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**Company Introduction**

The University of Tokyo, NTT Corporation, and NEC Corporation are collaborating on research and development under the University of Tokyo's Social Cooperation Program. Looking ahead to around 2030, when AI and robotics are expected to be deployed widely in society, the three parties are advancing research and development of next-generation network technologies related to 6G and IOWN.

**Products Details**

Currently, agentic AI mainly acts on human prompts, but future agentic AI will autonomously act on sensor data, leading to a rapid increase in multimodal data. Existing ICT infrastructures are not equipped to support this evolution due to three major limitations:

- Wireless bandwidth is insufficient for massive sensor data
- Increasing computational load and power consumption with large-scale AI
- Internet delays and congestion caused by reliance on cloud-based agentic AI

To overcome these challenges, this study develops three key technologies:

- Streaming semantic communication, which detects context changes and transmits only semantic differences, reducing wireless resources
- AI-oriented media control, extracts key sensor data via pre-processing and feeds it to agentic AI, optimizing computation for reasoning
- In-network computing, which distributes tasks across specialized AIs and external sources, improving efficiency and reliability

These technologies enable future agentic AI to efficiently handle the continuously expanding volumes of multimodal data.

