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**Technical Requirement for LTE based Broadband Trunking
Communication(B-TrunC)
(English Translation)**

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1 Scope

This Standard specifies the overall technical requirements for broadband trunking communication (B-TrunC) systems (Phase I) based on LTE technology, including guiding principles, service and application scenarios, detailed functional and performance requirements, system architecture, interface requirements, numbering and addressing, and codec requirements.

This Standard applies to terminals, base stations, trunking core networks, and dispatcher equipment of the broadband trunking communication (B-TrunC) system (Phase I) based on LTE technology.

The broadband trunking communication (B-TrunC) system (Phase 1) standard based on LTE technology DEFINES the broadband trunking enhancement technology based on TD-LTE technology in local networking scenarios, as well as the accessible interfaces between the terminal and the core network, and between the core network and the dispatcher.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB 4943.1-2011, Information technology equipment -- Safety -- Part 1.General requirements

GB/T 18288, General specification of nickel-metal hydride battery for cellular phone

GB/T 18289, General specification of nickel-cadmium battery for cellular phone

YD 1268, Safety requirements and test methods for lithium-ion battery packs and chargers for mobile communication handsets

YD/T 1484.6, Wireless terminal space radio frequency radiation power and performance measurement method - Part 6.LTE wireless terminal

YD/T 1539, Technical Requirements And Test Method For Reliability of Mobile Telecommunication Handset

YD/T 1591, Technical Requirements and Test Method for Power Adapter and Charging/Data Port of Mobile Telecommunication Terminal Equipment

YD/T 1644.2, Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices-human models, instrumentation, and procedures. Part 2.Procedure to determine the specific absorption rate(SAR) for wireless communication devices used

YD/T 2560 (all parts), TD-LTE digital cellular mobile communication network. Uu interface physical layer technical requirement (Phase 1)

YD/T 2571, TD-LTE digital cellular mobile communication network base station equipment technical requirements (the first stage)

YD/T 2575, Technical requirements for user equipment of TD-LTE digital cellular mobile telecommunication network (Phase1)

YD/T 2620.1, Evolved mobile packet core network (EPC) overall technical requirements - Part 1.Support E-UTRAN access

3GPP TS 36.113, Evolved Universal Terrestrial Radio Access (E-UTRA); Base Station (BS) and Repeater ElectroMagnetic Compatibility (EMC)

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1.1 Dispatcher

A special terminal that connects to the TD-LTE broadband trunking core network via wired or wireless means can initiate trunking scheduling services. Its service privileges are higher than those of ordinary terminals.

3.1.2 Broadband Trunking

A broadband wireless communication system based on broadband wireless mobile communication technology, supporting broadband data transmission services, voice and multimedia trunking command and dispatch services.

4.1 Backward compatibility

The system is based on 3GPP Release 9 and maintains backward compatibility with

Release 9.

Under the condition that the system's operating frequency band is supported, terminals of 3GPP R9 and R8 shall be able to use data services normally in the system. 3GPP R9 base stations can access the system through the SI interface.

4.2 Scalability

The system architecture and protocol design shall have good scalability to support functional and performance enhancements in subsequent stages, including large-scale networking and roaming, and interoperability with other networks.

4.3 Modularization

Under the condition of conforming to the overall system architecture, the system can be decomposed into multiple logical entities, and each logical entity is independent of the others. The various logical entities of the system can be flexibly combined to form actual network elements.

4.4 Interface accessibility

The system shall have good interoperability. It shall support interoperability between different equipment manufacturers using standard-defined accessible interfaces, such as air interfaces.

4.5 Safety

The system shall have a high level of security to ensure the security of broadband data and trunking services.

5.1 Business

The system shall support basic IP packet data transmission services and broadband trunking services. The system's broadband trunking service requirements are shown in

Table 1. The broadband trunking service function definitions are in Section 6.2.

Broadband trunking voice services implement session management through extended NAS protocol messages.

5.2.1 Local networking

The first phase of the B-Trunc broadband trunking system shall support local networking. Interoperability with other networks, large-scale and roaming networking shall be specified in subsequent phases and are not within the scope of this Standard.