Report on Industrial visit at

Reliance Jio

Ghansoli, Navi Mumbai

22th March, 2019

ATHARVA COLLEGE OF ENGINEERING
Malad-Marve Road, Charkop Naka, Malad (West),
Mumbai-95 Department of Electronics and
Telecommunication
YEAR 2019-2020

ABOUT THE COMPANY:

Reliance Jio Infocomm Limited or Jio is an LTE mobile network operator in India. It provides broadband services to customers using WI-MAX as access technology pan India. The company was formerly known as Infotel Broadband Services Limited and changed its name to Reliance Jio Infocomm Limited in January, 2013. The company was incorporated in 2007 and is based in Mumbai, India. Reliance Jio Infocomm Limited operates as a subsidiary of Reliance Industries Limited. It is a wholly owned subsidiary of Reliance Industries headquartered in Navi Mumbai, Maharashtra. Reliance Jio aims to enable this transformation by creating not just a cutting-edge voice and broadband network, but also a powerful ecosystem on which a range of rich digital services will be enabled – a unique green-field opportunity.

One day industrial Visit to Reliance Jio Ghansoli where students were introduced to the Reliance Jio technology.

Organiser: Electronics and Telecommunication Department
Participants: Students of EXTC, IT Department and Two teaching staff

Students of ACE (Atharva College of Engineering, Malad, Mumbai) visited at Reliance JIO on 22th March 2019 for gaining knowledge at ghansoli. It is one of the broad areas of 500 acre + campus spread across with greenery and serene environment with latest in tech and advanced amenities.

After reaching at ghansoli reliance jio we came across the prerequisite formalities and then we got entry into the world of JIO, with the very first being the JIO gadgets one of the most interesting one was the latest JIO feature phone which was advance as comparison to previous development, we had a demo of the same. I was amazed to see such a user friendly product with capability to play IPTV with 500 Channels viewing capacity and multi lingual compatibility at an impeccable price, truly that phone made for India or for normal people. Then we saw Jio Home automation based on IOT -Internet Of Things which has capacity to control different things like lighting, climate, entertaining system, fan, AC etc. We also saw Jio Smart setup box, which used personal user data and projected the user interested related content accordingly.

Next interesting Product that we saw was JIO car. JIO Car is going to convert your car into a digital one and it consist of a SIM slot which not only allows the user to use JIO 4G connectivity and work as a Wi-Fi hotspot for car users but also provides insights about the car. They have also develop an application which help to monitor different functionality like checking current status and location of car, getting notification as unknown person drive the car through IOT. For that we have to connect application to the device then through application we can fully track your vehicle. JIO car router provides lots of feature like GPS, Wi-Fi hotspot, navigation etc. and if anything goes wrong with your vehicle then we can get alert on JIO car router connected app and by this device location tracking can also be done.

We also experienced JIO Money; a payment gateway service which is called jio credit card machines that was developed in lower cost for normal people. As compared to other company in jio credit card machine, some more features were added. After this we came across with different jio application and their features.

We were truly blessed and flabbergasted by being a member of the team to visit such an iconic campus and get to know the team behind such a popular company such as JIO. I am very much thankful and obliged for Atharva College of engineering and faculties for managing such a wonderful event for us and giving us the opportunity to visit such a wonderful technology center.

Reliance Jio 4G VoLTE technology:

VoLTE stands for voice over Long Term Evolution. Utilising IMS technology, it is a digital packet voice service that is delivered over IP via an LTE access network.

Voice calls over LTE are recognised as the industry-agreed progression of voice services across mobile networks, deploying LTE radio access technology.

The implementation of VoLTE offers many benefits, both in terms of cost and operation. VoLTE:

- Provides a more efficient use of spectrum than traditional voice;
- Meets the rising demand for richer, more reliable services;
- Eliminates the need to have voice on one network and data on another;
- Unlocks new revenue potential, utilising IMS as the common service platform;
- Can be deployed in parallel with video calls over LTE and RCS multimedia services, including video share, multimedia messaging, chat and file transfer;
- Ensures that video services are fully interoperable across the operator community, just as voice services are, as demand for video calls grows;
- Increases handset battery life by 40 per cent (compared with VoIP);
- Delivers an unusually clear calling experience; and
- Provides rapid call establishment time.

While 2G and 3G networks are circuit-switch based, 4G or LTE networks utilize Packet Switching. When a call is made over a 2G or a 3G network, a certain amount of network bandwidth is assigned to that call as a pipeline, which does not terminate till the call ends. On a VoLTE network, voice calls are broken up into packets of information, sent over the full data pipeline and then Reconstructed at the receiver's end. The result is that voice information can be carried over a higher bandwidth pipe, resulting in better call quality. Reliance Jio network is purely LTE, and does not have any 2G and 3G bands and as such, calls made on this network will only be VoLTE based. Therefore, in order to use the feature, you must have a handset which is VoLTE enabled. While VoLTE is baked into most of the modern Qualcomm and several Mediate SoCs, the feature may not be enabled on the handset and can be done so by means of a software update to be pushed out by the handset manufacturer.

Conclusion:

We conclude that while going through the entire industrial visit, the cooperation is found to be very well organized developed & most ideal industry in every walk of its production, administration & management aspects. We came to know about different technologies used in telecommunication industries. We would like to extend our gratitude to company for giving us permission and support which help to make our visit successful with accomplishment of objective and also thankful to our department for arranging this visit for us.