

Asahi Kasei Corp.
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Asahi Kasei Group Fellow Masaya Yamashita chosen for Medal with Purple Ribbon

Asahi Kasei Group Fellow, Dr. Masaya Yamashita has been chosen for a Medal with Purple Ribbon in recognition of his development of the electronic compass and the function of automatically compensating for magnetic offset.

Japan's Medals of Honor are high-profile government awards conferred in recognition of outstanding contributions to society, public welfare, culture, etc. Among them, the Medal with Purple Ribbon recognizes scientific and artistic inventions, improvements, and creations.

Dr. Yamashita developed the world's first digital 3-axis electronic compass and the function of automatically compensating for magnetic offset in electronic compasses. These technologies are incorporated as standard features in a wide range of portable devices, and used for functions such as pedestrian navigation systems in smartphones. The medal recognizes the contribution of these achievements to the expansion of the sensor devices market.

Electronic compasses measure geomagnetism to determine azimuth. When the electronic compass is mounted in a portable device, it is influenced by strong magnetic fields from surrounding magnetic parts such as speakers, which introduce error in the calculation of azimuth. With conventional electronic compasses, users are required to perform a complicated adjustment procedure to eliminate such errors and obtain more accurate measurement of the weak geomagnetism.

In contrast, the technology developed by Dr. Yamashita enables automatic collection of geomagnetic data while the device is used in natural manner. After developing the world's first digital 3-axis electronic compass, Dr. Yamashita also succeeded in several successive miniaturizations to maintain the world's smallest size. The size by volume of the latest electronic compass is less than 1/50 that of the initial product. This has not only improved the usability of electronic compasses significantly as the device constantly calculates azimuth and performs error corrections by using statistical estimations, but also contributed to the rapid spread of the electronic compass as a standard function in smartphones around the world.

Asahi Kasei will continue to create new business models based on solutions that combine hardware and software in the field of sensor devices.

Recipient

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