



Information Technology Institute

Embedded Systems Track

**FOTA Project Proposal**

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# Project Description:

The Firmware-Over-the-Air-Update (FOTA-Update) is one of the most important features for the vast majority of modern embedded devices used, for example, by manufacturers in the automotive, consumer electronics and healthcare industries. The FOTA update functionality enables manufacturers to fix bugs in software components of the existing system on the one hand and to install updates remotely on the other hand. This means that the devices always remain up-to-date, even if new functions and features are only introduced after the purchase of a device.

We will build a FOTA-Update system on STM32-f103 microcontroller.  
This system consists of a bootloader, hex parser and a communication mechanism.

# Project Block Diagram:

hex file program bytes

Communication  
mechanism

PC application

program bytes

bootloader

program bytes

Flash interface

# Project Time Plan:

|  |  |  |  |
| --- | --- | --- | --- |
| Week 1 | Week 2 | Week 3 | Week 4 |
| Searching & Design |  |  |  |
|  | Implementation & Documentation | |  |
|  |  |  | Testing & Delivery |

# GitHub Link:

<https://github.com/bishoykadees/ITI_GraduationProject_FOTA>