

STUDY TEXT

ARDUINO WSN

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1 Introduction

Purpose of this text is to provide general introduction to Arduino and applications which can be made using Arduino platform. Focus of second and third part will be at wireless communication and making wireless sensor networks with Arduino based nodes. All used source codes can be found at Edu-Hoc project home, <https://github.com/crocs-muni/Edu-hoc>; at official Arduino website, www.arduino.cc; or at JeeLib library website, <http://jeelabs.net/projects/jeelib/wiki>.

2 Arduino - general view

2.1 Arduino IDE

Installation

Introduction to tools

Compilation & upload

Serial monitor

2.2 Arduino Code basics

Setup

Loop

Serial

Print

Read

3 WSN node, JeeLib basics

3.1 JeeNode HW

General specs

Radio

Pins

3.2 JeeLib basics

How to add to IDE

Header format

Send unicast msg

Receive msg

2 motes network

4 WSN network

4.1 Simple apps

Alive

Sniffer

4.2 Network

General options

Fixed routing