Data Link Protocol

Computer Networks
Bachelors in Informatics and Computing Engineering

3LEIC03_G3

Tiago Rodrigues up201907021@fe.up.pt
Mário Travassos upidk@fe.up.pt

December 7, 2021

Summary

This report will cover the first work proposed for the Computer Networks Curricular Unit, with the objective of creating a small application that could transfer data through two computers asynchronously, through a serial port.

The application is capable of transferring files whilst mainting their integrity, and detect errors in transmission, resolving them if possible.

Introduction

This report is the result of an examination to the practical component, which was the development of a data transfer protocol. A serial port was used to transfer the files in an asynchronous fashion.

The report is organized as follows:

1. Architecture- Functional blocks and interfaces
2. Code Structure - APIs, main code structures and their relation with the architecture
3. Main use cases - Identification and Call Stack Sequence
4. Data link Protocol - Main functional aspects and implementation strategy
5. Application Protocol - Main functional aspects and implementation strategy
6. Validation - Description of the tests conducted
7. Efficiency - Statistical characterization of efficiency, against a Stop&Wait protocol
8. Conclusion - Summary of the above descriptions, reflection on the learning objectives