

## PRESS RELEASE



# SIM-Drive Corporation established to promote in-wheel motor technology for electric vehicles

August 24, 2009 – Tokyo – SIM-Drive Corporation today announced its establishment as a venture business of Keio University. The registration for the company's establishment was filed on August 20, 2009. The company received investment from Keio University Professor Hiroshi Shimizu, Chairman and CEO of Benesse Corporation Soichiro Fukutake, Gulliver International Co., Ltd., Nano-Optonics Energy, Inc., Benesse Corporation and Marubeni Corporation in a collaborative effort between industry and academia. The new company hopes to promote the widespread use of electric vehicles to ensure a cleaner environment for the next generation.

SIM-Drive Corporation aims to promote electric vehicles in Japan and abroad with its SIM-Drive (Shimizu In-wheel Motor Drive) technology developed by Hiroshi Shimizu. SIM-Drive Corporation will not actually manufacture or market electric vehicles. Rather, it will provide its SIM-Drive technology and cooperate with a wide range of companies that manufacture electric vehicles and electric vehicle parts.

Following the establishment of the company, SIM-Drive Corporation will invite participation from companies that share its excitement at the possibilities of electric vehicles with SIM-Drive technology, and investigate and plan how to promote the widespread use of electric vehicles. SIM-Drive Corporation aims for its business partners to mass produce electric vehicles with SIM-Drive technology by the time the second commitment period of the Kyoto Protocol begins in 2013.

### 1. Background

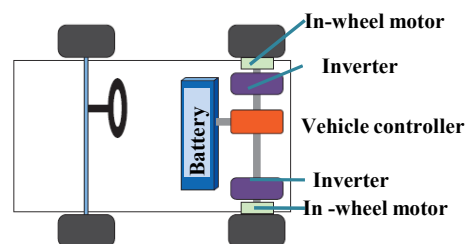
The popularization of electric cars has been deemed one solution for the world's environmental problems. The energy efficiency of electric vehicles equipped with SIM-Drive technology is four times that of gasoline-powered vehicles, and they can surpass gas-powered vehicles in terms of acceleration, roominess, ride comfort, and price when mass produced thanks to their simple design and smaller number of parts.

SIM-Drive Corporation brings together dedicated people who have great expectations for the future of SIM-Drive technology, which Hiroshi Shimizu has spent over 30 years developing. They share the corporate philosophy of ensuring a cleaner environment for the next generation.

#### What is SIM-Drive?

SIM-Drive is the name given to the integration of an in-wheel motor, platform, suspension, system management and control as a component of an electric car. It utilizes the know-how of SIM-Drive Corporation and can be used to improve existing vehicles or be applied in "ground-up" models (newly designed vehicles).

SIM-Drive Corporation is currently pondering phrasing such as "by SIM-Drive" or "Platform by SIM-Drive" for future cars with components approved by SIM-Drive Corporation.



## 2. Corporate overview

■ **Company name:** SIM-Drive Corporation

■ **Established:** August 2009

■ **Location:** 3-14-3 Kanda-Nishikicho, Chiyoda-ku, Tokyo

■ **Capital:** 44 million yen

■ **Officers:**

Chairman: Soichiro Fukutake (Representative Director, Chairman and CEO of Benesse Corporation)

President: Hiroshi Shimizu (Professor in Faculty of Environment and Information Studies, Keio University)

Director: Kenichi Hatori (Chairman of Gulliver International Co., Ltd.)

Director: Hiroshi Fujiwara (Representative Director of Nano-Optonics Energy, Inc.)

Director: Hideaki Fukutake (Director of efu Corporation)

Auditor: Tadaaki Kimura (President of Addlight Inc.)

■ **Corporate advisers:**

Nobuyuki Idei (Founder and CEO of Quantum Leaps Corporation)

Jun Murai (Professor in the Faculty of Environment and Information Studies at Keio University)

Tadashi Takano (Professor of Graduate School of Media and Governance at Keio University) \*Technical advisor

■ **Shareholders :**

Soichiro Fukutake

Clean Craft Co., Ltd.

Hiroshi Shimizu

Gulliver International Co., Ltd.

Nano-Optonics Energy, Inc.

Benesse Corporation

Marubeni Corporation

Keio University

■ **Business activities:**

1. Research and development of electric vehicles
2. Research and development of in-wheel motors for electric vehicles and other parts for electric vehicles
3. Consulting pertaining to the development of electric vehicles
4. Educational services to promote the widespread use of electric vehicles
5. Setting of technical standards for electric vehicles
6. Support for basic production of electric vehicles

### 3. Business strategy and timeline

Business will be developed in three phases.

- **Phase 1:** Investigate and plan how to popularize electric cars equipped with SIM-Drive technology.

*\*Phase 2 and thereafter are current plans and may change depending on the results of Phase 1.*

- **Phase 2:**

- Standardization and collaboration on frontrunner electric vehicles
- Recruit automobile makers, motor manufacturers, and platform manufacturers to conduct SIM-Drive standardization and collaborative research for frontrunner cars using patents, technologies and experience gained from the SIM-Drive technology development process.

- **Phase 3:**

- **Support manufacturing operations:** Provide comprehensive support for business partners in the manufacture of cars with SIM-Drive technology.
- **Educational activities:** Foster the development of human resources (developers and technicians) for electric cars.

- **2013 target:** Business partners begin mass production of electric vehicles with SIM-Drive technology.

Inquiries:

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URL: <http://www.sim-drive.com>  
Person in charge: Yuji Watanabe

## Executive profiles



### **Hiroshi Shimizu**

Professor in Faculty of Environment and Information Studies,  
Keio University

Shimizu was born in Miyagi prefecture in 1947 and earned his Ph.D. from the Graduate School of Engineering of Tohoku University in 1975.

In 1976 he began his work as a researcher at the National Institute for Environmental Studies and in 1987 was appointed Research Director of the Regional Environment Research Group. After stepping down in 1997, Shimizu became a professor in the Faculty of Environment and Information Studies at Keio University, engaging in analysis of environmental issues and research into technological solutions such as development of electric automobiles and energy systems. Shimizu has been a leading figure in Japan for electric car development, working on development of eight concept cars in 30 years.

Since 2004, Shimizu has been a technology leader in the Eliica project, which does research into the marketing of electric cars. The Eliica concept car which utilizes next generation "in-wheel motor" technology reached a speed of 370 km/h (230 mph) in 2004 tests. As of 2009, Shimizu has been involved with the development of an electric bus in collaboration with the Kanagawa prefectural government.

Shimizu authored a book about strategies to prevent global warming published in 2007.



### **Soichiro Fukutake**

Representative Director, Chairman and CEO of Benesse Corporation  
Representative of Benesse Art Site Naoshima; President of  
Naoshima Fukutake Art Museum Foundation

Fukutake was born in Okayama prefecture in 1945 and graduated from the Faculty of Science and Engineering at Waseda University in 1969. In 1973, he began work at Fukutake Publishing Co., Ltd. (currently Benesse Corporation). He was appointed president in 1986 and has served as Chairman and CEO since 2007. In 1987, the Naoshima project in Kagawa prefecture was initiated to revitalize its local community with mixing nature and art.

Fukutake has received numerous prizes and awards, including the Mecenat International Prize (1998), 13th Iwakiri Shotaro Prize (2000), Mecenat Grand Prize (2006), Kagawa Prefecture Award for Distinguished Services to Culture (2006), Minister of Education, Culture, Sports, Science and Technology Award for Art (2008).

Fukutake's mottos include "Work with what you have to make something new,"  
"The economy serves culture," and "Capitalism for the common good."



## **Kenichi Hatori**

Chairman of Gulliver International Co., Ltd.

Hatori was born in 1940 in Fukushima prefecture and graduated from Sukagawa High School in 1959. Hatori started a used car business, Tokyo My Car Hanbai in 1976. In 1994, he founded Gulliver International Co., Ltd. to auction used cars wholesale rather than displaying them in showrooms, and established a new business model. In 1998, Gulliver launched Dolphinet, a car sales system that transmitted images via satellite (currently available over the Internet). In 1998, Gulliver's stock was registered with the Japan Securities Dealers Association. In 2000, in the smallest span of time to that date, the company's stock was listed on the Tokyo Stock Exchange's Second Section. In 2003, it was upgraded to the First Section. Gulliver was awarded the Porter Prize in 2006 for its innovative sales model. Hatori has served as Chairman since 2008.



## **Hiroshi Fujiwara**

Representative Director of Nano-Optonics Energy, Inc., President and CEO of Internet Research Institute, Inc.

Fujiwara was born in Fukuoka prefecture in 1954 and graduated from the Faculty of Science at Kyoto University in 1977 and later earned a Ph.D. from the Faculty of Engineering of the University of Tokyo.

Through his work with IBM Japan, Hitachi Engineering, and ASCII Corporation, Fujiwara worked on video encoding and standardization. After the establishment of the Moving Picture Experts Group, he founded the Internet Research Institute, a corporation that conducts R&D into web technologies in December 1996.

Fujiwara has served as President and CEO to the present. In 2005, he founded the environment/energy research venture Nano-Optonics Energy and became Representative Director. Through collaboration with universities and organizations including the University of Tokyo, Kyoto University, the National Astronomical Observatory of Japan, Nagoya University and Chubu University, Nano-Optonics Energy conducts R&D in cutting edge technological fields such as super high precision, high speed grinding technology and high temperature superconducting power transmission. Fujiwara currently is a vice president at Internet Association Japan, an affiliate professor at the Graduate School of Mathematical Sciences at the University of Tokyo, a special professor at Aoyama Business School and Vice President of SBI Graduate School.

Fujiwara has written several books on themes of science, technology and enterprise.

# Investing companies

## Clean Craft

**Company name:** Clean Craft Co., Ltd.

**Established:** 2008

**Headquarters:** 4489-10 Endo, Fujisawa-shi, Kanagawa Prefecture

**Capital:** 30.5 million yen

**Business description:** Management of intellectual property relating to electric cars

## Gulliver International

**Company name:** Gulliver International Co., Ltd.

**Established:** October 25, 1994

**Headquarters:** 2-7-3 Marunouchi, Chiyoda-ku, Tokyo

**Capital:** 4.157 billion yen (as of February 28, 2009)

**Business description:** Purchase and sale of cars, and other business related to the sale of cars

## Nano-Optonics Energy

**Company name:** Nano-Optonics Energy, Inc.

**Established:** November 18, 2005

**Headquarters:** 2-1-1 Minami-Aoyama, Minato-ku, Tokyo

**Capital:** 317.575 million yen

**Business description:** Manufacture and sale of ultraprecise machine tools, processing machines and optomechanical devices; sustainable energy business using superconducting magnets; and research on environmental conservation using astronomical observations

## Benesse Corporation

**Company name:** Benesse Corporation

**Established:** January 28, 1955

**Headquarters:** 3-7-17 Minami-Gata, Kita-ku, Okayama-shi, Okayama Prefecture

**Capital:** 13.6 billion yen

**Business description:** Correspondence education; educational support such as simulated examinations; publishing business centered on magazines; nursing care business centered on the running of nursing homes; and the foreign language study business centered on Berlitz International, Inc.

## Marubeni

**Company name:** Marubeni Corporation

**Established:** December 1, 1949

**Headquarters:** 1-4-2 Otemachi, Chiyoda-ku, Tokyo

**Capital:** 262.686 billion yen

**Business description:** General Trade Company

Handling of products in a wide range of fields such as foodstuffs, fibers, raw materials, paper pulp, chemicals, energy, metallic resources, iron and steel products, import and export of aircraft, domestic trading, electrical power, infrastructure and plants, ships and vessels, industrial machinery, development construction, financial, logistics and environmental; and provision of various services, as well as business investment, development and operation