Indoor Location Technology Experience at Indoor Navigation Seminar

UK-based CSRâ€™s SiRFusion platform was featured alongside STMicroelectronics (ST) MEMS technology in a live, hands-on demonstration of CSRâ€™s industry-leading indoor location and navigation capabilities at an Indoor Navigation Seminar at the Museum of Contemporary Art (MoCA) in Taipei, Taiwan, on 1 August 2012, assisting a museum guide tour app on a smartphone.

During the event, attendees and leading members of Taiwan's media community had the opportunity to personally navigate through the museum's exhibits using a standard smartphone equipped with ST MEMS and CSR's SiRFusion platform. The indoor navigation application from VisioGlobe on the smartphone is designed to tell the user when they've entered a new room within the museum as well as the name of the exhibit nearest to them. Tight integration between SiRFusion based on CSR's SiRFstarV architecture and ST MEMS is also designed to enable the delivery of low-power indoor and outdoor navigation.

Previous attempts at indoor navigation typically relied on labour-intensive manual surveys to build and maintain an indoor Wi-Fi and cellular location database, resulting in inconsistent location data. To achieve a location and navigation system that delivers a seamless transition between outdoor and indoor navigation, CSR created the CSR Positioning Centre (CPC), a cloud-based server that receives location information wirelessly from users' devices, including indoor devices, to build and constantly improve the location database. This is the system that will deliver the location information to the devices at the Taipei event.

SiRFstarV architecture gathers real-time information from GPS, Galileo, GLONASS and Compass satellites systems, Wi-Fi, cellular and other radio-based systems, as well as multiple MEMS sensors, including accelerometers, gyros and compasses. SiRFstarV then combines this real-time information with ephemeris data, mapping, cellular basestation and Wi-Fi access point location data and other cloud-based aiding information using the SiRFusion platform.

STMicroelectronics MEMS (Micro-Electro-Mechanical Systems) fills the need for the most in-demand features in today's market, ranging from mobile and consumer applications to the needs of the healthcare and automotive markets. Housed in ultra-compact packages, MEMS achieve a high level of motion-control detection, embedding the most useful smart functions and minimising the power consumption. For example, ST's compasses integrate a 3-axis digital accelerometer with a 3-axis digital magnetic sensor in a single package to enhance advanced navigation features and smart location-based services.

https://www.gim-international.com/content/news/indoor-location-technology-experience-at-indoor-navigation-seminar