BMW GROUP
Corporate Communications

Press Information
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Change at the top of BMW Forschung und Technik GmbH.

Professor Raymond Freymann hands over the reins for the executive management of the BMW Group's think tank to Dr. Christoph Grote on 1 November.

Munich. After eight successful years as CEO of BMW Forschung und Technik GmbH Professor Raymond Freymann is handing over the reins of executive management to Dr. Christoph Grote on 1 November. Raymond Freymann is embarking on a well-earned retirement after 25 years with the company.

"During my time at BMW Forschung und Technik GmbH, I have experienced the most exciting and important moments in my professional career. During these eight years, we have developed a plethora of innovations and put them on the road. You can only do something like that with a large number of creative minds." (Raymond Freymann)

His successor Dr. Christoph Grote has managed the development portfolio for strategy and innovations at the BMW Group.

"BMW Forschung und Technik GmbH provides us with a unique world-class centre of competence that enables us to develop innovative technologies for the individual mobility of the future. I am proud to be part of this innovative team and privileged to be able to play a proactive role in helping to create future technologies for our appealing products."" (Christoph Grote)

25 years of flair for innovations.

Raymond Freymann was born in Luxembourg in 1952. He decided to study mechanical engineering and majored in aero-engineering at Braunschweig Technical University. He obtained a doctorate in 1981 after carrying out research at the Institute for Aeroelastics at the German Centre for Aerospace in Göttingen. After a period of research at the Flight Dynamics Laboratory of the Wright-Patterson Air Force Base in Dayton (Ohio), USA, Freymann turned to cars and joined BMW in 1986.

His first position involved heading the Department of Acoustics and Structural Dynamics. This was followed by the Central Department for Vehicle Physics covering the areas of acoustics, vibration comfort, aerodynamics and heat engineering, and subsequently the Central Department for Vehicle Research. In 2000, he completed his habilitation thesis in structural dynamics with the Chair of Applied Dynamics at Munich Technical University and he has held the post of honorary professor there since 2002. During his time at BMW, Freymann has completed 130 technical publications, given more than 300 lectures at conferences and other events, and registered 30 national and international patents.

From 2003 to 2011, Freymann headed BMW Forschung und Technik GmbH and was responsible for all research activities at the BMW Group.

A new start.
Dr. Christoph Grote, born in 1967, is a physicist. After completing his degree at Ruprecht Karl University Heidelberg he obtained a doctorate in theoretical physics at the University of Cambridge after carrying out research into stochastic theories of glass transition. He launched his professional career at BMW in 1997 as an advisor in in-house consulting for development. From 1999, he was responsible for a wide range of specialist areas: configuration management, light engineering, air-conditioning, physical onboard power supply, batteries, fuel cells and the cockpit. From 2004, he headed the highly innovative Central Department for Information and Communication Systems before he took over management of Strategy and Innovations in the development portfolio of the BMW Group in 2009.

“During my professional career, I have been able to gain a wide range of specialist and entrepreneurial experience. I have also been able to combine two very different areas of science – automotive and information technology – to develop innovative products. One of my future objectives in BMW Forschung und Technik GmbH will be to enable other innovative companies to make a contribution to premium mobility of the future.” (Christoph Grote)

BMW Forschung und Technik GmbH – the Think Tank of the BMW Group.
The BMW Group owes its status as the world’s most successful manufacturer of premium automobiles to outstanding development expertise in all areas relevant to driving pleasure, sustainability and safety. The foundations for this success have been created at BMW Technik GmbH over the past quarter of a century. The researchers working in this think tank develop technologies and concepts for individual mobility of the future. The subsidiary company set up 25 years ago provides the BMW Group today with a unique and world-class centre of competence that secures and expands its technology leadership as a source of innovations.

Since 2003, the wholly owned subsidiary company of the BMW Group has been responsible for universal research activities carried out within a wide range of areas such as intelligent energy management and alternative drives, driver assistance systems and active safety, man-machine interface and IT architecture, and communication technology. The legal independence as a GmbH empowers creative scope and maximum flexibility. Global access to trends and technologies is ensured by a network of international contacts with the BMW Group Technology Office USA in Mountain View (California), the Liaison Office in Clemson (South Carolina, USA) and stakes in the Institute

EURECOM (Sophia Antipolis, France) and the German Research Centre for Artificial Intelligence (DFKI GmbH, Saarbrücken).

An era comes to an end. The milestones in a researcher's career.
BMW Group Research and Technology under the leadership of Raymond Freymann was defined by ambitious goals and visions in areas such as alternative drives and energies, and driver assistance with the objective of "Vision Zero". Their success convinced sceptics in the company about the projects advanced by the researchers.

"I was always motivated by the vision of sustainable, individual mobility. After all, even if we have one billion cars on our planet, the earth should not be impacted by them. My personal highlight during my research time here was undoubtedly the round-the-world trip with the H_2R in 2004." (Raymond Freymann)

The vehicle was propelled by a twelve-cylinder power unit that had been developed by BMW Group Research and Technology and manufactured at in-house workshops. On the BMW test circuit at Miramas in France, this car went on to break nine international records for hydrogen-powered engines with a reciprocating engine, attaining a top speed of more than 300 km/h.

The "Turbosteamer" is a research project which specialists at BMW Forschung und Technik GmbH have been working on for ten years. The system is intended to make use of waste heat and is based on the principle of a steam process. It has demonstrated the potential to reduce consumption by up to ten percent when cars are driven by customers over long distances. The first generation – a maximalist approach – was launched in the public domain in 2005. The second generation was developed with a clear focus on suitability for volume production and is therefore smaller and simpler than the first generation. The research team presented this to a public audience in August 2011.

Autonomous driving – a "crazy" idea becomes reality.
In 2005, the researchers developed another "crazy" idea. A BMW was to maintain an ideal line at high speed on defined race tracks using an automated drive mode. The BMW TrackTrainer achieved even greater success. The system took a BMW round the North Loop of the Nürburgring completely autonomously on 21 October 2009 and the Laguna Seca Raceways in California on 25 May 2011. And the BMW TrackTrainer is also being used for race-track training at the BMW Group driver experience facility.

But this was not enough for Freymann. The specialists used the platform of the BMW TrackTrainer as they moved to the next stage and developed the BMW emergency stop assistant in the "SmartSenior" research project. If a driver undergoes a health crisis that precipitates an emergency, the system switches to

autonomous drive mode and carries out a safe emergency stop manoeuvre. This in turn forms the basis for the current challenge being addressed by the researchers: highly automated driving on the motorway.

“My objective to crown my professional career at BMW was to make highly automated driving on the motorway a reality. We achieved this objective in August 2011 when driving along the A9 from Munich to Nuremberg and back. I am very proud of this achievement.” (Raymond Freymann)

Apart from these selected projects, an average of 70 projects run in BMW Group Research and Technology during the course of any one year. Christoph Grote and his team are able to look forward to many challenging projects over the coming years.

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The BMW Group
The BMW Group is one of the most successful manufacturers of automobiles and motorcycles in the world with its BMW, MINI, Husqvarna Motorcycles and Rolls-Royce brands. As a global company, the BMW Group operates 25 production and assembly facilities in 14 countries and has a global sales network in more than 140 countries.
During the financial year 2010, the BMW Group sold 1.46 million cars and more than 110,000 motorcycles worldwide. The profit before tax for 2010 was euro 4.8 billion on revenues amounting to euro 60.5 billion. At 31 December 2010, the BMW Group had a workforce of approximately 95,500 employees. The success of the BMW Group has always been built on long-term thinking and responsible action. The company has therefore established ecological and social sustainability throughout the value chain, comprehensive product responsibility and a clear commitment to conserving resources as an integral part of its strategy. As a result of its efforts, the BMW Group has been ranked industry leader in the Dow Jones Sustainability Indexes for the last seven years.