The infinite world of the web.
Experts from BMW Group Research and Technology are developing in the research project webinos an open source platform for using mobile web applications across different devices.

Munich. In today's modern society, we are constantly online. A world without social networks would be almost inconceivable, while using apps has become an intrinsic part of our digital lifestyles. Every device now enables the use of web services, whether it's a smartphone, the home PC, the television or an in-car head unit. However, these devices are not yet able to communicate between one another to exchange information in that way. And this is precisely where the EU-funded project webinos comes in, by aiming to develop and standardise an open source web-based and browser-based application platform to enable the unrestricted and combined usage of heterogeneous CE devices. 30 partners from the automotive, IT and telecommunications industries, as well as several research institutes, have united forces with this common goal. The research project, which is being funded by the European Commission as part of its 7th Framework Programme, was launched in September 2010 and runs until August 2013. An initial automotive prototype will be on show at the "Communication World" IT trade fair in Munich on 9–10 October 2012.

Cloud computing as a role model.
Cloud computing provided the inspiration for the webinos project. The World Wide Web already provides an impressive example of how documents and information can be successfully exchanged across the boundaries between different devices with the help of open source standards. Webinos applies the same approach to applications. By creating purpose-designed web browser add-ons and defining suitable communication standards, webinos demonstrates how the browser can increasingly evolve into a shared web application platform. The research work is focusing on the development of both communication mechanisms between the devices as well as the necessary browser interfaces for web applications.

The webinos technology.
To enable secure data exchange, webinos relies on the concept of "personal zones". A personal zone comprises all of a user's devices, and centres around a personal zone hub that works like a kind of telephone exchange. The hub knows what the individual devices are, which applications are installed on which device, and also which services they each support. Users can configure and adapt their personal zone on a special website. Special privacy settings are designed to ensure that applications are only able to make use of enabled data and services. A web browser such as Mozilla Firefox or Google Chrome can be used to execute webinos-enabled applications. Web applications can access the services within a personal zone by means of a special browser add-on. The new interface builds on the trend first started with HTML5 of using the browser as an application platform.

In the research project webinos 22 different service components have been developed for accessing device functions. These cover both universal functions and the specifics of the smartphone, PC, TV and vehicle devices addressed in webinos. For the in-vehicle integration the Vehicle API (that allows access to the vehicle-specific data), the Geolocation API (that can be used to obtain data on speed and GPS location) and the Device Orientation API (that comprises data on both lateral and linear acceleration) are the most relevant components. The Geolocation API and the Device Orientation API are both standards of the World Wide Web Consortium (W3C). A wealth of data can be made available with the help of just these three packages. This makes it possible to access parking sensor information, average speed and fuel consumption readings, as well as light and windscreen wiper settings, and also relay information on the current gear. Customers could use webinos enabled applications to call up their vehicle's current fuel level on their smartphone or TV, for instance. Conversely, the technology also makes it possible for them to access their smartphone's or PC's media library from the comfort of their car.

First automotive prototype showcases browser-based onboard computer and networked trip planner.
In the research prototype on show at the Communication World fair, the complete onboard computer display appears in the browser with HTML5 and the webinos add-ons. Thanks to the new interfaces in webinos, the Park Distance Control function can also be visualised in the browser.

Users are able to manage their personal points of interest for a trip with the help of the "webinos travel" web applications. The trip can be planned on the smartphone, tablet or home PC. On the day of departure, the planned stop-off points are then ready to be selected in the vehicle, or can be sent from the smartphone directly to the navigation system as the journey's destination. If it is not possible to drive all the way to the destination, the latter will be transmitted to the web application on the smartphone for Last Mile navigation on foot.

BMW Forschung und Technik GmbH is a 100% subsidiary of the BMW Group and has been responsible for the following research areas since 2003: Vehicle Technology, EfficientDynamics Drivetrain Research, ConnectedDrive (driver assistance / active safety) and ITDrive (IT architecture and communications technology). Its legal autonomy as a limited company ensures scope for development and maximum flexibility. Global access to trends and technologies is ensured by an internationally established network with support bases in Mountain View and Clemson (USA), as well as the Liaison Offices with EURECOM (Sophia Antipolis, France) and the German Research Centre for Artificial Intelligence (DFKI GmbH, Saarbrücken).

BMW GROUP

Corporate Communications

Media Information

Date 09 October 2012

Subject The infinite world of the web.

Page 2

For questions please contact:

Technology Communication

Cypselus von Frankenberg, Head of Technology Communication
Cypselus.von-Frankenberg@bmw.de
Telephone: +49 89-382-30641, Fax: +49 89-382-28567Contact

Media Website: www.press.bmwgroup.com
E-mail: presse@bmw.de