Lots of historical exhibits that can only be seen here!

Welcome to the historical explorations of the "Technology of Telecommunications"



# **NTT HISTORY CENTER OF TECHNOLOGIES**

https://hct.lab.gvm-jp.groupis-ex.ntt/english/index.html

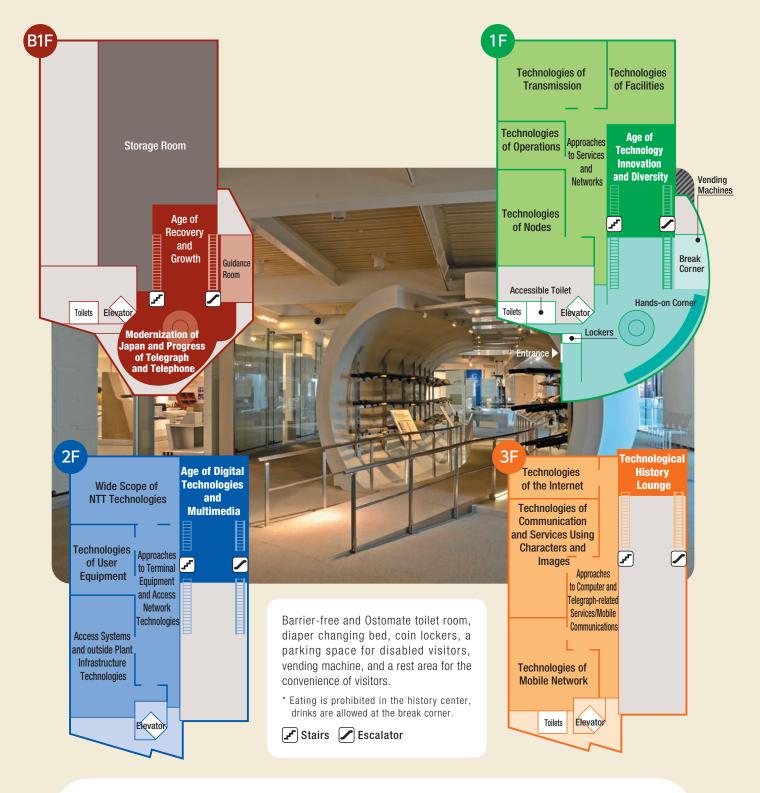
# Open to the public!

## Every Thu and Fri 13:00 - 17:00 (No reservation needed/Free Admission)

The first domestically produced telephone, the black telephone reminiscent of the Showa era, high purity fiber preform that can become 2000km long optical fiber, and many more historical developments are on display. Visitors can also experience a retro telephone like the one seen in the movies.

\* If you wish to join the guided tour or to visit other than above dates, please make a reservation beforehand. \* It may be closed due to circumstances, please check on our website or contact us in advance.

## The NTT Group's historical assets on the two themes, "Tracing the History" and "Exploring the Technologies " are being exhibited.



## Audiovisual Tablet Guide (JP/EN available) free rental service

At the History Center, visitors can borrow exhibit commentary tablets for free for enhanced enjoyment of exhibits.



**Be an Operator!** 

Experience old systems where a telephone switchboard operator made all the connections.



Hands-on



# Tracing the **History**

Follow the history of the NTT Group's telecommunications activities together with the social landscape chronologically from the beginning of telegraph services in 1870 to modern times.



History mural (introduction of history from the end of the Tokugawa shogunate to the Meiji era, Taisho era, and the early Showa era)



It took 20 years between the years of post-war devastation and the hosting of the Tokyo Olympics. See the background of the telegraph and telephones supporting the spirited reconstruction and growth efforts of Japan. We have set up an area presenting television footage from this period.

# BIF Modernization of Japan and Progress of Telegraph and Telephone

The arrival of Commodore Perry in Japan in 1854 also brought the telegraph. When Alexander Graham Bell invented the telephone in 1876, Japan also began creating its own domestic telephones. In 1890, the first telephone exchange service began. See the history of telecommunications until the Nippon Telegraph and Telephone Public Corporation was established in 1952.





"The First Domestically Produced Telephone" based on the Bell telephone. "T-type Automatic Switching System" developed as the first domestic switching technology during the war.

# Exploring the **Technologies**

- Approaches to Services and Networks
  Technologies of Nodes
  Technologies of Operations
  - Technologies of Transmission

The devices of foundational technology for network are exhibited here. We introduce the traces of various fields of technologies, such as network, switching, wired and wireless transmission, operation, construction and electrical power. Here, we present developments in various fields of technologies supporting the growth of telecommunications.



**D10 Electric Switching System** 



**Communications Tower** 



Underwater Repeater

# NTT's Information and Communication Technology to your daily life, to society and to the world

Since the start of telegraph service in 1870, the telecommunications business in Japan has undergone significant changes, starting with the Ministry of Communications, which then became the Ministry of Telecommunications, Nippon Telegraph and Telephone Public Corporation, and finally, following privatization, the current NTT group. The history of Japan's communications technology is the history of the technological development of the NTT Group. The NTT History Center of Technologies exhibits in timeline fashion a collection of historical assets of the NTT group, accumulated as the result of the group's development of telecommunications technologies, with particular focus on the half-century since the foundation of the Nippon Telegraph and Telephone Public Corporation.

Various lessons may be learned from the ingenuity and hard work of the pioneers who developed original technologies to answer evolving social needs amidst intense international competition.

It is thus hoped that this center will be a source of inspiration for innovators working on new technologies to usher in the next age.



Actual historical materials and models show a realistic recreation of that time period's situation in this exhibit booth.



# BIF Age of Recovery and Growth

The Ministry of Communications and Ministry of Telecommunications conducted government operations for the development of communications industry. When it was succeeded by the Nippon Telegraph and Telephone Public Corporation in 1952, Japan was in the middle of the postwar reconstruction. We would like to show the history in which the economic activity and revitalization where the technology went into practical application.

The telephone used from 1950s to 1960s. Seen from the right (the oldest first), the No. 4 Telephone set, the Model 600 Telephone set, and the Pushphone.



The futuristic "wireless telephone" was introduced at Expo'70, the Japan World Exposition Osaka 1970.

# **2F** Approaches to Terminal Equipment and Access Network Technologies

- Access Systems and outside Plant Infrastructure Technologies
- Technologies of User Equipment
- Wide Scope of NTT Technologies



Manhole to pass through communications cable (model)

The fruit of NTT's basic research—including the access network connecting customers with NTT, the cables and the external infrastructure, telephones and facsimiles customers use, and the VAD Method for the optical fiber manufacturing system foundation—are all part of the history of the evolution of technology.



Drilling machine for ducting



Development of optical fiber mass production method (VAD Method)



## "Parabola Antenna" Allows you to talk to someone



far away

You can communicate with each other via the parabola antennas on the 1st and 3rd floor.

# 3F **Technological History Lounge**

In the "Technological History Lounge" on the 3rd floor where you can oversee exhibits down through the atrium, the technological prototype satellite ETS-VI antenna's experimental model is on display.



# **1F**1970 Age of Technology **Innovation and Diversity**

From the 1970s to the mid-1980s, Japan went from a period of high growth to a period of stabilization. The telecommunications industry advanced dramatically, including the computerization of exchanges, pagers and car-phone services, which laid the groundwork to modern-day mobile technologies.





Early pagers

Mini-fax

Mobile Network and Internet

# $_{2F}$ From the mid- 1980s**Age of Digital Technologies** and Multimedia

In 1985, Nippon Telegraph and Telephone Corporation was privatized. During this period. the digitization of networks, conversion to fiber optics of communications networks, and the rapid deployment of mobile networks and the Internet gave rise to advanced networks allowing everyone to establish communications connections.



The Great Hanshin Earthquake and the Portable Earth Station for

Satellite Circuits



- Technologies of Communication and **Services Using Characters and Images** 
  - **Technologies of Mobile Network**
  - **Technologies of the Internet**

Telegrams, the telex, TV-phones, and other tools of communications using literal and pictorial transmissions underwent great change with the advent of the computer. Here, we introduce the new technologies that started the movement.



Computers used for the network (DIPS)







Diverse selection of mobile equipment

## **Time Traveler D!**

Let's Try

Go around the History Center for this quiz rally to find the secrets behind communications (Available only in Japanese).

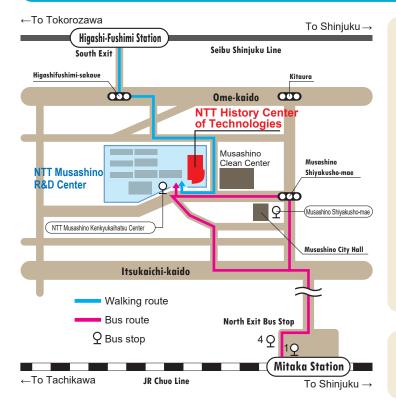


## **Original Papercraft**

This rare papercraft can only be obtained by visiting the NTT History Center of Technologies. Find out what you will get by coming here.



### Access



### Bus route from JR Chuo Line "Mitaka Station" North Exit

- Go to Bus Stop No. 1 and take the bus going to "Kitaura," "Musashiseki," or "Tanashihashiba." Get off at the "Musashino Shiyakusho-mae" stop. Walk 5 minutes.
   (The trip takes approx. 15 minutes)
- Go to Bus Stop No. 4 and take the bus going to "NTT Musashino Kenkyukaihatsu Center." Get off at "NTT Musashino Kenkyukaihatsu Center" (the last stop). (The trip takes approx. 10 minutes)

Seibu Shinjuku Line "Higashi-Fushimi Station" The Center is a 15-minute walk from the South Exit.

## **NTT History Center of Technologies**

## NTT Musashino R&D Center 3-9-11 Midoricho, Musashino, Tokyo 180-8585

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