DISPERSE project receives the 2020 PENTA award for excellence

# for its work on enabling MRI scans of patients with multiple implants

Online, 26 November 2020. DISPERSE, a project within the EUREKA PENTA cluster programme managed by Industry Association AENEAS, was today presented with an award for excellence during the EFECS 2020 online event. The award was accepted by the project leader, Mark Van Helvoort from Philips Medical Systems, on behalf of all 12 partners from the three countries involved in the project. DISPERSE set out to enable people with multiple medical implants to undergo Magnetic Resonance Imaging (MRI) scans. This is particularly important as the population ages, because many more patients both have multiple implants and require scans for conditions such as cancer, and neurodegenerative or musculoskeletal diseases.

Currently, patients with a modern implant may be scanned under specific conditions, which cause lengthy examination times. The challenge for the DISPERSE project participants was thus two-fold: firstly, to develop and test active implantable medical devices (AIMDs) while also enhancing the MRI scanner technology to increase compatibility with the AIMDs; and secondly, to find ways to reduce the examination time and improve the image quality for more accurate diagnosis.

These goals were successfully met within the project, and the project partners have also produced new guidelines for safe scanning of patients with AIMDs. Furthermore, the collaboration has helped to drive industry standards and facilitated cooperation between implant vendors and suppliers of MRI systems. As result, the project DISPERSE paves the way for benefits for society by enabling more patients to benefit from the diagnostic capabilities of MRIs and therapy with AIMDs by developing joint knowledge in this important area. Plus, it benefits the economy by boosting opportunities for relevant European healthcare businesses.

Mark Van Helvoort, Disperse Project Leader, receiving PENTA award at EFECS 2020 online edition
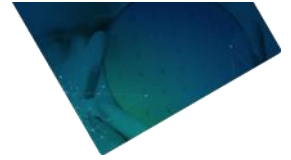
In addition to these main objectives, the project's scope included addressing some related issues – in particular, monitoring of patient anxiety during MRI exams. The partners developed acoustic technologies based on multiple microphones that detect patient reactions and allow the operator to adjust the workflow accordingly. Although developed in the context of MRI scans, these technologies also have wider potential, for instance, in acoustic monitoring for detection and surveillance systems in smart cities, smart homes and automotive applications. Indeed, DISPERSE has even led to technology to increase efficiency in radio astronomy communications, further illustrating the diversity of applications that can often be addressed within PENTA projects.

For the full impact of DISPERSE, please read the PENTA project DISERSE impact summary

About the PENTA programme

PENTA is a EUREKA cluster whose purpose is to catalyse research, development and innovation in areas of micro and nanoelectronics enabled systems and applications. Guided by the Electronic Components & Systems (ECS) Strategic Research Agenda (SRA) key application areas and essential capabilities, the PENTA programme enables the development of electronic solutions to help drive the digital economy through the formation of collaborative ecosystems along the ECS value chain. This creates the opportunity for rapid competitive exploitation and a strong impact on European societal challenges. PENTA supports SMEs, large corporations, research organisations and universities to work together in project consortia by facilitating access to funding, fostering collaborative work and creating consortia in areas of mutual industrial and National interest.

PENTA is managed by the Industry Association AENEAS

More on PENTA: http://www.penta-eureka.eu
More on AENEAS: https://aeneas-office.org

About the DISPERSE project

DISPERSE is a RD&I project consortium involving 12 partners from 3 countries. The project partners are: Philips Medical Systems (project leader), Astron Netherlands Institute for Radio Astronomy, Cochlear Technology Centre Belgium, Firecomms Ltd, GTX Medical BV, KU Leuven, Luceda Photonics, MinDCet NV, Sorama BV, Sound Intelligence BV, Technobis Fibre Technologies BV, Tyndall National Institute. National funding support is provided by the Netherlands, Belgium, and Ireland.

More on DISPERSE: http://disperse.eu/