Cognitive Radio Test Environment ++ (CORE++)

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This project focuses on spectrum sharing as the means to enhance the efficiency of spectrum use in order to ensure the availability of spectrum for wireless services. The project studies spectrum sharing concepts, techniques, and live field testing and trials in close collaboration with companies and the public sector. It particularly addresses the mobile broadband and influences and further develops the new spectrum sharing concepts including the European Licensed Shared Access (LSA) concept and the US Spectrum Access System (SAS) concept. Using the expertise developed within the mobile broadband, the knowhow on spectrum sharing and its applicability is expanded to the public safety domain.

The project will help the industry to prepare for the next steps of evolution of wireless systems by sharing information in regulation, standardization and academic research within the project consortium. It also offers the companies cooperation possibilities with the concrete trials the project produces in close collaboration with industry projects. The project aims at the practical level to demonstrate the spectrum sharing solutions. New measurement, analysis and interference minimization methods are developed and implemented with commercial solutions. New algorithms and spectrum sharing concepts are tested with agile method by working in close collaboration with industrial and research partners. Best of the sharing methods and algorithms will be trialed in developed and upgraded CORE and CORE+ trial network. Practical trials supports regulation and standardization by demonstrating the current technological capabilities and by developing of technology to better fit the spectrum sharing concept. The spectrum sharing in multi-RAT and multi-layer environment requires new measurement , analysis, testing tools and methods. The project will develop new tools and methods which are verified by the practical measurements in developed trial network.

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**Project duration**
1.1.2015 - 31.12.2016

**Operating sphere**
National

**Total funding**
250 000 €

**Project website**
http://core.willab.fi

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