Design Report

for

Simple Communication Protocol (SCP)

Version 1.0.1

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Revision History

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| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
| Alex Whiteman | 12/2/20 | Final Touches to report, making report as accurate as possible to current project conditions. | 1.0.1 |
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# Introduction

## Purpose

*The purpose of this project is to design a program that allows computers to communicate with each other over a network, specifically in order to send messages from any one computer to another computer in the network. This is accomplished through the Simple Communication Protocol, a robust method for communicating between network computers.*

## Product Scope

The scope of this project is to allow computers to receive messages from other computers, send messages to other computers, offer congestion control over those packets of data, provide a secure connection between the nodes on the network, and keep track of the life of the packets using a TTL mechanism.

# Overall Description

## Product Perspective

This program is a newly designed program that is being developed in Kokomo, IN.

## Product Functions

* Receives messages from connected computers
* Sends messages to other connected computers
* Allows congestion control over the packets of data
* Implements TTL mechanism
* Offers a “hail Mary” messaging approach that allows for a message to be sent to a corresponding node even if none of those nodes are the recipient. This is done so to reduce the possibility of a lost message.

## Operating Environment

Java is platform independent, making it a great language to use for this project. This program will work on any machine that can execute Java code.

# External Interface Requirements

## Software Interfaces

This program will run consecutively on multiple machines in order to work properly. An initial ITC file is required in order for this program to work successfully.

Appendix: Analysis Models

