



Master Degree Project –Evaluation of UWB Technologies for Industrial Wireless Applications

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Background:

Ultra wideband (UWB) is expected to be a promising alternative as physical layer of many industrial wireless applications in terms of improved throughput and reliability comparing to narrow band ones. New standards like 802.15.4a (as amendment to the commonly used 802.15.4) and 802.15.6 have been launched. Specific chips are at the early stage now.

Task:

The purpose is to investigate the state-of-the-art and best practices of low data rate UWB technologies for industrial wireless applications. The student will do literature review and in-lab performance evaluation with commercially-available chips to identify the promising applications, challenges and solutions. If time is enough, in-field evaluation will also be carried out in real industrial environments.

Requirements:

Students in MSc programs in Electrical/Electronic Engineering, Engineering Physics, and Computer Engineering or similar are suited for this job. Candidates are expected to have a strong background in hardware, RF testing and embedded C/C++ programming. Good knowledge on mathematics, wireless sensor network, and communication theory is desired. It is also important that the applicant have good writing and communication skills. Please indicate a list of courses with marks and a CV in your application.

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