

Don Bosco Institute of Technology
Department of Electronics and Telecommunication
Subject- Mobile Communication

Topic: Industrial Visit

Date & Time: September 24, 2016; 10am – 3pm

Venue: Centre for Excellence in Telecom Technology and Management,
Hiranandani Gardens, Powai, Mumbai.

Audience: BE-EXTC

Description:

The visit started with a formal introduction to the communication world and the growth of communication over the years by Mr. Duhin in the seminar hall. He gave us an idea of about how the present technology and instruments are implemented. A service provider requires around 2-3 MSCs to cover entire city. Then it also depends on the area like Urban areas have more towers concentrated, whereas, Rural areas are more spread out. Providers requires around 10-15 towers depending on the signal strength in the area with spacing of 200-300 meters for an area.

Any network has two parts; one is the wireless part which connects the MS to the tower and the wired part which performs all the routing operations to connect one user to the other. Almost 10% is wireless and 90% is wired. The legacy network is pre-dominantly used for voice communications. Circuit switching technology is used for packet transfer with shared channels through multiplexing. Packet switching technology is also being implemented but has difficulty for voice calls usage, but is good for data transmission like sms, emails, etc. Wired part of the network is either the E1 link or nowadays fibre optical cable.

Next we were taken to the Transmission line where we were shown the different optical cable being used. Also the concepts of E1 link were explained and how multiplexing can convert a 2Mbps, 30 channels line to 128 Mbps, 1920 channels. The concept of STM and various equipments were also demonstrated for multiplexing and de-multiplexing. The next lab we visited was Broadband Lab. The internet access through routers was explained to us and how the data network is being developed with the bandwidth requirements being involved. Next was the exchange lab which demonstrated various techniques of the landline communication. The following block diagram was explained by the lab incharge,

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The last lab we visited was the GSM lab which was about the wireless mobile communication technologies like 2G, 3G and 4G. There were various questionnaires between the students and the speakers which helped us to know the present scenario of the industry as well to get our doubts clear about the technologies.