

by **Siemens, SenStadtUm, IKEM, VMZ Berlin and DFKI**

Munich, September 24, 2015

Siemens starts pilot project in Berlin to test radar-based parking space detection

- **World's first pilot project in public area**
- **Radar sensors monitor parking areas and report free spaces**
- **No more parking-related traffic congestion**

Siemens and partners have launched the world's first pilot project in Berlin aimed at simplifying the search for a parking space. The company has installed for test and demonstration purposes radar sensors on street lamps that provide information on parking space occupancy. The network of sensors scans from above an area of up to 30 meters, the equivalent of five to eight parking spaces. "Thanks to our system, the nerve-wracking search for a place to park can be made considerably easier as the information on available parking spaces can be transmitted to the car drivers before they set off", says Jochen Eickholt, Head of the Siemens Mobility Division. The test results will be available in 2016 and should prove that by reducing parking search traffic the system is suitable for cutting CO₂ emissions.

As part of the City2.e 2.0 research project, Siemens is demonstrating a faster way to find curbside parking in the Bundesallee in Berlin in cooperation with the Senate Department for Urban Development and the Environment in Berlin (SenStadtUm), the VMZ Berlin Betreibergesellschaft mbH, the Institute for Climate Protection,

SIEMENS

Siemens AG
Wittelsbacherplatz 2
80333 Munich
Germany

SenStadtUm
Wuerttembergische Str. 6
10707 Berlin
Germany

IKEM
Magazinstr. 15-16
10179 Berlin
Germany

VMZ Berlin
Ullsteinstrasse 114
12109 Berlin
Germany

DFKI
Alt-Moabit 91
10559 Berlin
Germany

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Energy and Mobility (IKEM), and the Robotics Innovation Center of the German Research Center for Artificial Intelligence (DFKI).

Therefore, street lamps on a 200-meter-long section of road between Walther-Schreiber-Platz and Friedrich-Wilhelm-Platz in Berlin Friedenau have been fitted with radar sensors that continuously monitor urban parking areas and report free parking spaces and the number of occupied e-parking spots to parking space management software. The data collected by the system can either be used by the traffic information center for its own information services or forwarded through a data interface, such as to app operators, so that drivers can always find free parking spaces simply by using their smartphone, a navigation device or the parking guidance signs. The key aspect here is the software application developed by the Robotics Innovation Center uses intelligent learning methods. Data from parking space sensors helps the system to recognize typical parking space situations. This learning feature enables the system to predict in advance where and when the best chances exist for finding a free parking space. The system is also coupled with a multimodal route planner. So if no parking spaces are available, the route planner provides real-time information on possible options for switching to public transportation services.

The project is funded by the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB). By doing so, the Federal Ministry is pursuing one essential goal: the reduction of the carbon dioxide, pollutant and noise emissions due to road traffic.

SIEMENS

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Germany

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You will find this press release, press photos and other material on this topic at:

www.siemens.com/press/smart-parking

Contact for the trade press

Katharina Ebert

Phone: +49 89 636-636 802; e-mail: katharina.ebert@siemens.com

Contact for the business press

Stefan Wagner

Phone: +49 174 1947049; e-mail: sw.wagner@siemens.com

Follow us on Twitter: www.twitter.com/siemensMobility

Siemens AG (Berlin and Munich) is a global technology powerhouse that has stood for engineering excellence, innovation, quality, reliability and internationality for more than 165 years. The company is active in more than 200 countries, focusing on the areas of electrification, automation and digitalization. One of the world's largest producers of energy-efficient, resource-saving technologies, Siemens is No. 1 in offshore wind turbine construction, a leading supplier of combined cycle turbines for power generation, a major provider of power transmission solutions and a pioneer in infrastructure solutions as well as automation, drive and software solutions for industry. The company is also a leading provider of medical imaging equipment – such as computed tomography and magnetic resonance imaging systems – and a leader in laboratory diagnostics as well as clinical IT. In fiscal 2014, which ended on September 30, 2014, Siemens generated revenue from continuing operations of €71.9 billion and net income of €5.5 billion. At the end of September 2014, the company had around 343,000 employees worldwide on a continuing basis. Further information is available on the Internet at www.siemens.com.

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With its wide range of responsibilities, the **Senate Department for Urban Development and the Environment** is the central State of Berlin authority contributing in many areas to the future development of the city. It is organized into diverse sections covering the topics city planning and building culture, housing and rents, mobility, environment and climate protection and monument conservation. It also includes subordinate agencies such as the Berlin Monument Authority, the forestry agency Berliner Forsten, the Plant Protection Agency, and Berlin Traffic Control. The Senate Department is led by the Senator, two Permanent Secretaries and the Director of Urban Development/Permanent Secretary, who pays special attention to urban design.

Founded in November 2009, the **Institute for Climate Protection, Energy and Mobility (IKEM)** is an independent, non-profit organization that has the status of an associated institute to the Ernst-Moritz-Arndt University in Greifswald. The organization concentrates on the three key topics of a sustainable economic and social order: climate protection, energy and mobility. The appropriate legal and political framework is examined from an interdisciplinary, integrative and international perspective. Since it was formed, the IKEM has worked on scientific projects for public sector and private customers and funding bodies. In the City 2.e 2.0 project, the institute guides the technical/industrial research endeavor by presenting, analyzing and evaluating the relevant economic and legal framework necessary to introduce the environmental protection system. More information can be found in the Internet at www.ikem.de.

Since January 1, 2003, the **VMZ Berlin Betreibergesellschaft mbH** has operated the traffic information center (VIZ) in Berlin, which was initially set up as a traffic management center (VMZ) from 1999 to 2003. The VIZ provides current information on the road system in Berlin, which is used, for example, by the traffic control center to optimize traffic control in the city. The VIZ also operates several intermodal information services (www.viz-info.de, 33 dynamic information signs, text services and information services for the media). With its research activities and central operation, the VMZ Berlin GmbH has extensive experience in traffic information system pilot applications, the preparation and evaluation of measurement data from different sources (detection, FCD), the analysis of accident data, the planning of traffic measures to reduce traffic-related environmental pollution, the generation and maintenance of comprehensive digital networks with traffic, environmental and infrastructure data, the creation of concepts, the technical implementation and operation of information services for the administration, the public and the media, and e-mobility consultation.

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The **German Research Center for Artificial Intelligence (DFKI) GmbH** was founded as a Public-Private Partnership (PPP) in 1988. It has research facilities in Kaiserslautern, Saarbrücken, Bremen and a project office in Berlin. In the field of innovative commercial software technology using Artificial Intelligence, DFKI is the leading research center in Germany. As a research section of the DFKI, the Robotics Innovation Center headed by Prof. Dr. Frank Kirchner, develops mobile robotic systems that are capable of solving complex problems on land, in the air, on water and in outer space. This requires a design based on the latest discoveries in mechatronics as well as programming using complex, massively parallel embedded system solutions. Further information is available on the internet at www.dfki.de/robotik.

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