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Semester/Master Thesis

## TinyOS Debugger for Eclipse

Wireless sensor networks are a valuable tool to gain a digital representation of the physical world. Applications for sensor nodes are developed and compiled on desktop computers and afterwards transferred to nodes. On the nodes the applications run in the operating system TinyOS. Debugging tools like GNU Debugger (gdb) can access the application only with support of special hardware (or in a simulation).

For TinyOS compiling an application means first to convert the application into an intermediate format. GDB only works with this intermediate format, not the original source code. Currently developers have to guess how their source code got converted.

The TinyOS Eclipse Plugin “YETI 2” developed in our group is a step toward easier development of applications. It provides developers with instant error- and warning messages (e.g. a typing error). The goal of this thesis is to integrate the TinyOS specific version of GDB into YETI 2. This may include: a tool to create a mapping between source code and intermediate format, new views (e.g. to show the values of variables or the call-stack), a solution to start the debugger with one click.



### Required Skills

You should already have some skills in software development and you should be familiar with the JAVA programming language. Knowledge of Eclipse, TinyOS or the C programming language is helpful but not mandatory.

Are you interested? Please contact us by email or phone.

### Advisors

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