
Team 20 Assignment 3

Simon Caven 11966939

Locky

IoT Analysis of Alternatives

21st April 2017

OVERVIEW

This report seeks to analyse the best alternatives for the development of an IoT Application with server-client communication. The application is required to exchange sensor data between the IoT device and the server. This data is then communicated to the client. The development of the application will be in the Node.js framework.

ALTERNATIVES

For the IoT-Server data exchange there are two alternatives we will consider: Johnny-Five and SerialPort. These are both available as Node.js packages.

Johnny Five

SerialPort

For server-client communication we will consider the following two alternatives: Firebase and Socket.IO.

Firebase

Socket.io

From these alternatives we have coded 4 spikes in order to analyse and determine the best development plan.

CRITERIA

The analysis of alternatives will focus on the following criteria:

Learning Curve

How easy is the framework to learn?

How much time does the framework take to learn?

Ease of Programming

How easy is programming and developing in the framework once learnt?

Support

How much support is available in the form of online forums, manuals, documentation etc?

Communication Time

How long does it take to operate the application?

What is the response time between the server and the client for communication?

Integration

How well does the framework integrate within the application?

Extensibility and Flexibility

How easy is it to extend or change the application when using the framework?

RESULTS

CONCLUSION