

Enables communication among people in remote locations IOWN x Spatial data transmission


Background and Technical Challenges

Regarding the transmission and reproduction of spatial information, current technologies require (1) a specially prepared space for measurement and targeting only limited subjects (people or objects in a restricted area), and (2) transmitted and reproduced information limited to audiovisual data.


IOWN×空間伝送 ～大阪・関西万博の追体験～

まるで隣にいたような存在を感じる未来のコミュニケーション・エンターテインメント体験を構成する要素技術の紹介
Technologies for future communication and entertainment that feels like being side by side

① 動的3D空間伝送・再現
Dynamic 3D spatial transmission and reproduction technology



カメラとLiDARで3Dセンシング
3D sensing with camera and LiDAR



背景の欠損やノイズを低減し空間を再現
Reproduces the space with reduced defects and noise

リアルタイム3D空間伝送

3D空間・触覚
IOWN-APN

① 動的3D空間伝送・再現
② 触覚振動伝送・再現
③ IOWN APN

伝送元

伝送先

人や空間そのものが空間伝送され
まるで隣にいたような体験を実現

④ IOWN APN
低消費電力、高品質・大容量、低遅延の伝送を実現
Achieves low power consumption, high quality, large capacity, and low latency transmission

② 触覚振動伝送・再現
Tactile vibration transmission and reproduction technology



加速度マイクとトラッキングによる振動計測
Vibration measurement using an accelerometer and tracking



定位感や質感まで伝わる振動場を再現
Reproduces a vibration field that conveys the sense of positioning and texture

R&D Goals and Outcomes

By transmitting and reproducing complete information of distant people and spaces, many more people—including those far away—can share the same experience and emotions simultaneously.

Key Technologies

01 Core Technologies

- Measure moving objects along with their surrounding space and transmit and reproduce them at a remote location.
- Measure the haptic vibrations, including the position information, and transmit and reproduce them at a remote location.

02 Key Differentiators

- It is possible to measure and reproduce the entire space, including people and objects.
- Large-scale, low-latency presentation of vibrations with directional perception from eight directions is possible.

Use Cases Entertainment

R&D phase Research

Technology Schedule FY27-29

Commercialization Schedule TBD

【Exhibitors】

NTT Human Informatics Laboratories

【Co-exhibitors】

-

【Contact】

Human Informatics Laboratories Cyber-World Laboratory

【Related Links】

-