thrill or the technology. We want to give them that opportunity."

And GE is very much part of the idea. "Formula One has definitely not sold enough of its expertise to the car industry," Fernandes argues. "We can do it better. Formula One is like a bridge between aviation and the automobile and we will exploit that in every way we can. In aviation, for example, we now have the Boeing 787 Dreamliner, which is highly fuel-efficient and the first major airliner to use composite materials for most of its construction. Many of these processes are fully automated, so there is a fantastic link to be looked into there.

"There is so much collaborative potential," he adds. "GE has tremendous technology in all things electrical: in batteries, in hybrids, charging systems and so on. They have billions and billions of dollars invested in research projects designed to save fuel, so there is a lot of technology that we think we can put into our cars, and into aviation.

"At the same time there is stuff we are doing in terms of energy-recovery systems, aerodynamics and lightweight materials that GE is interested in, so there will be technology flowing both ways, which may be helpful for them to develop hybrid systems, batteries and better solutions for the future.

"I think electric cars are cool," he smiles. "I own a Tesla and I love it. I would drive it every day if I could but the big question is whether fully electric cars are feasible. If recharging is easy electric cars will take off, I have no question about that. There is a mass market there, but at the moment there is still a question about charging. Is it feasible to create the infrastructure?"

"It is fairly easy to come home in the evening and plug in your car - if you remember - but there needs to be a way to do that during the day and on longer journeys. The beauty of electric cars is that they are cleaner and cost less. It is the way forward."

Fernandes makes no claims of being an engineer. He just asks questions and looks for solutions.

"The other day I asked the guys in the Formula One team whether we could take a Kinetic Energy Recovery System (KERS) and put it into a small sports car. Everyone looked at me oddly but they must be able to mass produce these things. OK, maybe they will not recover as much as they can in Formula One but they must be able to do something. We are really going into the unknown. But that is part of the fun!"



# THE ROAD AHEAD

## [AND BEHIND, AND TO THE SIDE]

Safety on the road is moving away from crash mitigation and, thanks to ever more intelligent electronics, towards crash avoidance.

The buzzword doing the rounds of the automotive world at the moment is 'e-safety'. Increasingly, the industry is looking to overcome safety issues with electronic solutions. Materials science still plays its part but after three decades of very successful development the law of diminishing returns has set in. More intelligent crumple zones, survival cells and better welding technology still push car safety forward but they are mature technologies: the giant leaps of the 1980s and 1990s have been replaced by shuffling refinement in the 21st Century. Moreover, they solely focus on crash mitigation. The area in which car safety moves forward most swiftly is crash prevention - which almost exclusively relies on sensors, algorithms and on electronic vehicle control systems. These days E-safety is where the engineering action is.

A recent study carried out across 10 European countries by the FIA-supported e-Safety Challenge found that over 80 per cent of respondents had found themselves in a dangerous traffic situation at some point, but that only half of those respondents were now willing to pay a premium for e-safety technology.

"The study shows that familiarity with these life-saving technologies is on the rise but Europe's car buyers are still not

purchasing e-safety systems in sufficient number," commented Werner Kraus, President of FIA Region I. "Thousands more lives could be saved if these systems were widely used."

Electronic safety is not a new automotive science. ABS and electronic stability control have achieved ubiquity in the developed world and are making significant inroads elsewhere but still, these are systems used when a car is already in a tough spot. The latest generation of e-safety technology is aimed at ensuring the driver doesn't get into trouble at all.

Dr Thorsten Wey is Ford of Europe's driver assistance engineering supervisor. In recent years Ford have won numerous Euro NCAP accolades for bringing accident-avoidance technology to the mainstream, moving it down from the exclusive environs of the premium sector. The latest model Focus and its platform siblings have been breakthrough models for Ford, introducing a raft of e-safety technology to the mass market.

"From our perspective the step we have taken is to move from passive safety into the active safety arena," confirms Wey. "The vehicle needs to know what is happening around it. To do this we have introduced a variety of sensors, which are based on radar, on laser and on cameras. In essence, their job is to look at the environment and traffic around the vehicle from the front, sides and rear."

The third generation Ford Focus, launched at the beginning of this year uses a front-mounted camera to read road signs and relay information to the driver - for example if the car is going excessively fast.

At night the car will automatically choose to activate its high-beam headlights when appropriate and cut them off when it senses other road users. Blind spot detection will warn a driver to surrounding dangers when a manoeuvre is being attempted. Radar technology will determine unsafe closing speeds, warn the driver and, if necessary, begin braking. At lower speed, for example in slow-moving city traffic, laser range-finding is capable of fully autonomous braking.

Taken together the technologies serve to move electronic systems away from emergency assistance and into the realm of everyday driver aids, albeit driver aids that come with a sizeable optional extra price tag.

While car buyers have historically been willing to pay premiums for comfort or infotainment features, rarely has safety been a big seller as →





**"THOUSANDS MORE LIVES COULD BE SAVED IF THESE SYSTEMS WERE WIDELY USED"**  
**WERNER KRAUS, PRESIDENT, FIA REGION 1**

informed of what OEMs are working on. Is [the new technology] as good as it should be? Is there evidence in accident statistics that it reduces fatalities? If the evidence suggests the new technology works they reward it and maybe soon make it part of the protocol for the five stars."

For the moment, Ford often brings new e-safety technology to market via the backdoor. "We try to bundle the technology," explains Wey. "For example, the radar sensor has two functions: as a comfort feature it gives you adaptive cruise control (ACC) but it also measures the relative speed to the vehicle in front and in an emergency situation will do some warning or intervention. The customer is buying the comfort function and getting the safety functionality for free."

As with any automotive technology, e-safety products benefit from economies of scale, traditionally beginning life in low-volume, high-cost segments, then appearing as optional extras in the mass market before finally achieving market saturation. The radar and laser technologies that lie at the heart of crash prevention are no exception.

The Ford Focus uses an electronic scanning radar (ESR) developed by Delphi Automotive. Despite the company only launching automotive radar technology a little over a decade ago, the model used by Ford is already a sixth generation device, with each generation offering greater functionality or lower cost. Sometimes both.

"We've been active in the radar business since 1999 when we launched our first adaptive cruise control systems but the business grew to expand the features of those base radars to add safety-based systems on top of convenience features," explains Mike Thoeny, director of engineering at Delphi Electronic Controls.

"The first safety systems were forward collision warning, alerting the driver to take action. Eventually, the radar become combined with vision-based systems in what we call 'sensor fusion', combining radar and vision data to give the vehicle a very accurate view of the situation in front of it, allowing it to not only warn the driver but also apply the brakes autonomously, after the driver has been given the chance to do so and, for whatever reason, has not."

ESR followed a predictable path, coming onto the market in the premium sector before trickling down to mass market models. In the mass market Ford of Europe first used it in the D-segment Mondeo before the Focus.

"The object with automotive technology is always to bring it down into cars for the masses - cars that everyone can afford," says Thoeny. "In order to make that happen you have to bring the cost down. ESR is a high-performance radar at low-enough cost that it can really start to drive into the mass market, and allow us to achieve the greater good of these safety systems, reaching a point where enough of these systems are out there that you start to see a reduction in fatalities, a reduction in accidents."

Beyond the current state of the art, Delphi's next generation focuses on greater integration of e-safety features, carrying forward their idea of 'sensor fusion'.

"In 2014 we're going to be launching a fusion of radar and camera that - creatively - we're calling RaCam," reveals Thoeny. "Today's systems have a radar housed in the grille or behind the bumper, a camera mounted in the windshield behind the rear-view mirror and a controller that does the fusion functions somewhere else in the car. RaCam takes those three boxes and combines them into one. It's going to simplify packaging and also the harness requirements and drive overall system cost down significantly."

**"WE HAVE A VISION OF ZERO ACCIDENTS AND ZERO FATALITIES IN THE FUTURE."**  
**MIKE THOENY, DELPHI**



**"THESE TECHNOLOGIES HAVE HIGH VARIABLE COSTS. YOU CANNOT MAKE THEM STANDARD."**  
**DR THORSTEN WEY, FORD**

As a general rule radar works either as a long, thin beam or in a progressively shorter, wider field. At long range Delphi's ESR scans almost 200m in front of the vehicle, but has a simultaneous mid-range mode also, looking at a 90° section of road in front: while the long-range sensor detects blockages and slow vehicles ahead, the medium range can sense events such as other cars cutting into the lane. Both systems alert the driver to potential danger or apply the brakes as appropriate.

The cameras, of course, do the work that radar cannot, interpreting road markings and signage, assisting the vehicle in staying in the right lane, differentiating between oncoming traffic and vehicles on the same side of the road. Tied in with an array of other sensors, such as blind-spot cameras, very short range radar systems and rearward sensors, it all contributes to the notion of a 'cocoon of safety', surrounding the vehicle.

While the car will supply ever-more sophisticated levels of information, acting on that information remains largely the responsibility of the person behind the wheel. Legally required by convention, the driver must stay in control of the vehicle, which is why in most circumstances he or she is

informed of danger by the technology in the first instance.

Should the driver not act, autonomous systems kick in, albeit with an option for the driver to over-ride. That last part is something of a legal nicety, indeed the industry now holds the opinion that autonomous systems are becoming sufficiently sophisticated to cope on their own.

"We have a vision of zero accidents and zero fatalities in the future," says Thoeny. "To get to this vision you need to have the technology, first of all, allow the driver to make the right decisions to stay out of trouble. However, if the driver can't or doesn't react, then it will take action to protect the driver. Because, with accidents, unfortunately drivers are 90 per cent of the problem. You can't ignore that."

Autonomous steering input - the car that drives itself - has long been a staple of science-fiction but in the last few years fiction has become fact, with a handful of real-world applications now in existence.

"In use today, Park Assist is an example of what the technology can do," says Laurent Bresson, Chief Operating Officer of Nexteer Automotive's international division. "We also have lane-keeping technology, so, for sure,



**"IN MY VIEW, SOME DEGREE OF AUTONOMOUS STEERING IS INEVITABLE."**  
**LAURENT BRESSON, NEXTEER**

steering is going to be part of the vehicle safety infrastructure of the future. It is already and undoubtedly will become increasingly so."

Nexteer is a former GM subsidiary now owned by the Chinese car parts manufacturer Pacific Century Motors. It has slightly more than a hundred years experience in designing steering systems, the latest developments of which tend to feature steering powered electrically (EPS) rather than with hydraulics.

This primarily is a weight-saving technology, albeit with the added advantage of allowing car makers to tailor performance and steering wheel feedback with greater ease. It also makes EPS a much more natural fit for haptic (ie tactile) warnings and autonomous steering applications.

"My view is that some degree of autonomous steering is inevitable, however it does remain a challenge in terms of cost, safety and to some extent public acceptance," says Bresson.

"There will be more and more interactions between the EPS and the other systems, certainly for functions like lane speed assistance, and integrating the steering with stability control and collision avoidance functions like autonomous control," he adds. "Those are things where electrical power steering is playing an important role now and will play a bigger role in the future."

"The technologies are evolving so quickly everything is on the table. My belief is for the mid-term and maybe even long term that the driver will stay in control of the key decisions."

"There are some situations where that doesn't work - a drowsy driver for example - and by monitoring the steering input it's possible to pick up on things like over-corrections or unusual steering patterns that indicate the driver is not attentive. At that point the steering system has to intervene - but I think only after the car has issued warnings to alert the driver."

Already at technology symposia and events such as the FIA's eSafety Challenge, the cars of the future are being demonstrated. The challenge for the automotive industry is to provide the consumer with better information, clearly presented.

Mirroring society at large, what the consumer chooses to do with that information is still something they need to decide for themselves, though for how long that continues to be the case is a matter for ethical discussion: the technological battle is being won by the capabilities of the e-safety machines.

→ an optional extra. It's a thorny issue both ethically and financially for a car industry still tottering through a very muted recovery.

"Characteristically these technologies have high variable costs. You cannot really make them standard," concedes Wey. "Cameras, radar, laser sensors are high cost items. To put it all on the vehicle as standard is not something that currently we could do in a way that would be perceived by the customer as an advantage."

The unwillingness of consumers to pay a premium for safety often rallies calls for legislative intervention: the EU, US and other countries now mandate electronic stability control - though the industry response to governmental edict remains distinctly cool.

"From my perspective [electronic stability control] became mandatory just after everybody already had it available as standard and honestly, I think the same was true of ABS," says Wey.

"My opinion is that improving the system through competition is more efficient than having legislation coming into play. Public domain clubs and associations like Euro NCAP are very effective: The Euro NCAP awards, for example, push new technologies by awarding additional commendations.

"For this they need to be well

# THE INFORMATION HIGHWAY

Where will e-Safety technology takes us over the next 10 years?

### 1. Laurent Bresson *Nesteer*


I'm a steering specialist, so looking at the next five, 10 or 15 years, the thing that's critical for me is the executive class of vehicles where new technology traditionally makes its first appearance. We will certainly see autonomous control to reduce speed and make interventions. From the premium sector those systems will trickle down into mass production. With regard to electric power steering, there will be more and more software to deal with input coming from sensors, which is going to have increasingly better resolution in order to integrate steering with stability control, ABS and the collision avoidance systems. I don't think the hardware will change all that much but the increases in microprocessor power and frequency in our electronic systems are going to enable a car to process more and more information in real time, and therefore we'll have more and more complex algorithms that will enable more effective safety-oriented steering systems.

### 2. Mike Thoeny *Delphi*

The five- to 10-year time frame will see us increasing the number of sensors on the vehicle until we have a full 360° view around the car - a cocoon of safety that can be integrated with other vehicle systems for connectivity and passive safety. Alongside that we're involved with multiple projects that look at integrating this sensor cocoon with vehicle-to-vehicle and vehicle-to-infrastructure communications. Through quite basic communication technology we can increase that cocoon beyond the range of radar - which is a couple of hundred metres - to several hundred kilometres, with vehicles passing along information about accidents, slow vehicles ahead, traffic jams and emergency manoeuvres. It's all there in the next few years.

### 3. Dr Thorsten Wey *Ford*

We see the industry moving to more autonomous interventions, specifically longitudinally. We want to brake autonomously at higher speed. What comes into play then is controllability. I brake my own car to avoid or mitigate a collision but maybe that surprises someone behind me and, having avoided a front-end impact, my car is now in danger of a rear-end collision. The systems we're working on are very reliable but we seldom achieve 100 per cent efficiency and an intervention that is not expected by all the road users can still result in an accident. That's why we're involved in connectivity projects. With other manufacturers in

Europe we're participating in a project called SimTD. There is a field study in Frankfurt where participating OEMs prepare vehicles that can communicate with each other but also talk with the infrastructure of the city's roads. Signs can pass along information: 'I am a 50kph sign,' 'I am a traffic light on red'. The second thing we'll see in five years is a combination of longitudinal and lateral control, ie radar measuring distance with steering [plus braking] controlling the vehicle in the lane. Below a certain speed and on specific roads determined by GPS [ie in a city traffic jam], you will have something that could be thought of as completely autonomous driving. 

GRAPHIC BY JOHN RUGBY

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**Car-to-Car Communication**  
Cars could pass information to each other - so when one car brakes it sends a signal to the cars behind it, warning them to slow down.

**Road Sign recognition**  
with SimTD the car's camera looks at the sign, but also the signs can send signals to the cars.

**Lane detection warning**  
Camera technology looks at the white lines and senses what is a solid line, what is a dashed line and knows when a car is veering out of its lane.

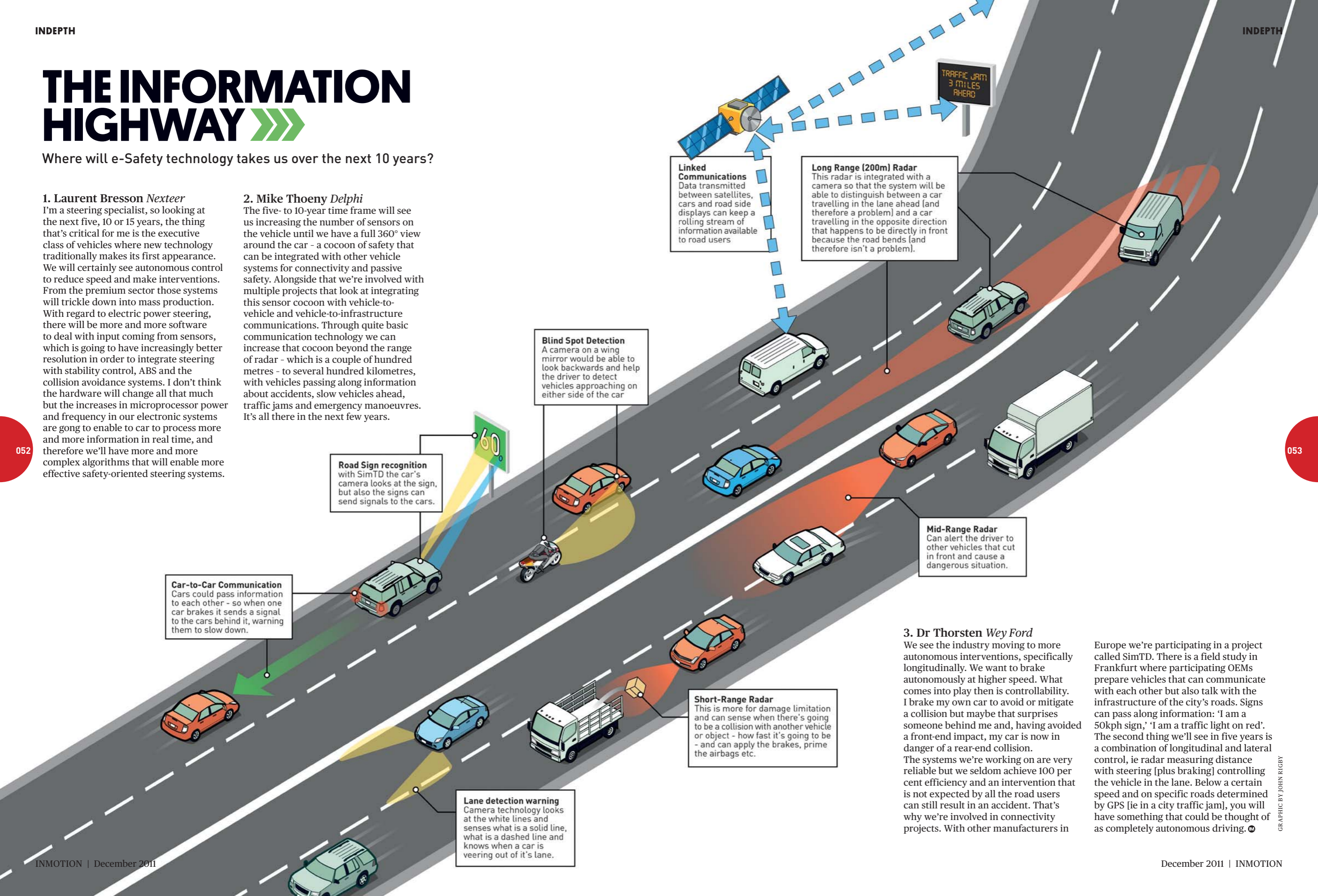
**Blind Spot Detection**  
A camera on a wing mirror would be able to look backwards and help the driver to detect vehicles approaching on either side of the car

**Short-Range Radar**  
This is more for damage limitation and can sense when there's going to be a collision with another vehicle or object - how fast it's going to be - and can apply the brakes, prime the airbags etc.

**Mid-Range Radar**  
Can alert the driver to other vehicles that cut in front and cause a dangerous situation.

**Long Range (200m) Radar**  
This radar is integrated with a camera so that the system will be able to distinguish between a car travelling in the lane ahead (and therefore a problem) and a car travelling in the opposite direction that happens to be directly in front because the road bends (and therefore isn't a problem).

**Linked Communications**  
Data transmitted between satellites, cars and road side displays can keep a rolling stream of information available to road users



# INPERSON

> With a distinguished racing career to draw on, CIK-FIA Vice President **KEES VAN DE GRINT** has a wealth of experience to draw on as he helps restructure karting. “It should be understandable so that a father and his kid can go racing,” he insists.

Dutchman Kees Van de Grint is the Vice President of the CIK-FIA karting federation. He is a highly experienced race engineer and designer, with a curriculum vitae that takes in most of the major racing disciplines in Europe, from karting all the way through to Formula One.

Van de Grint was always fascinated by cars and by competition. “When I was still at school I wrote to the Dutch kart builder Evert Bos, who owned the Landia kart company, looking for a job as a mechanic,” he says. Bos was impressed, took him on and Van de Grint soon began working as a mechanic with Peter de Bruijn, winning two Dutch championships with Landia before they built their own Concorde kart, with which they took a third Dutch title in 1978. In his spare time Van der Grint raced FF1600 in England.

He was then commissioned by wealthy Dutchman Jan Bosch to design and build a McGregor Formula Ford. Rather than simply go out and buy existing cars for young racers, Bosch had the unusual idea of building cars for them and offered Van de Grint the chance to design the cars. In all they built three cars and all the spares, and enjoyed some success with Glenn and John Bosch, so much so that their father decided to fund a Formula 3 car.

Van de Grint admits that the strategy made no real sense when competing against long-established manufacturers, but he laughs off the hubris now. “We were younger then and had a lot of energy,” he says with a wry smile.

Their Barron Formula 3 car was not a great success and so the team bought Ralt vehicles to race, intending to develop their own car in parallel.

Unfortunately, Glenn Bosch was badly hurt in a road accident soon afterwards. The team continued, however, running James Weaver and Roberto Moreno with some success, including two victories. John Bosch arrived hoping to take over where his brother had left off but sadly suffered serious leg injuries in an accident in Germany, which put an end to his single-seater career, although he later enjoyed much success in rallying.

The team later went on to run a pair of Tyrrells in the first year of Formula 3000 in 1985 but by then Van de Grint was searching for a new challenge. It came in the shape of a phone call from Bridgestone. The Japanese company wanted to expand its racing activities and sounded the Dutchman out about an overseers role, building up a programme of activities and then reporting back to the tyre designers in Japan in order to create the most competitive tyres possible. Van de Grint jumped at the opportunity.

It was a low-key role and Van de Grint played it well, developing Bridgestone's first competition tyres in Formula Ford and then overseeing projects in Opel Lotus, and from 1989 onwards Formula 3 and karting. He has now been with Bridgestone for 26 years and has successfully managed to create bridges between the different cultures of Japan and Europe.

He led the Bridgestone technical teams to success in Formula 3, DTM, the Le Mans 24 Hours and ultimately was closely involved in the development of Bridgestone's F1 programme.

Van de Grint's first taste of Formula One had come with the Barron Tyrrells in 1985 and he later helped Moreno with the EuroBrun team, engineering the →



RONALD FLEURBAUM

Brazilian in qualifying and then disappearing off to do Bridgestone work in karting on race days, but it was his working relationship with Michael Schumacher at Ferrari from 2001 onwards that garnered the glory.

"I met Michael in 1989 at a F3 race," he says. "I offered him four 'super-soft' qualifying tyres, but he just looked at me and said 'no'. He said harder ones would give him a better set-up. I thought 'what an extraordinarily mature 20-year-old'. Most young drivers just think 'Wow, qualifying tyres!'"

Schumacher and Van de Grint worked together for six years at Ferrari, winning four World Championships on the trot between 2001 and 2004. When Schumacher retired in 2006, Van de Grint stayed on for one further year, overseeing all of Bridgestone's F1 activities but by then the company was the series' sole tyre supplier and Kees was more interested in a return to karting.

"I started in karting and I have always followed it," he says. "I still like it very much. It is basic racing. Very natural, without so much politics. There is no reason for it to be complicated. It is a pure form of racing and there is no need for politics. There is overtaking and you don't know before the race who is going to win. Aerodynamics play hardly any role. It is really down to driver skill and I like to see the young drivers coming up. I don't see it is as work."

"Karting's continued global growth is essential to increase awareness of and enjoyment and participation in motor sport around the world," he adds. "FIA President Jean Todt has a clear vision of how he wants to develop the sport in a sustainable way."



The FIA President asked Van de Grint if he would like to help Sheikh Abdullah bin Isa Al Khalifa to restructure karting.

"I accepted the role with great pleasure," Van de Grint says, "I think that people should give something back to the sport. I work closely with Sheikh Abdullah. We are very much involved at the moment in the restructuring of karting, in part because of the economic situation at the moment, but also because there are other technical issues that need to be sorted out. It is more or less a full-time job, although I am still a consultant to Bridgestone."

"I attend all the CIK events, so that we know what is happening and so that we are aware of the difficulties people are having. We have already done some restructuring this year, which was good. It has really paid off and we had lots of competitors and a good atmosphere, like it was in the old days."

"Now my main job is to get the technical regulations revised so that the sport is a lot more simple than it has been," he says. "That is how it should be. It is a grassroots competition and you do not want to have regulations that mean you need Einstein to understand them. It should be understandable so that a father and his kid can go racing. This should be totally accessible sport."

"Karting should be very friendly and the teams and spectators should get value for money with plenty of free practice and a lot of racing," he insists. "Driving should be the priority. The inflation of costs for the chassis, the engines and the travel has been considerable and we need to find ways to keep the racing affordable."

When he gets a free weekend he likes to race historic karts but he is also passionate about Matra and owns a number of rare Matra racing cars, including a Rene Bonnet Aerojet, the prototype for the first Matra sports cars. He races this from time to time in hill climb events, although given that hill climbing in Holland is not a huge sport due to the flat nature of the country he sneaks across the border to Germany to get his kicks.

**KEES VAN DE GRINT** began his motor sport career in karting, with the Landia team in 1970, and since then has enjoyed an illustrious career, most notably with Bridgestone, where, as Head of Track Engineering Operations, he helped Michael Schumacher to four world titles between 2001 and 2004. Having kept up his interest in karting via the CIK's technical working group, he was elected Vice President of the FIA-CIK earlier this year, with the aim of working with CIK President Sheikh Abdullah bin Isa Al Khalifa to restructure the sport.

## > Recently elected as President of FIA Region IV, Uruguay's **JORGE TOMASI** has a vast constituency to preside over. But, he insists, the way forward for the region is to forge closer links with the clubs and to celebrate diversity

As General Manager of a large pharmaceutical conglomerate, Jorge Tomasi is well versed in bringing together disparate parts of a company and finding common ground. It is those skills he is hoping to utilise as the newly elected President of FIA Region IV.

With the region including 18 mobility clubs in 17 Latin American countries, with a total of 520,000 members, he believes it is crucial that dialogue become a key component of how the FIA operates in the region.

"In any business, organisation or institution, a fundamental component is team work," he says. "Our region is complex, because of the distance between the countries and also because of economic constraints in the region. Both factors conspire against having regular meetings with member clubs."

"My objective is to find a way to overcome these factors, developing programs that bring us together and that help consolidate the region, giving us a spirit of unity and belonging that will become the reason behind our work."

"Also I want to encourage members to strengthen their links with our office in Buenos Aires," he adds. "We have some excellent people there who are ready and willing to support local initiatives and to start regional projects."

Tomasi began his interest in motoring organising rallies and soon moved into a club role in order to better promote the events and to harness better support from the FIA.

"I studied business administration and marketing and these days I'm general director of a pharmaceutical company (Laboratorios Roemmers del Uruguay)," he says. "With regard to my links to the



Uruguay Automotive Club, well, that's a long story, but I'll try to summarise. I was for many years president of a club in my country that used to organise rallies and other racing events."

"One of the main events we were responsible for was the annual Rally for the South American Automotive Sporting Confederation (CODASUR)," he continues. "Back then in 1988 we didn't get a lot of support for the FIA, which is why I joined the institution, with the aim of helping them reach their goals of promoting motor sport and of getting more support from the FIA. Both these goals have been met and the support we now get from the FIA is first class."

Now, as President of Region IV, Tomasi has a number of new goals.

"Firstly, we need to continue the excellent work started by the late president Victor Rubén Dumot Martínez in the area of strengthening relations between the clubs and institutions that form the region," he says. "We have to promote the value in the diversity of the clubs. Also one of the major challenges will be to promote activities relating to the Decade of Action and the FIA's Action for Road Safety initiative."

In relation to the Decade of Action, Tomasi believes that targeting initiatives by territory is a must. "There are many discrepancies between different Latin

American countries and establishing a uniform approach to involvement in the Decade of Action is a complex task," he insists. "However, I have no doubt that the initiative will make a great contribution to reducing the number of fatal accidents, which is one of the gravest problems the developing world faces. One of the main challenges will be to educate people and introduce adequate road safety policies in all countries of the region, taking into account the fact that these policies will need to be tailored to the individual country's characteristics."

"About five months ago, in collaboration with the clubs here and experts from the FIA and the FIA Foundation, we launched the Decade of Action plan in ten Latin American countries with the co-operation of the automotive clubs, government department and private organisations."

Tomasi also has ambitious plans for a number of region-wide initiatives, which he hopes will improve co-operation between member clubs.

"We'd like to generate a system of FIA benefits for our clubs in Latin America that will allow members travelling to other countries in the regions to avail of discounts," he says.

"At the same time we are working on an information platform for mobile

phones aimed at smartphone users," he adds. "This will allow them to access institutional information, road safety advice, and at the same time point out the location of our branches and of refuelling stations across the region."

"In relation to road safety we have successfully implemented a training and certification programme for driving schools. This has been brought in across the majority of the countries in the region. We have approved the content for theory and practical courses for driving schools. The next step would be to develop a learning program that would allow driving simulation."

Motor sport activities remain at the heart of the new Region IV President's vision for the region. "There is great development going on in this sphere," he says. "There are countries where motor sport has a great audience, such as Argentina, where you have a lot of different categories across the country. The same applies to Brazil, where motor sport is huge. As for the rest of the countries, motor sport is in development and is adapting to the individual characteristics of each nation."

To achieve these goals Tomasi insists that communication between clubs, with the Region IV office in Buenos Aires and with head office in Paris is crucial.

"We keep all the clubs in the region informed about activities through our monthly e-newsletter, which covers activities and news from the member clubs, as well as general news about regional activities," he explains. "Also we've developed a private intranet that our members can access. This allows us to share information online easily as it is organised by working/interest areas."

"We also work closely with the FIA head office in Paris and the Strategic Plan for Region IV is based on the FIA's Annual Mobility Plan," he adds.

"The mark that President Todt is leaving on the FIA, visiting all the countries and making contact with the different local governments and authorities is of great importance. That way local governments are made aware of the importance of the UN Decade of Action for Road Safety and plan and the commitments required by them."

"For the region and for our member clubs, Mr Todt's recent visit was very motivating and his presence at the American Congress was important in terms of building new and exciting relationships that will lead to better opportunities."

**JORGE TOMASI** was elected President of FIA Region IV in May this year. He is also President of the Automóvil Club del Uruguay.

> While Formula One is still waiting for its first female race winner, one woman has landed the job of helping decide who wins at every grand prix. Meet **SILVIA BELLOT**, F1's youngest, and only female, race steward

With degrees in Biology and Fashion Business one might have expected some sort of entrepreneurial career in her native Barcelona for Silvia Bellot, but despite the years spent in academia the 25-year-old Catalan was always destined for another path, towards the world of motor racing.

If the next sentence were to state that she is an aspiring racing driver or perhaps a junior aerodynamicist then few eyebrows would be raised. This, after all, is pretty normal in a sport that is, broadly, no longer afflicted by institutionalised chauvinism. But when you learn that Bellot's chosen motor sport path is as a race steward, indeed she's the youngest and only female steward in Formula One, then her remarkable achievements become clearer. In some ways, however, she has always been destined for the role.

"I think I was about 13," she recalls. "At the time my father was the President of the Rally Commission of the Spanish Motoring Federation and he took me to see a rally for the first time.

"As it was a case of spending my time with the stewards, I got a completely different view of things than if I'd simply been a spectator in the crowd."

Listening, observing, checking, but above all seeing the key players, the drivers, from the point of view of the sporting regulations; it was an eye-opening experience for Bellot.

"In the stewards' room, the driver is different and from listening in the antechamber I could hear some very robust discussions, not at all what one might expect from the outside."

It was a strange experience for a young girl, but her curiosity was piqued. It was explained to her that the main difficulty lay in getting the drivers to

understand and to get them to accept what had to be done to respect the rules, no matter how hard that might be for them to accept. Intrigued by the process she lost no time in asking her father to take her to as many events as possible.

"From then I went to all sorts of events, not just rallies but more especially races," she says. "I even made it clear to my father that I didn't want to always go to the same circuits. I wanted to see it all."

Bellot began to seriously share her father's passion for motor sport and thus started her own apprenticeship in the world of racing, which from the beginning saw her always looking at the race from a jurisdictional standpoint.

"In 1999, I was 14 and I saw my first race at Valencia's Ricardo Tormo circuit, where a certain Fernando Alonso won the World Series [then the Euro Open Movistar by Nissan series] and I asked myself if he hadn't overtaken under yellow flags," she says with a wry smile.

Her first race as an official came when she was just 16 and soon after she began to marshal at events and also act as secretary to race stewards. In the same year, Bellot also began working with the Real Automóvil Club de Catalunya.

Her progress was astonishingly rapid and at the age of 18 she acted as steward for the first time. Her first race meeting was in Bilbao, followed a Trofeo Maserati round in Valencia, working with the Spanish Federation. A year later and Silvia was appointed as a permanent steward. "The funniest moment? When I was 19, working at a Hyundai Coupé Cup meeting, word was doing the rounds among the drivers that I was the same age as them: 'Look at this, the stewards are having a laugh aren't they.'

Despite incredulity from some quarters, however, Bellot settled into her new role and she has enjoyed working at some exceptional events.

"I remember when I was 21 I was a steward at my first international race meeting at Magny Cours, which was a real privilege, and then, working at the Spanish Endurance Championship was unforgettable," she says. "Also working at numerous GP2 and GP3 races has been great. There I also had the further honour of being the Chairman of the Stewards."

And she took the final step up to the pinnacle of motor racing at the tender age of 24 when she first officiated at a Formula One race.

"It was the 2009 Spanish GP and I was a trainee steward," she says. "It was so exciting getting the drivers to sign all the necessary documents. It was all I had ever wanted since I was 13 years old."



JIRI KRENEK

And finally, in January 2011 she graduated to the big league proper, a letter from the FIA informing her that the organisation was inviting her to properly officiate at two grands prix this year, Turkey and Italy.

"This year has brought me incredible satisfaction," she smiles. "I don't think anything could surpass it, well, maybe becoming Chairman of the Stewards!"

Adding to the satisfaction is the fact that Spanish magazine *Tiempo* has included Silvia in its list of the top 100 Spanish women of the 21st Century, featuring her photo on the cover. It is an achievement of some pride for Bellot but she says, it also comes with a sense of

responsibility for being a successful woman in what is still seen as a man's world. "But, having said that, being a woman has never created a problem for me," she says. "Actually, I think that in the end it was probably an advantage. Everyone has always been very nice to me and above all, patient.

"Only once was my gender a problem and believe it or not, the driver was a woman!"

Finally, while Bellot admits that her path to a career in motor sport was smoothed by her family ties she insists that it was only the first step on the path and that all her achievements since have been fuelled by a genuine passion for

what she does and by a determination to see justice prevail, a moral position she's nurtured since her school days.

"At school, I always pulled through and I did what I had to do without wanting to be the centre of attention and what I really did not like was those who cheated," she says. "Those who copied, complained, made excuses and tried to trick the teachers in situations that just weren't true, I always fought against people like this and I think I did it well.

"I think it's a fundamental concept," she concludes. "I have always believed that the role was made for me as I always thought in terms of how one should reach a decision."

**SILVIA BELLOT** A graduate of the FIA Trainee Steward Programme, 25-year-old Spaniard Silvia Bellot began marshalling in 2001, at the age of 16. She has been Permanent Chairman of Stewards for the European F3 Open and Spanish Endurance Championships, as well as Permanent Steward of the GT Open International and Andorra Ice Championships. She has been on the stewards' panel the World Rally Championship, GP2, GP3, BMW Europe, DTM and World Series by Renault. In 2001, she began working with Catalunya's automobile club, the RACC, and in 2008 she joined the Spanish Assembly and the Circuit the Catalunya officials' committee. A year later, Bellot took part in the FIA trainee stewards' program for GP2 and F1. 🏁

## Club Profile

### Confederation of Australian Motorsport

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**It was founded when?** The Melbourne-based Confederation of Australian Motor Sport (CAMS), has been the governing body of motor sport in Australia since 1953. It oversees all forms of four-wheeled motor sport, including circuit racing, rallying, hill-climbs and off-road competition. It has 430 affiliated clubs and stages around 2,000 events a year. It is one of Australia's largest volunteer-based sporting organisations, with 20,000 licence holders and 10,000 officials. The organisation is run by a national board, which features one representative from each of Australia's six states, plus three commercial representatives. The board elects a president every two years, although there is no limit to the number of terms a president can serve.

**Who's in charge?** The current CAMS President is Andrew Papadopoulos (pictured), who was elected to the position at the start of 2009. He has a long history in motor sport, mainly racing sports sedans, particularly Alfa Romeos. His wife is an accredited official and his sons are both involved in motor sport, one racing sedans and the other as an engineer with Lotus Renault GP in the UK. Papadopoulos has extensive experience in the commercial world and runs an agency that manufactures, markets, repairs and recycles pallets for the transportation business. He has been a CAMS board member since 2001.

**Transporting sporting success:** CAMS has played, and continues to play a key role in developing motorsport in Australia. The organisation is building on that success all the time, delivering accredited training, both in person and on-line, to volunteers across Australia. It also provides training and development services to international organisations, helping to develop motor sport in the Asia-Pacific region, where it provides mentoring services to train officials for nations that are new to motor sport and require assistance and expertise.

**Star spotting:** CAMS aims to create a stronger motor sport scene in Australia across all disciplines. It understands that there is a need for local heroes to inspire younger generations and so, in league with the Australian Motor Sport Foundation, it runs the CAMS Rising Star initiative, which aims to facilitate the rapid development of drivers from the junior ranks to national and international competition. The confederation also aims to enhance the safety of the sport and also change attitudes and improve the general safety of drivers and passengers on the road through better education. The organisation is also developing a motor sport environmental strategy across all levels of motor sport.

## INMOTION

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## FIA CALENDAR

### → NOVEMBER

- 23 Middle Management Workshop – Baden bei Wien, Austria  
Hill-Climb Commission
- 28 E-Safety Board Meeting
- 29 Safety Commission  
GT Commission  
TC Commission
- 31 Truck Racing Promotion Working Group  
Truck Racing Commission  
Circuits Commission

### → DECEMBER

- 01 LMP1 Technical Meeting
- 02 F1 Technical Working Group Meeting
- 05-09 FIA General Assembly - Delhi, India
- 09 FIA Prize-giving Gala, Delhi, India

### → JANUARY

- 06 CIK Commission
- 17 GT Sport CIK  
GT Technical CIK
- 24 GTT ALL Terrain
- 25 GTT Tourism  
GTT Engine  
GTT Rally  
Truck Racing Commission

### → FEBRUARY

- 06 Cross Country Rally Commission  
GT Commission  
WRC Commission  
Rally Commission
- 08 Commission CIK  
Touring Car Commission
- 09 Circuits Commission  
Endurance Commission
- 10 Endurance Commission
- 21 Safety Commission  
Manufacturers' Sporting Committee

*All meetings Paris unless stated otherwise*



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