

Dissertation press release

6.5.2019

Augmented reality for everyone, everywhere

Title of the dissertation	Enabling Ubiquitous Augmented Reality with Crowdsourced Indoor Mapping and Localization
Contents of the dissertation	An increasing performance of smartphones has enabled software developers to create numerous Augmented Reality (AR) applications. The main novelty of an AR mobile application is to display computer-generated models and information that seamlessly blend with our real world, seen through the phone's screen. However, current AR applications are rather limited, as they allow to experience AR only outdoors or only close to special AR markers, such as QR codes or brand names. This dissertation aims to eliminate this limitation by presenting techniques for enabling AR applications in large indoor environments. We develop methods for accurate positioning of a mobile device within an indoor area, present efficient indoor mapping techniques and create tools to ensure smooth performance of the developed systems, when they are deployed on a cloud. We believe that the results of this dissertation will contribute to a new wave of pervasive AR applications available to everyone, everywhere.
Field of the dissertation	Networking Technology
Doctoral candidate	Marius Noreikis, MSc. Born in Kaunas, 1989
Time of the defence	10.06.2019 time 12:00
Place of the defence	Aalto University, School of Electrical Engineering, lecture hall T2, Konemiehentie 2, 02150, Espoo
Opponent	Professor Romit Roy Choudhury, University of Illinois at Urbana-Champaign, USA
Custos	Professor Yu Xiao, Aalto University School of Electrical Engineering, Department of Communications and Networking
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