



Further Refinement and Evolution of Core Technologies through Global Interaction

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Last October, China succeeded in launching its first manned spacecraft "Shenzhou V", thus becoming the world's third major space power after Russia and the United States. The pace of human invention is accelerating, extending beyond the terrestrial world into space. We are living in a world quite different from that of a few years ago when technological development was led mainly by European countries, the United States, and Japan. Technological levels are becoming increasingly uniform around the world, as evidenced by China's rapid attainment of state-of-the-art technology, creating a common platform for sophisticated basic technologies on which countries compete fiercely for breakthroughs.

The automotive industry is no exception to this trend. Every automaker around the globe is striving to improve its technologies to ensure its survival. The key to remaining competitive is to further refine and develop the core technologies, and to act with a global vision.

Mitsubishi Motors' technological innovation is proceeding in line with its corporate vision of: "concept leadership and driving fun", "Japanese craftsmanship, engineering and design", and "environment friendly technology".

Today's major challenges for automobile engineers are to develop environmental technologies to reduce greenhouse gases and nitrogen oxides which are the worldwide demands, as well as passive and active safety technologies.

At the 2003 Tokyo Motor Show, Mitsubishi Motors presented an environment-friendly next-generation family of engines and the MITSUBISHI FCV, a fuel cell vehicle based on Mitsubishi's GRANDIS minivan body and DaimlerCrysler's latest fuel cell technology.

The next-generation family of engines includes three engine series having different displacement ranges while delivering the same performance and features such as high power, low fuel consumption, light weight, compactness, and low cost. All of them also sport an aluminum cylinder block and cutting-edge technologies such as variable valve systems. At the Motor Show, Mitsubishi also showcased its next-generation GDI engine, an improved fuel consumption version of the Mitsubishi original GDI engine, which offers a significantly extended stratified lean-burn zone.

In addition to these technological achievements in the driving components, Mitsubishi Motors exhibited weight reduction and other innovative technologies for the body, the essence of which was captured by the Mitsubishi "i", a concept car that uses an aluminum space-frame.

One of our solutions for the other major challenge, namely safety, is Mitsubishi's next-generation safety system achieved by using advanced electronics for both active and passive safety. This system was mounted in the COLT safety test car and demonstrated excel-

lent results. The system is now under further development for commercialization.

As we learned through development of the new-generation engine series, the important point when developing innovative technologies is to consider the basis of that technology before advancing to the next step. This is especially true in today's world of technology where there are so many different fields of speciality. We should thus aim to improve the value of our products by first building a foundation of highly reliable core technologies and then adding to them Mitsubishi's original, specific technologies in order to satisfy customers' demands.

The second key to remaining competitive is to act on a global scale. This does not simply mean selling our products in international markets, but globally expanding our activities in all dimensions. The Mitsubishi FCV was developed in cooperation with our alliance partner, which is one example of corporate globalization in the field of development. Another example is the way in which Mitsubishi Motors is working closely with overseas suppliers in various areas, such as perfecting new technologies and products through technological cooperation at the early stages of development, and optimizing parts procurement on a global scale.

While we must embrace economic and technological globalization, we must also offer customers unique and distinctive products as people's lifestyles and tastes are becoming increasingly diverse. When responding to customers' needs, we must therefore do business on the global stage while keeping Mitsubishi's distinctive identity.

To create a distinctive corporate identity, a distinctive identity in technology is crucial, and this requires creating innovative and original technologies. To this end, we must consider technical development not only in the short-term but also from a long-term perspective. We will be able to create more exciting and enticing cars by combining such promising technologies as nanotechnology, information technology, and human engineering technology with automobile technology, and hence realize our potential through international, business, and academic interactions.

To do this, each employee must grasp the latest trends and technological information in their own field, and store that knowledge in a databank shared by all members. This new information must be processed into comprehensible knowledge, which must then be quickly used in the development of components and basic technologies. This will require courage, passion, and a strong sense of responsibility and mission. Some technologies require a long time and profound research before they work sufficiently; others should be implemented quickly to be really effective. Engineers must be sensitive enough to distinguish between these two types of technology and to achieve a good balance between the two. True technological innovation is possible by those engineers who understand and meet these requirements. Mitsubishi Motors also remains committed to technological innovation for minimizing impact on the environment and realizing safe, efficient, and clean driving.

This issue of **MITSUBISHI MOTORS TECHNICAL REVIEW** introduces many of Mitsubishi Motors' latest technologies and products. We will continue to use the **MITSUBISHI MOTORS TECHNICAL REVIEW** as an important means of informing our customers of Mitsubishi's current technological and production activities in the pursuit of providing all customers around the world with vehicles that bring pleasure to life.