**NTT DOCOMO** 

# Technical Journal

Vol.21 No.3 Jan. 2020

#### DOCOMO Today

Toward the 5G Era

#### Technology Reports (Special Articles)

# **Special Articles on 5G Pre-commercial Service**

- Overview of 5G Pre-commercial Service
- 5G Pre-commercial Services Making Full Use of 5G Features
- MY NETWORK Initiative
- NTT DOCOMO Activities toward the 5G Era
- Solution Co-creation with Partners —

### Technology Reports

- Interactive and Multilingual Al-based "Oshaberi Annaiban"
- Development and Testing of the "Mieru Denwa" Service Supporting Users with Hearing Impairment

#### **Collaboration Projects**

 Vehicle Antenna Technology for Stable 5G Communications without Compromising Vehicle Design — 5G Vehicle Glass Antennas —



Vol.21 No.3 Jan. 2020

# [Contents]



# **DOCOMO Today**

Toward the 5G Era Sadayuki Abeta 1

# **Technology Reports (Special Articles)** Special Articles on 5G Pre-commercial Service



(P.15)

High Speed-Large Capacity/Low Latency/Massive Connectivity 5G Pre-commercial Service

5G Pre-commercial Services Making Full Use of 5G Features 9

Overview of 5G Pre-commercial Service

5G Pre-commercial Service High Speed-Large Capacity/Low Latency/Massive Connectivity Spectator Support Services

MY NETWORK Initiative

MY NETWORK 5G Era Creation of Services & Solutions

15

NTT DOCOMO Activities toward the 5G Era —Solution Co-creation with Partners—

DOCOMO 5G Open Partner Program Solution Co-creation

(P.19)

# **Technology Reports**

Interactive and Multilingual Al-based "Oshaberi Annaiban"

31

AI Multilingual Inbound

Development and Testing of the "Mieru Denwa" Service Supporting Users with Hearing Impairment

(P.31)

Speech Recognition Telephone Speech-to-text Conversion



(P.53)

# **Collaboration Projects**

Vehicle Antenna Technology for Stable 5G Communications without Compromising Vehicle Design—5G Vehicle Glass Antennas—

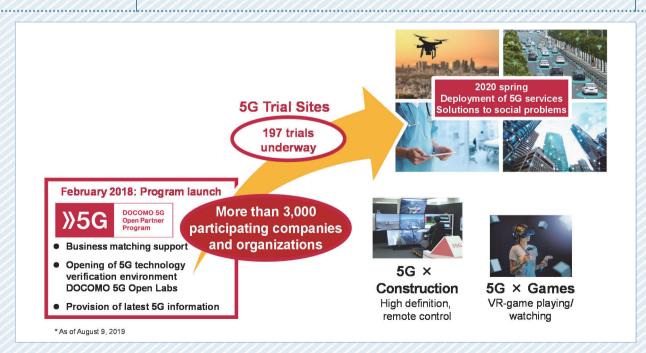
Connected Car Cellular V2X

## News



(P.60)

NTT DOCOMO Awarded World First Place in the "KDD Cup 2019" 60 - the World's Leading Data Analysis Competition



Technology Reports (Special Articles) Overview of 5G Pre-commercial Service (P.4) NTT DOCOMO initiatives toward early deployment of 5G services

# NTT DOCOMO Technical Journal

Vol.21 No.3

#### **Editorship and Publication**

NTT DOCOMO Technical Journal is a quarterly journal edited by NTT DOCOMO, INC. and published by The Telecommunications Association.

Editorial Correspondence NTT DOCOMO Technical Journal Editorial Office R&D Strategy Department NTT DOCOMO, INC. Sanno Park Tower

2-11-1, Nagata-cho, Chiyoda-ku, Tokyo 100-6150, Japan e-mail: dtj@nttdocomo.com

#### Copyright

© 2020 NTT DOCOMO, INC.

Copies of articles may be reproduced only for personal, noncommercial use, provided that the name NTT DOCOMO Technical Journal, the name(s) of the author(s), the title and date of the article appear in the copies.