IOWN INTEGRAL

NTT R&D FORUM 2024

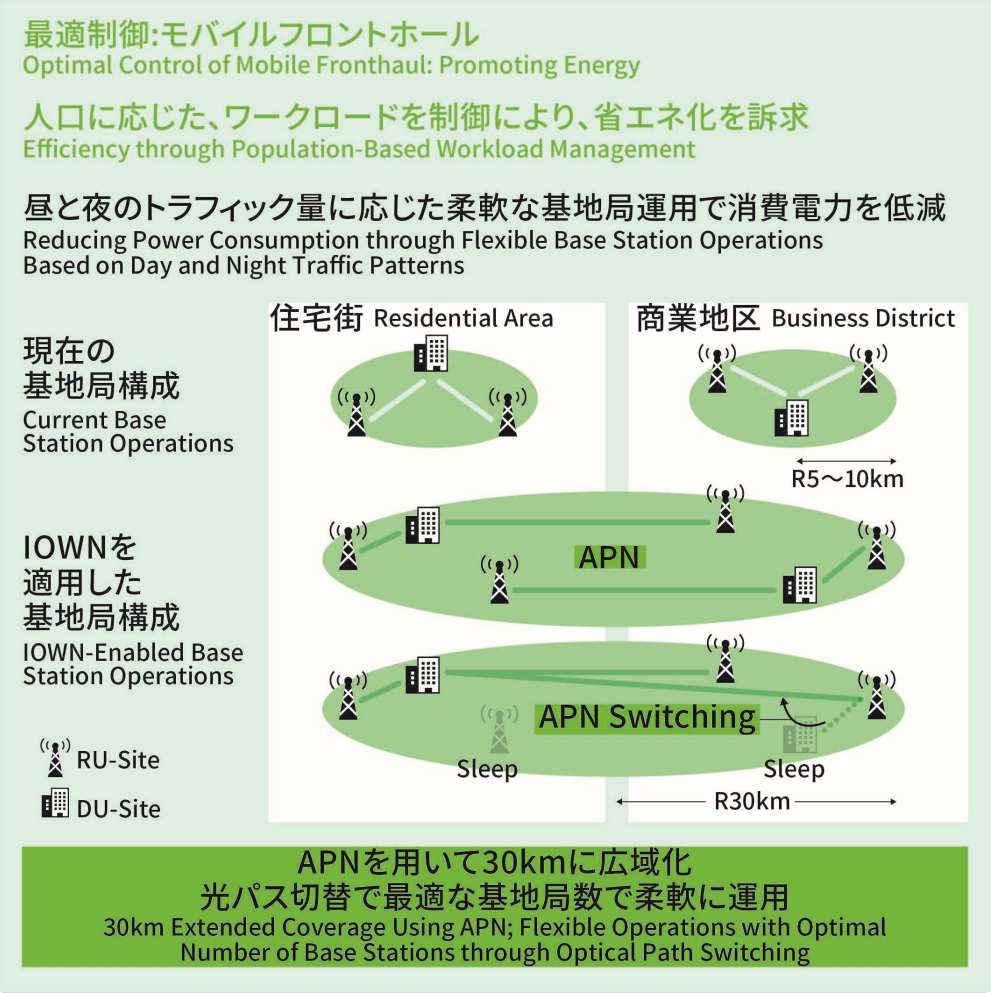
DEVELOPMENT

δ 03-09

Optimization of green energy - Mobile fronthaul

Reduction of base station power consumption

#Green Transformation #Business Resilience



///Technical Issue

Achieving mobile networks by meeting strict latency and jitter requirements in mobile fronthaul through the integration of wireless and optical transmission technologies.

///Research Goal

Applying APN to mobile fronthaul to enable efficient base station operation with dynamic optical path switching based on traffic.

---Technology

IOWN APN's optical wavelength path switching technology can predict and assess traffic volume from the RAN side, enabling remote and rapid automatic control of APN and RAN devices.

---Novelty

Currently, RUs and DUs are connected one-to-one with optical fibers, resulting in fixed communication paths. This setup keeps all DU sites operational even when traffic is low.To solve this, APN can flexibly switch routes between RUs and DUs, aggregating traffic to specific DU sites and putting others to sleep.

---Applicable Business

Business Area: Mobile business
Use Cases: - By predicting and assessing traffic volume during the day and night, the optimal number of base stations can be operated, reducing TCO/OPEX through energy-efficient base station operations by switching paths between RUs and DUs using APN. Availability: Beyond 2030

Exhibitors= NIPPON TELEGRAPH AND TELEPHONE CORPORATION

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