Introduction

The internet is a network of networks. Grows organically and constantly changes to adapt to the challenges of today.

Networks exist for various reasons:

- Local access networks for the user
- ISPs for the higher level to route traffic between access nets.
- IXPs to exchange data from one AS to another
- Regional nets can arise to connects a group of access nets to an ISP
- CDN networks pop up to handle the distribution of content to end users.

Networks can be broken down into tiers:

- Tier 1 would be the extremely well connected international and national ISPs (Connecting the world)
- Tier 2 Could be an Internet Exchange Point or Regional ISP
- Tier 3 could be Access nets and the rest

ASs have their own internal networks, referred to as intranets. The internet the the entire connected world/network

Optical Fibre is god tier cable for networks, attenuation is in the range of 0.2 - 0,5 dB/km with no real need for a repeater before 40kms

Acronyms: ISP: Internet service provider IXP: Internet Exchange point AS: Autonomous System CDN: Content Distribution Network