

A REPORT ON
INDUSTRIAL VISIT TO
REGIONAL TELECOM TRAINING CENTER
HYDERABAD



Organized by:

ECE Department, Nalla Narasimha Reddy Group Of Institutions -Hyderabad

GLIMPSE OF INDUSTRIAL VISIT:

Starting Date: 14 August, 2018

Venue: RTTC - BSNL, Hyderabad

Duration: 1Day

Students: III B.Tech I-Sem Sec A&B (69 Members)

Faculty Members: Mr A.Gopal & Mrs G.Indira priyadarshini

They have visited 4 labs at BSNL

1. C DOT lab
2. Introduction to optical fiber lab
3. Mobile technology lab
4. BB lab



COMPANY PROFILE:

Bharat Sanchar Nigam Limited (abbreviated BSNL) is an Indian state-owned telecommunications company headquartered in New Delhi, India. It is the largest provider of fixed telephony, largest broadband services provider with more than 60% Market share, and fourth largest mobile telephony provider in India. BSNL is India's oldest and largest communication service provider (CSP).

ABOUT RTTC:

Regional Telecom Training Centre, Hyderabad is one of the prime training centers of BSNL in the western region. It was established in 1973 catering to the training needs in telecom sector. RTTC, Hyderabad is one of the most valued training centers of BSNL, providing quality training in the field of telecommunications, to its people as well as to the engineering students, professionals from other Government and private organizations.

The session started with center for development of telemetric

C DOT LAB:

The Coordinator of switching C-Dot lab explained switching process for networking, and then we were shown the rack having 1000 boards with 1k landline user's capacity.

The c dot lab consists of four main processors

1. Switching
2. Terminal unit
3. Control unit
4. Operating and maintenance unit

Switching:

The switching process includes central modulation in which the landline subscriber exchange takes

Terminal unit:

Terminal unit is front end processor for main frames and some mini computers which supports attachment of one or more telecom lines. TCU'S free processors the handling the data coming In and out of RS-232 ports.

Control unit:

Control unit is also called administrative module. It controls the entire exchange process and distributes the works.

Operating and maintenance system unit:

Operating and maintenance system unit is also called input and output module. It stores the information about the subscriber.

Ex - Call records, routing information

OPTICAL FIBER LAB:

Then after we visited OFC (Optical Fiber Connection) lab. There the Expert explained the actual working of OFC system. He explained how the conversion of electrical signal into optical signal takes place.

Introduction:

There are two types of transmission medium

1. Wire line:

The medium which can be seen physically with eyes

Ex: copper cable, optical fiber cable;

2. Wireless:

The medium which can't be seen physically with eyes

Ex: air

1. Copper Cables:

STP- Shielded twisted pair computing (These are protected by metal)

UTP-Unshielded twisted pair computing (These are not protected by metal)

Limitations of Copper Cables:

Less security

Less bandwidth

Less data rate

2. Coaxial cable:

Coaxial cable is used as a transmission line for radio frequency signals; its applications include connecting radio transmitters and receivers to their antennas, computer network connections, and digital audio and distribution cable television signals

Drawbacks:

Less security

Less distance than copper

More expensive to install compare to twisted pair cable

3. Optical fiber:

An optical fiber cable also known as fiber optic cable is an assembly similar to an electrical cable but containing one or more optical fibers that are used to carry light. The optical fiber elements are typically individually coated with plastic Layers and contained in a protective tube suitable for the environment where the cable will be deployed.

BSC-basic station converter

MSC-mobile station converter

There are different types of optical fiber 24f, 96f, 12f

Next we have attended Mobile technology lab

*MOBILE TECHNOLOGY LAB:

In mobile technology lab we mainly discussed about the different technologies available in the communications. Different technologies like 2G, 2.5G, 2.75G, 3G, 4G and their speeds and their transmission techniques have been clearly explained and their working process has been given a

brief. All the equipment regarding the mobile technology has been detailed and explained. The efforts going on for achieving 5G are also clearly briefed and the 5g can come in to usage by 2020. Later on we were introduced to broadband lab.

*BROADBAND LAB:

In telecommunications, in broadband is wired bandwidth data transmission which transports multiple signals and traffic types. The medium can be coaxial cable, optical fiber, radio or twisted pair.

In telecommunications, a broadband signaling method is one that handles a wide band of frequencies. "Broadband" is a relative term, understood according to its context. The wider the bandwidth of channel, the greater the data carrying capacity ,given the same channel quality.

OUTCOME OF THIS ACTIVITY:

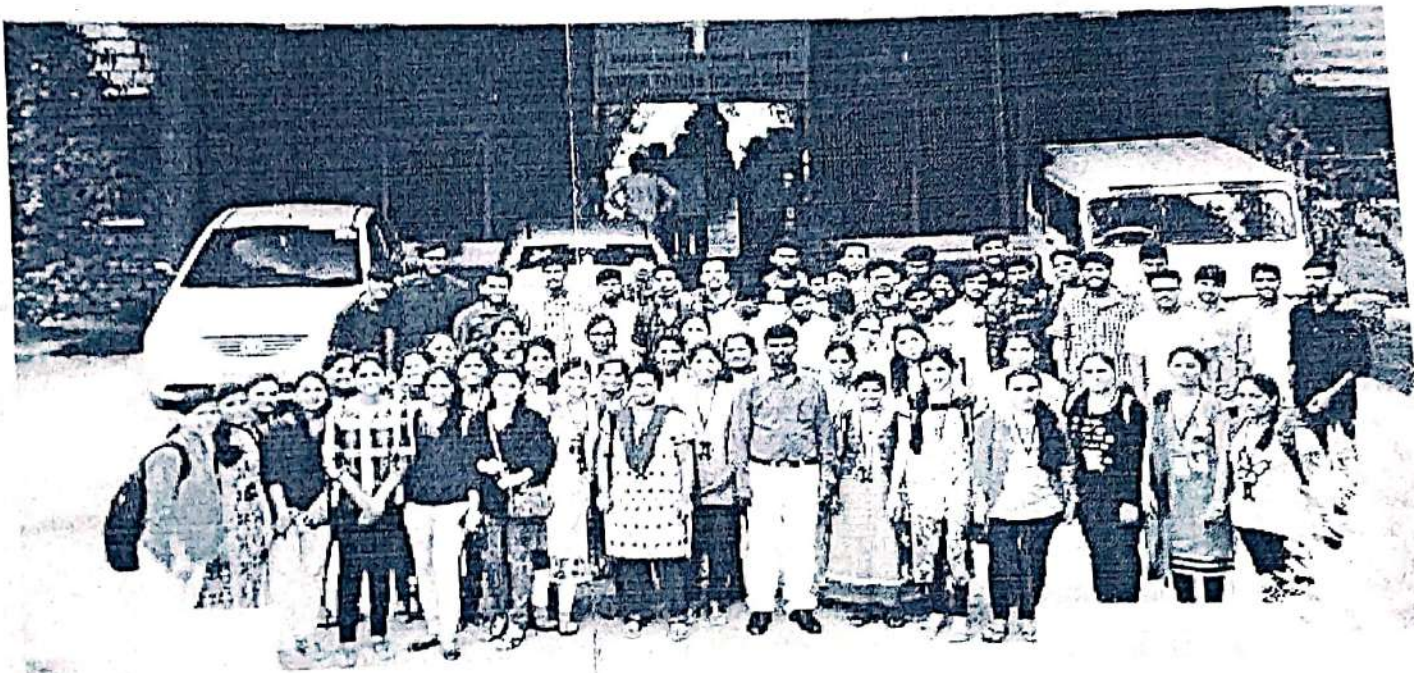
'See & know' is better motto than 'read & learn'. Students learned much practical application of C DOT, Wired Communication system, Mobile communication and Broadband how the connections are established, how they work, how to detect the error in connections and how to overcome from those errors and many more. Also they learned different advantages and disadvantage of all above mentioned technology.

STUDENTS AT RTTC



ACKNOWLEDGEMENT:

We thank RTTC authorities who helped us through the visit.



Dr.M.A.Khadar Baba

Head of the Department

Head of the Department
Electronics & Communication Engineering
Kotla Narasimha Reddy Education Group of Institutions - Integrated Campus
Chowdhariguda(VIII), Ghatkesar (M.D), R.R. Dist. 501 033