

NAPA Research Project Takes Pedestrian Navigation to Next Level



The NAPA navigation receiver (navigation receiver chipset for high-precision pedestrian navigation) opens up new possibilities with easy app-based pedestrian navigation and orientation. Funded by Germany's Federal Ministry of Education and Research, NAPA is a joint project of Garmin Würzburg, HERE Europe, IMST, NavCert, RWTH Aachen, University of Koblenz-Landau, and the Fraunhofer Institute for Integrated Circuits IIS.

For elderly and physically disabled people, highly accurate and easy-to-handle route guidance makes all the difference. The combination of a high-precision receiver and exact map material, operated via easy-to-use app, opens up entirely new opportunities for pedestrians. With NAPA, pedestrians are not only provided with real-time information like store hours or historical aspects, but it is also possible to determine the exact pavement

they are using at any given moment. This is a prerequisite to then guide them to a pedestrian crossing so that they can cross the street safely.

The novel pedestrian navigation technology NAPA was developed utilising the combined strength of various navigation systems like Galileo, GLONASS and GPS. Even in challenging areas like urban canyons, a user knows their exact location, right down to which side of the street they are on, producing a navigation performance that is hard to match by solutions relying on just one satellite navigation system.

The new navigation chip has been field-tested in the Würzburg area and has proven its reliability and performance capabilities.

Image: The NAPA chipset can be used by visually impaired people, for example, helping them to navigate cities efficiently and safely. (Courtesy: Fraunhofer IIS/Steffen Werthmann and Katja Wanzl)