

28GHz band Multisector Antenna Indoor Base Station Device Demonstration Overview

1. Demonstration Overview

Demonstration was conducted using an actual 5G base station control unit (CU: Central Unit) and an actual 28 GHz-band 5G indoor base station device (RU: Radio Unit) equipped with a multi-sector antenna. Emission of radio waves from the multi-sector antenna in all directions and switching by radio beam control were confirmed at a large anechoic chamber in the NTT DOCOMO R&D Center on Friday, January 27.

2. System Overview

(1) Test Specifications

Center frequency	27.6 GHz
Bandwidth	400 MHz
MIMO layers	2
Beam settings	12
Antenna gain	15 dBi

(2) Multisector-antenna Indoor Base Station

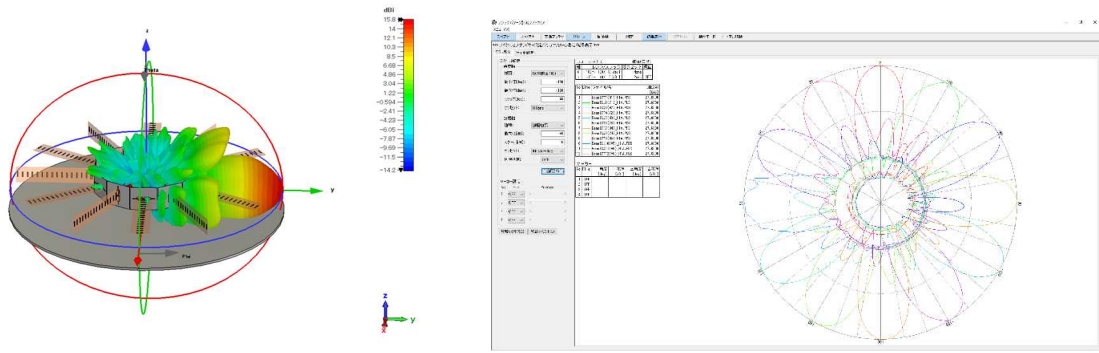


Multisector Antenna for Indoor Base Station



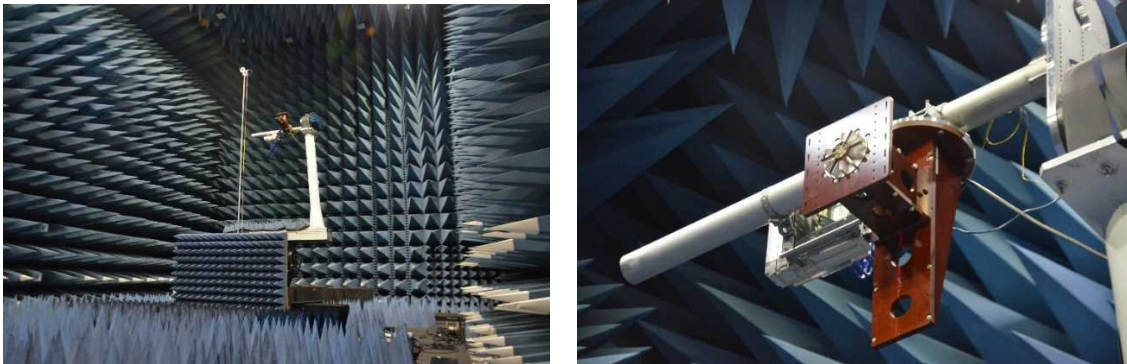
5G Base Station

(3) Directivity of the Multisector Antenna for Indoor Base Station



Radiation Pattern (Simulation) Radiation Pattern of All Antenna Elements (Measurement)

(4) Demonstration Scenes



3. Roles

Yokohama National University	Designed multiselector antenna for indoor base station, implemented simulation evaluation
DOCOMO	Determined specifications for multiselector antenna and indoor base station, provided measurement environment and implemented demonstration
NIHON DENGYO KOSAKU	Design and commercialization of multiselector antenna for indoor base station
Fujitsu	Implementation of multiselector antennas in 5G indoor base station