**NETWORK DESIGN PROPOSAL FOR A SCHOOL**

**INTRODUCTION**

The scope of this proposal is to create a better network for the School Area that will allow them flexibility in the following categories:

1. Security

2. Network Scalability

3. Emailing and FTP using

4. Own Server

5. Data backup

**SCOPE AND UTILITY**

• **Scope**

• The project is primarily intended for small organizations, which include startups & other organizations, and small to medium-sized schools.

• The project has been made keeping in mind both cost and efficiency.

• Lastly, the project can be used both as a blank slate, and for upgrading a pre-existing network.

• **Utility**

• I firmly believe that the template provided by this design is applicable for any network – provided it is not large enough.

**TOOLS USED AND KEY HIGHLIGHTS**

**• Tools**

• The main tool used is Cisco Packet Tracer, provided free of charge for educational or academic use, by Cisco Inc.

**• Highlights**

• DHCP

• DNS

• WEB

• VLANs

• FTP

• EMAIL

• Routing

**DEVICES**

**Network Devices need**

1. 6 Switches

2. 3 Routers

3. 5 Hubs

**Server Equipment**

1. 1 Print server

2. 1 Web and 1 FTP server

3. 1 DHCP , 1 DNS, 1 Email server

**Workstations**

64 PC

36 For Students (ICT Lab)

15 For Classroom 9 For Teachers

1 For Lab Teacher (ICT)

1 For Hall Room

1 For Head Master

1 For Printing

**PROFESSIONAL & TECHNICAL LEARNING**

• **Professional**

• Broadened my horizons - learnt that there is more to life than studies.

• Managed to set deadlines, and abide by them – so that there is no undue pressure near the end.

• **Technical**

• Learned the OSI and the TCP/IP model in great detail.

• Learned about various protocols, and why they are (or not) in use.

• Learned to build complex networks using Packet Tracer.

• Learned in great detail about various components of a network – switches, hubs, routers, servers, connecting wires, static and DHCP routings, VLans uses etc.