Mehr Licht!
More Photonics for Intelligence

#A04

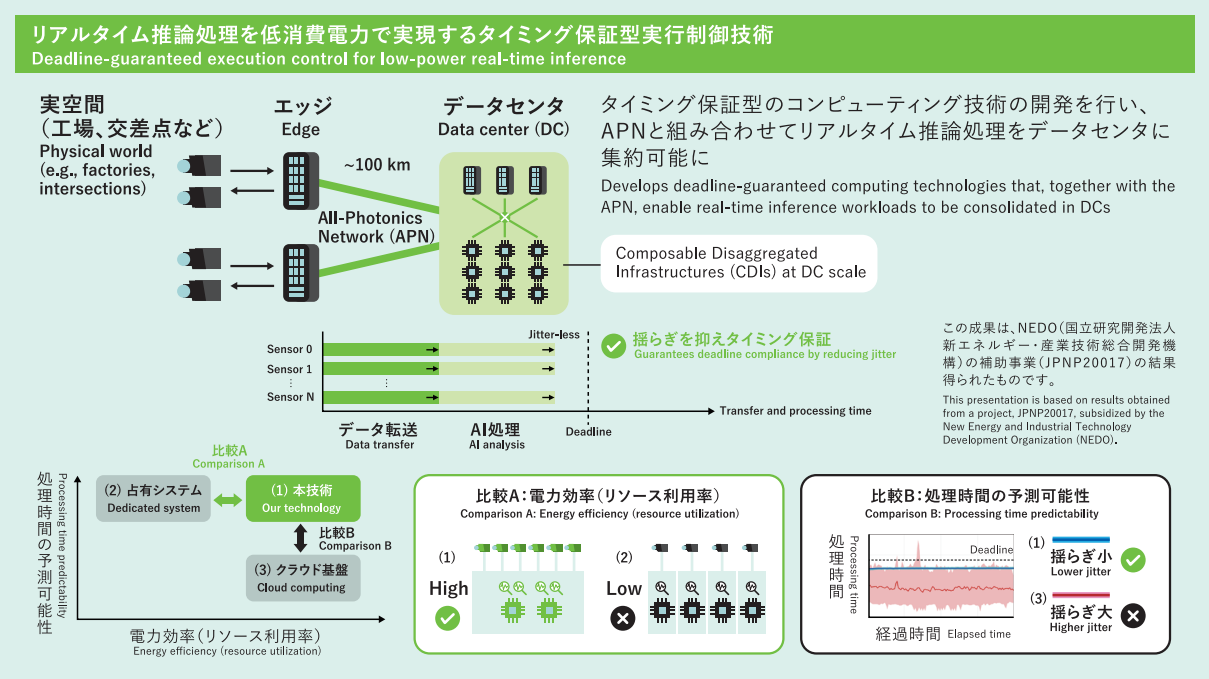
#AI & Quantum Infrastructure#Carbon Neutral#Open Innovation

Timing-Assured Execution Control for DCs

Centralize AI in DCs for low-power, efficient real-time inference

Technical Challenges & Goals

Demand for real-time processing that analyzes sensed data and feeds results back to the real world is growing. To guarantee processing time, conventional systems run edge resources at low utilization, increasing power use. NTT technology guarantees timing in efficient, highly used data centers, reducing energy use.



Key Technologies

Core Technologies

- Preplanning execution times on DC compute resources to prevent contention/reduce latency jitter
- Extend timing guarantees beyond compute to CDI and inter-DC transfers for system-wide assurance

Key Differentiators

- Conventional clouds vary by 100–1000 ms; our technology keeps processing-time variation < 10 ms
- Power use can be reduced by consolidating more applications than in conventional edge setups

Use Cases

Smart City

This system provides low-power safety support at intersections. Cameras predict future vehicle trajectories and send alerts when collisions are expected. Consolidating multiple intersections in one DC cuts power consumption.

Exhibitors

NTT, Inc. Center for Computing Technologies
NTT, Inc. Network Innovation Laboratories

External Partners

NEC Corporation
1FINITY Inc.

CONTACT：AI Computing Platform Technology Development Project