IOWN INTEGRAL

NTT R&D FORUM 2024

BUSINESS

β01-04

Initiatives to utilizing 5G in the industrial field

Promoting 5G in industrial sites through high-precision area and system performance evaluations

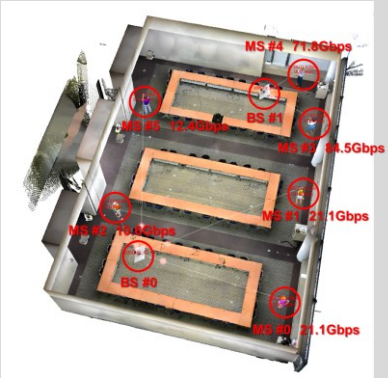
#Customer Experience Value Creation #Productivity Improvement #Regional Revitalization

産業利用に向けて，実環境の無線伝送・電波伝搬特性を解明

Prediction of Wireless Characteristics in Real Environments for Industrial use

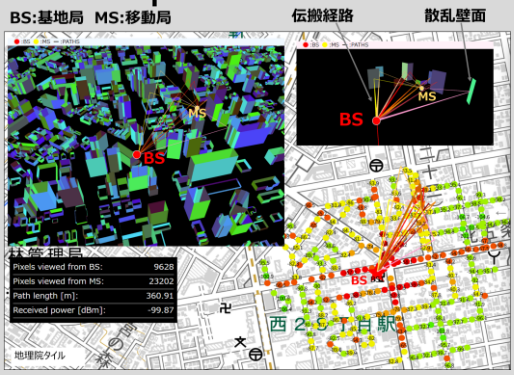
高精度点群モデルを用いたエリア評価技術

Area Evaluation Tech. Using High-Precision Point Cloud Models



高速にエリア評価が可能なカラーイメージ法

Color Images Method for Rapid Area Evaluation



///Technical Issue

Installing 5G/6G base stations at industrial sites requires a clear cost-benefit analysis. Effective implementation is challenging without pre-assessing system performance in the target communication environment.

///Research Goal

Visualizing coverage and wireless performance when 5G is introduced aids in corporate decision-making and enhances proposal closing rates for corporate clients.

---Technology

- Technology for area estimation and deployment support in indoor environments using high-precision point cloud data.
- Ultra-fast area estimation technology using color image method.

---Novelty

The 5G/6G simulator models complex factory structures, simulating real-time radio wave propagation, throughput, and delay. Utilizing commercial map data, it conducts high-precision, high-speed calculations in complex outdoor environments, offering accuracy and speeds hundreds to thousands of times faster than existing solutions.

---Applicable Business

Can be used in all industrial sectors that want to deploy 5G network.
・Enterprise department: Used as a tool to promote 5G adoption to enterprise customers and to create deployment plans for proposals
・Enterprise customers: Used as a tool to show the effects of deployment to persuade internal decision-making
(Technology Established)

Exhibitors=NTT DOCOMO, Inc. Outside Partner=OMRON Corporation/Nokia Solutions and Networks Japan G.K.

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