R&D phase | Research **Expected Commercialization** | FY30-

Mehr Licht!
More Photonics for Intelligence

#E02

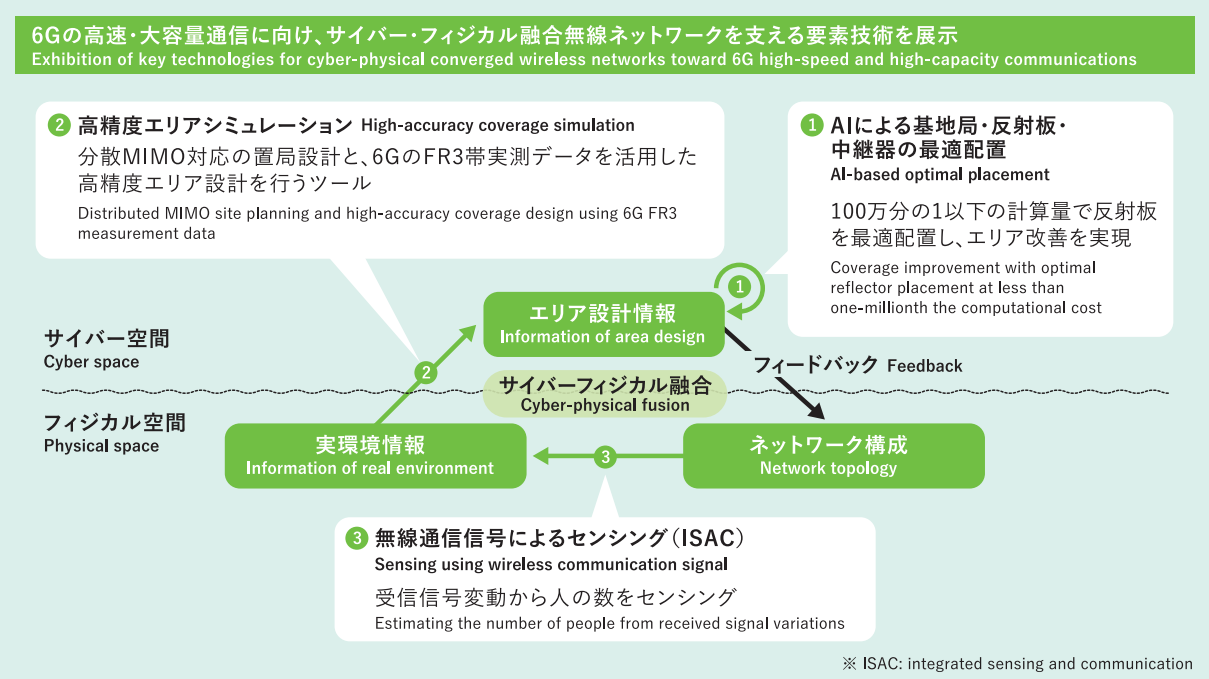
#Customer Experience#Digital & AI Transformation

Cyber-Physical Integrated 6G Networks

AI-powered high-quality 6G networks

Technical Challenges & Goals

6G requires advanced wireless networks for high-speed, high-capacity communications. Cyber-physical convergence optimizes wireless network operation by analyzing radio environments in cyberspace, improving wireless performance, and feeding the results back to the physical world.



Key Technologies

Core Technologies

- AI-based deployment optimization for communication-quality enhancement and coverage expansion
- High-fidelity simulation for wireless environments
- Sensing using 6G communication signal

Key Differentiators

- Sub-second computation for real-time mobile reflector control
- High-precision area design with estimated values
- Validation of ISAC via experimental trials

Use Cases

Communication Services

Through cyber-physical convergence, AI predicts network conditions in cyberspace. Applying the results to real-world 6G networks enables optimization.

Exhibitors

R&D Innovation Division, NTT DOCOMO, Inc. , NTT Access Network Service Systems Laboratories, NTT, Inc.

External Partners

Keysight Technologies
Rohde & Schwarz Japan

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