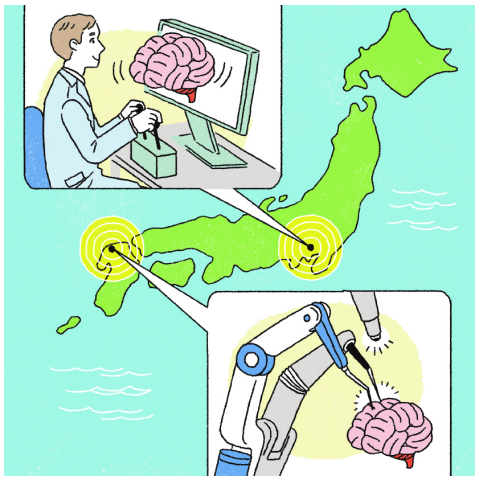
N03

Enable remote robot arms to handle delicate objects by natural and precise manipulation

Remote precise manipulation enabled by IOWN and bilateral control

IOWN Now

APN（All-Photonics Network）

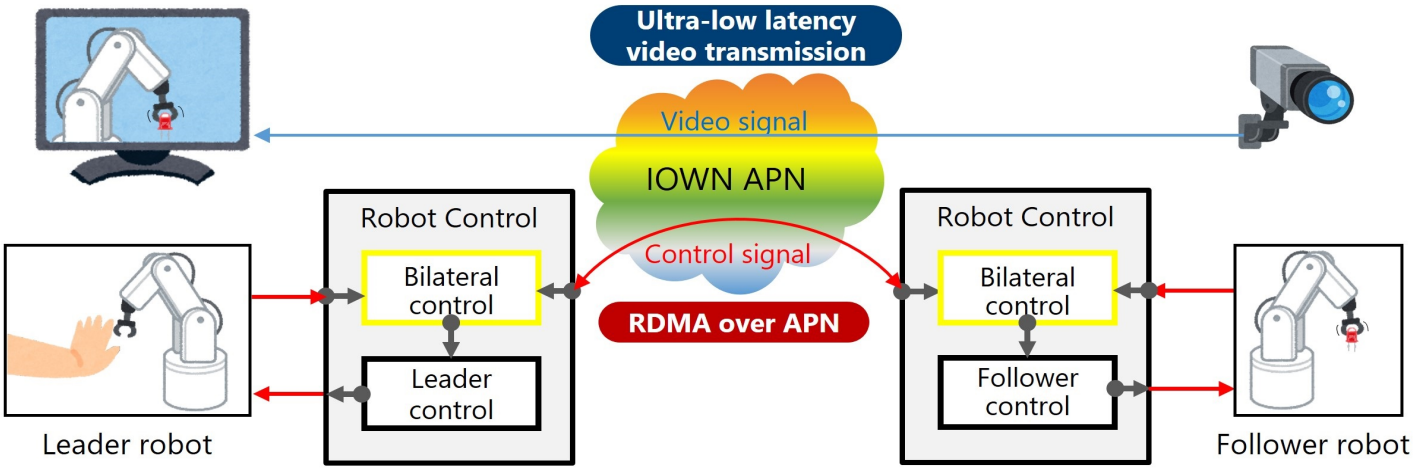


Background

In precise control of manipulator motion, the slight control deviation or delay can be a fatal problem. Therefore, in addition to precise mechanical design and force control, low latency control data transmission and video transmission were required to achieve remote precise control.

Summary

We have achieved a remote precise control through IOWN All-photonics network (APN) by combining bilateral control of SONY group corporation, which provides the precise force feedback and stable operation in remote control, with low-latency data/ video transmission of NTT.



Features

- Bilateral control technology enabled by precise mechanical design, high-precision force sensors and force control
- RDMA over APN technology that transmits control data between memories in remote PCs in APN with low latency and high reliability
- Ultra-low-latency video-transmission technology that transmits high-definition uncompressed video flows through IOWN APN

Future_benefits

Our technology provides a remote precise manipulation, which was previously unachievable due to latency and precision, and opens up new applications such as telemedicine.

Collaboration partners

Sony Group Corporation

Exhibiting Company

NIPPON TELEGRAPH AND TELEPHONE CORPORATION

Contact

rdforum-exhibition@ml.ntt.com