MIDDLE EAST TECHNICAL UNIVERSITY

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

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EE 493-DESIGN STUDIO 1

WEEKLY REPORT X

Company Name: Revolutionary Systems Inc.

Date: 05.12.2019-11.12.2019

Group Members: **Onur Akdeniz**

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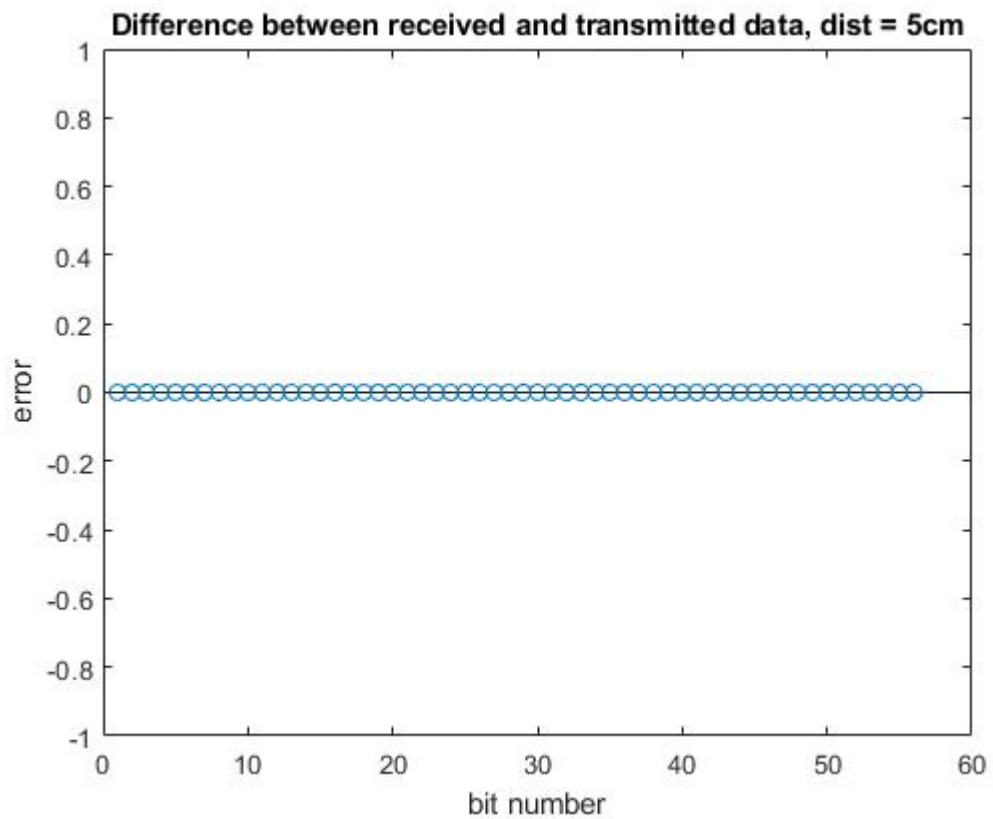## 1. <u>Test of Communication Module</u>
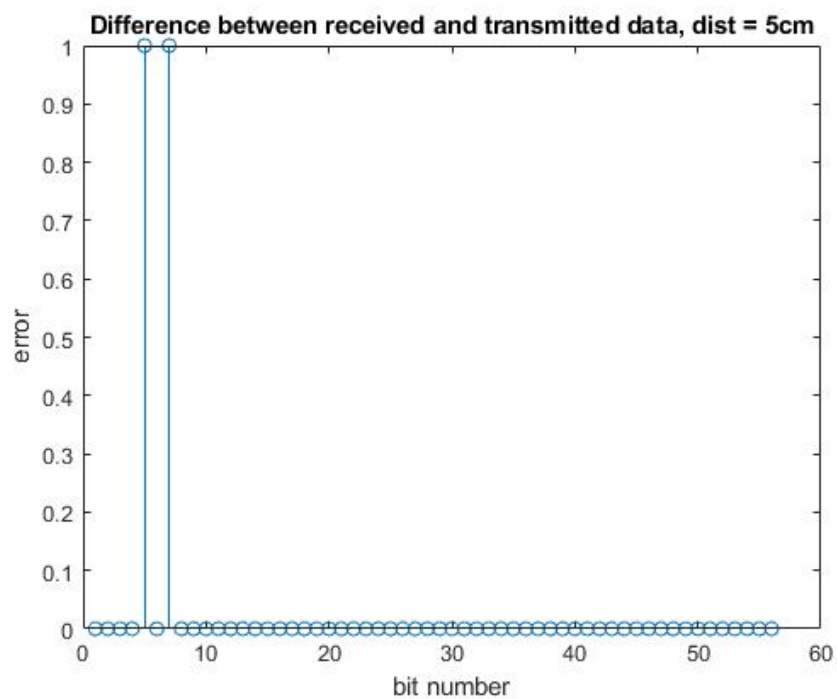

Figure 1: Erroneous Bits at 20kBits/sec

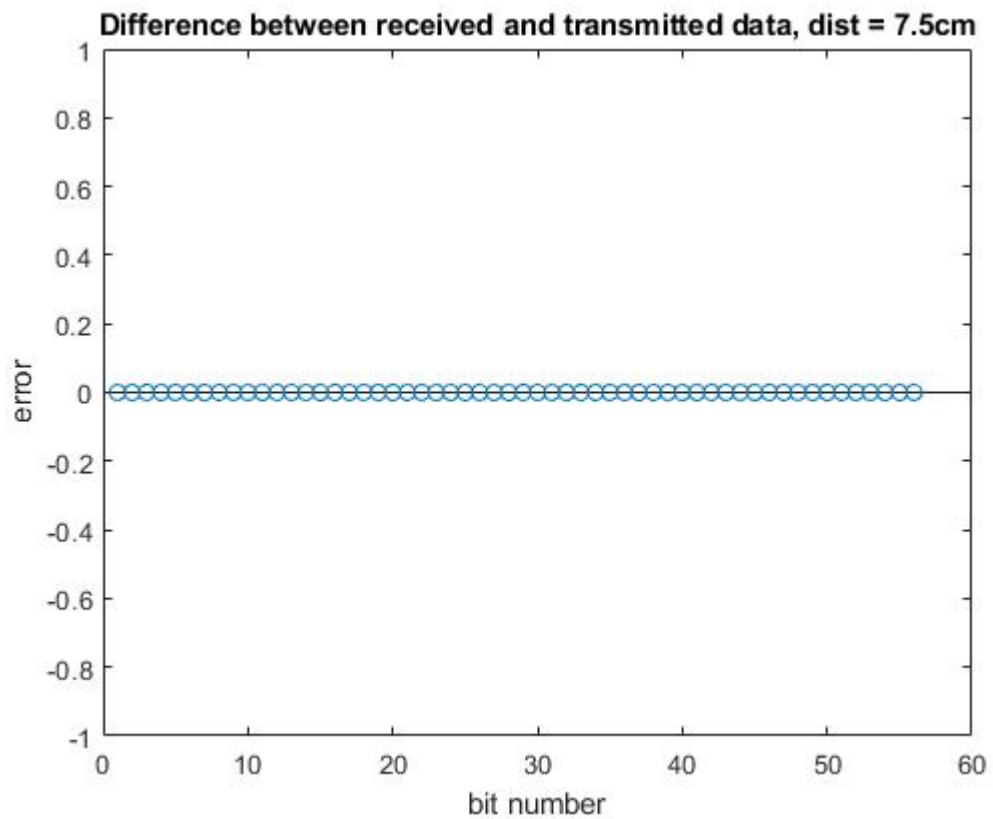*Figure 2:Erroneous bits at 20 kBits/sec*
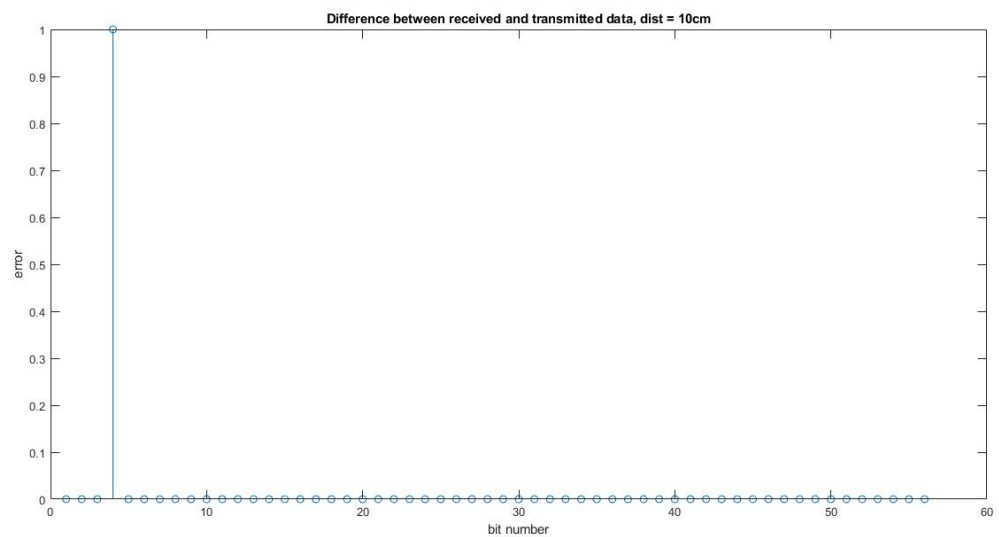
Figure 3:Erroneous bits at 20 kBits/sec

Figure 4:Erroneous bits at 20 kBits/sec

Through Figures 1-4, we can see the graph of the difference between the transmitted and received bits. The Figures 1 and 2 have the same parameters, namely they share the same distance, same transmission speed and same illumination conditions. The transmission was tried for ten times in this case. There was no error at nine times, however we obtained two erroneous bits in one of the trials. Therefore, we share the graphs of the both cases.

In Figure 3, the same experiment was repeated for 7.5 cm case. The bits are transmitted correctly in all the ten trials.

In Figure 4, the experiment is conducted for 10 cm case. There was always error in this case, maximum number of erroneous bits was two. We share one of the erroneous code cases here.