PRESS RELEASE

Fraunhofer develops anti-SARS-CoV-2 app

Proximity tracing and the coronavirus pandemic: Fraunhofer's proposal for a German approach

Proximity tracing apps are a digital option for efforts to contain the coronavirus pandemic currently underway. The Fraunhofer-Gesellschaft has developed an approach of its own for a German proximity tracing app. Using Bluetooth technology on cell phones to measure distance and time, it is to send digital notifications to people who are at risk of a SARS-CoV-2 infection. The aim is to develop an IT system with digital tools to augment health authorities' processes.

"Various assumptions and prejudices figure prominently in the debate on the use of proximity tracing apps in Germany and Europe. However, this is an instrument that can make all the difference in containing the coronavirus pandemic, so it is important to get the facts and the science straight in this discussion," emphasizes Fraunhofer President Prof. Reimund Neugebauer. "The Fraunhofer-Gesellschaft has developed an approach of its own to a German proximity tracing app. Germany already has functioning and established pandemic control measures and procedures in place. The aim of our project is to develop an IT system with digital tools to augment health authorities' processes and to help implement the corresponding recommendations of the Robert Koch Institute (RKI). The app itself will use sophisticated technology and digital processes to notify people who are at risk of a SARS-CoV-2 infection, taking into account all data protection aspects."

The key to this digital process is a tool to measure distance and time using Bluetooth technology on cell phones. The overall system's functionality derives from the legal mandate for public health authorities. It has to meet a number of specifications to be used by agencies such as the RKI. The project addresses these demands directly. Work on the German app commenced in early March 2020 at the participants' expense, with the support of base funding from the Federal Ministry of Education and Research (BMBF), and with a feasibility study funded by the Federal Ministry of Health (BMG). From the outset, this project was geared to create a pan-European solution that complies with data privacy laws. Initial field tests conducted with the German armed forces have already verified the system's functionality and reliability. French partners are on board to help develop the system. This cooperation was stepped up in recent weeks to achieve full compatibility. The Fraunhofer organizations playing a major role in this project are the Fraunhofer Institute for Telecommunications, Heinrich-Hertz-Institut, HHI, the Fraunhofer Institute for Applied and Integrated Security AISEC, and the Fraunhofer Institute for Integrated Circuits IIS. The intention is to maximize support for the app on

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Editorial Notes

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available devices by collaborating with the operating system vendors Google and Apple.

The project's entire approach is underpinned by the conviction that the public healthcare system must retain sovereignty over the criteria for conducting risk assessments, recommending actions and sharing feedback within this type of system. The proposed system does not collect or process data such as information about the place, phone numbers, names, and the like when the app is used. The use of this system via an installable app will be voluntary. Users may uninstall the app at any time without the service on the server being able to identify who deactivated the app. Registration does not require personal data such as the individual's name or phone number. The system's design factors in the principle of data minimization in keeping with data protection regulations.

The Fraunhofer paper on the technical implementation of a German proximity tracing app, including information on the background, functionality and data privacy, is available at www.fraunhofer.de/en/press/research-news/2020/april/fraunhofer-develops-anti-sars-cov-2-app.html