# Purpose

This paper describes the Fall 2013 expansion of the Bluetooth Android Intern Project.

# Background

Currently the ABB(Totalflow) G4 Product line uses a PC Client based software(PCCU) for local and remote configuration via serial and IP bases connections. The purpose of this project will be to develop an android application that will provide a subset of PCCU functions to a field person for access via an IP and/or Bluetooth connection. This application does not currently provide all of PCCU’s functionality but will offer the features defined in the scope of the original Bluetooth Android Intern Project as well as those listed in this document.

This document will outline the high level user requirements

# Project Objectives

* Expand the Mobile Collection Unit (MCU) to meet the marketing requirements outlined later in this document.

# What you should know when you start

We expect you to bring these:

* Problem solving skills
* Small project, 4 engineers, contracted at 10 hours per week each
* One academic semester duration
* Management skills
* Advanced understanding of Bluetooth wireless protocols
* Experience using C++, Java or other object oriented programming language

# What you should learn from this project

We expect you to learn these:

* Software Development Lifecycle
* how to write strong technical requirements
* how to create test procedures
* how to write an Android application

# Project Organization

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# Roles and Responsibilities

Terry

Nathan

John

Nathan Lea

# Project Scope

* Using the android development environment, develop an application that will be used with the current android based mobile phones and tablets.
* This application should provide a user interface to the existing G4 product line via Bluetooth or IP connections.
* It should present the data points as defined in the Marketing Requirements with the ability to turn on or off data points for display.
* It should also provide an additional screen with a user defined set of data points not listed in the Marketing requirements.
* It should have a general settings page for general configurations settings such as Communication settings for Bluetooth or IP
* Graphics should be used whenever applicable.
* Ease of navigation should be top priority beyond functionality.

# Stretch Scope

* Conversion of the android application to the Objective C programming language to run on Apple devices.

# Marketing Requirements (Highest Priority First)

1. Rework: Backwards Compatible (old files will be viewable from app updates)
2. Remember Past Connection
3. Write Registers (allowing user to aknowledge alarms)
4. Help
   * Keyword Searchable
   * Task Oriented
5. System Settings
6. Additional Flow Apps.
7. Automation Apps: (as time permits more applications will be added)

* Gas Lift Application (R & W)
* Plunger Lift Application (R & W)
* Valve Control Application (R & W)
* Pulse Accumulator Application (flow rate, today vol., y’day vol.)

# Estimated Cost of Project

* 18 (weeks) \*10 (hours) \* $21 (wage) = **$3780** \* 4 (Intern Count) = ***$15,120***