Netmanias Korea ICT Research Report

Open vs. Proprietary 5G Fronthaul Interface: SK Telecom Case

January 11, 2018

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SK Telecom announced on December 15 last year that its newly developed "open 5G fronthaul interface specification" was adopted as a Korean national standard by the Telecommunications Technology Association (TTA). This report covers the "5G RAN architecture and Fronthaul" strategies that are being shaped by SK Telecom.

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Abbreviations

3GPP	3rd Generation Partnership Project
BBU	Baseband Unit
C&M	Control and Management
CPRI	Common Public Radio Interface
C-RAN	Cloud/Centralized Radio Access Network
CU	Central Unit
DAC	Digital to Analog Converter
D-RAN	Distributed Radio Access Network
DU	Distributed Unit
eCPRI	enhanced CPRI
FCS	Frame Check Sequence
gNB	5G base station name
IQ	In-phase and Quadrature
LTE	Long Term Evolution
MAC	Media Access Control
NGFI	Next Generation Fronthaul Interface
OAM	Operations, Administration and Maintenance
OFDM	Orthogonal frequency-division multiplexing
PDCP	Packet Data Convergence Protocol
PHY	Physical Layer
PRACH	Physical Random Access Channel
RAN	Radio Access Network
RE	Resource Element
RF	Radio Frequency
RLC	Radio Link Control
RoE	Radio over Ethernet
RRC	Radio Resource Control
RRH	Remote Radio Head
RU	Remote Unit
SRS	Sounding Reference Signal
TLV	Type-Length-Value