

Report of tunnel visit

Wednesday 16th of January 2019, Tokyo, Japan

1 Introduction

This visit was organized by NTT and Okinawa Open Laboratory (OOL), and I joined as a participant from the Specialist Development Program of OOL. The tour started at Otemachi Place building, in Tokyo. We gathered in the 3rd floor before proceeding to the facility where we received a brief explanation of the location where we were going to visit. The responsible explained us about the tunnel, its history, and gave us some information like its characteristics.

2 Participants

Workers from NTT, especially some recently hired employees, have joined us in this tour. Below the group photo of all participants.



Group picture near NTT building around Otemachi after the tunnel visit

3 Overview of the tunnel

The underground tunnel can be accessed from NTT facilities only, or via manholes in some locations. The total length of the tunnel is around 300 km in the city of Tokyo. History had proven that it can resist big natural disasters like flooding or earth quake.

4 Management system

The tunnel is monitored via a central management system accessible from NTT data centers. In addition, different sensors were deployed inside the tunnel in order to quickly react in case of emergency. Devices like speakers and a special telephone line are installed to ease the intervention if any incident occurs.

5 Types of cable

The tunnel is carrying different type of cables, but most of them are optical fiber and coaxial cable. Electric cable can also be found, it's mainly used for connecting buildings to energy backup system in case of electricity outage around Tokyo. Coaxial cable is used by the telephone network.

6 Conclusion

The cable tunnel is an important place because it is the heart of the network, not only in Tokyo but in Japan. Since it is vital for the economy of the country, any cut, even a few seconds, is not tolerated; that is why it is highly secured. This visit was very impressive, it was my first time to visit such important place.

I learned during this tour that the construction of such infrastructure is essential for expanding connectivity. Most of the developing countries in Africa lack of such infrastructure and need to reconsider the planning of their cities. Although, the construction of a tunnel is not easy and need great expertise. For deploying tunnels, my country, for example, can partner with Japan which has many years of experience on building, extending and maintaining underground tunnels.

I would like to express my gratitude to OOL for letting me participate to this tour, and to Morifuji さん for his constant support.