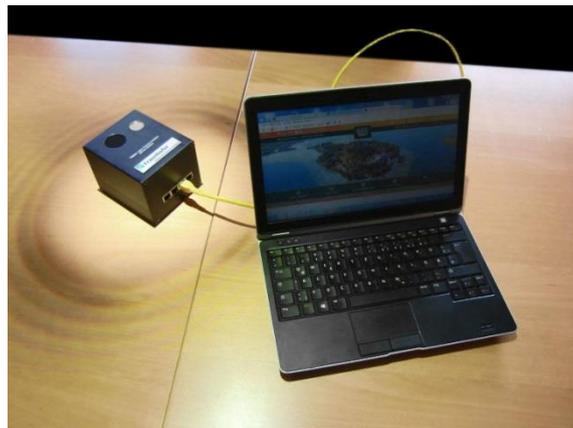


Fraunhofer HHI takes stock: Project Phase A concluded with the installation of VLC technology on Mainau Island

Mainau Island, 25 April 2016: In the spring of 2015, the project "VLC Mainau" started with the goal of equipping an existing conference room on Mainau Island with Visible Light Communication (VLC) technology. The goal is to create an optical WiFi environment. The Fraunhofer Institute for Telecommunications, Heinrich Hertz Institute, HHI and Mainau GmbH have now completed the first project phase. A further expansion is planned for the end of 2016.

The equipment of the conference room will be accomplished in multiple project steps and is intended to provide findings for parameter optimization through practical application. This VLC installation is the first outside a laboratory environment in Germany and one of the few field tests of this kind worldwide.

The first project phase has been completed, and the conference room is now equipped with a communication system based on Visible Light Communication. The VLC technology, also known as LiFi, is an alternative for WiFi without having to give up the wireless exchange of high data volumes.



With the completion of project Phase A, Fraunhofer HHI has installed a communication system based on visible light communication on Mainau Island.

Dr. Anagnostis Paraskevopoulos, project manager at Fraunhofer HHI, is pleased that the first system version has been installed on Mainau Island. "Through its use in an everyday environment the field tests are providing us with valuable findings for further system development".

Bettina Countess Bernadotte, CEO of Mainau GmbH, is looking forward to the findings of the test phase. "From personal conviction, I support the research on low-radiation mobile communication, and we as Mainau Island are pleased that we have been able to make a contribution to the further testing of the new technology".



The project is supported by the Baden-Württemberg Ministry of Environment, Climate and Energy. The Initiative BodenseeMobilfunk (Lake Constance Mobile Communications) came up with the idea for the project on Mainau Island and also coordinates the activities of the project participants.

The VLC technology

The demand for wireless communication networks within buildings will continue to increase in the coming years. Visible Light Communication offers an alternative which uses LED-based light sources for data transmission purposes. Through the higher number of access points a significant increase of the network capacity can be achieved while retaining the mobility which users want.

Visible Light Communication avoids all electromagnetic interferences with radio-based wireless networks and is by definition RF-free. Data rates of one gigabit per second (1 Gbit/s) and more can be achieved with conventional LEDs, thus even allowing for the flawless transmission of video data in HD and 4K quality. Just a few additional components are needed to turn a conventional LED light into a powerful optical WiFi transmitter. A special modulator turns the LED on and off very quickly, thus transmitting the digital information.

More information about the VLC technology for Mainau Island is available at: www.hhi.fraunhofer.de/vlc-mainau

More information about the VLC technology is available at: <http://www.hhi.fraunhofer.de/vlc>

The **Fraunhofer Heinrich Hertz Institute** is a world leader in the development of mobile and fixed broadband communication networks and multimedia systems. From photonic components and systems through fiber optic sensor systems to video coding and transmission, the Fraunhofer HHI works together with its international partners from research and industry. www.hhi.fraunhofer.de

Press Contact: Anne Rommel, anne.rommel@hhi.fraunhofer.de, Phone: +49 30 31002 353.

Department Contact: Anagnostis Paraskevopoulos, anagnostis.paraskevopoulos@hhi.fraunhofer.de, Phone: +49 30 31002 527.

Mainau Island is one of the most significant excursion destinations at Lake Constance. Lennart Bernadotte, born a Prince of Sweden, turned the summer residence of his great-grandfather Grand Duke Friedrich I of Baden into a flower and plant paradise. Thousands of tulips, hundreds of rhododendrons, scented roses, perennials and colourful dahlias bloom in the park and gardens. Also discover giant sequoias, the tropical Butterfly House, the Palm House and adventure playgrounds. www.mainau.de

Press Contact: Mainau GmbH, Florian Heitzmann, pressereferat@mainau.de, Phone: +49 7531 303 138.

The **Initiative Bodensee-Mobilfunk** was established in 2007 by around 30 groups and organizations in all four states of the Lake Constance region. In addition to the current light communication project on Mainau Island, various other projects to minimize RF emissions have already been carried out in the past or are in the planning stages. The co-initiators are members of the Ärzteinitiative Allgäu-Bodensee-Oberschwaben, the Bürgerinitiative für humanen Mobilfunk in Constance and the Verein strahlungsfreies Kreuzlingen. Press Contact: Günter Dolak, bi.humaner.mobilfunk@web.de, Phone: +49 7531 44 192.