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Internet of Things for Smart Cities

Abstract

A lot of technological developments can be witnessed for enhancing the INTERNET with new application fields and new domains. Main directions are the cyber physical systems, Internet of Things, Internet of Services, industry 4.0, domains which are overlapping in the adopted technologies and applications. We will address in the talk the differences and similarities of the overlapping technological solutions. There are still many unsolved problems which mainly deal with security, privacy, controllability, and trust of very complex systems. The talk will identify the main problems of such environments and will propose a novel framework for future IOT systems. We have developed and applied this framework for a specific application domain: smart cities. This application class defines the requirements necessary for the development of Internet of things architecture and the technologies involved. The talk will report the experience and lessons learned by using it in Berlin for the smart city ICT framework.

Biographical Sketch

Radu Popescu-Zeletin is professor at the Technical University Berlin and Director of the Fraunhofer Institute for Open Communication Systems (FOKUS), Berlin. For many years he led the research and development department of the BERKOM project of the German Telekom, – pilot project for the development of new applications in broadband ISDN environment. He published many papers on distributed computing systems and applications. He was active in standardization committees (DIN, ISO, EURESCOM) and had contributed to the development of telecommunication standards. His chair for "Open Communication Systems" is highly involved in the development of the vision of an "I-centric communication".

He is founder of several telecommunication companies, such as, IKV++ Technologies AG, IVISTAR AG, Twonky Vision GmbH, E-safe GmbH, BITTUBES GmbH, Testig Tech GmbH etc.

Prof. Popescu-Zeletin graduated at the Polytechnical Institute Bucharest, Romania, got his Ph.D. from the University of Bremen, and his habilitation from the Technical University Berlin. He is Senior Member of IEEE, Doctor honoris causa of the Polytechnical Institute Bucharest, Romania and Professor honoris causa of the Catholic University of Campinas, Brazil. He is member of the Romanian Academy as well as bearer of the Public Service Medal of the Republic of Romania.