

**Sompo Japan Nipponkoa Insurance established the ‘Connected Support Center’,
 and launched operational tests to develop future insurance services
 for automated driving**

Sompo Japan Nipponkoa Insurance, Inc. (hereinafter, “Sompo Japan Nipponkoa”. President: Keiji Nishizawa) established the ‘Connected Support Center’ at the head office of Prime Assistance, Inc. (hereinafter, “Prime Assistance”. President: Hiroyuki Tokuoka) with the aim of advancing research on the future roles of an insurance company in our coming automated-driving society.

On September 27th, as a first step to accelerate research, Sompo Japan Nipponkoa together with cooperating companies conducted operational tests on the assumption that automated-driving vehicles (equivalent to SAE Level 4^{*1}) were experiencing problems.

These tests included remote-steering intervention^{*2} and an operator remotely providing insurance services to a passenger in an unmanned automated-driving vehicle.

^{*1} SAE Level4 indicates that the automated driving level is of “High Automation”. SAE Levels are defined by the Society of Automotive Engineers (SAE) International.

^{*2} Steering intervention: To avoid an unmanned automated-driving vehicle being involved an accident, etc., steering intervention is conducted by a remote driver.

1. Background

The tests were conducted as part of a joint research project between Sompo Japan Nipponkoa and Dr. Shinpei Kato (associate professor at the University of Tokyo), the person leading the ‘MEXT^{*1}-JST CREST’ program^{*2}.

^{*1} MEXT: Ministry of Education, Culture, Sports, Science and Technology

^{*2} MEXT-JST CREST: A funding program by the Japan Science and Technology Agency (JST) that aims to produce technological ‘seeds’ that contribute to the reformation of industries and society. JST calls for research proposals from university researchers, etc. Basic strategic research projects have been promoted.

2. Cooperating companies

(and the services and products they provided for the tests):

companies	services and products
Sompo Japan Nipponkoa	- Risk assessment (safety measures) - Remote-monitoring assistance service for the automated-driving vehicle’s traveling conditions - Assistance-services following the accident/trouble involving the automated-driving vehicle
Prime Assistance	
Tier IV, Inc.	- The world’s first “all-in-one” open-source software, “Autoware” designed for automated-driving vehicles and the remote-monitoring system connected with them
AISAN TECHNOLOGY CO., LTD.	- High-accuracy 3D mapping for automated driving - Assistance with the automated-driving vehicle’s operation
KDDI CORPORATION	- Telecommunications network for the automated-driving vehicle
MACNICA, Inc.	- A new model automated-driving vehicle

3. Sompo Japan Nipponkoa 'Connected Support Center'

The 'Connected Support Center' is a comprehensive research body established to develop insurance company services for automated-driving vehicles. As well as accident/trouble assistance, it is working on remote-monitoring and steering intervention.

Future researches conducted by the 'Connected Support Center' include:

- '1-N' remote-monitoring where one operator monitors multiple automated-driving vehicles, and conducts remote-steering intervention in dangerous situations
- Assisting with emergency reporting to police and fire departments
- Arranging towing and roadside services, replacement transportation, and also dispatching rescuers to automated-driving vehicles in the event of an accident

4. Operational tests

Test 1: Remote-monitoring automated driving and services in the event of an accident/trouble:

- i) A service operator at the Connected Support Center (hereinafter, the 'Center') was remotely-monitoring a moving unmanned automated-driving vehicle.
- ii) The Center's remote-monitoring system, which was connected with 'Autoware', notified a service operator after an anomaly was detected with the vehicle.
- iii) Remote-steering intervention was carried out by a remote driver and the vehicle was safely maneuvered onto the shoulder of the road. After grasping their real-time conditions through the system, a service operator then proactively arranged for accident/trouble services to be dispatched to assist a remote driver and a passenger (each was located separately).

Test 2: Remote-monitoring multiple automated-driving vehicles

The Center remotely monitored four automated-driving vehicles* on a public road.

* Two vehicles were in driving-mode with a human driver present to intervene if necessary (such as in an emergency or in certain traffic conditions)



5. Towards the future

We are determined to accelerate our efforts towards a 'worry-free and safe automated-driving society', which should be achieved by linking automated-vehicles with connectivity technology.

By promoting cooperation among industry, government and academia, we will proceed with cutting-edge research in automated-driving technology, telecommunications and insurance so that we can create new values in our coming automated-driving society.

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- Reference-
Corporate Profiles

Name	Sompo Japan Nipponkoa Insurance, Inc.
Business	Insurance
Date of establishment	October 1,1888
Head Office	26-1,Nishi-Shinjuku 1-chome, Shinjuku-ku, Tokyo 160-8338, Japan
President	Keiji Nishizawa

Prime Assistance, Inc.
Assistance service
April 2,2012
32-2, Honcho 1-chome, Nakano-ku, Tokyo, Japan
Hiroyuki Tokuoka

Name	Tier IV, Inc
Business	Providing fully autonomous self-driving platforms and services
Date of establishment	December, 2015
Head Office	1-1-3, Meieki, Nakamura-ku, Nagoya City, Aichi Prefecture
President	Kazuya Takeda

AISAN TECHNOLOGY Co., Ltd.
1.Design, development, distribution, maintenance of CAD systems for public survey, registration surveying and civil engineering and construction industry 2.Entrusted development of analysis software and conversion module for world coordinate system 3.Research and development of software used for maintenance of 3D maps 4.3 dimensional map measurement service 5.Mobile mapping system sales business
August,1970
AT Bldg., 3-7-14, Nishiki, Naka-ku, Nagoya City, Aichi Prefecture
Atsushi Kato

Name	KDDI CORPORATION
Business	Telecommunications business
Date of establishment	June 1, 1984
Head Office	2-3-2,Nishishinjuku,Sinjuku-ku,Tokyo,Japan
President	Makoto Takahashi

MACNICA, Inc.
Import and export of electronic components such as semiconductor devices and ICs, and distribution, development and processing thereof; development of electronic equipment and its peripheral equipment and accessories, and import, export and distribution thereof
October 1972
1-6-3 Shin-Yokohama, Kohoku-ku, Yokohama, 222-8561 JAPAN
Kiyoshi Nakashima