

DOCOMO Today

- Facing the Challenges of the 5G+AI Era through Innovation

Technology Reports (Special Articles)

Special Articles on New AI Agent

- docomo AI Agent Open Partner Initiative
- Multipurpose Dialogue Engine for Converting Natural Language into Instructions to Enable Services
- Proactive Support Engine to Actively Support User Activities
- IoT Access Control Engine Enabling Control of Various IoT Devices from the Cloud

Special Articles on Release 15 Standardization

—Advancements in the Completed Initial 5G and LTE/LTE-Advanced Specifications—

- Technical Overview of the 3GPP Release 15 Standard
- NR Physical Layer Specifications in 5G
- Specifications of NR Higher Layer in 5G
- 5G Radio Performance and Radio Resource Management Specifications
- Network Management Specifications for 5G Era

Technology Reports

- LPA Application Conforming to GSMA eSIM Specifications

[Contents]



DOCOMO Today

Facing the Challenges of the 5G+AI Era through Innovation

Lan Chen 1

Technology Reports (Special Articles) Special Articles on New AI Agent

docomo AI Agent Open Partner Initiative 04

AI Agent

Open Partner

Voice AI

Multipurpose Dialogue Engine for Converting Natural Language into
Instructions to Enable Services 10

AI Agent

Natural Language Processing Technology

Voice Recognition/synthesis

Proactive Support Engine to Actively Support User Activities 18

AI Agent

Prediction

Personalization

IoT Access Control Engine Enabling Control of Various IoT Devices
from the Cloud 26

AI Agent

Device WebAPI

IoT

Technology Reports (Special Articles)

Special Articles on Release 15 Standardization —Advancements in the Completed Initial 5G and LTE/LTE-Advanced Specifications—

Technical Overview of the 3GPP Release 15 Standard 37

5G

NR

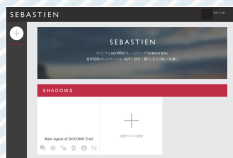
LTE

NR Physical Layer Specifications in 5G 49

5G

Design of Physical Signals and Channels

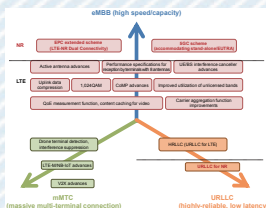
NR Physical Layer



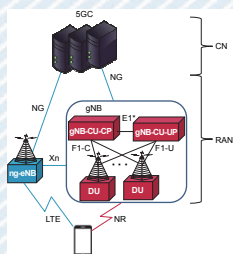
(P.10)



(P.26)



(P.37)



(P.62)



(P.102)



(P.112)

Specifications of NR Higher Layer in 5G 62

5G

NR

NR Higher Layer

5G Radio Performance and Radio Resource Management Specifications 79

5G

NR

Radio Performance/Management Specifications

Network Management Specifications for 5G Era 96

5G System

Network Slicing

Network Management

Technology Reports

LPA Application Conforming to GSMA eSIM Specifications 102

eSIM

LPA

One Number Service

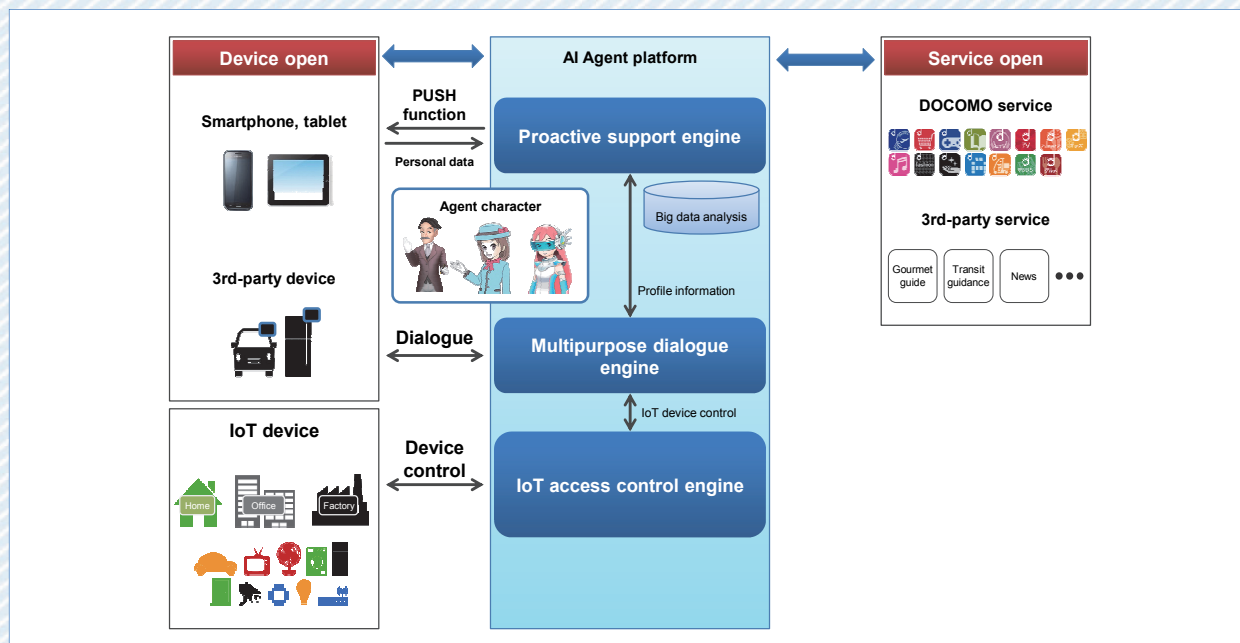
Topics

Providing VoLTE Interconnectivity 112

VoLTE

IP Interconnectivity

ENUM



Technology Reports (Special Articles) docomo AI Agent Open Partner Initiative (P.4)

AI Agent platform structure

NTT DOCOMO
Technical Journal Vol.20 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

© 2019 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.