

CIT 223: Data Communication and Computer Network Lab

Assignment #01

Introduction to CAT6 Cabling

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1 Introduction

There are different types of cables for wired communication.

- Twisted Pair
- Co-axial Cable
- Fiber Optic Cable

Twisted Pair are widely used cables for networking home and organizational end devices.

There are two types of twisted pair cables:

- Un-shielded Twisted Pair (UTP)
- Shielded Twisted Pair (STP)

1.1 UTP Cable Types

1. Direct Cable (Direct Connection) - to connect a network card port to a switch or hub
2. A crossover Cable - to connect two network cards in computers or from Network Interface Card (NIC) to routers.

2 Lab Objectives

The objectives of the lab are:

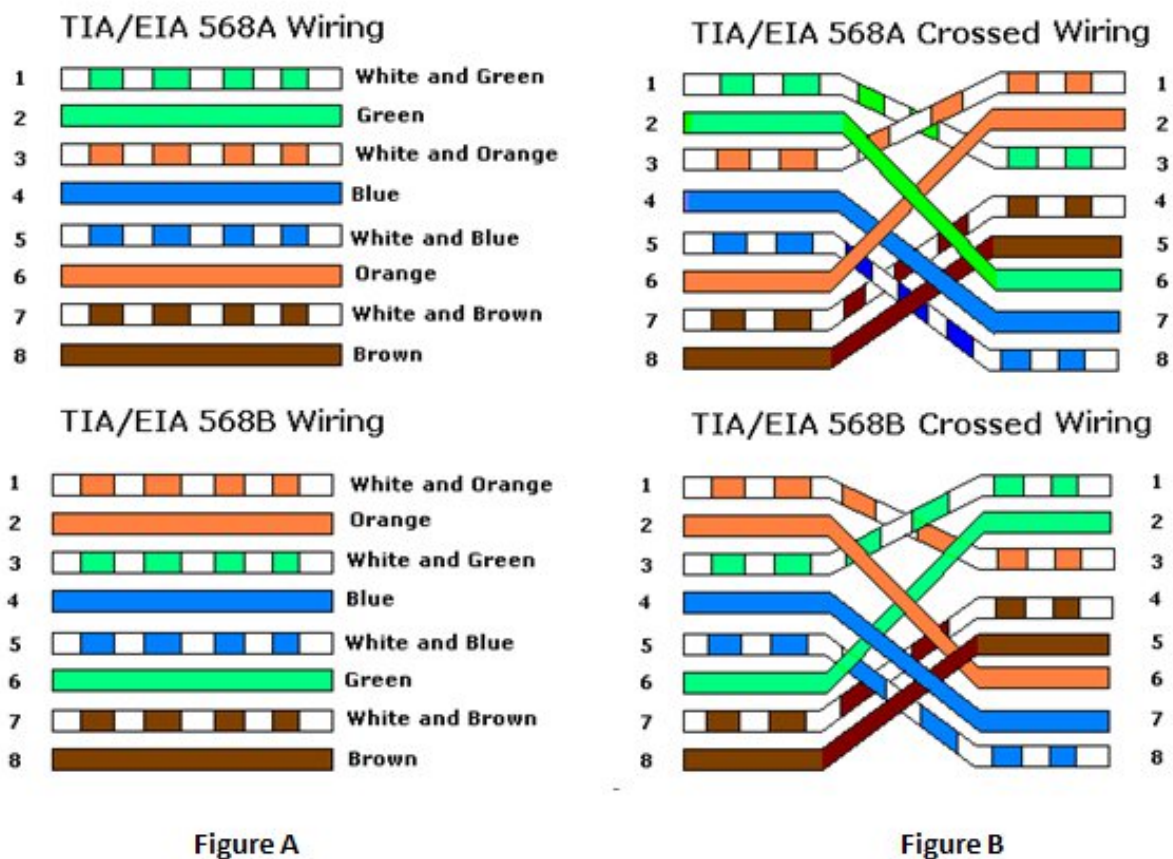
1. Study of technical data and designs of UTP Cat5 and Cat6 cables (twisted pair) used in computer networks.
2. Get the initial skills of crimping and testing UTP Cat5 network cable.

3 Video Links

- Terminating CAT6 Shielded Cable with RJ45 Connector <https://www.youtube.com/watch?v=-bQjrDirT6g>
- Terminating CAT5 Unshielded Cable with RJ45 Connector <https://www.youtube.com/watch?v=WvP0D0jiyLg>

4 Other Guides

1. https://net.academy.lv/labwork/net_LW-02EN_makeUTP5.pdf



Shows the Pin Out of Straight through Cables

Shows the Pin Out of Crossover Cables

Figure 1: Cable Connection: Direct and Cross-over Cable

5 Required Items

1. Ethernet Cable
2. RJ45 Crimpable Connectors
3. Plug Shields (optional)

4. Crimping Tool
5. Cable Stripper(Optional)
6. Cable Tester for RJ-45

6 Lab Questions

Question 1

Make a Direct UTP Cable Connection.

Question 2

Make a Cross-over UTP Cable Connection.



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CIT 223: DATA COMMUNICATION AND
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