



# DECADE OF ACTION

How the FIA and FIA Foundation led the call for a Decade of Action for Road Safety, an historic declaration sanctioned by governments worldwide.



## FIA PRESIDENT

An in-depth look at the policy agenda for motor sport, mobility and the FIA which is being implemented by FIA President Jean Todt and his team.

## WORLD RALLY CHAMPIONSHIP

A Special Report examines the technical, environmental and promotional developments in the FIA's premier rallying championship.

# FIA IN MOTION

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# FIA PRESIDENT'S MESSAGE



This is the first issue of InMotion since the FIA presidential election and I am pleased that it covers so many important areas of the FIA's work. In the past two months alone, the FIA has participated in the UN Ministerial Summit for Global Road Safety in Moscow, been active in the European Commission in Brussels, and led numerous motor sport commission meetings covering technical, promotional and environmental areas of our sport.

My first month as FIA President has been busy meeting FIA staff and FIA Clubs as well as holding discussions with stakeholders across motor sport and mobility. We have commenced the process of implementing the constructive changes we promised as part of our election proposals, including a complete review of the FIA statutes.

In line with our pre-election commitment to meet personally with the FIA Membership, I have had the opportunity to meet so many people either working for the FIA or involved with the FIA's work across the world. I have been impressed by the breadth of the FIA's involvement in every area of motor sport and mobility and I plan to help facilitate this important work through constructive change.

I was certainly pleased to see such a strong FIA delegation present at the recent Global Ministerial Summit on Road Safety in Moscow. This was a particularly important event as it offered the highest level political endorsement for our goal of making roads safe and it was significant that many FIA Club Presidents sat side-by-side with their national ministers during the Summit. Our clubs played a vital role in ensuring their national ministers' participation and will play an equally vital role in the implementation of the Decade of Action.

I am now developing a comprehensive plan to meet with as many FIA clubs as possible over the next year. We have shown that through working together we have already made great progress in achieving our policy aims and I am sure we will continue to do so as we strengthen our member network across the world.

Jean Todt  
FIA President



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# FIA NEWS

## MOSCOW DECLARATION CALLS FOR DECADE OF ACTION



*Dimitry Medvedev, President of the Russian Federation, gives his opening address to the Global Ministerial Summit on Road Safety*

FIA President Jean Todt and around 40 presidents from FIA clubs around the world were in Moscow on 19-20 November to attend the first ever Global Ministerial Summit on Road Safety.

The Summit, attended by around 70 transport ministers from countries across the world, approved the 'Moscow Declaration', which endorses the Make Roads Safe campaign's proposal for a UN Decade of Action for Road Safety 2011-2020, and establishes the basis for a global governmental framework for road

safety, with the commitment of the Sultanate of Oman to host a second Ministerial in five years' time.

The week in Moscow was also marked by two other major developments for global road safety. The World Bank and the six leading multilateral development banks (African Development Bank, Asian Development Bank, European Bank for Reconstruction and Development, European Investment Bank, Inter-American Development Bank and Islamic Development Bank) agreed to a

'Shared Approach to Managing Road Safety'. This is a powerful and unequivocal pledge to make road safety a priority in the banks' operations.

The cause received further financial backing from Bloomberg Philanthropies, which made a US\$125 million pledge to aid global road safety, the largest single donation ever made for international transportation safety developments. It was coupled with the FIA Foundation's €10 million commitment to an international programme for road safety and

Thierry Willemarck, Chief Executive of Touring Club Belgium (left), with the Belgian delegation at the Global Ministerial Summit on Road Safety



a £1.5 million grant from the UK Department for International Development to the World Bank Global Road Safety Facility.

It was the Russian Federation that first proposed hosting the high-level Summit during a March 2008 United Nations meeting, which is why it was held in Moscow. For the Russian government, where over 35,000 people are killed on the road each year, the issue of road safety has become an urgent one.

The President of the Russian Federation Dmitry Medvedev, in his opening address to the Summit, stressed the importance of Road Safety as a worldwide issue. He said: "It is no less dramatic for our planet than the consequences of the world's recession or food supply security". Medvedev went on to outline Russia's plans notably via its Ministry for Interior to dramatically reduce road accidents.

Medvedev's statements of concern and need for action were echoed by a number of high level speakers, from various bodies such as the UN, World Health Organisation, and national Ministries. Sergei Ordzhonikidze, Director-General of the United Nations

Office in Geneva, delivered a message from UN Secretary Ban Ki-moon recognising that such a conference was long overdue and that the world collectively needed to do more to improve road safety.

On the first day of the Summit, the FIA President urged ministers to make the meeting a success. He said: "Five million lives are at stake in the coming decade. We know what needs to be done to save these lives. The international community must demonstrate its political will to succeed, and make this ministerial meeting a turning point for global road safety."

Overall attendance was high with 1,500 delegates from 150 countries, including around 70 Ministers, the high numbers contributing to the success of the meeting. FIA Clubs had campaigned solidly to ensure that their national transport ministers would be participating in the historic meeting.

Both the Ministerial and its Declaration are a testament to the hard work of the FIA Foundation, which has pioneered the Commission for Global Road Safety and the Make Roads Safe campaign. Make Roads Safe

Global Ambassador Michelle Yeoh, who spoke in the opening session of the Summit, has played a key role in raising awareness for road safety issues worldwide.

The Make Roads Safe campaign has been strongly supported by the FIA and its member clubs.

FIA Clubs have been involved in a number of ways, such as holding Make Roads Safe events in their own countries, helping collect names for the petition of over a million signatures calling for action by the UN, finding key figures and celebrities to endorse and support the Decade concept, and also actively talking with national ministries to ensure they attended the conference.

Another key actor in making the Ministerial Conference a reality was the work of Russian Automobile Federation President and Chief of the State Traffic Safety Inspectorate of Russia, General Victor Kiryanov.

With the Moscow Declaration now signed, attention turns to the next UN General Assembly meeting in March, which is expected to formally adopt the Decade of Action.

# GENERAL KIRYANOV AWARDED FIA WORLD PRIZE



*General Victor Kiryanov, President of the Russian Automobile Federation, was awarded the FIA's Academy's World Prize for Road Safety, the Environment and Mobility*

The FIA Academy has awarded its annual World Prize for Road Safety, the Environment and Mobility to General Victor Kiryanov, President of the Russian Automobile Federation, for his outstanding contribution to the promotion of road safety.

The award is given for exceptional merit or endeavour by individuals or organisations involved in motoring and mobility. The FIA Academy, which is made up of eight senior members of the FIA and its national automobile clubs, gave the award to Kiryanov primarily for his leading work in organising the first ever Global Ministerial Summit on Road

Safety, which was held in Moscow on 19-20 November.

The silver and crystal trophy was presented to General Kiryanov by FIA President Jean Todt at a meeting of FIA Clubs in the run-up to the Ministerial event. The Ministerial called on governments from around the world to agree plans for a Decade of Action which could save five million lives on the world's roads.

FIA President Jean Todt said: "General Victor Kiryanov is a strong and influential supporter of road safety both in Russia and around the world. He spoke at the first ever UN General Assembly

debate on road safety in April 2004, and again in March 2008, and is an active member of the Commission for Global Road Safety.

"The development of this first ever global ministerial summit would not have been possible without the foresight, leadership and effort of General Kiryanov and his colleagues at the Road Traffic Inspectorate of the Russian Federation. His work is more than worthy of this recognition."

Past recipients of the FIA World Prize include German company Bosch for its work in eSafety and tyre group Bridgestone for its road safety campaign work.

# GENERAL ASSEMBLY ELECTS FIA PRESIDENT



*FIA member club representatives cast their votes for the new FIA President in Paris on 23 October*

On 23 October 2009, the FIA General Assembly voted overwhelmingly in favour of Jean Todt to succeed Max Mosley as FIA President for the next four years.

Todt was elected alongside his team of 22 candidates. Filling the top positions, Nick Craw, President of the Automobile Competition Committee of the US, was elected President of the Senate; Brian Gibbons, Chief Executive of the New Zealand Automobile Association, was elected Deputy President for Automobile Mobility & Tourism; and Graham Stoker, Council Chairman for the Motor Sports Association, was elected Deputy President for Sport.

Each candidate gave a short speech before voting commenced, discussing their credentials and their hopes for the FIA if elected.

Stoker talked about his 25 years' experience with the Motor Sports Association and his work as a former member of the International

Court of Appeal, a Formula One steward and chair of the anti-doping committee. He outlined his goals as Deputy President for Sport including securing more events and enhancing training opportunities for drivers.

Gibbons spoke about his commitment to building on the Mobility for All policy template, and using his experience to respond to the challenges and opportunities that lie ahead. Craw spoke about his 25 years in motor sport management and his experience as CEO of a major US club.

Todt, who has enjoyed long and highly successful careers as head of racing activities at Peugeot and Ferrari, said: "My wish is to contribute with all of you to a renewal of the FIA through the implementation of constructive changes adapted to the evolution of the global environment. The world is changing quickly and our leadership will become more and more crucial in the

coming years. The time to act is now. I want to work with you and for you."

Speeches were also heard from Ari Vatanen, contender for the FIA Presidency, along with Jack Wavamunno, Founder President of the Federation of Motor Sports Clubs of Uganda and HRH Prince Feisal Al Hussein, Jordan Motorsport President, both candidates for Sport Vice President.

One by one, member club representatives were called to cast their vote. After the votes were counted, Max Mosley announced the results: 135 votes for Todt, 49 for Vatanen and 12 abstentions.

Following his election, Todt was greeted with warm congratulations from FIA club members from around the world. He said: "With our team – Nick, Brian, Graham – I hope in one year when we meet again at the General Assembly, we will have fulfilled our promises. Alone, I can't do it, but with you, we will do it."

# FIA APPROVES ACTION PLAN FOR MOBILITY



The FIA's action plan for mobility, entitled 'Mobility for All', was approved by the FIA General Assembly on 23 October in Paris, opening up a new channel for FIA activity surrounding three main pillars – safe, sustainable and accessible mobility.

This new advocacy programme is based on the concept that peoples' ability to move around easily is one of the defining features of modern society and access to safe transportation is essential for economic and social activity.

While forms of personal mobility include car travel, public transport, walking and cycling, the automobile is likely to remain the mode of choice for most people because it provides the flexibility, convenience and independence that people need, want and expect.

Use of the automobile comes with its own issues. More than one million people die each year around the world, and 50 million are injured in motor vehicle accidents. Cars contribute to greenhouse gas emissions and congestion problems in major cities. The

world's vehicle fleet is expected to double in the next two decades which will only exacerbate these problems.

The FIA's objective is to advocate a global personal mobility strategy that ensures a safe, sustainable and accessible transport system to meet the needs of all people. Central to this commitment is the goal of maintaining the benefits of personal mobility without compromising the planet's resources and future. Achieving this goal will require concerted action by major stakeholders including government, industry, interest groups, and consumers.

Reducing or eliminating the negative impacts of automobile travel will require that travellers have true choice in mobility permitting them to make decisions for safer, more sustainable travel, including alternative transport modes and incentives for choosing cleaner cars.

Tourism is a vital component of the global economy and is particularly dependent upon personal mobility. There are great

opportunities to share lessons learned, hardships endured and successful practices from around the world to build a safer, more sustainable and more accessible transport system for everyone.

The FIA is uniquely qualified to lead this effort because of its long history advocating for motorists, its global reach with a network of over 220 clubs, and its collaborations with the FIA Foundation in promoting road safety, the environment and other mobility issues.

As the governing body for motor sport, the FIA can also take advantage of Formula One's position at the cutting edge of new technology to call upon manufacturers to explore such innovative environmental motor sport technologies as energy recovery systems that can be transferred to the consumer market.

With these resources at hand, the FIA is committed to leading an effort toward ensuring that Mobility for All is a reality in every part of the world.



# GLOBAL CLUB NETWORK DEVELOPS



A meeting of the Members' Benefit Forum during FIA General Assembly week provided an ideal opportunity to update members on progress made on the FIA Global Club Network.

The project is the amalgamation of a number of ongoing FIA projects, such as the work on developing regional travel projects, re-developing the AIT-FIA Information Centre (OTA) touring database, and reinforcing the reciprocity programme. The Global Club Network is a recognition that the FIA is in a unique position to offer exclusive benefits to members of FIA clubs.

The first pillar of the Global Club Network is reciprocity, which is an element enshrined in the FIA's statutes. The concept originally referred to the sharing of services between FIA member clubs, and has been the subject of intense review. Although reciprocity has mainly referred to towing and roadside assistance, club activities are now so diverse that there is a whole group of additional services that could be exchanged and shared.

The OTA database is an important example. Until now, OTA touring data has been a private, paid resource for clubs wishing to get touring information on different countries. The Global Club Network will make OTA data

another important pillar of its structure, as the information is exclusive to the FIA and could become a valuable asset for member clubs by helping drive traffic to club websites.

With these resources as a base, the Global Club Network has a vision of an online international network linking FIA clubs and providing individual members with a host of FIA information accessed through their own club websites. The service would appear to the member as a service of their own club facilitated by the FIA.

In time, it is hoped that the Global Club Network will evolve into a valuable tool allowing members from across the world to benefit from services offered by all member clubs. For example, Canadian Automobile Association members could use the network to benefit from pre-existing deals offered by the Automobile Association of South Africa when travelling there. By opening up services for reciprocity, clubs from around the world can share a potential market of 110 million members, greatly benefiting each other's business.

The Members' Benefit Forum demonstrated a working trial version of the site. A number of key early adopter clubs will gradually fill the site with data with a view to an official launch of the service in November 2010.

## ITEST RELEASES RESULTS

The Mobility Plan iTest Working Group concluded its work prior to this year's FIA General Assembly held in October. The working group conducted a worldwide test on behalf of the FIA, and spent months surveying tourism issues via questionnaires on FIA club websites. In total, detailed data was collected from over 9,000 people in 38 different countries.

The results were launched on World Tourism Day, highlighting that lack of safety due to crime, risk of natural disasters, sanitary issues, or terrorism, was the principle reason to rule out a destination, and scored highest in the survey with 8.5 points out of a possible 10. Safety was closely followed by weather, which received an average 8.2 points, quality of accommodation at 8.2 points, and natural beauty at 8.0 points.

The factors that were the least valued by tourists included the availability of sports facilities (4.8 points) and nightlife (4.9 points), although the latter was the highest valued factor among travellers aged 18 to 30. Likewise, availability of sports facilities was more important for tourists aged 18 to 45 than those aged 46 and older.

Presence of natural beauty in the surrounding area, including quality of beaches and other swimming areas, scored significantly higher in importance than quality of food or other tourist attractions.

The data highlighted the need for tourism organisations and governments to provide tourists with adequate information on higher risk areas, maximise security measures, and

establish evacuation protocols for all countries in cases of disaster or health risks.



Club websites surveyed members across the world from the early part of 2009

# FIA ANSWERS EU ON COMPETITION LAW



*The FIA responded to an EU consultation regarding the Block Exemption Regulation set to expire in 2010.*

At the recent EU consultation on future competition law in the automotive sector, the FIA addressed a number of key areas important to FIA clubs. This included the motor-specific Block Exemption Regulation (BER), which acknowledges mobile consumers' right to affordable mobility.

Answering over 10 million rescue calls each year, automobile clubs' roadside assistance patrols benefit greatly from the BER, a provision that forces vehicle manufacturers to disclose information on all motor vehicles sold since October 2002.

The BER has succeeded in achieving better price parity across the EU and improving access for market operators to vehicle manufacturers' technical information, ensuring fair competition with authorised networks in after-market services. But what will happen when the regulation expires in May 2010?

In the current economic climate, preserving affordable mobility and consumer confidence is more essential than ever. Over the lifetime of a vehicle, its maintenance and repair will cost as much as the purchase price itself. FIA European clubs call for an improved sector-specific regulation, which would efficiently address all contemporary competition issues in the automotive primary and after market.

Legislation should contain provisions enabling independent operators to access all information and spare parts needed for repair and maintenance, taking into account the evolution in vehicle technologies over the last 10 years.

The FIA supports the European Commission's finding that more should be done to prevent vehicle manufacturers using warranties to tie consumers to their brand for servicing and repair. Restrictions on warranties should be included in an improved Motor Vehicle Block Exemption Regulation.

## FIA NETWORK LAUNCHES GLOBAL SERVICES SCHEME



The Mobility Plan Reciprocity Reinforcement Working Group concluded its work with the launch of Global Services during FIA General Assembly week in October.

The task was to create global reciprocity of services between clubs. Despite being enshrined in the FIA's statutes, such reciprocity was until now an ambition rather than a reality. The group was conscious of the need to ensure that commitments to mutual support and sharing did not become an unsustainable burden for member clubs, and that clubs be equipped with the tools to promote reciprocity to their members.

To address these challenges the working group split its focus into two distinct areas: reinforcing and defining the boundaries of the agreement, and communicating this agreement both internally and externally.

For the first task, the working group made proposals on the nature of reciprocity and conducted a wide ranging consultation with the FIA Network. These proposals established an agreed set of basic services that every club could accept and allowed the possibility for clubs to opt in to a cross-regional roadside assistance exchange.

To facilitate communication, the group agreed to create a brand that symbolised and helped communicate the reciprocity agreements to a wide audience. Global Services was adopted as a brand base alongside two initial deliverables for the clubs. Firstly, a booklet containing reciprocity information of all clubs will be made available online for clubs to personalise and print. Secondly, an online application will be created to contain automatically-updated reciprocity data that can be displayed on clubs' own websites.

# DESCHAUX APPOINTED KARTING PRESIDENT



*Nicolas Deschaux, FFSA and CIK-FIA President*

Nicolas Deschaux, President of the Fédération Française du Sport Automobile, was appointed President of the Commission Internationale de Karting (CIK-FIA) at the FIA World Motor Sport Council meeting on 21 October.

Deschaux has worked for the FFSA in various capacities since 1997, having started out as a legal director. In 2000, he was appointed Deputy Director General, a position he held until 2005. He was then appointed Secretary General, before becoming Deputy President in 2006. Deschaux took over as FFSA President in May 2007.

Deschaux is also an international steward for Formula One and World Rally Championship events.

Since 2007, he has carried out numerous activities aimed at the development of karting

in France. He created the French Schools of Karting and completed a renewal of national karting governance and an overhaul of karting championships.

He became an institutional partner with EDF for research and development in leisure karting and implemented education and training programmes for 10 to 15 year olds. He also created the Capitanat Equipe de France Karting with Yvan Muller.

One of his most recent accomplishments is the Défi Kart Jeunes, a talent scouting operation taking place in six cities throughout France over four months. At each stage, hundreds of young people have the chance to get behind the wheel of an electric kart. The programme has already proven a successful way of attracting new young drivers to participate in the sport, enhancing the growth of motor sport's grassroots.

# FIA DISCUSSES TRAUMA PREVENTION

FIA President Jean Todt and FIA Institute Deputy President Gérard Saillant participated in a panel discussion on road trauma prevention at the 2009 Annual Meeting of the Société Française de Chirurgie Orthopédique et Traumatologie on 9-13 November in Paris.

The FIA panel discussion, entitled "Preventing Road Trauma", discussed the contributions of motor sport safety advances on improving safety for all road users. Participating alongside Todt and Saillant were World Rally Champion Sébastien Loeb, former French rally driver Guy Fréquelin and four-time Formula One champion Alain Prost.

The presentation consisted of two parts. First, Saillant gave a lecture about the relationship between motor sport and daily road traffic, describing how, in terms of safety, a car has numerous benefits derived from all motor sport disciplines.

This was followed by a round table with Todt, Prost, Loeb and Fréquelin demonstrating the need



*Prof. Gérard Saillant, FIA Institute Deputy President*

for a very close relationship between increasing performance, and active and passive safety. To conclude, Todt emphasised the role of the FIA and FIA Foundation concerning the environment and safety through the global campaigns Make Cars Green and Make Roads Safe.

The conference included numerous presentations from experts across the medical field, as well as two symposiums on traumatology and orthopaedic surgery. Round tables were held to debate contentious issues in the medical field.

# CLUB NEWS

## WOMEN TEST ANTI-SKID TECHNOLOGY



*DTM star Susie Stoddart helped demonstrate the benefits of ESC at a recent eSafety Aware event in Rome*

Road safety is high on the policy agenda in Belgium, and one of the biggest steps forward in road safety since the seat belt is the anti-skid technology called Electronic Stability Control (ESC). Touring Club Belgium (TCB) has for some time been actively involved in promoting ESC and raising its members' awareness of the need to choose ESC when purchasing a new car:

In a survey conducted in September, TCB researched how children go to school, finding

that in 85 per cent of cases, journeys are made by car. With these findings at hand, TCB doubled its efforts to emphasise the importance of cars being equipped with adequate safety systems. This campaign specifically targeted mothers who often drive smaller family cars that are not necessarily equipped with an ESC system.

In fact, around one in two new cars in Belgium are still not fitted with ESC, and it is the

smaller models in particular that are either not equipped with the system or only offer it as an optional feature. Recognising that these types of vehicles are often used by women for transporting their children to and from school, TCB joined forces with automobile technology company Bosch to stage an event giving 24 female TCB members the opportunity to experience the benefits of ESC first hand.

As part of the event, a test track was set up that enabled the participants to try the anti-skid technology under the supervision of experienced instructors. The women were first allowed to negotiate the circuit in a car without an ESC system, and then in a vehicle equipped with the technology.

After taking part in the event, all agreed that they would ask for the anti-skid system when purchasing a new car in the future. Some even said they would never again drive without the security of ESC.

TCB is the Belgian partner for the Choose ESC campaign and Euro NCAP, which this year expanded the scope of its assessment programmes to include the standard fitment of an ESC system. Part of TCB's safety drive for the past several years has been to run a public education campaign aimed at making drivers aware of the importance of these active vehicle safety systems.

The European regulatory authorities have also reacted to the problem of ESC take-up by car manufacturers. Earlier this year, the European Parliament approved a European Commission proposal to make the anti-skid technology mandatory for all new vehicle models starting in 2011, and for every newly registered vehicle starting in 2014.

# CONSUMERS POSITIVE ABOUT ELECTRIC

An internet survey conducted by ADAC has found that 90 per cent of car consumers have a positive impression of electric vehicles. Of the 4,146 respondents, only 6.5 per cent did not believe electric cars represented the future, with 3.5 per cent remaining undecided. Three out of four respondents said they would buy an electric car.

However, the survey highlights that despite the positive outlook, consumers are not willing to compromise their car's performance to go electric. While 37.5 per cent would pay extra for an electric car of equal performance to a conventional car, another 40 per cent of respondents would not.

Only 37 per cent would accept a filling time of one to four hours, and 20 per cent for charge times over five hours. The majority, 56 per cent, expect the fuel pump to be walking distance from their home. Another important issue is range. The majority expect a range of 500 kilometres between fills; only 10 per cent would be satisfied with a 100-kilometre range and 20 per cent with a 200-kilometre range.

Consumers also want to travel at normal speed, with one in 10 being satisfied with a maximum speed of 100 km/h and only three per cent satisfied with an 80 km/h maximum. On space, half of respondents expect that their car should have four seats; a quarter expects even more.

The survey shows that despite willingness to buy electric cars, consumers will not lose comfort in the process. Manufacturers must optimise their offering for electric cars to reach their potential.



## CEZ AWARDS PRIZES IN MONTENEGRO

On 21 November, the FIA Central European Zone (CEZ-FIA) held its 2009 prize-giving ceremony at the Maestral Resort and Casino in Pržno, Montenegro. A total 220 guests, including FIA President Jean Todt, attended the gala dinner hosted by the Montenegrin ASN Auto-Moto Savez Crne Gorne.

Talent of the Year prizes were awarded to Jan Charouz, winner of the 2009 Le Mans GT1 series, and Norbert Michelisz, winner of the Seat Leon Euro-Cup 2009. The top circuit trophies were awarded to Tripo Ivovic in Group N, Marijan Nagode in

Group A-2000 and Nikola Kvasai in Group E2-2000.

First place rally trophies were awarded to Andrea Torlasco / Piercarlo Capolongo and Vaclav Pech / Petr Uhel for Group A, Jiri Vlcek / Martin Vlcek for Group S1600, and Michal Solowow / Maciej Baran for Group S2000. First place Autocross trophies were presented to Martin Chott, Boris Vaculik, Adam Pavol and Vladislav Demkin. Awarded first place karting trophies were Kristijan Habulin, Ferenc Kancsar for Rotax Max Juniors, Sandro Lukovic for Rotax Max Seniors

and Thomas Preining for Rotax Mini Max.

Jean Todt took the opportunity to speak with club presidents from throughout the region to discuss ways to improve synchronisation between sport and mobility participation as a way of promoting road safety.

Todt also reported on the outcomes of the UN Ministerial Meeting held in Moscow on 19-20 November, where 150 countries agreed to support the Decade of Action for Road Safety. The proposal will be taken to the United Nations in March.

# AFRICAN COUNCIL MEETS IN PARIS

Clubs from FIA Region I in Africa met on 20 October during FIA Annual General Assembly week to take part in the latest meeting of the FIA African Council for Touring and Automobile.

The meeting was chaired by David Njoroge, Director General of the Automobile Association of Kenya. Other members represented Tanzania, Kenya, South Africa, Uganda and the Ivory Coast. FIA Foundation Director General David Ward and FIA Region I President Werner Kraus also attended.

The council discussed opportunities to increase participation of other African countries in ACTA. The Chairman requested that the President of the Fédération Ivoirienne de Sports Automobile et de Motocyclisme, Kady Angelbert, act as a facilitator to attract other member countries from West Africa to join ACTA. The council also noted it would be beneficial to work closely with Confederation of African Countries in Motor Sport (CACMS) to recruit additional African member countries to ACTA.

The council will soon start gathering information on driver instruction programmes.



(Left to right): AA Tanzania's Satinder Birdi and Nizar Jivani, AA South Africa's Karen Bryden, and AA Uganda's Felix Odongkara

Karen Bryden, Director General of AA South Africa, informed delegates that an official from her club will visit Kenya, Uganda and Tanzania to develop a model on driver instruction to be used throughout Africa.

Ward congratulated AA Tanzania on hosting the Road Safety Conference,

African Council and CACMS meetings. He reiterated the FIA Foundation's support for the next council meeting scheduled to take place in Maputo in August 2010. It is hoped the session will incorporate environmental issues and will feature speakers from the United Nations Environment Programme in Nairobi.

# NORDIC CLUBS DISCUSS PROGRESS



Maria Spetz, Managing Director of Sweden's Motormännen

matters of interest and exchange ideas. Chaired by Maria Spetz, Managing Director of Sweden's Motormännen, the meeting consisted of a roundtable discussion about each club's progress and activities.

Spetz discussed Motormännen's new insurance broker operations, which are developing according to plan. However, due to the global economic situation, Sweden has seen fewer car sales and therefore cancelled contracts with repair shops and dealers.

Spetz said: "About 50 per cent of the income at our test centres is generated by such contracts. However, new contracts are now coming in."

In Finland, Autolitto reported that decreased car sales have affected the club's road assistance market. Meanwhile, the club reported great success with hosting the European Traffic Education Contest in September.

Royal Automobile Club of Sweden reported its activities remain focused on rallying, with the Midnight Sun Rally being its biggest upcoming event. The Royal Norwegian Automobile Club reported a 16,000-strong membership and 60 motor sport events organised per year with the help of volunteers.

Thomas Møller-Thomsen, Director General of FDM in Denmark, said a lot of media interest was generated by the club's 'Best Driver in Denmark' award which involved step-by-step qualifications towards winning a new car.

Jan Johansen, Director General for the Norges Automobil-Forbund in Norway, reported a highly successful discount benefit with up to 10 per cent reduction on the pump price, with 40,000 members having already signed up. As Chairman of the Region I Structure Working Group, Johansen presented a report with recommendations and proposals.

The Nordic Clubs' Coordination Forum (NOCOF), a sub-group of FIA Region I, met in Paris during General Assembly Week to discuss

# COFO DISCUSSES ROAD SAFETY

The Coordination Forum for Eastern and Central European Clubs (COFO) met in Paris on 20 October giving representatives the opportunity to present on their recent club activities and initiatives.

John Lodder of ANWB in the Netherlands gave a presentation about the benefits of the Middle Management Workshop as a platform to exchange information, bridge cultural differences and enhance cooperation between clubs. At the workshop, middle management and marketing-level club representatives are able to discuss developments, ideas and ongoing projects.

Lodder said: "The workshop helps us all save time by not reinventing the wheel in different clubs simultaneously. Every participant is responsible for bringing and taking his or her own input, for generating added value, and putting it into practice in their own club."

So far, there has been a strong focus on strategic planning and e-commerce, he said. Three clubs have implemented the 'Show Your Card and Save' programme and several clubs have co-produced a tourism brochure.

Eva Kostevc, International Affairs Executive for HAK in Croatia, gave a presentation about hosting the Road Safety Contest. The

event brings together road assistance patrol staff from clubs throughout the region to compete in identifying and solving breakdown problems.

The contest includes practical portion, consisting of a car breakdown simulation, and a theoretical portion of 40 questions about electronics and repair technology. This year's winner was BIHAMK from Bosnia.

Other presentations included updates on club participation in various international road safety initiatives such as the Make Roads Safe campaign and the International Road Assessment Programme.

# ASIA TALKS TOURING CAR



*The members of the FIA Asian Sport Zone met in Paris*

The FIA Asian Sport Zone held its latest meeting in Paris on 21 October, moderated by Asian Zone President Wesley Wan, who is also President of the Hong Kong Automobile Association (HKAA). The meeting was well

attended by club delegates from throughout the region.

On the agenda was the possibility of a touring car series being developed with

FIA support which will begin with events in China, Hong Kong and Macau. HKAA, the Federation of Automobile Sports of the People's Republic of China (FASC), and the Automobile General Association Macao-China will consider jointly organising the championship in 2010. In parallel, a karting championship is being developed in those same countries.

It is hoped that India and Sri Lanka could later be incorporated and that the touring car championship could develop into a larger-scale series equivalent to the Asia Pacific Rally Championship.

Andrew Papadopoulos from the Confederation of Australian Motor Sport gave a presentation on how his club plans to get involved in Asia-Pacific activities, and the FASC discussed a safety seminar it hosted for 30 children including classroom training and hands-on karting practice.

The meeting followed on a previous Asian Zone event held 15 June in Hong Kong. Some of the items discussed then were streamlining the movement of racing cars within the Asian Zone, licensing of Asian karters, and updating regulations for drifting events.

Wan presented on the Motor Sport Safety Development Fund and all those present were encouraged to submit applications to promote motor sport safety.

# AMA HAILS ENVIRONMENT AWARD



*Mexico City was presented the Roy Family Award for Environmental Partnership for its Bus Rapid Transit system*

The Mexican Automobile Association (AMA), which has been campaigning for sustainable solutions in the Mexican capital, has hailed the award of a prestigious environmental prize for the city's Metrobus Bus Rapid Transit (BRT) system.

Harvard University's annual Roy Family Award for Environmental Partnership was presented to Mexico City in recognition of its BRT system which has helped to reduce air pollution and greenhouse gas emissions, while improving the quality of life and transportation options in one of the largest cities in the world. By implementing this mode of transport, the city has reduced emissions by 80,000 tons of CO<sub>2</sub> and at the same time has increased transport capacity.

AMA Director General, Ignacio Gonzalez Fausto, said: "AMA believes that the Metrobus is an important transport mode for our city that will help reduce traffic and air pollution. It modernises our transport system, moves nearly half a million people daily, and is contributing to the reduction of emissions in line with the 50by50 initiative of the FIA Foundation."

The 50by50 Global Fuel initiative, which is being backed by FIA clubs around the world, aims to encourage development in fuel economy issues to reduce fuel consumption by 50 per cent by 2050.

## FMU WELCOMES NEW PRESIDENT

George Fred Kagimu was elected President of the Federation of Motor Sports Clubs of Uganda (FMU) after having served on the steering committee that founded the FMU in 2000. Prior to that, Kagimu held the position of Vice President for the Uganda Motor Sport Association.

Kagimu is a Certified Accountant, having been admitted to the Fellowship of The Association of Chartered Certified Accountants in December 2003. Kagimu is involved with motor rallying, having ranked

4<sup>th</sup> driver in Uganda in 1999. He also helped develop a motor racing circuit at Festino Cite Mukono.

Kagimu spent a long career working for oil and gas company Total, starting out as a financial accountant and sales representative, and later becoming a network development manager in Nigeria. He then worked for Total in France on implementing marketing strategies and finally in Zambia where he supervised a team of 30 managers and marketing staff.

## TACI WELCOMES NEW PRESIDENT

Ali Asghar Parhizgar is the newest President of the Touring and Automobile Club of the Islamic Republic of Iran (TACI). Before coming to TACI, Parhizgar was an active and successful manager of various cultural projects throughout Tehran municipality.

During his time as TACI President, he plans to improve all services and activities of the club, especially focusing on the area of rallying. He also hopes to improve communications and dialogue with the FIA and all other touring and automobile clubs around the world.



## NEW PRESIDENT AT RAAT



Somchainuk Engtrakul is the newest President of the Royal Automobile Association of Thailand (RAAT). Born in 1944 in Thailand, Engtrakul holds a BA in Economics and a Ph.D. in public administration. He began his career in the Customs Department Ministry of Finance in 1987 and was promoted to several other major departments during his time there.

By 2000, Engtrakul had achieved the highest rank of Permanent Secretary of the Ministry followed by Vice Minister in the Office of the Prime Minister. Apart from civil services, he was appointed as Chairman and Director of several leading organisations including Dhipaya Insurance PLC, Major Cineplex PLC, Siam Piwat, Nok Airlines, Admiralty Thailand, Vajthani Hospital, Niyomthai Foundations, Thai Airways International PLC, and Thai Military Bank PLC.

Engtrakul joined RAAT in early 2008 when he began to organise the first RAAT Thailand Endurance race which took place in 2009 in Pattaya and is set to become an annual event. He also works closely with Sport Authority of Thailand with regards to its manpower development plan, which aims to promote motor sport in Thailand.

# ACTAC EMPHASISES ARAB COOPERATION



*The Arab Council of Touring and Automobile Clubs discussed pan-Arab promotion of road safety, tourism and the environment at its latest meeting on 22 October*

The Arab Council of Touring and Automobile Clubs (ACTAC) met in Paris on 22 October during FIA Annual General Assembly week. The council suggested that special committees should be formed to promote messages of road safety, tourism and the environment on a pan-Arab level. These committees would decide the best means of getting across these messages while at the same time tackling issues related to customs and private vehicle importation.

Walid Shaban, FIA Region I Vice President and Automobile Club of Syria President, made a presentation outlining the importance of

ACTAC to strengthen links between Arab clubs and to assist in the development of motor sport, tourism, transport and the environment.

He stressed the importance of co-operation between Arab clubs in addressing future challenges and in ensuring that Arabic member clubs have a cohesive voice and unified opinion. Shaban also highlighted the necessity to nominate four members of the council to prepare future plans and projects to be presented at the next council meeting, set to take place during the 2010 FIA Spring Meetings in Dubai, United Arab Emirates.

# IN FOCUS

Hundreds of FIA club presidents and representatives gathered in Paris on 23 October to take part in the FIA General Assembly.





FIA CLUB PROFILE: iRAP

# IRAP MAKES ROADS SAFE

The International Road Assessment Programme (iRAP), the FIA's newest member organisation, aims to improve road standards and infrastructure worldwide.

The International Road Assessment Programme (iRAP) has a bold vision for the next decade – to rid the world of high-risk roads. If successful, the iRAP's investment plans could assist in preventing 200 deaths every day.

To help make this reality, iRAP is creating a global membership structure to bring together organisations dedicated to making roads safe.

John Dawson, iRAP Chairman, said: "It is a little known fact that road traffic injuries are one of the top three causes of death for people aged five to 44. It is estimated that crashes cost as much as US \$4 billion every day – the equivalent of three per cent of the world's combined Gross Domestic Product."

This important work has been aided by the fact that at the 2009 FIA General Assembly, iRAP was voted in as the latest organisation to become an associate member of the FIA.

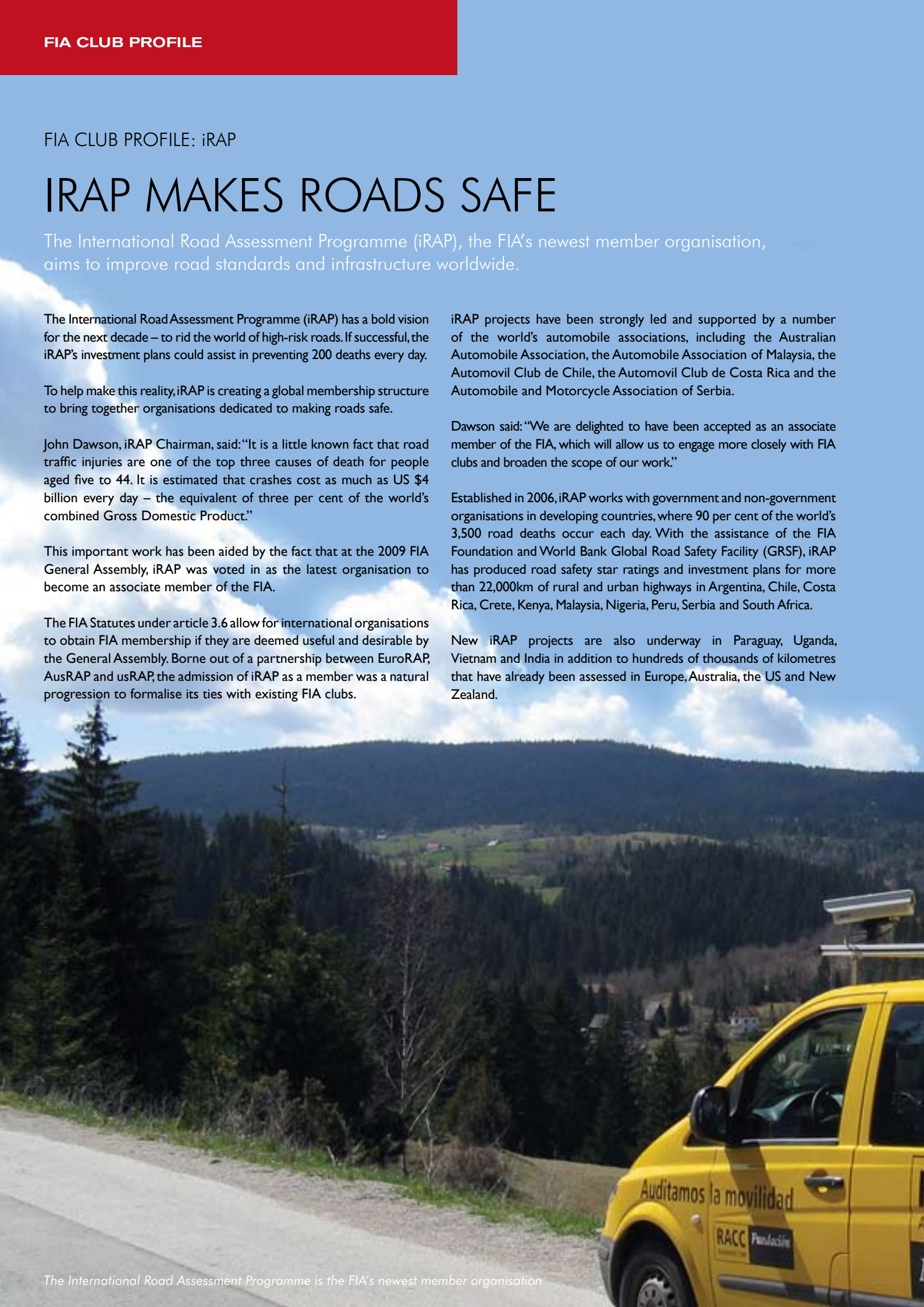
The FIA Statutes under article 3.6 allow for international organisations to obtain FIA membership if they are deemed useful and desirable by the General Assembly. Borne out of a partnership between EuroRAP, AusRAP and usRAP, the admission of iRAP as a member was a natural progression to formalise its ties with existing FIA clubs.

iRAP projects have been strongly led and supported by a number of the world's automobile associations, including the Australian Automobile Association, the Automobile Association of Malaysia, the Automovil Club de Chile, the Automovil Club de Costa Rica and the Automobile and Motorcycle Association of Serbia.

Dawson said: "We are delighted to have been accepted as an associate member of the FIA, which will allow us to engage more closely with FIA clubs and broaden the scope of our work."

Established in 2006, iRAP works with government and non-government organisations in developing countries, where 90 per cent of the world's 3,500 road deaths occur each day. With the assistance of the FIA Foundation and World Bank Global Road Safety Facility (GRSF), iRAP has produced road safety star ratings and investment plans for more than 22,000km of rural and urban highways in Argentina, Chile, Costa Rica, Crete, Kenya, Malaysia, Nigeria, Peru, Serbia and South Africa.

New iRAP projects are also underway in Paraguay, Uganda, Vietnam and India in addition to hundreds of thousands of kilometres that have already been assessed in Europe, Australia, the US and New Zealand.



Dawson said: "iRAP received a major boost at the Clinton Global Initiative in New York this year when Make Roads Safe campaign ambassador Michelle Yeoh met with former US President Bill Clinton to announce a \$10 million pledge by the FIA Foundation to help prevent 1 million deaths and serious injuries a year by 2020."

The announcement followed the Inter-American Development Bank's (IDB) commitment to reduce the number of road deaths throughout Latin America and the Caribbean. Through a five-year Memorandum of Understanding, iRAP and the IDB will work in close partnership to eliminate high-risk roads in 26 countries throughout the region.

iRAP star ratings are based on detailed road inspection data and provide a simple and objective measure of the level of safety which is 'built-in' to the road for car occupants and vulnerable road users – motorcyclists, pedestrians and bicyclists. Five-star roads are the safest while one-star roads are the least safe.

Dawson said: "The inspections have highlighted the fact that many roads suffer from a lack of facilities for vulnerable road users, who account for half of all people killed in road crashes. Less than two per cent of the 22,000km inspected have pedestrian crossing facilities or dedicated lanes for bicyclists and motorcyclists in place, while just 18 per cent of the network has pedestrian footpaths provided."

In addition to the road inspections and star ratings, iRAP has also identified infrastructure improvements that, when implemented, would prevent almost 200,000 deaths and serious injuries over 20 years. The treatments would save more than US \$11 billion in terms of crash costs avoided - a saving of \$16 for each \$1 invested.

iRAP has helped AA Kenya and the Kenyan government produce a US \$100 million plan that could cut deaths and serious injuries on

the roads inspected by 25 per cent. The plan recommends some 130 pedestrian crossings in Nairobi that could prevent more than 10,000 deaths and serious injuries over 20 years.

Through iRAP, Vietnam roads and research agencies have had the opportunity to develop their expertise in safe road design and safety assessment and use specialised software and sophisticated road inspection technology.

In Malaysia, the government is working to extend the initial assessments across the federal network, implement recommended improvements and build knowledge and capacity through education and training. In Costa Rica, the results are contributing to a major review of speed management.

Seeking to build on this momentum, iRAP is now proposing to formalise the strong relationships it has built through a new membership structure. It would enable the quick transfer of know-how, promote continuous improvement and encourage mutual support through regional associations. iRAP is encouraging all organisations involved in road infrastructure safety to comment on the discussion paper that will be published on the iRAP website at [www.irap.org](http://www.irap.org).

Dawson said: "With the number of road deaths projected to dramatically rise during coming decades, urgent action is needed. iRAP's plan for the next 10 years is bold: to assess and improve the worst five per cent of the world's roads, which experience a disproportionately high number of deaths and injuries. Large-scale, sustained and immediate improvements to these high-risk roads are both necessary and achievable. Importantly, lives can be saved without new dollars; it simply requires smarter use of existing investment.



FIA STAFF PROFILE  
 Alan van der Merwe

## 21<sup>ST</sup> MAN ON THE GRID

As a racing driver, Alan van der Merwe was consistently quick. Today, as the FIA Formula One Medical Car driver his speed is an essential asset.



FIA Formula One Medical Car Driver Alan Van der Merwe

At the start of each Grand Prix there are usually 21 cars on the grid. Twenty of them are Formula One single-seaters, but the 21<sup>st</sup> is a bit different.

Alan van der Merwe, the FIA Formula One Medical Car driver, is the man behind the wheel of the last but most important car on the grid.

His car, a souped-up AMG Mercedes-Benz C63 Estate, follows the F1 cars on the first lap of every race. It must be in position to be on the scene of an accident in less than a minute, ready to provide the fastest possible emergency treatment in case of injuries.

The car has to be driven quickly to be back in the pit lane before the F1 cars arrive at the end of their second lap. This is why the Mercedes

comes equipped with a 450bhp 6.3-litre V8 engine with a speed-shift gearbox and a high performance, suspension, brake and cooling package.

Strapped in alongside Van der Merwe is the FIA F1 Rescue Coordinator Dr Gary Hartstein. In the back are one or two local doctors, while the luggage compartment is filled with medical equipment, including a defibrillator and a respirator.

After the first lap and in every practice and qualifying session (including GP2 sessions at European races) the car is on standby in the pit lane. A radio call at any moment from Race Control will send Van der Merwe and Hartstein on their way. With constant two-way communication they will know the exact nature of the accident before they arrive at the scene.

Speed and composure in this situation is essential and Van der Merwe was chosen because of his proven track record and racing experience. Look at the list of the winners of the Formula Ford Festival in the last 15 years and you will see his name alongside Mark Webber; Jenson Button and Anthony Davidson. Take a look at the list of British Formula 3 Champions and you will see his name alongside Rubens Barrichello, Takuma Sato and Jaime Alguersuari.

Van der Merwe started racing relatively late at the age of 17 but found that he was quick straight away.

He says: "I started racing karts in 1997. It was something that I just did for fun with my father on weekends."

It soon got serious. His father Bruce had raced a Brabham-Repco BT20 in the South African F1 Championship in 1970-71. Competition was in the blood. The younger Van der Merwe soon found that he wanted to follow in his father's footsteps.

After a steady rise through various championships he won the British F3 title in 2003 and was awarded South African motor sportsman of the year. He had high hopes for the following season.

He says: "We had been talking to a couple of F1 teams, and it looked like I was going to be in with a shout with at least one of them. I had been given a run in the team's simulator, met my engineer for my first test at Barcelona, and even had team overalls."

Yet the phone call that came was not to confirm flights, but rather to tell him that another driver had turned up with money.

So he used what sponsorship he had to get a seat in GP2. But the money soon ran out. Luckily, he had done enough to win an evaluation



test with BAR alongside drivers like Nico Rosberg, Heikki Kovalainen and Nelson Piquet. Van der Merwe ended up with a testing deal and stayed with the team until the end of 2006.

With testing limited in Formula One his high point came when team sponsor Lucky Strike decided to take the car to the Bonneville Salt Flats, in Utah, to set a land speed record for an F1 car.

He says: "We came away with a one-way speed of 415km/h on tarmac and an official record on the salt of 397.360km/h."

After leaving Honda, he had stints as a driver for the South African AIGP team and as the race and development driver for the Aston Martin GT2 project.

But competitive race seats proved hard to find. The offer of the Medical Car job came at the start of 2009 when the FIA's David Lowe, who had been Van der Merwe's team manager in his Formula 3 days, asked him if he was interested.

He says: "Considering it has been very hard to find competitive race seats this year, without bringing funding to a team, the Medical Car was a great opportunity for me."

Van der Merwe was immediately impressed with the FIA set-up.

He says: "The thing that struck me immediately about the FIA is how much you take for granted as a race driver when you turn up to an event. The amount of time and money invested in safety and the smooth running of events is staggering."

There are, for example, three F1 Medical Cars, two of which are at each race. The cars are fitted with TV and timing screens. On every Thursday afternoon the Safety Car and Medical Car circulate for an hour testing the tracks' marshalling and timing systems.

It is all important preparation for the race, especially for the first lap.

He says: "The first lap of the race is probably the most intense part of the job. It can end up being pretty hectic with cars going off in front of us and having to listen to radio traffic whilst getting the car around as fast as possible.

"Besides slowing for any incidents and making sure any drivers are OK or self-extricating from the car, we are constantly aware of our track position relative to the F1 cars. Slowing down for one or two incidents increases our risk of getting in the way, so we are always pushed for time."

Fortunately for the FIA, Van der Merwe makes every second count.

LEADERSHIP LINES

Brian O'Rourke, Chief Composites Engineer, WilliamsF1

# CRASH TEST CONNOISSEUR

Brian O'Rourke, Chief Composites Engineer for the WilliamsF1 team, has spent 25 years crash testing Formula One cars. His expertise has been invaluable to the FIA and FIA Institute.



Williams' Chief Composites Engineer Brian O'Rourke



In 1984, Williams F1's composite engineer Brian O'Rourke went to the Cranfield Institute of Technology to pit his car against the latest frontal crash test that the FIA had introduced to the sport. He did not have a good day.

At the time, Williams was in the process of building the FW10, its first composite chassis. Time was short and O'Rourke was told to test the nose of the old FW09, in case the team had to use the old cars.

He remembers: "They had this huge pendulum rig at Cranfield. It's amazing looking back. They had a weight of about three-quarters of a ton and they just let it drop on to the nose."

The Cranfield engineers tactfully suggested that the first test could be conducted at half the required speed so that O'Rourke could see how things worked.

He says: "I reckon they saw the nose I had and were worried about damaging their rig."

In the first test the nose absorbed the impact in about half its length, but a quick calculation in his head convinced O'Rourke that this was not good news. Half speed meant a quarter of the energy and so he knew that with a full speed test the nose needed to be twice as long as it was.

After the full-speed test, he recalls: "There was almost nothing left. There was a steel tube that went through the nose to mount the wings on. It was the only recognisable part left - and it was flattened. I still have it somewhere - to remind me."

The new tests led to hugely increased safety in F1 and O'Rourke was heavily involved in helping the Williams team achieve this.

He concentrated his efforts on the FW10 and the new car passed the front impact test at its second attempt, just a week and half before the first race.

O'Rourke says: "It was an exciting time, although I am not sure I would want to leave it that late again."

Ever since then O'Rourke has been going back to Cranfield and has been responsible for all the Williams crash-testing. He has worked closely with the FIA throughout that time.

He says: "I have worked with the FIA as a user of the regulations since Day One. The FIA sets the standards but we are the ones who actually have to work out how to do it so they are always interested in informed feedback. I have obviously put in opinions over the years and I think that Charlie Whiting respects these views."

O'Rourke was one of the leading advocates of wider F1 chassis in the mid-1990s and then, after a Formula 3000 accident in 1999 in which the nose of one car penetrated the side of the monocoque of another car, fortunately just missing the driver, the FIA brought in new side panels for F1 in 2000.

Since then O'Rourke has worked on numerous projects with the FIA and FIA Institute, particularly on improving side penetration protection in F1 and on accident reconstructions.

The dialogue with the FIA is continuous. Today there are 16 different crash tests needed and the energy involved has increased. Some are done at the factory with FIA observers, but many others are still being done at Cranfield.

He says: "You can do front, side and rear in one day but it is better if it is a constant process. We did the first parts for the 2010 car in June and we plan to have it all done by late January. In the last few years we have had it done before Christmas but with the new regulations this year there has been more to do. You really need to do your homework and make sure everything is prepared."

It is a long way from when he joined Williams in 1982, when there was a belief in F1 circles that composite materials were the answer to everything.

He recalls: "There was really not much knowledge of composite materials at the time. It was just considered to be magic and instantly strong. But people had to understand that every piece needed to be designed properly."

With the experience he had gained as a British Aircraft Corporation stress engineer on the Jaguar and Tornado jets in the mid-Seventies, and later working on the F-18 Hornet at Northrop in California, O'Rourke was a good catch for Williams.

McLaren had caught its rivals on the hop in 1981 by introducing the first F1 carbon fibre composite monocoque. It was so successful that everyone else raced to find composite engineers. O'Rourke was in his office in California when he received a mysterious phone call asking if he would like to work for Williams.

He recalls: "When I left England, Formula One had only been on the television for a year or so. I'm embarrassed to say that I had never heard of Williams. I asked around the office and they said: 'They are the World Champions!'"

Some of his colleagues were going to Las Vegas to watch the final race of the 1981 season and, intrigued by the idea, he hitched a ride with them and had an interview with team Technical Director Patrick Head in the Caesar's Palace casino on the day after the race.

Williams had no composite department but Head wanted an in-house set-up, to ensure quality. O'Rourke developed the department from scratch and still heads it today.

He is not a man who likes to take credit for the work of others and today he says he is only a minor player in the "impact solutions" team at Williams. But there is no doubt that his 25 years of experience is invaluable to the team, as well as to the safety of the sport.

# FIA INSTITUTE DEVELOPS F1 TEST SOLUTION

With F1 fuel tanks more than doubling in size this season following the ban on refuelling, the FIA Institute has developed a new frontal impact crash test to ensure the extra weight does not impinge on safety.

The FIA Institute has developed a new frontal impact test to accommodate changes to the design of fuel tanks in Formula One cars for the 2010 season.

With the introduction of a ban on refuelling during races Formula One teams have had to increase the size of their fuel tanks so that they are now capable of holding around 230 litres of fuel instead of 100 litres previously.

The increase in the amount of fuel means that in the event of a head-on impact far greater forces will be experienced through the chassis than in recent seasons.

The FIA Institute devised a new test to assess the strength of the chassis and the seat back bulkhead and evaluate whether they could

handle the force of a full fuel load during a heavy frontal impact.

When considering the new testing criteria the primary objective was to ensure that the 2010 cars conformed to at least the same safety standards as the 2009 cars.

In addition to meeting the 2009 technical regulation requirements there was a target to raise overall performance to meet limits of bigger crashes - similar to the accident that Michael Schumacher suffered at Silverstone in 1999.

The improved test includes an array of crush tubes that are designed to simulate the progressive forces experienced by the car during a heavy impact.

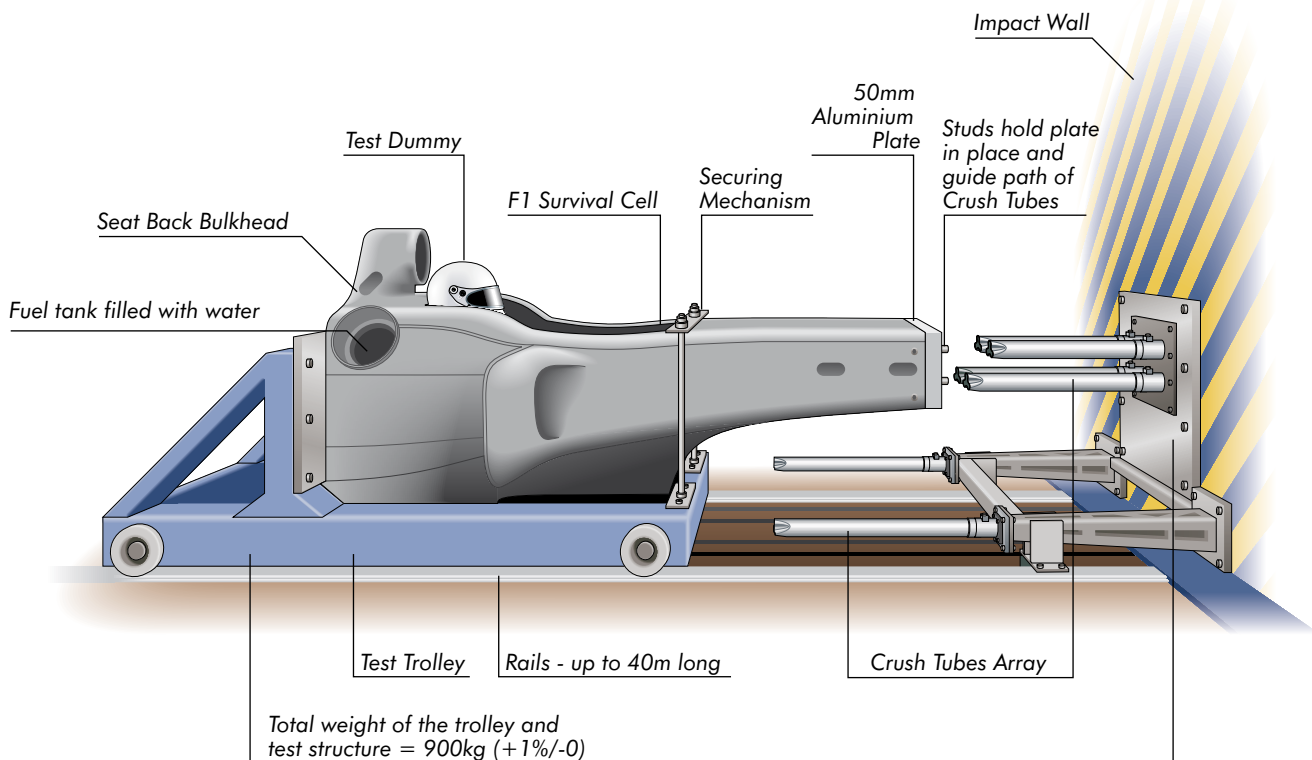
During the test the crush tubes produce a combined force of 36 tons into the chassis and trolley that generates a nominal acceleration of 40g.

To achieve an increase in the test performance, water is used in the fuel tank as it is denser than fuel and produces an elevated equivalent acceleration of almost 60g.

A recent validation test using the crush tubes successfully showed that a 2010 chassis and seat back bulkhead could cope with the 40g acceleration with a full fuel tank.

The new test also achieved its additional target by surpassing the standards of 2009 safety parameters.

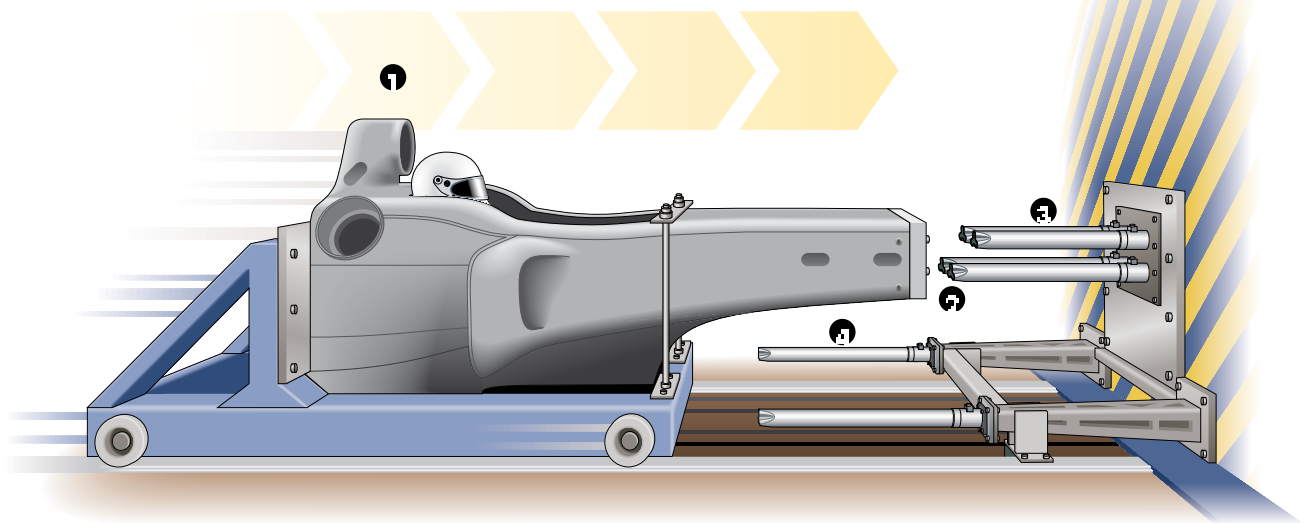
## COMPONENTS OF THE FRONTAL IMPACT TEST



# ANATOMY OF THE FRONTAL IMPACT TEST

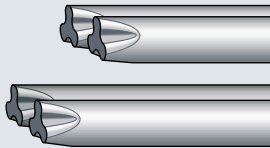
## PRE-IMPACT

- 1 Test trolley travels along the rails accelerating to 1g
- 2 The front of the chassis impacts with the first two crush tubes generating a force of 12 tons
- 3 The impact continues into the next two crush tubes generating a further force of 12 tons into the chassis
- 4 The final segment of the impact delivers an additional force of 12 tons into the trolley



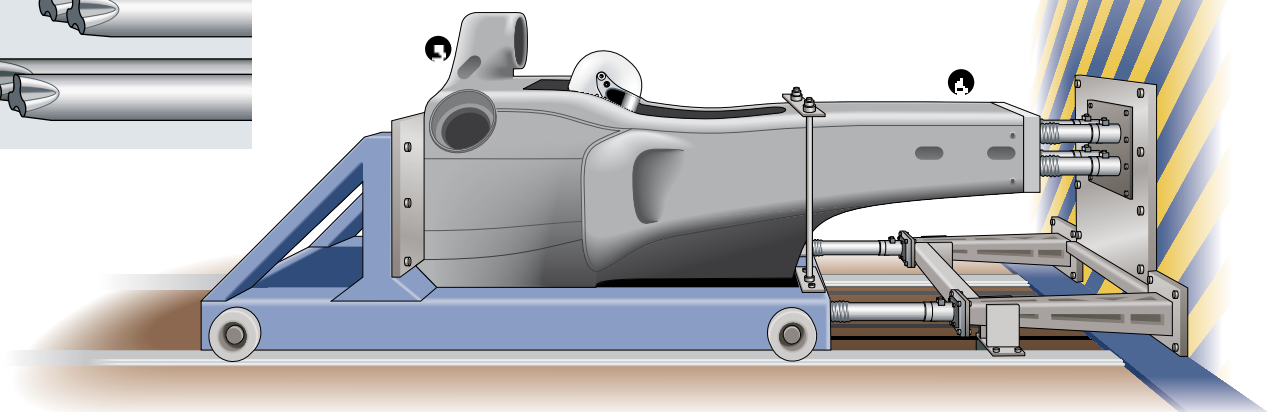
## CRUSH TUBES

The crush tubes can be tailored to different components being tested by controlling the diameter and wall thickness of each tube and the force as it collapses.



## POST-IMPACT

- 5 With the fuel tank full of water the resulting total impact delivers a force of almost 60g through the chassis
- 6 A pass or fail is based upon there being no damage to the chassis, rearward of the pedal faces



# SHEDDING LIGHT ON MOTOR SPORT SAFETY

The FIA has been utilising a new electronic marshalling system throughout this season's FIA Formula One World Championship.

A new electronic marshalling system, developed by the FIA FI Technical Department in conjunction with the FIA Institute, technology group EM Motorsport and FI Technology Partner LG Electronics, has been in use through most of this season in the 2009 FIA Formula One World Championship.

The system, which is initially supplementing flag marshals, involves the use of light panels that can be placed closer to the track than flag points without risking human safety. The panels are linked up to the FIA's Global Positioning System, enabling Race Control to see the exact location of all cars at any time and to communicate with the drivers by illuminating the panels and corresponding cockpit lights.

With 15 to 20 light panels placed around each circuit, the system has been hailed by the drivers for increasing the visibility of signals, especially from long distance.

The Marshalling System uses its own, dedicated, two-way radio telemetry system to receive information from, and send information to, all cars on circuit. The telemetry runs in combination with bespoke software, which can display the GPS coordinates of every car graphically.

When required, the system allows race control to send flag signals to any car, dependent upon its position on circuit, illuminating coloured lights on the driver's dashboard display. As well as warning drivers of impending danger, the system is also used by race control to monitor the speed of all drivers during on-track incidents, such as when the safety car is deployed.

The Marshalling Light Panels are a further development of this System. Using the same telemetry set up, it allows race control to monitor and operate coloured flag signals at any static light panel set up around the circuit.

The successful use of the system by the FIA and the teams relies on the software interface provided to them over the FIA's paddock-wide local area network. EM Motorsport provides the teams with its own bespoke software to monitor the marshalling system data in real time during an event. A more sophisticated version of the software is provided to the FIA in race control, allowing all of the race management and system de-bug features to be implemented.

The software centres around a graphical user interface, which shows the circuit map and car positions in the main window. A zoom window then allows the user to focus on a particular position on circuit or, alternatively, to track the position of one car closely. The FIA race control operator uses a single 'Master' software client that has access to all the required Marshalling System commands.

Following each session of on-track activity, the Marshalling System server saves a playback file that can be used and accessed by FIA personnel or race stewards, using the EM Motorsport software client, to review any incidents. If required by the stewards, a playback file can also be generated during run time, mid-session or if a particular incident requires immediate action.

With the GPS system having been in use in FI for nearly three seasons now, and with the full marshalling system in place through most of this season, a high level of system reliability and maturity has been reached. Now the system, and the GPS information it provides, is an integral part of FI technology and is depended upon by drivers, race organisation personnel, team engineers, accident investigators and even the viewers at home.

## MARSHALLING SYSTEM IN USE

In order to demonstrate how the system works in practice, consider an imaginary incident and the resulting sequence of events during an FI race:

- One car's engine blows up on the approach to a corner.
- The flag marshal sets the preceding light panel to display the red / yellow slippery surface or 'oil' flag, alerting race control to the track condition.
- A car spins off the circuit impacting the barriers after the corner.
- The flag marshal sets the light panel to 'waved yellow'. This sets a sector of the circuit to yellow, informing race control, and also setting the panel after the incident to green. An automatic message indicating the yellow sector is generated on all teams' timing screens.
- Software in race control indicates the crashed car's GPS position (to within 1m) and the nearest marshal post.
- Marshals attend the stricken vehicle.
- As cars pass through the yellow sector, a yellow dashboard light illuminates.
- As the stricken vehicle is in a dangerous position, race control decides to deploy the safety car using the Marshalling System software. Simultaneously, these events happen:
  - The safety car is given the command to leave the pit lane.
  - A 'safety car deployed' message appears on all timing screens.
  - All Light Panels around the circuit display a flashing yellow flag, and an illuminated 'SC'.
  - All CEs go into safety car mode, displaying the target time to pit lane on the car's dashboard, based on its position on circuit.
- Teams track all cars' positions using team client software to determine if it is advantageous to pit their car under the safety car.
- Finally, the car involved in the original incident is recovered. Race control issues the 'safety car in this lap' command. As the cars on track complete the lap, race control issues a 'track clear' command, clearing the light panels, the on-board car lights and removing the yellow sectors from the system. Racing resumes.



The new electronic marshalling system has been in use during the 2009 Formula One season

# FIA PRESIDENT AND TEAM

## SPECIAL REPORT

Following the FIA General Assembly in October, FIA President Jean Todt and his team have already begun implementing their four-year policy agenda for progress and change. This Special Report introduces the new team and outlines their proposals for developing motor sport and mobility. It also looks at their vision for the FIA, which involves a comprehensive review of the FIA Statutes, a strengthening of the FIA's international role through constructive dialogue, and measures to assist clubs in attracting new members.

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INTERVIEW

Jean Todt, FIA President

# TODT SUCCEEDS TO FIA PRESIDENCY

FIA President Jean Todt will use his vast experience in motor sport and motoring to drive forward his comprehensive policy agenda.



FIA President Jean Todt



Jean Todt is used to success. In his long motor sport career as a driver and manager he won the FIA World Rally Championship twice, the Paris-Dakar four times, the 24-Hour Le Mans two times in a row and is a seven-time winner of the FIA Formula One World Championship Constructors Title.

On Friday, 23 October 2009, Todt's winning streak continued as he was elected FIA President with 69 per cent of the vote. Now, in his new role, he is looking to give something back to those who created the platform for his successful career.

Todt says: "I have been very fortunate in my career to have enjoyed considerable success in motor sport. Like so many others in our sport, I have benefited from the hard work of previous leaders of the FIA in creating a global platform on which to compete. So for me, I felt the time was right to give something back to the sport and the FIA's clubs that have given me so much."

Todt was elected following a comprehensive campaign where he set out a four-year policy agenda to review the FIA statutes and update its initiatives in motor sport and mobility. He was in his new office at the FIA headquarters in Paris at 9am on the Monday following the election, putting those plans in place.

He says: "Now that I have been elected, I am even more driven in my ambitions for the role. Together with my team we have developed a policy agenda for the FIA which we all think is exciting and offers a new vision of how the FIA should develop in the years ahead. I'm excited about the opportunity to help shape the future of the FIA."

That future involves ensuring that motor sport and motoring are safe and sustainable both economically and environmentally.

For motor sport, Todt wants to create a platform in emerging markets to grow the sport and raise standards worldwide.

He says: "We need to do more to encourage the growth of motor sport in the emerging economies of Asia, Africa and Latin America. The world's car population will more than double in the next few decades and inevitably this will increase interest in the sport. That is why we must also ensure that motor sport is more accessible both for competitors and officials at every level with clear programmes for training and best practice, clear pathways for competition and improvement."

He also wants to work to continue to improve the FIA's major championships - Formula One, World Rally and World Touring Car.

For Formula One, Todt says his approach will be one of consensus not confrontation. He says: "We will make the best use of the FIA Commission and will appoint a new FIA Commissioner to work with all the stakeholders, including the Formula One Teams Association. We want to further develop F1 so that it benefits all those involved, from teams to fans. As the regulator of a hugely competitive and technically

complex sport we will also establish an independent disciplinary panel to investigate breaches of the rules and to recommend the most appropriate response."

It is a similar situation in WRC and WTCC, where a Commissioner dedicated to the daily management of each Championship will help to achieve the best changes as well as help to increase the popularity and success of these championships.

Ensuring the environmental relevance and sustainability of motor sport is also key to Todt's plans.

He says: "By doing this we will not only act to safeguard our sport from those who would criticise it but, more significantly, will allow the sport to become a catalyst for technological change which can have great social relevance worldwide. From an engineering and technical perspective, motor sport can pioneer green technologies of immense benefit to the motoring public. We have only just started to do this but, with the understanding and support of all the stakeholders, so much more can be achieved."

Todt's agenda for mobility focuses on making motoring as safe, clean and affordable as possible.

He says: "Working together the clubs have achieved a great deal already, for example, contributing enormously to the success of the 'Make Roads Safe' and 'Make Cars Green' campaigns. At the same time, the FIA can help grow its club network, increase their membership levels, and exchange best practice in consumer protection and tourism services."

Todt hopes that all FIA clubs will have an important role to play under the new leadership of the FIA.

He says: "During our campaign we opened a dialogue with clubs all over the world and we need to keep this communication channel open so that the clubs have a real say in the FIA's future. In particular we want to give the regions greater input into the way the FIA operates and the priorities it sets and this means regular consultation."

Todt's plans will be helped by his other roles, which compliment his FIA work. He is a member of the Board of Trustees of the FIA Foundation and President of the eSafetyAware! campaign, which aims to increase awareness and uptake of life-saving electronic safety technologies in vehicles. With his partner Michelle Yeoh, Todt has travelled the world promoting the Make Roads Safe campaign and the Call for a Decade of Action for Road Safety.

Now, he will utilise all of his knowledge and experience to be a success in his latest role.

As Todt puts it: "I see the FIA as my new team and I want to be as successful with it as I have been with other teams during my career."

# MEET THE TEAM

On 23 October, the FIA General Assembly overwhelmingly elected its new leadership team for the FIA.



Senate President Nick Crow, Deputy President for Sport Graham Stoker, FIA President Jean Todt and Deputy President for Mobility Brian Gibbons

Headed by FIA President Jean Todt, the FIA's new leadership team of Senate President Nick Crow, Deputy President for Automobile Mobility & Tourism Brian Gibbons and Deputy President for Sport Graham Stoker, will use their extensive background and experience to guide their policy decisions over the next four years. Here, we profile their careers.

**Jean Todt** has been involved in motor sport since 1966 following his graduation from the

School of Economics and Business in Paris. He began a successful career as a rally co-driver from 1966 to 1981 leading to a Manufacturers' World Title win with Talbot Lotus.

In 1982, Todt retired from competition and was appointed Director of Racing Activities for Automobiles Peugeot, where he founded the Peugeot Talbot Sport team. His team won two rally constructors' world championships,

two rally drivers' world championships and four victories at Paris-Dakar. In 1990, Todt became Director of Sporting Activities at PSA Peugeot-Citroen Group, which won the World Title in Sports Cars in 1992 and saw two victories at 24 Hour Le Mans in 1992 and 1993.

Todt entered his career with Ferrari as General Manager of its Racing Division in 1993. By 2001, he was General Manager of

all Sporting Activities of the Ferrari-Maserati Group and in 2006, he became Chief Executive Officer of Ferrari SpA. During Todt's time with Ferrari, the team won a total 98 Grand Prix victories and 13 world titles. In his final year with Ferrari, Todt worked as special advisor to the Ferrari Board chairman before retiring from the company in March 2009.

Todt is a member of the Board of Trustees of the FIA Foundation and President of the eSafety Aware campaign. In February 2007, he was awarded the Grand Officier of the Légion d'Honneur, France's second highest honour.

**Nick Crow** brings over 30 years' experience in motor sport, having started out as a driver for Fred Opert Racing in the L & M Continental Series. Crow drove Miller & Norburn BMWs in IMSA, winning two national championships and more races than any other driver in the history of the series. He was elected to the Road Racing Drivers Club in 1974.

Following a two-year stint as Director of the US Peace Corps in the early 1970s, Crow joined the Sports Car Club of America (SCCA), the largest amateur motor sports club in the US. Holding a BA in international affairs from Princeton University and an MBA from Harvard Business School, Crow became President and CEO of SCCA for 17 years, an organisation with 55,000 members and 110 regions.

Through his role at the SCCA, Crow became a board member of the Automobile and Competition Committee of the United States (ACCUS), which serves as the interface between the national racing bodies in the US and the FIA. He was elected ACCUS President in 2005. Crow is a member of the FIA World Motor Sport Council, the FIA Audit Committee and the Motor Sport Safety Development Fund Committee. In November 2008, he was unanimously elected FIA Deputy President for Sport.

**Brian Gibbons** has been President of the New Zealand Automobile Association (NZAA) since the country's 15 independent motoring clubs merged into one national body. Prior to joining the NZAA, Gibbons had extensive experience in financial and managerial roles within the motor vehicle and pharmaceutical industries. Gibbons holds a Bachelor of Commerce and Administration from Victoria University of Wellington, and is a qualified Chartered Accountant.

With the NZAA, Gibbons has introduced a new range of club services relevant to motorists including driver licensing, insurance, tourism guides, financial loans, a loyalty discount programme, battery service, technical repairs, vehicle inspections and motor industry awards.

Gibbons holds board directorships in a number of NZAA subsidiary and joint venture companies. He is also a Fellow of the New Zealand Institute of Management and a Justice of the Peace. Gibbons has held the position of Secretary for Region II Mobility.

**Graham Stoker** was educated at the London School of Economics and the London Institute of Advanced Legal Studies. Called to the English Bar, he is a Winston Churchill Prize holder, a member of the Middle Temple and Lincoln's Inn, and a leading barrister in the areas of sport law, governmental, environmental and commercial law.

Stoker has pursued a lifelong commitment to motor sport, first becoming involved in the sport in his teenage years and graduating from the Ian Taylor Racing School in the UK and the Winfield Elf Motor Racing School at Magny-Cours in France.

Joining the judicial panel of the Royal Automobile Club, UK Motor Sports Association (MSA) in 1985 he went on to become Chairman of the Panel in 1995 when he also joined the MSA Motor Sports Council. He became Chairman of the Motor Sports Council in 2001, a member of the Board of the MSA and Chairman of the MSA's pivotal Executive Committee.

He joined the FIA International Court of Appeal in 2001 hearing a range of motor sport cases and acting as a President of the Court. As joint head of the UK ASN, Stoker is at the centre of motor sport policy in the UK driving forward issues such as race and rally driver development, grass roots and club development, securing championships, and grappling with sport, governmental and environmental challenges.

The FIA General Assembly also elected the Senate members and Vice Presidents for Mobility and Motor Sport as part of Jean Todt's candidacy list.

#### **Senate Members**

Hernan Gallegos Banderas  
HHTunku Mudzaffar bin Tunku Mustapha  
S.H. Rudolf Graf von der Schulenburg  
Carlos Slim Domit  
Jainchang Yan

#### **Mobility Vice Presidents**

Carlos Barbosa  
Victor Dumot  
Ignacio Gonzalez Fausto  
Gus Lagman  
Franco Lucchesi  
Jorge Rosales  
Danijel Starman

#### **Sport Vice Presidents**

José Abed  
Michel Boeri  
Morrie Chandler  
Enrico Gelpi  
Carlos Gracia  
Mohamed ben Sulayem  
Surinder Thatthi

# VISION FOR THE FIA

Jean Todt and his team have outlined their vision for strengthening the FIA both regionally and globally through enhanced dialogue and cooperation.

Following his election as FIA President, Jean Todt outlined his plans to strengthen and renew the FIA as an organisation.

He said: "The election gives our team a strong mandate to take action in the areas we believe the FIA needs to be strengthened and renewed as we move forward together. I believe that over the next four years the FIA should seek to build on its strengths but also be ready to adapt its management and decision-making structures to make them more cost effective, responsive, and transparent."

An important aspect of keeping the FIA strong is to grow its membership base and help clubs attract and retain their members, competitors and volunteers. This requires the FIA to be more effective as a worldwide organisation, by involving all regions in decision-making processes.

Teamwork on a global scale will require organisational reform for a more efficient and representative governance system. A major component of this work will be a review of the FIA statutes to adapt and modernise the Federation's structure and rules where necessary. The FIA leadership, World Councils and membership will be fully involved in this process.

Todt said: "With the opportunity of a new leadership team, the time is right to further modernise our organisation and consider reforms that will help us to realise the FIA's full potential in cooperation with our member clubs."

Changes to the FIA Statutes will aim to strengthen regional organisation to make it more representative through a renewed system of Vice Presidents for mobility and motor sport for each region. Vice Presidents will be given a leading role in developing a renewed commitment to an expanded regional structure.

As a result of the FIA's merger with the Alliance Internationale de Tourisme, the FIA now has a regional structure for its mobility clubs which should be further developed in the future, by facilitating intra-regional and inter-regional cooperation. The appointment of regional co-ordinators and the strengthening of club structures in Africa and the Middle East are excellent first steps.

On a global level, dialogue between regions and well-structured club involvement will be integral to enhancing the FIA's international role through the collaborative development of public policy and services. This will mean working together to identify new public policies, membership recruitment strategies, and service priorities.

The FIA must provide the necessary framework for clubs with common challenges and opportunities to work together to achieve mutually beneficial outcomes. This need for enhanced communication between FIA members applies to both mobility and motor sport clubs.

Todt said: "The key to any successful global alliance is teamwork and the willingness of clubs both large and small to share experiences and wisdom. We especially want to highlight the importance of sharing strategies to grow our global club alliance and help them to recruit and retain new members."

For emerging mobility clubs, the FIA can play a more active role, helping to accelerate their policy and service development through the support of the FIA Mobility Secretariat. The FIA Mobility Commissions and other FIA working groups will continue to be supported in order to facilitate new and existing ways for member clubs to participate in and access the outcomes of their work.

The World Council for the Automobile Mobility and Tourism plays a full role in

developing a clear framework of targets and budgeting to support the implementation of the 'Mobility for All' programme. The resources and structure of the Mobility Secretariat will be reviewed to ensure that it is adequately equipped to cost effectively fulfil its role and responsibilities.

National Sporting Associations around the world depend on local volunteers and competitors to grow the grass roots of motor sport.

Todt said: "It is vital, therefore, that we address the particular organisational needs of all our ASNs to ensure they can increase their membership and encourage skills training for both competitors and officials, providing a pathway from national to international motor sport."

This is especially important in emerging motor sport nations where there is enormous potential to increase membership and participation. In this respect the FIA Foundation, FIA Institute and Motor Sport Safety Development Fund will play a central role in delivering frontline support to ASNs in these vital activities.

To achieve the required level of integration and dialogue to be truly global, the FIA will need to improve its communication systems, increasing emphasis on the FIA Knowledge Centre as a high quality, globally relevant information tool. The Knowledge Centre should promote the exchange of experience of clubs, nationally and within FIA regions, so that public policy, membership recruitment and service opportunity successes can be shared.

Todt said: "All clubs operate in changing times and the collective cooperation and support provided through the FIA network is a unique benefit of membership. We must ensure that all our actions have measurable and demonstrable outcomes that are of value to member clubs."



# MOBILITY AGENDA

Jean Todt and his team are proposing a dynamic agenda for Mobility, which will make sure that the Mobility arm of the FIA reaches its full potential in the coming years.



With over 100 million members, the FIA's clubs are the largest mobility consumer network in the world, providing vital assistance and tourism services to their members and defending the interests of motorists and their freedom of mobility. With the world's motoring population growing every day, the FIA must help its clubs to remain at the

forefront of innovative motoring services and effective public policy.

Since its merger with the AIT, the Mobility side of the FIA has been transformed. The merger brought together into one structure all of the world's motoring clubs with the potential to represent the motorist more effectively than

ever before, with an opportunity to realise this potential for the benefit of FIA members.

Good progress has already been made in restructuring the Mobility Secretariat and in developing a policy platform over the next three to five years. The 'Mobility for All' policy paper addresses climate change and road safety and identifies the next major issue for mobility clubs, that of access to safe, sustainable and affordable mobility for our members. It offers FIA clubs a great opportunity to be the leading voice of motoring consumers on the world stage.

In partnership with the FIA Foundation, FIA clubs also share highly effective advocacy activities such as the Make Roads Safe campaign, which was so influential in promoting the first ever global Ministerial Conference on road safety in Moscow in November. Through the FIA's Make Cars Green campaign and its support for the FIA Foundation's 50by50 Global Fuel Economy Initiative there is also a clear agenda to ensure that the mobility needs of FIA members will be sustainable and responsive to global concerns about air quality and climate change.

Under Jean Todt's presidency, the FIA will maintain effective, well-structured club involvement in the development of FIA public policy and services. The Knowledge Centre should promote the exchange of experience of clubs, nationally and within FIA regions, so that public policy, membership recruitment and service opportunity successes can be shared. Clubs are significant providers of tourism services. This will become an issue of greater focus of FIA activity, as there is a clear opportunity for the FIA to be a source of global and regional information of benefit to the clubs, and to facilitate the exchange of successful experiences and the development of tourism services. Tourism is another potential area for FIA public policy, protecting the rights and safety of club members.

Consumer protection will be at the heart of the FIA's identity. The FIA can strengthen the effectiveness of such consumer programmes by encouraging inter-regional co-operation, by providing independent expert advice, and promoting consumer rights at a global level.

# MOTOR SPORT AGENDA

Jean Todt and his team have set out a comprehensive plan to enhance motor sport at every level.

For the next four years, Jean Todt and his team are committed to enhancing motor sport at all levels through a variety of initiatives aimed at reducing costs, supporting grass roots development and improving dispute resolution in the sport.

Todt said: "Our worldwide community of motor sport clubs depends on a wide range of local volunteers, grass roots organisation and local competitors that provide the sound base to our pyramid of world motor sport in all its rich variety. It is vital, therefore, that we address the particular organisational needs of all our ASNs to ensure they can increase their membership, encourage skills training for both competitors and officials, to provide a pathway from national to international motor sport."

This is especially important in the emerging motor sport nations. The FIA Foundation and FIA Institute, together with the Motor Sport Safety Development Fund, will deliver frontline support to National Sporting Associations (ASNs) in these vital activities.

A commissioner will be appointed to each FIA World Championship who will be responsible

for the governance of each championship and will report to the World Motor Sport Council and sporting commissions. By reducing the direct involvement of the FIA President, the leadership will be able to concentrate on the strategic management of the FIA as a whole.

Dispute resolution by fair and transparent means is a vital role of a world governing body. For more efficient dispute resolution in FIA Championships, a Stewards Review Group will be established to examine improvements to the stewarding system of the FIA's major championships, and also to explore the development of stewards training courses to encourage their professional development.

A separate Disciplinary Panel will be established to carry out investigations, hold hearings and recommended possible penalties to the World Council. This will ensure that there is a greater separation between the disciplinary process and the World Council whilst retaining the latter's final authority over any possible sanction.

Regional Centres of Excellence will continue to be established as multi-purpose venues for competition, training and regional motor sport co-ordination. The FIA Foundation and FIA Institute will partner with ASNs to establish these centres.

To reduce costs, the FIA will encourage target setting for cost reduction in all the major championships, rules stability, standardisation of components, reduced overheads, and simplified logistics. The FIA internal budget will also be reviewed, and where possible reductions will be made to the cost for organisers by reviewing the structure of calendar fees.

Todt said: "Above all, the first duty of the leadership of the FIA is to act as the custodian of its role as the independent world governing body of motor sport. We must never forget that success at the top of motor sport depends upon our global network of competitors, volunteers, and grass roots organisation that provide the essential starting point for the world champions of today and tomorrow."



# MAX MOSLEY

## SPECIAL REPORT

After 16 years as FIA President, Max Mosley has left an undeniable legacy marked by vast improvement in many areas of FIA activity. Most notably, Mosley will be remembered for his dedication to saving lives, both on the track and on the road. This Special Report outlines his work in establishing the European New Car Assessment Programme (EuroNCAP), the FIA Foundation promoting road safety and environmental protection, and the FIA Institute which has led remarkable improvements in motor sport safety.

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# LASTING LEGACY

Following 16 years as FIA President, Max Mosley leaves a legacy of improved safety in motor sport and motoring, a stronger environmental focus for the FIA and a solid foundation for the future.

When Max Mosley was elected FIA President in 1993, there was much work to be done for mobility and motor sport in terms of safety, the environment and governance. As he enters his retirement 16 years later, the FIA has come a remarkable distance.

Very early in Mosley's tenure, discrepancies in the safety of Formula One became apparent. Two deaths in one tragic weekend at Imola in 1994, of Ayrton Senna and Roland Ratzenberger, led Mosley to take immediate drastic measures to ensure these fatal accidents would never be repeated.

"Their deaths led to a fundamental re-evaluation of safety at all levels of motor sport," says Mosley. "We established a research group charged with constant innovation and renewal of safety requirements."

Mosley's first step was to call on Professor Sid Watkins, one of the world's top neurosurgeons who had been working as a Formula One physician, and make him Chairman of the Expert Advisory Safety Committee.

Over the years, the Committee researched and implemented numerous major safety advancements including the collapsible steering column, protective foam around the top of the cockpit, new crash tests for front, rear and side impacts and the Head and Neck Support device now mandatory for every driver.

An important aspect of its work was that Mosley provided the freedom and the funding to undertake whatever research was deemed necessary, as he saw no limit to the importance of improving safety in the sport.

As Mosley puts it: "The benefits can be seen every weekend in race meetings and rallies all over the world."

A rally research group was later formed to improve safety in closed cars and another research group was formed specifically for karting. In 2004, Mosley put all the groups under one roof, forming the FIA Institute for Motor Sport Safety, and naming Watkins its president. The FIA Institute has continued to complete groundbreaking research in areas such as high

speed barriers, helmets for young drivers and an advanced side impact safety system for rally cars.

But beyond these landmark improvements in motor sport, Mosley has made a point to advance safety for all drivers, including the 100 million motorists the FIA represents.

In the aftermath of the Imola incident, Mosley became aware that European road vehicle crash tests had not been updated since 1974. Through a major campaign, the FIA forced legislative change in Europe to develop new front and side-impact crash tests.

The next step was the establishment of the European New Car Assessment Programme. Mosley led the formation of Euro NCAP in 1996 and remained chairman of the organisation through maximum repeated terms of office until 2004.

In that time Euro NCAP has seen a huge increase in the number of safety features that are fitted as standard in new cars. From the humble seatbelt to the array of new active safety technology that is currently available on the market, manufacturers took note of the rising demand for safer cars.

Safety has now become a marketing tool that manufacturers use to compete with each other on the public stage, seeking the highest accolade of five stars for adult occupant protection from Euro NCAP's stringent crash-testing programme.

Intelligent technologies, such as Electronic Stability Control, have been further promoted through the eSafety Aware campaign group and its eSafety Challenge, which brings together top racing drivers to demonstrate the benefits of these life-saving features.

Mosley says: "These initiatives spread beyond Europe and have transformed the level of safety of modern road cars. Many thousands of deaths and injuries have been avoided. Lives continue to be saved every day."

In 2001, the FIA Foundation was created, allowing for road safety policies to be pushed onto the international agenda. The FIA Foundation's work has led to the first-ever global UN Ministerial Conference on road safety which took place from

19-20 November and resulted in 150 countries supporting the Decade of Action for Road Safety.

The FIA Foundation also spearheaded the Motor Sport Safety Development Fund, which provides funding for training and development programmes throughout the world. National Sporting Authorities, in particular from developing motor sport countries, are invited to apply for funding for their various safety training programmes.

"The FIA Foundation's resources have enabled a far greater engagement of FIA clubs in Asia, Africa and Latin America in safety, environmental and mobility issues," says Mosley.

During his time, Mosley has worked to place the FIA at the forefront of environmental work in mobility and motor sport, most recently with the launch of the Make Cars Green campaign, which has successfully integrated the work of the motor sport and mobility sides of the FIA. As well, the FIA's newly-formed Environmentally Sustainable Motor Sport Commission has already introduced proposals to reduce the sport's impact on the environment.

Regulation of major FIA championships has been another major focus for the President over the years, with the aim of preserving the FIA's role as regulator and keeping interest in those championships on the rise.

Mosley says: "Despite the inevitable controversies, this has been achieved and Formula One continues to be one of the world's great sporting contests and a testament to the work of the FIA team."

The mobility side of the FIA experienced significant change over the years with the successful completion of a merger with the Alliance Internationale de Tourisme (AIT) allowing for reorganisation and a successful policy agenda, Mobility for All, to be developed and pursued.

As his 16 years come to a finish, Mosley says he is ready to enjoy his retirement: "The time has now come for me to step back and enjoy a much quieter life. There are so many books I want to read and maybe I will write a book myself – because there is so much to tell."



*Max Mosley talks with Lewis Hamilton at the 2000 World Karting Championship in Braga, Portugal*



# MOSLEY'S RALLYING ACHIEVEMENT

By Martin Holmes

In an article first published in GPweek ([www.gpweek.com](http://www.gpweek.com)), rally correspondent Martin Holmes explains why the sport has a lot of reasons to thank former FIA President Max Mosley.

Looking back on the careers of retiring politicians can unearth a depressing catalogue of broken promises and missed opportunities, but for all the complaints and irritations which the pressure of motor sport brings, the career of former FIA President Max Mosley brought a lot of forward movement in the field of rallying.

A year after he came to power, Mosley honoured a promise and gave me an interview in which he itemised his views about contemporary rallying. These were days of overt public extravagance and largesse within rallying and were long before the current ecological issues had become a global concern. He came with endless ideas of the future, which were often too revolutionary in those days to be aired publicly, for fear of being ridiculed, but Mosley always said the things that were in his mind at the time.

When Mosley came to power in 1993, ecological issues were thoughts of extremist people and were not widely considered, but they formed the groundwork of Mosley's views. In rallying they took the form of issues like wastage. "If thousands of tyres are prepared for a forthcoming rally and only hundreds are used, what sort of responsible behaviour is that?" he questioned.

Then he gave thought to issues like wanting to recognise the purpose of rallying as an activity based on production cars. "What is the value of an endurance sport if cars are rebuilt after every stage?" he asked. These were days in which tyre companies were producing tyres suitable for the different character of individual stages. "So what is the value to the public when tyres are changed every hour or so, and are of a different specification each time?"

Safety was always very high on the Mosley agenda. "It is very difficult to defend the system in which service time comes out of scheduled road times," he advocated. This was

the background behind the introduction of central service parks and the endless debates that created. And more about tyres: "Things which make tyres last longer which also give them less grip, make them safer rather than more dangerous. Less grip means less speed which means fewer serious accidents. The faster you go round corners the bigger the crash if something goes wrong."

Pirelli control tyres with deliberately reduced grip came in to force in 2008 and served to balance the increased speeds which the latest vehicle technology created.

Mosley was deeply concerned about the diminishing number of manufacturers active in rallying, and supported the 'Kit Car' concept of rally car modifications. These were ways in which manufacturers who do not mass-produce four wheel drive, turbocharged cars can still enter the sport with a worthwhile chance of success. It was soon after he came to power that the whole World Rally Car scene, which allowed radical changes to basic car designs, was introduced and went on to become arguably the most successful rally formula.

One thing which struck me forcibly then was the first comment he made. "The problem with rallying is that there is no definable career structure for a driver", he said. Drivers in those days fought their way to the top of their profession and then fell from hero to zero overnight. On this he certainly had ideas. "The way to do this is to insist on larger teams. A five car instead of a (then) three car team would achieve this well, because teams could easily employ both cadet drivers and very experienced drivers in their cars. An unnecessarily large amount of money is being spent on non-competing vehicles. And if you cut down on servicing it frees up more money to run extra cars. Teams only have finite budgets and this rule would force teams to adjust their financial priorities." Unfortunately this is still an issue.

As Mosley's regime continued, value for money became a major issue in rallying, and this is where a lot of his idealistic ideas became unstuck. Arguments about which events should be in the championship calendars, reducing the size of the teams and technical changes went on and on. My memories of Mosley's reign was that nearly everything in that original interview came true, but not everything.

One of Mosley's biggest nightmares was controlling how things were done in the first place. Rights holders felt entitled to make their own decisions, and they needed to be put into their place. Manufacturers likewise, so every time the FIA took the initiative in making decisions manufacturers screamed that they should be making the decision instead.

"The trouble is, the manufacturers never agree between themselves, and anyway, they come and go and we at the FIA are here to stay".

Rallying is an internationally emotional activity where hearts have an undue influence but Mosley came to power with his feet on the ground. It was therefore interesting to hear Jean Todt in the press conference at the Spanish rally saying that we should count ourselves lucky we have a world rally championship at all in these economically challenging days. It seemed that Jean is coming into power with the same sort of realism as Mosley.

It had also been interesting to hear Mosley's ideas considering these were from someone with a racing heritage. "Rallying has always been a bigger sport than racing, there is always a greater number of participating countries, the facilities are more readily available. Formula 1 and rallying are the two peaks as I see it". So, the future must be bright when the two candidates who fought for the new FIA Presidency both had rallying heritage.

# FOUNDATIONS FOR SAFETY

The FIA Foundation and FIA Institute are responsible for some of the most ground-breaking developments in road safety and motor sport safety in recent years.



Commission for Global Road Safety chairman George Robertson, Ferrari driver Felipe Massa and actress Michelle Yeoh promote the Make Roads Safe campaign's call for a Decade of Action

Following 16 years as FIA President, arguably the most significant elements of Max Mosley's legacy are his far-reaching efforts to improve safety.

During his tenure, Mosley established the FIA Foundation for the Automobile and Society and the FIA Institute for Motor Sport Safety, which have led extensive research, campaigning and international advocacy to enhance safety both on the road and on the race track.

Throughout its first eight years, the FIA Foundation has supported an international programme of activities promoting road safety, environmental protection, sustainable mobility and specialist motor sport safety research. Established in 2001 with a donation of \$300 million from the FIA, its main objective is to lead global campaigns and disseminate research in these vital areas of public interest.

Quickly establishing a strong reputation in both the road safety and environmental fields,

the FIA Foundation now works in partnership with a range of international agencies including the World Health Organization (WHO), the World Bank and the UN Environment Programme on road safety and environmental issues.

Rosario Alessi, founding Chairman and honorary member of the FIA Foundation, said: "Strong partnerships are at the heart of the work of the FIA Foundation. We are fortunate to enjoy valuable links with our

membership of automobile clubs across the world. Our international partnerships are equally vital. In the area of road safety our continuing cooperation with the World Health Organization and other United Nations agencies is paying dividends through greater efficiency and focus in how the international community tackles road traffic injuries."

In 2005, the FIA Foundation established the Commission for Global Road Safety to examine the extent of international progress on global road traffic injury prevention, and to make new recommendations for action. Lord Robertson of Port Ellen, former UK Defence Secretary and NATO Secretary General, agreed to chair the Commission, and many distinguished experts agreed to serve as Commissioners on the advisory board.

At the time, Lord Robertson said: "If we're going to get public awareness raised on this issue and we are going to command more world attention to the scale of this deadly epidemic then it is going to require a coalition of interest across the world to do it – politicians, diplomats, financiers, the international institutions – and that's why this initiative has been borne."

Through the Commission, the FIA Foundation set up the Make Roads Safe campaign, which grew into a broad based global coalition including public health bodies, motoring organisations, road safety NGOs and international organisations. The Make Roads Safe campaign's advocacy work has been hugely successful consistently raising road safety's political profile globally, positioning it within the international development agenda.

After gathering over a million signatures calling for action on road safety and submitting them to UN Secretary General Ban ki-Moon in 2008, the FIA Foundation succeeded in securing agreement for a UN Ministerial Conference on global road safety.

The FIA Foundation then made the proposal for a global Decade of Action for Road Safety and the Make Roads Safe campaign's main priority in the lead-up to the Ministerial was to promote the call for a Decade of Action.

At the historic conference on 19-20 November 2009 in Moscow, around 70 ministers attending from countries around the world endorsed the Call for a Decade of Action as the headline recommendation of the 'Moscow Declaration'.

Two of Max Mosley's signature initiatives that pre-dated the launch of the FIA Foundation are now also supported through the Foundation. Mosley was instrumental in establishing the European New Car Assessment Programme (EuroNCAP) in 1997 to provide independent safety assessments of the most popular cars sold in Europe. EuroNCAP is now backed by seven European Governments, the European Commission and motoring and consumer organisations in every EU country and has been credited with saving thousands of lives.

The FIA Foundation now plays a key role in promoting new life saving technologies for road safety, arguing for accelerated availability of Electronic Stability Control through the Choose ESC campaign, and a broader range of intelligent safety systems through the non-profit association, eSafety Aware. This EU platform is a direct legacy of Max Mosley's pioneering support for eSafety, working with then-European Commissioner Erkki Liikanen to promote the benefits of new active safety technologies at a time – in the late 1990s – when this was less fashionable.

While the FIA Foundation's road safety work is well established, its environmental programme has also been rapidly developing. A formula for testing pollutants and carbon dioxide emissions from cars in Europe called EcoTest was developed with ADAC's research laboratory in Germany. The FIA Foundation publishes regular reports on the EcoTest results to communicate key emerging trends to the media, consumers, manufacturers and policymakers.

Working with the International Energy Agency, the UN Environment Programme and the International Transport Forum, the Global Fuel Economy Initiative was recently launched to encourage ambitious improvements in fuel economy globally, with a focus on sustainable vehicle use in the industrialising world. The aim

is to achieve a 50 per cent improvement in fuel economy across the global fleet by 2050, a move which could save close to half of all CO2 emissions from all cars.

FIA Foundation Director General David Ward said: "The strong environmental portfolio that the FIA Foundation is building can be traced back to the environmental initiatives that the FIA took under the leadership of Max Mosley. Our work in the EU on the auto-oil legislation, demanding better fuel quality and stronger consumer safeguards, and the 1999 report 'Climate for Change', which recognised the potential scale of global warming and made constructive recommendations for improving fuel efficiency, were the platform for the work that the Foundation is doing today".

When it launched, a significant element of the FIA Foundation's research was also devoted to motor sport safety projects, such as its work on the Head and Neck Support device (HANS), which became compulsory for drivers from the 2003 Formula One season.

After two years, the FIA Foundation saw an advantage in separating its motor sport research into a specially-created body with specific expertise. A proposal to the FIA World Motor Sport Council in 2004 led to the creation of the FIA Institute for Motor Sport Safety, which took on a leading role in non-regulatory motor sport safety activities including research into vehicle design, driver equipment, circuit design and rescue facilities.

The FIA Institute has led ground-breaking research in numerous areas of motor sport, through the Open Cockpit Research Group, Closed Car Research Group and Karting Research Group. Its major projects include a high-energy dissipating barrier in use at Formula One circuits, an advanced side impact system for rally cars, and a crash helmet designed specifically for young drivers.

There are thousands of people who are alive today as a result of these many initiatives. Max Mosley's safety legacy will endure for a long time to come as both the FIA Foundation and FIA Institute continue to put safety first on the road and on the track.

# TAKING THE FIA TO THE EU

Max Mosley made sure that the FIA's influence on the Brussels political scene, especially on issues of road safety, was both incisive and long-lasting.



*Euro NCAP has assessed the safety performance of passenger vehicles since 1997*

Max Mosley's legacy in European Affairs is an important one. When Mosley assumed the FIA Presidency in 1994, European legislation on crash testing was 20 years old dating back to 1974. He set about a radical campaign to reform crash testing and to give Europe the most stringent safety standards in the world.

His work was made possible with the help and support of Alan Donnelly, then a Member of the European Parliament. Donnelly successfully led the drive for the EU to introduce a brand new set of crash test standards.

Mosley then led the establishment of the European New Car Assessment Programme (EuroNCAP), the independent crash-test organisation which he chaired for 10 years. EuroNCAP has since been described by the European Commission as the most cost-effective road safety initiative of the last 20 years.

Mosley's close work with parliamentarians also helped establish a parliamentary intergroup which later developed into the Forum for the Automobile and Society.

This success in Europe was supported by the establishment of the FIA European Bureau. The Bureau was Mosley's initiative to ensure that the FIA was well represented at the EU legislative level. Mosley placed David Ward, former advisor to the leader of the UK Labour Party, in charge of the Bureau's affairs. The establishment of the Bureau also helped lay the foundations for the eventual merger of the FIA and AIT, and the existing AIT bureau was merged with the FIA's bureau.

Alongside safety work, another important area for Mosley was the successful drive to improve emissions standards through the 'Auto Oil' package which was crucial in reforms to the fuel quality directive. His work in Brussels helped introduce a series of ever

stringent, Euro-emission regulations, reducing pollutants significantly in the process.

Mosley also led the first steps of the introduction of eSafety on the European agenda. Mosley established the eSafety platform to promote eSafety technologies and this platform was a precursor to the eventual establishment of eSafety Aware and the adoption of ESC in EU legislation last year. As part of the recognition for his work on eSafety, Mosley was made the honorary chairman of ERTICO, Europe's principle ITS platform.

On the sporting side, Mosley organised an important meeting of sports federations in Brussels called 'Rules of the Game'. The meeting which was jointly hosted by the FIA, the European Olympic Committee, and the European Commission, set out governing best practice models for sports federations. These formed the basis of the 2001 Statement of Good Governance Principles, a model of governance that the FIA still follows.



# FIA AND THE ENVIRONMENT

An important part of Max Mosley's Presidency was his work on environmental issues and his drive to ensure that the FIA is a leading light in sustainable practice.



Max Mosley's tenure as FIA president may be better known for his strong leadership in improving safety in both motor sport and mobility but he also made great strides in the FIA's environmental work. In fact, on this issue, he was way ahead of his time.

The FIA was one of the first sports organisations to take the environmental issue seriously, participating in the UN's Rio Earth Summit in 1992. This was shortly followed by the FIA's carbon offset programme to fully compensate for emissions in major championships such as the FIA Formula One World Championship and the FIA World Rally Championship.

In Brussels Mosley's initiative to create a European Bureau led to significant changes to EU legislation, calling for stringent limits on not only greenhouse gas emissions but also to pollutants. Many of these European policies later became part of the FIA's global policy. As part of the FIA's Mobility Plan under the leadership of Mosley, the Make Cars Green

declaration was signed, leading to a highly successful campaign, which has been adopted across the world by FIA member clubs. The Make Cars Green campaign sets out and recommends a number of actions that need to be taken by policy makers, consumers and industry to reduce emissions in the motoring sector.

This campaign has received global recognition through the support of leading motor racing stars in Formula One, World Rally and other major championships.

In motor sport, Mosley ensured that the FIA used its regulatory power to help accelerate the development of new environmental technology by automotive manufacturers.

For instance, the FIA passed regulations freezing engine development, and instead focusing on energy recovery systems. The first of these systems, KERS, was introduced at the start of the 2009 Formula One season, leading those manufacturers who chose to

adopt it, such as Mercedes, to conduct crucial research work into hybrid technologies for their road cars. In 2008, the FIA created the Environmentally Sustainable Motor Sport Commission, a Commission dedicated to environmental promotion across all of the FIA's championships. In his last World Motor Sport Council, Mosley presided over the adoption of the FIA's first set of environmentally sustainable motor sport policies.

There is no doubt that eco-technology and issues of sustainable practice are becoming essential in motor sport. In future, most professional championships will embrace the more ecological means of racing. For instance, the tactical use of energy (or gaining more from less fuel) will become an essential part of being successful in motor sport.

It was Mosley's foresight that ensured the FIA was prepared to deal with these environmental issues and there is no doubt Jean Todt will continue this legacy.

# WORLD RALLY CHAMPIONSHIP

## SPECIAL REPORT

The FIA World Rally Championship is heading in a new direction with new rules set to cut costs and increase competition. Other changes will improve safety and ensure the environmental sustainability of all events in the series. This Special Report takes an in depth look at some of the major technical, promotional and environmental developments happening across the championship.

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# TALKING ABOUT A REVOLUTION

The FIA is ushering in a new era for its World Rally Championship, with new rules designed to cut costs and increase competition.

The new World Rally cars to be used from the 2011 season will be smaller, cheaper and will be the first to run on the FIA's Global Engine concept. Designed to increase competition amongst drivers and teams, the new rules are set to revolutionise the sport.

The World Rally cars will be based on the current Super 2000 regulation, but the S2000's normally aspirated 2-litre engines will be supplanted by a 1.6-litre turbocharged unit with direct fuel injection. This is the global engine specification that is being developed by FIA and will be available for use across a number of championships, starting with WRC and WTCC in 2011 (see article on p54-55).

The car chassis itself will be smaller than existing World Rally cars, which will likely lead to manufacturers using 'small family' car models, such as Ford's Fiesta, for the new category. These are preferred by the FIA and the manufacturers as they are more environmentally friendly and are popular with the public.

The FIA has been working for some time to ensure these cars also meet the highest safety standards. Jacques Berger, President of the FIA Technical Commission, has made sure that the major safety elements of the cars, such as the reinforced steel chassis, are retained in their competition counterparts.

Berger explains: "The new generation of cars, like the Ford Fiesta and the new Citroën DS, have quite a big cockpit size, similar to the longer cars. Everybody will use the new specification cars from 2011 and we do not allow the removal of any steel parts from those bodyshells. So all the reinforcements of the B-pillar - all the steel - should remain."

The single exemption here is that NCAP-conforming production car side door bars must be removed to accommodate energy absorbing foam in the rally cars' sides. This is because the majority of accidents causing injury and fatality to

the occupants of World Rally cars have been when a car's side has impacted a solid object, such as a tree, at speed.

Andy Mellor, the FIA Institute's Head of Technical Affairs, has been working to optimise the side impact safety of World Rally cars for some time and has found that the foam offers the ideal solution due to its light weight and energy absorbing properties.

He says: "We have always stated that intrusion is not the problem; it is the energy management." This is the crucial rate at which high energy levels are absorbed. If the side of a rally car hits a tree at speed there is little space between the outside of the door and the occupants - who sit side-by-side - for energy to be absorbed.



Ideally, that space should contain material with deformation qualities sufficient to absorb and dissipate high speed and high energy levels optimally.

FIA Institute research also showed that window winding mechanisms should not be allowed and plastic side windows must be fixed to enable the area between the door skins and the outer sides of the seats to be filled with a particular foam specification, which has near-ideal deformation characteristics for the circumstances of a high speed side impact. Seats built to the latest safety specification will be mandatory for manufacturer teams in 2010 and all World Rally Cars in 2011.

For existing World Rally Cars there must be a minimum of 200mm between the outer door skin and the outer side of the seat to accommodate a foam volume of 60 litres or above. The

performance requirements of the foam were established by the FIA Institute through dynamic sled tests and quasi-static strength tests, the results taken into account in the 2009/2010 WRC technical regulations.

Andy Mellor says: "The key is the energy management and the foam part of the system. The current systems work very well and the 2009 WRC package is very safe. Incorporating that package into the Super 2000 cars is to some extent a measuring and desk job rather than needing testing."

With this being a formality, the FIA's Closed Car Research Group is focussing its work on optimising protection in roll-over accidents. The first task was to investigate roll cage performance through component testing and computer modelling.

The findings of this research were reported to the Closed Car Research Group Meeting, chaired by Professor Watkins, after which the team then enters the second phase, when up to seven Subaru Impreza bodyshells

will be fitted with full cages for destructive dynamic physical testing at high energies and deformation. Testing is dominated by measures to reduce possibilities of the roof section collapsing. Mellor says: "When we have established the best designs for rollover we will then validate for other impact directions."

The definitive safety blueprint for 2011 will be defined when the FIA Institute incorporates its resulting findings for best practice in packaging, roll over and side impact protection into two Super 2000 cars for testing. This work is expected to be complete early next year.

The new World Rally Cars for 2011 will incorporate all the safety devices used by existing WRCs.

"We all work together to go in the right direction as far as safety is concerned," explains Jacques Berger. "We work and liaise with Andy Mellor's Closed Car Safety Working Group. We work closely, tell him of a potential problem, and he comes back with a solution."



# UNIVERSAL MACHINE

The Global Race Engine concept offers an integrated solution for competition power units. Its first practical incarnations indicate important environmental benefits and enticing opportunities for manufacturers wishing to enter motor sport.

With growing public concern on environmental issues, the major car manufacturers are focused on producing smaller capacity, lower emission engines. Jacques Berger, President of the FIA Technical Commission, is ensuring that motor sport follows this trend.

Berger and his team create the technical regulations which govern the design of cars contesting every FIA motor sport category. Many categories incorporate production road cars and engines, or just engines, as their base; the most notable of the former group being World Touring Cars and World Rally Cars.

It is to the power units for these two disparate disciplines which the FIA Technical Department has turned first in developing its Global Race Engine project. The idea is to create one engine specification, which is both environmentally efficient and low-cost, for use across a number of championships.

Such units should be publicly available, thereby enabling manufacturers to build engines strong enough for competition and sufficiently sturdy to provide cost benefits for the competitor.

The Global Engine is also a prime example of the FIA's commitment to addressing environmental concerns. Berger explains: "The target is to reduce the CO2 production from World Rally and World Touring cars by 30 per cent."

A power unit of this type could be used in any FIA motor sport category if the relevant commission decides to use it. The more overtly road car-based series' - WTCC and WRC - are the first targeted applications, using 1.6-litre turbocharged units incorporating direct fuel injection. In June this year, the FIA World Motor Sport Council announced it had brought forward the date for introduction of the 1.6-litre turbo engine in WRC to 2011, to bring it in line with the engine used in the cars on sale to the public.

Every specification detail of a Global Race Engine is controlled by the regulations, and

the concept incorporates choice for each manufacturer interested in participating in one or more FIA series. A manufacturer can build and homologate its own Global Race Engine, or homologate a specialist supplied engine (most likely sporting the manufacturer's name on its cam covers), or use its standard production cylinder blocks and heads built to Global Race Engine specifications.

A manufacturer's production line-up may have, say, a 1.6-litre turbo – or a 1.8-litre or 2-litre to

reduce to 1.6-litre – which matches the Global Engine requirements. If that manufacturer is confident the resulting unit will be sufficiently sturdy to withstand the rigours of competition and conform to the minimum 6,000km between rebuilds requirement, then it may be homologated for a relevant series. Built to exactly the same regulated dimensions and materials as an in-

house or proprietary engine, such a power unit would be effectively a Global Race Engine, with identical performance to a Global sister. And, likely, cheaper.



Materials and dimension details of the World Rally and Touring Car 1.6-litre turbo Global Engine regulations are much progressed and a meeting of the

relevant parties to discuss and decide on remaining final details was held in November. For example, engines for touring car racing and rallying require different output characteristics, which can be obtained through specific cam lobe profiles and detail adjustments. Cam profiles must be homologated, and it has now been agreed that these may be varied according to the series for which the engine is developed. All other camshaft details will be the same; just the lobe profiles may be different.

Mandatory identical rotating and

The physical restriction to airflow into the engine goes some way to limiting engine output; only air travelling at subsonic speed can usefully produce engine power. When this air speed becomes supersonic, engine and/or turbocharger damage can result. Yet the air restrictor does not limit the turbocharger boost pressure and, if the boost pressure is free, much more torque, and power, could be extracted.

Hence a 2.5 bar boost limit. The FIA has previous experience of such a requirement with its 2.7 bar boost pressure limitation in WTCC diesel engines, which proved to work. Yet, the technology involved in limiting the boost effectively is complex, and electronics specialist Silvain Riviere has recently joined the FIA technical team, where his duty is to refine a solution to this problem.

Essentially the system comprises a specific tube between the butterfly and intake manifold, which is FIA equipment, carrying three sensors; two for the FIA and one for the competitor. These sensors feed a small FIA computer 'box' designed to be simple for scrutineers to read. An illuminated green light shows everything is within the rules, an orange light shows there is a problem, while a red light indicates an overboost or overspeed. When problems are indicated a small plug-in system will be available to determine the nature. While the basics of this system seem simple, Berger admits that perfecting the complexity inherent in such a system is not an easy task.

reciprocating components ensure performance parity between Global Race Engine derivatives, and WRC or WTCC engine power outputs will be regulated using 33mm diameter intake air restrictors placed at a regulated fixed distance between the butterfly and inlet manifold. In addition, the use of a system which limits turbocharger boost pressure to 2.5 bar is compulsory,

Some 280/290bhp is predicted and, as Berger says: "The real efficiency of Otto [cycle] engines is very good." He is pragmatic about the stated target of a 30 per cent CO<sub>2</sub> reduction and points out that, when a Global Engine is ready, physical dynamometer tests are the single way such a saving can be fully confirmed.

"We work and liaise with the FIA Institute's Closed Car Safety Working Group. We work closely, tell them of a potential problem, and they comes back with a solution."

INTERVIEW

Mario Isola, Pirelli Rally Manager

# PIRELLI'S STAR SHINES BRIGHT



*Italian manufacturer Pirelli was awarded an exclusive three-year contract as tyre supplier to the World Rally Championship*



Two years ago the FIA awarded the exclusive three-year World Rally Championship tyre supply contract to Italian manufacturer Pirelli. That deal began in 2008 and, according to Pirelli's Rally Manager Mario Isola, has been a great success for the company.

Not only was there a major technological challenge for the Pirelli engineers in Milan to overcome, but the programme has also improved the WRC's safety, its impact on the environment and its development of new rally drivers from countries all over the world - an important element at a time when the sport is expanding fast into new markets.

Pirelli is not new to motor sport. It has been providing tyres for competition since Prince Scipione Borghese and his chauffeur Ettore Guizardi had Pirellis fitted on his Itala for the 9,317-mile Peking to Paris motor race way back in 1907. During Pirelli's long and distinguished history the company has enjoyed much success; both on the racing circuits and rally stages of the world.

But being the first ever sole tyre supplier for the FIA World Rally Championship proved to be an enormous challenge albeit one that Pirelli took on with relish.

Isola explains: "The technical challenge for Pirelli was very different to previous years in the WRC. We were able to forget about concentrating on the outright performance of the tyres against competitors, but instead we had to focus on different things: consistency, reliability and improving the safety of the WRC by finding ways to avoid punctures causing accidents."

The company introduced the first of its range of WRC control tyres at the start of 2008. This included the PZero asphalt tyre, the Sottozero winter tyre, and the tyre known as the Scorpion, which was used in the WRC's various different gravel events. There were two compounds: one for abrasive surfaces and the other for softer ground. The aim was to create a tyre that was as adaptable as possible.

With anti-deflation mousse having been banned the company turned to its exclusive self-supporting 'run-flat' technology in order to make sure that punctures did not lead to accidents. The 'run-flat' designs were developed for road cars and feature heavily reinforced sidewalls which are strong enough to allow the tyre to maintain its structural integrity even after a puncture has occurred.

Isola explains: "These tyres allow any cars that do pick up a puncture to get to the end of the stage without losing too much time, and without destroying the bodywork of the car or any other components. We used existing Pirelli expertise and developed new technologies to achieve this."

The competition life of the tyres was also increased, by increasing the depth of the tread patterns. This helped the WRC teams to save money as the total number of tyres needed for an event could be reduced.

The Pirelli WRC programme was also designed to give the championship a reduced impact on the environment, an important goal for the FIA, highlighted by the establishment of FIA's Environmentally

Sustainable Motor Sport Commission (ESMSC) and that the expansion of the FIA Institute's remit into motor sport sustainability issues as well as safety.

Pirelli's World Rally Championship range of tyres were, according to Isola, "well ahead of the game" in terms of the environment, pre-empting the European Union Directive from 2005 that bans the use of polycyclic aromatic hydrocarbon extender oil from 2010 onwards. In addition, the WRC tyres are collected after each event and shipped back to Italy where they are recycled to create a number of different by-products, using techniques developed by the company.

The other big contribution to the WRC from Pirelli has been the very successful Pirelli Star Driver programme, which came into effect this year.

Isola explains: "We started with the proposal for the Star Driver scheme as part of the tender process. The cooperation with the FIA has been very good. In fact it was the FIA's idea to use its regional championships to select candidates for the Star Driver programme. This was a very good idea and now we have a worldwide reserve of new talent."

Three drivers were selected from the FIA regional championships in Africa, Asia-Pacific, and the Middle East, with a further two selected from Europe, which was divided into two zones. The successful drivers were each able to contest six World Championship rallies in fully funded Mitsubishi Lancers. The rallies were chosen to provide the broadest possible experience of the different conditions that can be encountered in the WRC.

Between the events the five drivers were sent to Edinburgh, in Scotland, to take part in the Elite Sports programme at Edinburgh University, overseen by 2001 World Rally Champion Co-Driver Robert Reid. This course includes sports psychology, fitness, nutrition, injury prevention, marketing, media and promotion techniques.

Isola says: "We have tried to teach them to build their careers in the WRC. We cannot support them forever but I know that some of them have found sponsors this year and I hope to see them back in the future. There are some real talents. With a completely new scheme it is hard to get everything right first the time and I am sure we can improve a little in the future, but the project has been a big success for us."

The first generation of Pirelli Star Drivers will now move on with rumours that Finland's Jarkko Nikara may be picked by Prodrive for its projects in 2011 and Martin Semerád (Czech Republic), Mark Tapper (New Zealand), Nicos Thomas (Cyprus) and Jon Williams (South Africa) are all hoping to raise money to enter the Production World Rally Championship in 2010.

Isola says: "There will be another generation of drivers in 2010. They will get the chance to compete in six events to show their potential and to learn."

As partnerships go, the alliance between the FIA and Pirelli has been a shining success.

# REPCO RALLY: THE ULTIMATE ENVIRONMENTAL CHALLENGE

When faced with environmental protests, the organisers of Australia's Repco Rally ensured that the green credentials of their event could not be disputed with.

In the lead-up to the 2009 World Rally Championship, the Confederation of Australian Motor Sport (CAMS) began a major undertaking: to move the Australian WRC round from its previous location in Perth across the country to the New South Wales Northern Rivers Region. To make the hard job even more difficult, the move faced harsh and unrelenting criticism from a small group in the environmental community.

Garry Connelly, the FIA representative at CAMS who was also Chairman of the Organising Committee, admitted they had no idea of the full extent of the challenges they were about to face. But as the magnitude of the opposing forces became clear – as letters, protests and even lawsuits began to arrive – CAMS and the organisers took matters into their own hands.

Connelly said: "We decided the best strategy would be a fully proactive one, by always keeping a step ahead of every environmental issue and making sure to leave no gaps in our green approach. We also agreed to be transparent by

completing a number of environmental reports and posting them directly on our website."

The organising committee began by developing an Environmental Policy with the help of an advisory committee. For this, it recruited a highly respected environmental consultant, Dr. Stephen Phillips, managing director and principal ecologist of the ecological consultant company Biolink.

External measures were taken to give the rally a green foundation, including adopting the FIA's Make Cars Green campaign as a broad theme for the event. Carbon offsetting was implemented for all competitors, media, spectators and officials. The estimated fuel and energy consumption for accommodations, service park and headquarters was calculated and converted into an estimate of the carbon offset required. Competitors were also encouraged to offset the carbon emissions of their travel and freight to and from the event.

But this was just the start of their environmental approach. A full ecological

survey was carried out that involved surveyors walking the entire length of the rally course to determine the type and amount of wildlife in the area, whether there were any threatened or endangered flora and fauna in the vicinity, and if so, to develop a management plan.

Connelly said: "We had a team of five specialists, who all work for Biolink, traverse the entire competition course. They performed very detailed ground examination of the entire route of the Special Stages, not only of the roadway proposed to be used, but also of the areas adjacent. In addition, we thoroughly researched all relevant records of endangered species."

Further assessments were carried out on the dust risk, noise monitoring, waste management and recycling, and traffic management. A report on noise control included recommendations such as fitting silencers or acoustic barriers, shutting down idle equipment and limiting the operating hours of garbage services. CAMS appointed a person to handle residents' noise problems, maintain a noise



complaint record and monitor adherence to Rally Australia's own noise guidelines.

A variety of measures were implemented to reduce the generation of dust and the effects of airborne dust. These included dampening of surfaces, dust suppressants, dust barrier fences and in some cases air conditioners within closed buildings such as houses along the route.

The cultural heritage of indigenous peoples in the region was also studied and evaluated. The entire course that passed through native title claim areas was examined to ensure the rally would not impact on Aboriginal cultural heritage values. When it was determined that in one area, the cultural beliefs of the indigenous peoples did not allow for any stakes or other objects to be planted in the ground, alternative arrangements were made for tents and barriers in that location so they would not violate this cultural practice.

The final route was not decided until the Ecological Assessment Report was received and analysed, and public meetings

were held to discuss the proposed routes. A community cross-section of 12 groups representing business, residents and environment was approached and provided feedback.

Following on the ecological assessment, extensive measures were taken to protect animals and plants during the race. This included the implementation of koala management plans in all areas where there was evidence of koala habitats. Another measure involved placing flotation barriers on a few creeks under bridges over which the rally passed, so that any oil or fuel spill would be captured if a car went off the bridge. It also prevented dust particles containing contaminants from polluting pristine waterways and impacting water habitats.

Specialists were hired to collect any snakes lurking near the course, place them in bags and transport them to other areas prior to the event, and then return them to their original "home" after the rally. Veterinary surgeons were hired to be on stand-by in case of any wildlife emergencies. On each spot where an

endangered plant was discovered, it was carefully protected with barriers.

After all possible variables had been considered, environmental assessments analysed and wildlife personnel in place, the moment finally arrived to see all their plans put to action. On 3-6 September, Repco Rally Australia, the 10<sup>th</sup> round of the 2009 FIA World Rally Championship, was staged as planned in the New South Wales Northern Rivers region.

The result was a truly incredible achievement. Connelly said: "When the rally was over and the post-event survey was complete, it was clear all our efforts resulted in an undeniable success. We proved to the critics that we could hold a rally with minimal impact to the environment over what would be expected from normal traffic. When all was said and done, we were extremely pleased with the outcome."

The community obviously agreed. An independent survey conducted by Southern Cross University revealed that 87.2 per cent of the local population stated they would welcome the return of the rally.



# WRC DEVELOPS ELECTRONIC FLAG SYSTEM

The FIA, ISC Technologies and Magneti Marelli are leading a WRC safety development to replace the current yellow flag system with state-of-the-art in-car electronics.



*With an electronic yellow flag system for WRC currently in development, Rally Control will be able to alert drivers of hazards with the push of a button*

The FIA and ISC Technologies are working with Italian automotive company Magneti Marelli to develop a new electronic yellow flag system for the World Rally Championship (WRC).

They plan to introduce this ground-breaking technology into the sport following further testing throughout the 2010 season. Once completed, the new electronic system will supplement the traditional practice of marshals

waving yellow flags to alert competitors of an incident ahead.

Currently, the Clerk of the Course takes each yellow flag decision following a series of radio communications from the marshal, or stage commander, to Rally Control. After the decision is taken, it is relayed back to the marshals via the same line of communication. With the new system, if an accident occurs, or a rally stage needs to be neutralised for any

other reason, an in-car electronic yellow flag will be immediately delivered to competition cars from Rally Control.

Rally organisers will be able to communicate directly with drivers and co-drivers through the device, which will display a flashing yellow flag to warn them of a hazard on the stage, along with a loud noise emitted to capture the crew's attention. By simply pressing a confirmation button, the co-driver informs Rally Control that

the danger signal has been received and the crew will slow to a safer speed.

Simon de Banke, General Manager of ISC Technologies, the technology arm of WRC promoter ISC, said: "There will be a mounted unit on the dashboard of selected cars. When the Clerk of the Course decides there is an emergency or a reason for a yellow flag warning, he is literally able to now press a button to send a signal through a repeater aircraft that we fly above our stages at all times and straight down into the individual cars themselves. This will then set off a warning light and a loud buzzer in the car to give warning to the driver that this yellow flag system has now been activated."

The system has been tested extensively throughout 2009 at every WRC event since Cyprus, including demonstrations for organisers, competitors and members of the Rally Safety Working Group.

De Banke said: "The good news is that the Electronic Yellow Flag system has performed

faultlessly since Sardinia, and on every event. Through our extensive discussions with the Rally Safety Working Group, we have signed off the in-car unit hardware and hope to have a good strategy for the Rally Control operations following our next meeting. If all goes well, I hope we will be introducing the system for tests in the rally cars by second quarter 2010."

Once the new technology is implemented, cars on the stage will receive the signal simultaneously, increasing speed of delivery to drivers and co-drivers and enhancing visibility of the warning signal. It will also eliminate the problem of distance between marshals so that all cars can go immediately to a safer road speed.

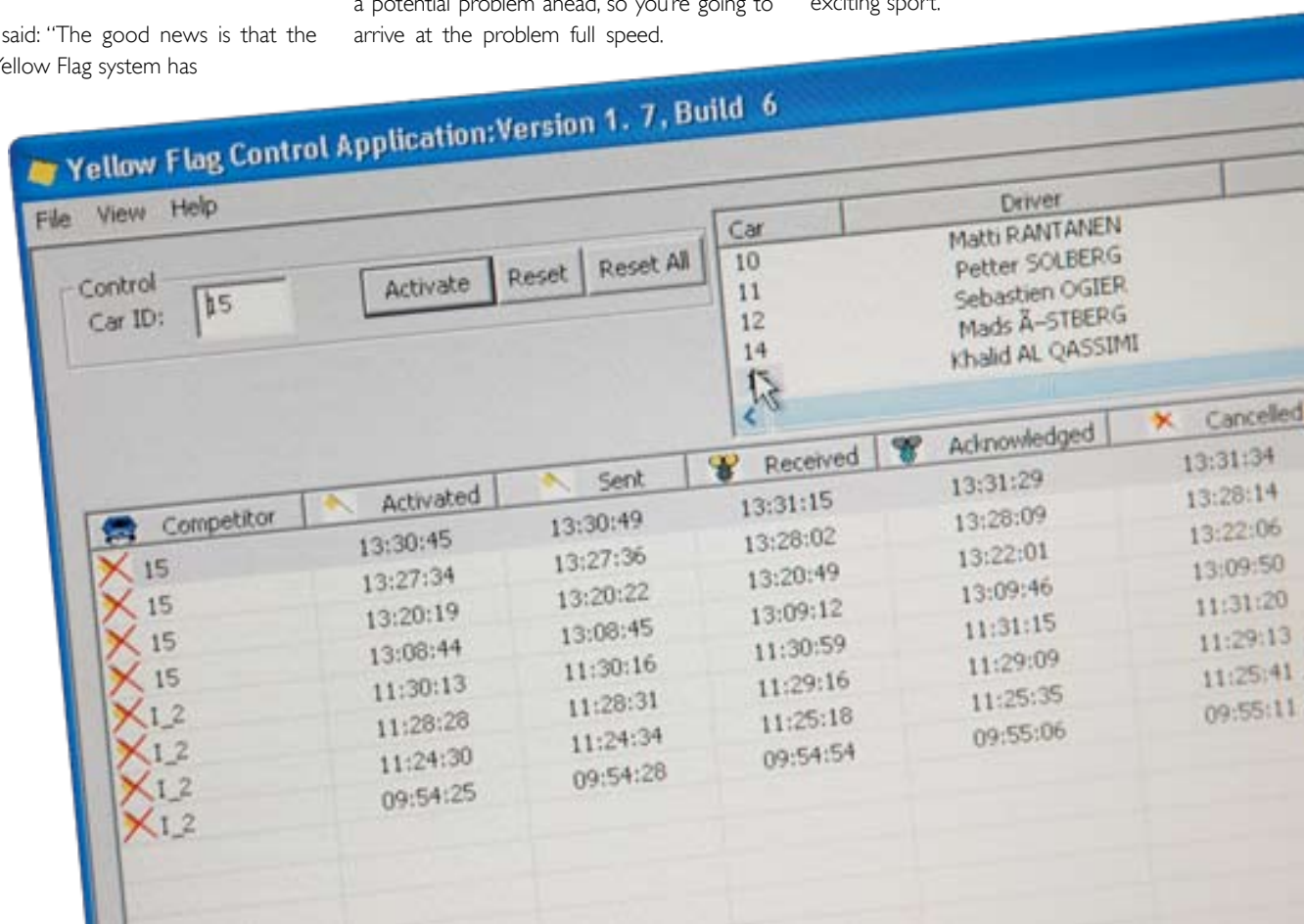
Phil Mills, a former World Rally Champion co-driver and advisor to the Rally Safety Working Group, said: "At the moment, the manual system works every five kilometers, so in a worst case scenario you could be 4.9 km at full speed with a potential problem ahead, so you're going to arrive at the problem full speed.

The advantage of the electronic system is that it takes that away. Instantly, you get the yellow light to reduce speed. All the cars on the stage get the message at the same time so there's no uncertainty."

Roberto Dalla, Managing Director of Magneti Marelli Motorsport, said: "We are very proud to be part of this project of the yellow flag with ISC. We feel we are very close to reaching the final target to use a road car technology in a very difficult environment, and to improve safety. That is the main target."

He added that the WRC is the ideal scenario in which to improve Magneti Marelli's products and a market to present innovative technological solutions.

Dalla said: "As of today, thanks to the WRC Electronic Yellow Flag System, it also represents a chance to do something extremely useful for the drivers and the fans who watch this exciting sport."



# FIA FOUNDATION NEWS

## MAKE ROADS SAFE LAUNCHES REPORT FOR MOSCOW MINISTERIAL



*Global campaign ambassador Michelle Yeoh speaks at a press conference on the eve of the Moscow Ministerial on Road Safety*

The Make Roads Safe campaign held a conference in Moscow on the eve of the first ever Global Ministerial Summit on Road Safety. The road safety experts participating in the conference called on the Ministers attending the Summit to agree on urgent action and increased resources to tackle the growing humanitarian emergency on the roads of developing countries.

A new report by UN development expert Dr Kevin Watkins launched in Moscow by the Make Roads Safe campaign describes road crashes as “a one way ticket into poverty” for many in the developing world. In some developing countries the cost of road crashes outweighs the amount they receive in overseas aid.

The report, ‘Road Traffic Injuries: the hidden development crisis’ shows how the mounting toll of death and injury is also placing an intolerable burden on health systems.

Lord Robertson, Chairman of the Make Roads Safe campaign said: “We need to stop building killer roads through poor communities and start saving lives. If you want to get a glimpse into the reality behind the global road fatality numbers, try to imagine sending your seven year old child on a daily journey to school that involves negotiating a six lane highway. We know how to make roads safe: better road design and speed management; helmets and seatbelts; police enforcement.”

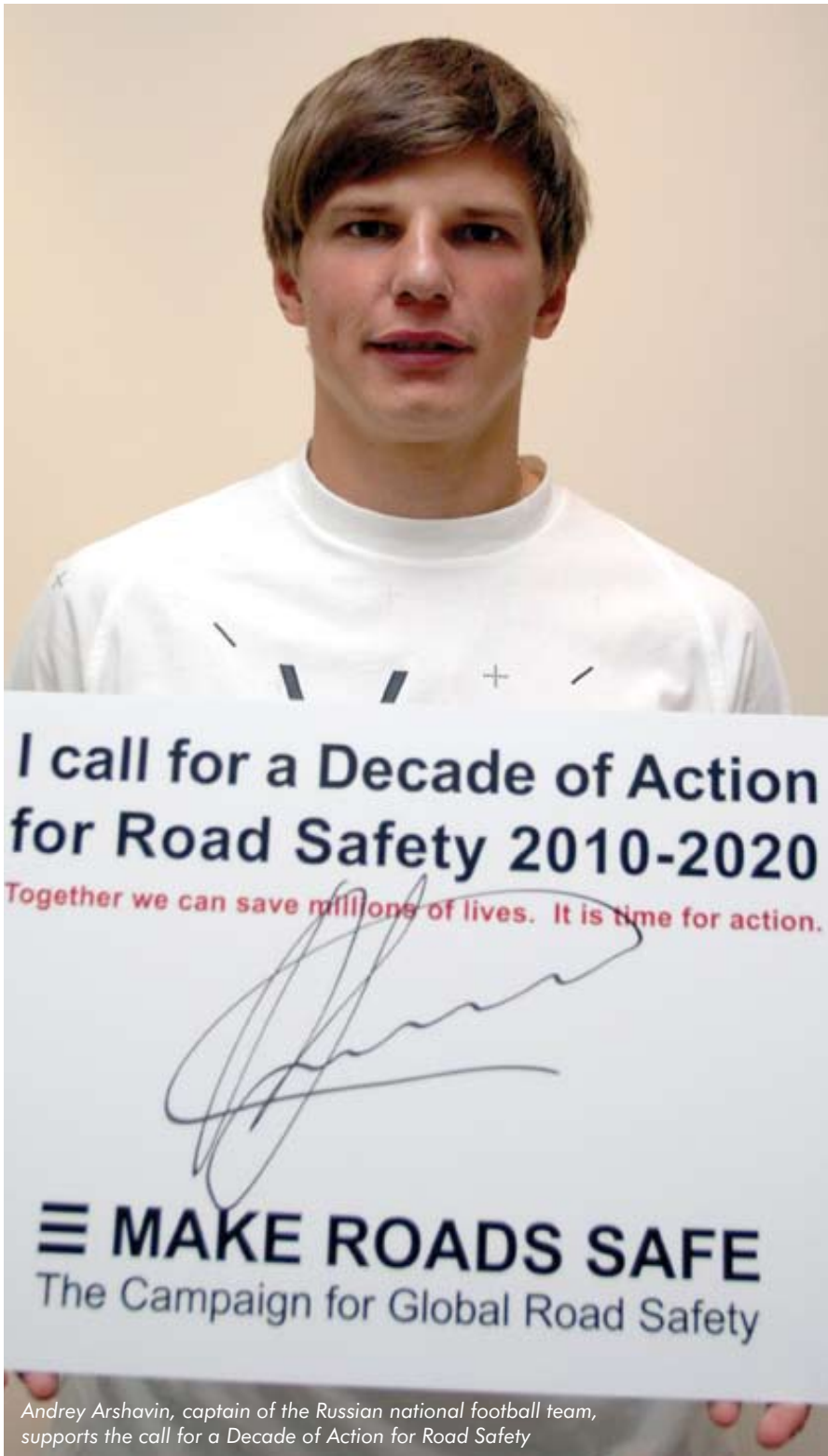
Michelle Yeoh, movie actor and Make Roads Safe global ambassador said: “Every day, hundreds of children receive a death sentence for simply crossing a road, for trying to get to school. Many thousands more will be killed or will have their lives ruined by injury if we don’t take urgent action. Here in Moscow governments have been given the opportunity to act. They must take it for the sake of our children.”

Developing countries are typically losing an amount equivalent to between 1-3% of GDP each year. The economic cost, at \$100 billion a year, equals all overseas aid. If calculated according to ‘value of life’ formulae used to justify road safety investment in some Western countries, the cost to developing countries is estimated to be as high as US\$ 385bn.

Road crashes already kill on the scale of Malaria or Tuberculosis and they are forecast to increase dramatically unless action is taken:

- Around 1.3 million people will be killed on the world’s roads this year. Over 90 per cent of these fatalities occur in the world’s poorest countries;
- By 2020, almost 2 million people will die each year on the roads;
- Road traffic fatalities are already the single biggest source of death among 15-19 year olds in developing countries and the second leading cause among 5-14 year olds.

# ARSHAVIN'S DECADE OF ACTION GOAL



Russian football star Andrey Arshavin has signed up to the Make Roads Safe campaign and called for a Decade of

Action for Road Safety in order to save lives both in Russia and around the world.

The Arsenal FC star and captain of the Russian national football team is keen to see improvements in road safety in his home country and welcomed the fact that the high level Ministerial summit on global road safety took place in Russia.

Giving his support to the Make Roads Safe campaign, he said a Decade of Action can reduce the level of death and injury globally.

Arshavin said: "More than a million people die on the world's roads each year. This makes road safety a huge problem both in Russia and around the world. We have to pay more attention to this issue. As a father of two children, I worry about the safety of young people. We need to take action to protect them on our roads."

Signing up to the Make Roads Safe campaign at his home in London, he added:

"I support the call for a Decade of Action for road safety. Too many people are dying on the world's roads. We need urgent action to save lives."

In Russia over 30,000 people are killed on the roads each year, contributing to a global total of 1.3 million. The Decade of Action for Road Safety was a proposal first put forward by the Make Roads Safe campaign and adopted by the Ministerial conference which took place in Moscow on 19-20 November. The Make Roads Safe campaign has said that if governments agreed to a Decade of Action, worldwide five million lives could be saved and fifty million serious injuries could be prevented over ten years.

As hosts for the high level intergovernmental conference, Russia has given strong backing to the road safety agenda. Russian President Dmitry Medvedev opened the conference and Head of Russia's Road Traffic Inspectorate General Victor Kiryanov was instrumental in its organisation. The new Ministerial Declaration on road safety was endorsed by Ministers from over 70 countries around the world.

## MACAYA PRAISES FOUNDATION'S LEADERSHIP ROLE



Carlos Macaya, FIA Foundation Chairman

The FIA Foundation's AGM heard of the major progress made in road safety and environmental initiatives during 2009.

The meeting, attended by the Foundation's membership of automobile clubs from across the world, heard progress reports on major initiatives, including the Make Roads Safe campaign and the Call for a Decade of Action for Road Safety, the continuing development of the International Road Assessment Programme, the e-Safety Aware campaign and, in the environmental sphere, the fuel economy campaign 50by50.

Technical experts from the FIA Institute for Motor Sport Safety, which is primarily funded by the FIA Foundation, also presented on the latest groundbreaking research in areas such as aerodynamic stability and crashworthiness. Opening the meeting, the FIA Foundation's chairman, Carlos Macaya, expressed his satisfaction with "an extremely busy and fulfilling year".

Macaya said: "Once again the FIA Foundation is leading the global road safety agenda. And

we are also supporting strong implementation programmes, for improved road design, for seat belts, for helmet wearing, vehicle standards and active e-safety systems. Many of our clubs are, of course, leading road assessment programmes in partnership with iRAP.

"This year has also seen the launch of our new environmental 50 by 50 initiative. In partnership with the world's leading environmental agencies we are promoting fuel efficiency for the global vehicle fleet. The ambition is to reduce fuel consumption by 50% by 2050".

Also attending the FIA Foundation annual meeting was the Make Roads Safe campaign's global ambassador Michelle Yeoh. Macaya paid tribute to Yeoh's work on behalf of the campaign.

He said: "She has done so much to open doors, engage the media and to give voice to the silent, desperate anger of millions of people affected by road crashes", he said.

## BANGLADESH STREET RALLY FOR DECADE OF ACTION

The Make Roads Safe campaign has been mobilising support in Bangladesh. Leading road safety and development organisations have united to call for a Decade of Action for Road Safety to mark Bangladesh's National Road Safety Day.

A colourful procession through the Bangladeshi capital Dhakar in October called for the United Nations to declare 2010-20 a Decade of Action for Road Safety. Carrying banners and placards, hundreds of road safety activists joined the march, which started in Kakrail and ended at Mukhtangan.

Nirapad Sarak Chai (We demand safe roads), a road safety advocacy group, organised the procession in association with the Make Roads Safe campaign. BRAC, the Centre for the Rehabilitation of the Paralysed (CRP), Safety Assistance For Emergencies (SAFE), and CIPRB also joined the procession.

Inaugurating the procession, Bangladesh's Communications Minister Syed Abul Hossain stressed the need for a holistic approach towards road safety. Sustained efforts from everyone are needed to prevent road accidents, he said.

Road traffic injury, the leading killer of young people worldwide, causes thousands of deaths in Bangladesh every year while the economic cost amounts to 2 percent of GDP, speakers at the rally said.

A discussion was held at Natyamancha in the afternoon, with actor Ilyas Kanchan, chief of Nirapad Sarak Chai, in the chair. Dr Syed Mudasser Ali, health adviser to the prime minister, was present as the chief guest.

Shakireh Ispahani, regional coordinator of the Make Roads Safe campaign, told the meeting that road crashes kill 1.3 million people globally -- a figure set to increase to more than 1.9 million by 2020 if no preventive actions are taken.



# FIA INSTITUTE NEWS

## FIA INSTITUTE PRESENTS PROGRESS



Andy Mellor, FIA Institute Head of Technical Affairs, FIA Institute Annual General Meeting 2009, Paris

The FIA Institute's Annual General Meeting on 22 October in Paris featured a number of presentations on progress of its projects over the last 12 months.

Andy Mellor, FIA Institute Head of Technical Affairs, reported that a study into Felipe Massa's high profile accident at the Hungarian Grand Prix concluded the FIA 8860 helmet made a significant contribution to saving his life. At the request of the Grand Prix Drivers' Association, a new study on visors has commenced.

A test configuration was developed for Formula One to cope with a ban on re-fueling starting in the 2010 season. As well, a new high frequency quartz load platform was developed for frontal, side and rear impact testing, which has been used to validate the performance of nosecones at oblique impact angles.

Work has continued to develop FIA specifications for new Frontal Head Restraint systems and concluded that sliding tethers raised no safety concerns. High-speed barrier testing has continued to evaluate nose height and penetration resistance, and work on a low cost safety package for single-seater space frame chassis cars is nearing completion.

A report from the Australian Institute for Motor Sport Safety showed the incidence of motor sport fatal injuries worldwide was reducing for circuit racing, but increasing for rally side impacts. The new FIA 8862 seat and side impact system were delivered to the World Rally Championship during 2008 and were further enhanced in 2009 to allow 60 liters of energy-absorbing foam to be fitted in the door cavity.

Advanced Racing Nets are being developed to improve protection during side and angled side

impacts, and the FIA 8860 helmet, originally designed for Formula One, will be delivered for the 2010 World Rally Championship. The project to determine best practice for roll-cage design is underway and the FIA Institute Accident Data Recorder programme has been implemented in the FIA World Touring Car Championship and Australian V8 SuperCars.

For karting, new test methods for body protection have been drafted, and the kart safety steering system has been fully evaluated through sled and track testing. The Snell-FIA CM2007 youth helmet is now available from Bell, B2 and Arai, and will be mandated by the Commission Internationale de Karting (CIK-FIA) for 2010. As well, the kart high seat specification has been published by CIK.

Quentin Crombie, FIA Institute Head of Educational and Excellence Programmes, gave a presentation on the FIA Institute's Education and Medical Programmes. The Education Programme is made up of the Officials Safety Training Programme, the Young Driver Safety Programme and the Facility Improvement Programme, all of which form the Motor Sport Safety Development Fund. The Medical Programme includes initiatives on training, participation and research.

Peter Wright gave a presentation on environmentally sustainable motor sport, examining FIA policy development and explaining how the FIA Institute will now be involved in implementing these policies through its research.

# FIA INSTITUTE TARGETS SUSTAINABILITY



At its Annual General Assembly in October, the FIA Institute agreed to expand its remit to address motor sport sustainability issues as well as safety.

The FIA Institute will now promote research into sustainability, providing information and guidance on the best environmental practices, procedures and technologies that can be applied to motor sport.

This will include aspects of vehicle design and technology, infrastructure management,

emissions monitoring and control, environmental education, carbon offsetting programmes, energy optimisation and storage, and the preservation of the natural environment.

Sid Watkins, FIA Institute President, said: "There is no doubt that eco-technology and issues of sustainability have become an essential part of motor sport. In future, professional championships will embrace a more sustainable means of racing,

"This decision was unanimously adopted by the FIA Institute's General Assembly at our annual meeting. It follows the unanimous recommendation made by the FIA Institute Executive in June to change its statutes to bring sustainability into its sphere of activity."

Expanding its remit to investigate issues surrounding the environment is a natural progression for the FIA Institute. It is funded by an annual grant from the FIA Foundation, which already focuses on both safety and sustainability in mobility. It is a logical step for the FIA Institute to mirror these activities in motor racing.

The move also complements the FIA's increasing involvement in environmental issues. The FIA recently created the Environmentally Sustainable Motor Sport Commission (ESMSC), specifically tasked with developing policy to promote sustainable motor sport. It is likely that the FIA Institute will be called upon to support the work of the Commission in a similar fashion to its current supporting role for the FIA Safety Commission.

# SLIDING TETHER SAFETY CONFIRMED



*A sliding tether attachment on a Head and Neck Support device*

The FIA Institute has completed testing on sliding tether attachments for Frontal Head Restraint (FHR) devices. The sled tests concluded that a sliding tether offers the same

high level of protection as standard tethers, and can be approved using the FIA 8858-2002 methods.

Sliding tethers provide some advantages over their non-sliding counterparts. They are designed to slide back-and-forth through slots in the FHR attachment points thus allowing the driver to move his or her head more freely. Additionally, the sliding configuration allows for shorter tethers to be used, which provides for more effective protection in a crash.

Andy Mellor, FIA Institute Head of Technical Affairs, said: "Many drivers have already commented that they find sliding tethers to be more comfortable. If more drivers like wearing them, it could mean more people will start using frontal head restraints."

The traditional configuration involves two fixed tethers of equal length that connect the helmet to the frontal head restraint. In an

accident, all the load paths are in one direction, causing the head to move forward until both tethers are tight achieving an equal load on each side of the head.

The sliding tethers were sled tested to ensure both the loads in the tethers, and the loading angle of the tethers, relative to the helmet-tether-anchorage, were not excessive. Testing was completed at Advanced Car Technology Systems (ACTS) laboratories in Germany in July.

It was found that the sliding tethers induced a rotating moment to the helmet and head during the early phase of a crash, such that the helmet was fully aligned with the FHR when the peak loads occurred. Based on this positive finding, the FIA Institute OCRG recommended that sliding tethers can be approved using the current FIA 8858-2002 specification; with the same test methods and requirements as for the fixed tethers.

# NASCAR SAFETY INTERNSHIP



Nine interns took part in an officials' safety programme at the NASCAR Research and Development Centre

In cooperation with the FIA Institute, NASCAR hosted its inaugural officials' safety internship on 12-17 October featuring a week of intensive study and training at the NASCAR Research and Development Centre in Concord, North Carolina.

The programme was aimed at developing officials from countries in Central and South America, providing participants with knowledge and skills to educate others in their home countries.

Nine interns took part in the programme, which covered topics such as track inspection processes, extrication tools, fire suppression, emergency operations planning, radio communications and environmental concerns. Participants were able to gain first-hand experience by attending the NASCAR Nationwide Series and NASCAR Sprint Cup Series events at Lowe's Motor Speedway.

Shawn Rogers, NASCAR Director of Business Affairs, said: "After a 73-hour week, from NASCAR's perspective and the initial feedback

from the interns, we believe the programme was a success. The areas such as safety equipment logistics, security planning, track inspection and maintenance, safety briefings, as well as overall communication seemed to be key areas of interest. The overarching theme was how to apply the concepts to their own style of racing and regulations."

Tamas Zettner, FIA Institute Officials Training Manager, said: "The programme was a great success, and was conducted with high degree of professionalism. NASCAR also went to great effort to make everyone feel extremely welcome. For most of the trainees this was the first chance to be close to a big motor sport event and to participate in a high quality motor sport programme of this kind."

The internship costs were covered by the Motor Sport Safety Development Fund and NASCAR. The initiative forms part of the Fund's Officials Safety Training Programme, which aims to facilitate the development of officials from around the world and at every level of motor sport.

# CLUBS EMBRACE FUNDING OPPORTUNITY



Officials' training is one of the areas of funding

The FIA Institute received 102 applications from 54 different countries requesting grants from the Motor Sport Safety Development Fund for projects to be carried out in 2010. Compared to last year, this represents a 64 per cent increase in the number of National Sporting Associations embracing this opportunity.

Approximately 65 per cent of those applications have been recommended by the FIA Institute for further consideration, and, if approved, will result in the distribution of over €5 million in grants in 2010.

The FIA Foundation Fund Management Committee will meet in mid-December to consider the FIA Institute's recommendations. It is expected that the FIA Institute will be able to notify ASNs regarding the outcome of their applications shortly thereafter.

ASNs were able to submit funding applications under each of the three safety programme categories relating to young drivers, officials and facilities during the period 31 August to 11 September 2009. ASNs submitted their applications via the FIA Institute's new on-line funding portal, which has made the application process much more efficient. Funding applications were required to meet a range of criteria and in particular needed to demonstrate an alignment, or an intention to align, to the best practice frameworks.

# FIA INSTITUTE HOSTS DEVELOPMENT WORKSHOP



*Robert Reid, MSA Performance Director, presents at the Motorsport Development Workshop*

The FIA Institute hosted its first-ever Motorsport Development Workshop in Paris on 22 October, offering a chance for experts from across the motor sport industry to

present about their initiatives and discuss to illustrate how they aligned to the FIA Institute's best practice frameworks

Jani Backman, Secretary General of AKK-Motorsport in Finland, spoke about the club's driver coaching programme. In cooperation with the University of Jyväskylä, the coaching team investigated strength and stamina requirements specific to drivers and how they should be measured and developed. Using this information, they turned general sports technology into advanced physical testing models for drivers.

Morgan Caron, responsible for the Equipe de France Circuit at the Fédération Française du Sport Automobile, gave a presentation about the FFSA's Auto Sport Academy, located in Le Mans. The Academy is dedicated to the training of drivers and mechanics.

Garry Connelly, FIA Representative at the Confederation of Australian Motor Sport

(CAMS), spoke first about CAMS' national officiating programme developed to provide job specific training to officials using a 'safety first' approach. He then gave a presentation about how environmental concerns were handled in organising the Repco Rally Australia for the 2009 World Rally Championship season.

Robert Reid, Performance Director for the Motor Sports Association and 2001 WRC champion, presented about the MSA Academy, which creates a development pathway to take competitors from entry level at age eight through to Elite and post-Elite levels, with a view to the most promising emerging onto the world stage.

Finally, Clive Bowen, founding director of Apex Circuit Design, spoke about strategies for making circuits more environmentally sustainable through proper building design, waste and water management, and environmental management systems.

## TRAINING PROVIDERS TO RAISE STANDARDS WORLDWIDE

The FIA Institute has appointed its first Regional Training Providers, which will be used to help increase the safety and training standards of motor sport officials worldwide.

The appointment is part of a move to help FIA motor sport clubs raise their level of expertise to a consistently high standard in every region.

The UK Motor Sports Association (MSA) and the Confederation of Australian Motor Sport (CAMS) are the first to be granted Regional Training Provider status after demonstrating that they meet the high standards required as part of the FIA Institute's scheme. They will now help to educate and train officials in other countries as part of the projects approved by the Motor Sport Safety Development Fund.

The Fund's programmes are managed by the FIA Institute and officials' safety training is one of its three key areas of development. National motor sport associations seeking grants from the Fund's Officials Safety Training Programme, must designate an FIA Institute-appointed Regional Training Provider in their applications.

Currently, MSA and CAMS will be allowed to help clubs outside of their region but the long term goal for the FIA Institute is to have at least one training provider each in Europe, Asia-Pacific, the Americas, Africa and the Middle East, thus creating a network of recognised trainers around the world.

FIA Institute President Sid Watkins said: "There are a significant number of motor sport associations around the world that require assistance with training officials and

developing sustainable training programmes. It is very important that this work is carried out by approved organisations that have already achieved high standards in these areas."

MSA Chief Executive Officer Colin Hilton said: "This is an extremely important initiative, and we commend the FIA Institute for its work in this area. We also recognise the significant responsibility that comes with helping other sporting associations and we are committed to carry out this work in line with the FIA Institute's high standards."

CAMS Chief Executive Officer Graham Fountain said: "We are thrilled to be appointed an FIA Institute Regional Training Provider, and we are looking forward to the possibility of working with a number of national sporting associations in the Asia-Pacific region in this capacity in 2010."

# MEDICAL BOOK AWARD NOMINATION



The FIA Institute was nominated for the 'Safety Initiative of the Year' award at the Professional MotorSport World Expo held 3-5 November for its first-ever comprehensive medical book entitled Motorsport Medicine.

Intended for all FIA championships from karting to Formula One, Motorsport Medicine presents safe, accepted approaches to the initial treatment of motor sport trauma patients. The 250-page book, edited by Formula One Medical Rescue Coordinator Professor Gary Hartstein, brings together medical and motor sport expertise from more than 20 contributors. These include FIA Institute Fellows Dr. Stephen Olvey, Professor Gérard Saillant, Dr. Terry Trammell, Hugh Scully MD, and F1 Race Director Charlie Whiting.

Part One, entitled the Motorsports Environment, provides an overview of the

organisation of motor sport, the role of the FIA, the Medical Commission, circuit procedures, racecar types, driver equipment, and the role of the Chief Medical Officer:

Part Two, Motorsports Medicine, outlines detailed medical instructions for all types of accidents and injuries. This includes extrication and primary survey procedures, as well as guidelines for numerous injuries including thoracic injury, abdominal trauma, head injury and spinal trauma.

The book's main purpose is to allow someone trained in medicine who has never participated in a motor sport event to feel at home during his or her first circuit or rally event. More experienced practitioners will find answers to their questions and a source of continuing refinement to their trauma care approach.

# ENVIRONMENTAL POLICY IN MOTOR SPORT

The FIA Institute recently commissioned a report on recent and forthcoming legislation and new policy issues in the field of sustainability, which could become directly relevant for motor sport.

The report, which focuses on legislation emanating from major political regions such as the EU, US, and Australia, found a number of policies that could impinge on motor sport and industries associated with the sport.

Examples of this include the EU REACH directive, which regulates and registers chemical products. With some downstream users, such as businesses involved in motor sport potentially having to contribute to the development of the registration dossier, this is something they should be aware of. Similar guidance was given by the report for the use of batteries, and the gradual elimination of certain products such as mercury and lead.

The report also highlighted the potential issues that could arise around new automotive technologies, such as EU directives that ensure



electrical equipment is safe. Even going as far as looking at potential problems arising through restricted movements caused by global health worries such as the current flu pandemic have been considered.

Armed with such a report, the FIA Environmentally Sustainable Motor Sport Commission, with the support of the FIA Institute, will be able to better focus its

work to ensure that motor sport is well prepared for any future legislation and able to react to its needs long before it is enforced. It will be further useful in helping in the long term planning of how the FIA should regulate motor sport so that it can best support the needs on national and transnational legislators, establishing a constructive supporting role by motor sport on environmental issues.

## DECEMBER

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- 11 World Motor Sport Council, Monaco
- 11 FIA Prize Giving Gala, Monaco
- 12 CIK-FIA Prize Giving Gala, Monaco

## JANUARY

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- 29 Sporting Manufacturers' Commission, Paris, France

## FEBRUARY

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- 2 Medical Commission, Paris, France
- 4 GT Commission, Paris, France
- 5 Touring Car Commission, Paris, France
- 10 International Karting Commission, Paris, France
- 17 WRC Commission, Paris, France
- 18 Environmentally Sustainable Motor Sport Commission, Paris, France

## MARCH

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- 11 World Motor Sport Council, Bahrain

For a full list of FIA Meetings please visit [www.fiakc.com](http://www.fiakc.com)

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SAN MARINO



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SLOVAKIA



SLOVENIA



SOUTH AFRICA



SPAIN



SRI LANKA



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