

Master Thesis
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**Coexistence Management for Industrial Heterogeneous
Wireless Networks Based on Software-Defined Networks**

Abstract

Software-Defined Networking (SDN) is a new path changing approach that transforms the way networks are being operated nowadays. Generally, path finding and forwarding decisions are acknowledged by the appliances that create the network. They perform as a distributed system and execute certain algorithms to deliver information to its designated receiver. SDN divides the functionalities of these appliances into two separate parts: a control plane, that acts as an administrative authority defining the forwarding rules and a data plane, which executes the generated rules.

This thesis aims to review the concept of SDN in the context of industrial heterogeneous wireless networks. Wireless heterogeneous technologies such as WLAN and Wireless HART are considered in this scenario. This thesis presents the ideas behind this new approach and discusses the possibilities of SDN application in the coexistence management of industrial heterogeneous wireless networks. Major potentials and challenges of SDNs based coexistence management approaches for industrial heterogeneous wireless networks were analyzed in this master thesis.

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