

<u>Name</u>	<u>Organisation</u>	<u>Project title</u>	<u>Decision No.</u>	<u>Decision date</u>	<u>Funding period</u>	<u>Funding</u>
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#### **Project description**

Pervasive computing introduces a vision of computational resources providing information and services to people when and where desired. Although this topic has been studied widely, there is no generic model that would support building advanced pervasive services and adapting them to match users' situation and goals. We propose a novel service-centric solution, Pervasive Service Computing (PSC), which enables encapsulating resources into services and building versatile service sets that support users in achieving their goals. The general goal of this research is to produce knowledge and solutions that enable people to focus on living their lives. In other words, people do not need to search themselves from the local environment and network services supporting their activities, to control themselves the found services, nor to combine themselves the services into a set offering the required functionality. Instead, the Pervasive Service Computing model developed in this research can be applied to build service sets that support their users' activities and do not require continuous interaction with them. We specify the time that services require from their users as the most important measurable parameter to evaluate the usefulness of IT based services. Our main research hypothesis is the following: The Pervasive Service Computing model will decrease the time that services require from users and hence lets the users to focus on their everyday activities either alone or together with a community. The research will start by defining scenarios of pervasive services, studying the related work, and developing the pervasive service computing model. These tasks will be done in co-operation with all researchers. After these tasks, the researchers from the Shanghai Jiaotong University will focus on designing, implementing, and testing prototypes. The researchers from the University of Oulu will focus on designing implementations for a set of services selected from the scenarios; using both the state of the art technology and the PSC model. The aim is to verify the hypothesis both by comparing the PSC model to the state of the art and using prototypes. The prototypes will be tested and the designs will be analysed to find out the time that the services require from their users.