The department of EXTC organised an industrial visit for one-day visit to BSNL office, Dhule. This visit was organised on 27th March 2017 for the class of B.Tech EXTC 4th year. This visit was approved by Dr. Aaquil Bunglowala (Associate Dean) and Prof. Atul Patil (HOD & Associate Professor, EXTC Department) of MPSTME campus shirpur. Along with these professors, Mr. Kiran Salunke (Assistant Professor, EXTC Department) and Mr. Paresh Patil(Lab Assistant), have taken efforts to make this visit a success.

The One-day visit was organised with prior permission from BSNL office, Dhule. The sessions conducted were very educational and gave the students the exposure as to how the industry and the outside market works. The students were benefited with the technical terms and the
knowledge of how a call setup is made using Landline and mobile phones. The company outreach plus opportunities were discussed which motivated the students to progress in their stream.

**The details of the trip are:**

1. The bus departure from the campus for Dhule was at 11:00 hrs.
2. The students reached the BSNL office. By 12:30 hrs.
3. The Senior manager gave a warm welcome.
4. At 13:00 hrs, the staff split the total number of students in two groups.
5. By 14:15 hrs, the first session was over.
6. The students then proceeded towards a nearby hotel for lunch and returned to office by 15:30 hrs.
7. By 15:45 hrs, the second session was initiated.
8. At 16:30 hrs, the session got over.
9. By 16:45 hrs, the bus left for campus and reached the campus by 17:30 hrs

**BHARAT SANCHAR NIGAM LIMITED LTD.**
Bharat Sanchar Nigam Limited (abbreviated BSNL) is an Indian state-owned telecommunications company headquartered in New Delhi. It was incorporated on 15 September 2000 and took over the business of providing of telecom services and network management from the erstwhile Central Government Departments of Telecom Services (DTS) and Telecom Operations (DTO), with effect from 1 October 2000 on a going concern basis. It is the largest provider of fixed telephony and broadband services with more than 60% market share and Fifth largest mobile telephony provider in India. However, in recent years the company's revenues and market share have plummeted into heavy losses due to intense competition in the Indian telecommunications sector. BSNL is India's oldest communication service provider and had a customer base of 93.29 million as of June 2015. It has footprints throughout India except for Mumbai and New Delhi, which are managed by Mahanagar Telephone Nigam (MTNL).

Bsnl Mobile is major provider of GSM cellular mobile services under the brand name Cellone. BSNL provides complete telecom services solution to enterprise customers including MPLS, P2P and Internet leased lines. It provides fixedline services and landline using CDMA technology and its extensive optical fiber network. BSNL provides Internet access services through dial-up connection as prepaid, NetOne as Postpaid and DataOne as BSNL Broadband.

BSNL offers value-added services, such as Free Phone Service (FPH), India Telephone Card (Prepaid card), Account Card Calling (ACC), Virtual Private Network (VPN), Tele-voting, Premium Rate Service (PRM), Universal Access Number (UAN). BSNL also offers the IPTV which enables customers to watch television through internet and Voice and Video Over Internet Protocol (VVoIP). In 2007, BSNL announced plans for providing 5 million broadband connectivity and secured 80% of the INR 25 billion rural telephony project of Government of India. On 20 March 2009, BSNL launched blackberry services across India. BSNL paid Rs. 101.87 billion for 3G spectrum in 2010. As of 2011, BSNL offers coverage in over 800 cities across India. BSNL launched in 2012 a 3G wireless pocket router named Winknet Mf50. BSNL 3G provides HSPA+ service with highest speed of 21.1 Mbit/s downlink and 5.76 Mbit/s uplink.

BSNL announced the discontinuation of its telegram services from 15 July 2013, after 160 years in service. It was opened to the public in February 1855; it was upgraded to a web-based messaging system in 2010, through 182 telegraph offices across India.

Bharat Sanchar Nigam Limited, A Public Sector Enterprise also provide Fiber to the home plans which are generally known as FTTH broadband service. It is the fastest broadband service which has been started by the BSNL. BSNL FTTH service can provide the speed up to 100Mbit/s to the Internet users.

As per Telecom Regulatory Authority of India Report dated 19 Feb 2016 BSNL has the 4th position in Broadband market share. It has broadband market share of 14.54% as on 31.12.2015. In wireless segment it is on 6th position with 8.16% of market share as on 31.12.2015.

BSNL launched linguistic email service with DATAMAIL app in 8 Indian languages. DATAMAIL app is powered with Xgen Plus email technology built by Data Xgen Technologies.
Industrial Visit Particulars:

The session 1 was conducted for about 1 hour.

The presentation session was conducted by: Mr. Kiran Bhamre

This session covered the points: -

1. Company Profile
2. General introduction of the services provided by BSNL.
3. The session focussed on call setup details via a landline Telephone.
4. Information regarding the Trunk Automatic Exchange (TAX).
5. Various switching technologies used in telephony like C-DOT, OCB-283, EWSD, AXE-10, SESS.
6. Detailed explanation of the OCB- 283 switching technique used in Dhule.
7. Detailed explanation of various instruments used for controlling the signals and switching like SMT, SMC, SMA, SMX, SMM.

After this the students proceeded towards lunch and returned back to the BSNL office in 1hr 30 mins
The session 2 was conducted for about 1 hour.

The presentation session was conducted by: Mr. S.P Deshmukh

1. This Session primarily focussed on call setup using Mobile devices.
2. The GSM methodology brief introduction was given.
3. Omni directional antenna and its utility in the communication process was concisely discussed.
4. Practical implementation of frequency reuse and cell sectoring concept.
5. The basic functioning of Base Transceiver station (BTS) and Base station Controller (BSC).
6. The various Bandwidth saving techniques adopted by BSNL were discussed.
7. The role of Telecomm operators in the criminal cases and assistance facilities provided by BSNL to the local police officials were also discussed.

LIST OF B.Tech Students attending the Industrial Visit.

<table>
<thead>
<tr>
<th>Student No</th>
<th>Roll No</th>
<th>Gender</th>
<th>Student Name</th>
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<tbody>
<tr>
<td>71205130002</td>
<td>B101</td>
<td>Male</td>
<td>Aggarwal, Abhishek</td>
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<tr>
<td>71205130007</td>
<td>B103</td>
<td>Male</td>
<td>Behera, KisanKUMAR</td>
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<tr>
<td>71205130009</td>
<td>B104</td>
<td>Male</td>
<td>CHHABRA, DARSHIT</td>
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<tr>
<td>71205130011</td>
<td>B105</td>
<td>Male</td>
<td>deep, prakhar</td>
</tr>
<tr>
<td>71205130012</td>
<td>B106</td>
<td>Female</td>
<td>Dey, Priyanka</td>
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</table>
Industrial visit to BSNL office, Dhule was organized by NMIMS, Shirpur. The guiding staff on the site was very supportive to all the students.

We are sure that this visit will help us in our future practical life and bring a positive change in our thinking and practical behaviour regarding education and engineering. The tour was very informative and entertaining for the students of 4th year B.Tech EXTC. It was a very great learning experience for the students and was very helpful for their 360-degree learning. The students maintained discipline throughout the trip and no injury occurred during the trip. The students thanked the Dean of MPSTME for approving such visits.

We are thankful to Hon. Associate Dean Dr. Aaquil Bunglowala, HOD of EXTC department Prof. Atul Patil and Prof. Shailendra Baraniya for organizing the visit. We also thank Prof. Kiran Salunke and Mr. Paresh Patil for accompanying and taking proper care of us throughout the visit.

Prepared By:

Chinmaya Vyas

Class Representative (CR)

Btech Extc (4th yr)