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**Terminology for telecommunication - Antenna
(English Translation)**

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is part 10 of GB/T 14733 Telecommunications Terminology. GB/T 14733 has published the following parts.

- GB/T 14733.1 Telecommunications terminology Telecommunications, channels and networks;
- GB/T 14733.2 Telecommunications terminology transmission lines and waveguides;
- GB/T 14733.3 Telecommunications terminology reliability, maintainability, service quality;
- GB/T 14733.4 Telecommunications terminology exchange technology;

---GB/T 14733.5 Telecommunications terms Telecommunications, telegraph, fax and data communications using discrete signals;

---GB/T 14733.6 Telecommunications terminology Space radio communications;

---GB/T 14733.7 Telecommunications terminology Oscillation, signal and related devices;

---GB/T 14733.8 Telecommunications terminology telephone;

---GB/T 14733.9 Telecommunications terminology Radio wave propagation;

---GB/T 14733.10 Telecommunications terminology antenna;

---GB/T 14733.11 Telecommunications terminology transmission;

---GB/T 14733.12 Telecommunications terminology. Fibre optic communications.

This document replaces GB/T 14733.10-2008 "Telecommunications terminology antenna". Compared with GB/T 14733.10-2008, except for the structural adjustment in addition to the integration and editorial changes, the main technical changes are as follows.

--- Added the terminology entries of "passive intermodulation", "third-order intermodulation interference" and "beam overlap level reduction" (see 3.2.1.40 to 3.2.1.42);

--- Added the term "indoor omnidirectional ceiling antenna" and "indoor directional ceiling antenna" for antenna types defined by electrical characteristics and radiation characteristics.

Language items (see 3.3.40~3.3.50);

--- Added test site terminology items related to antennas (see 3.7);

--- Added terminology items related to smart antennas (see 3.8);

--- Replace the terminology entries in Appendix A such as "front-to-back ratio", "cross-polarization ratio", "electrical downtilt", "radiation pattern circularity", "intermodulation" and "smart antenna array" Moved to the main text and changed the definition (see 3.2.2.24, 3.2.2.25, 3.8.1, 3.8.2, 3.2.1.39, 3.8.15, 2008 edition A.1.12, A.1.13, A.1.14, A.1.16, A.1.17, A.2.4).

1 Scope

This document defines basic terminology for antennas and their components, terms related to electrical characteristics, radiation characteristics and the types of antennas defined by them, antennas the terms related to antenna units, antenna-related devices, test sites, and smart antennas are introduced and defined.

This document is applicable to the production, scientific research, teaching and other related fields of communication antennas, and also to various standards and other related antennas.

Preparation and use of technical documentation.

2 Normative references

This document has no normative references.

3.1 Basic terminology

3.1.1

antennaantenna,aerial(deprecated) Able to effectively radiate or receive radio waves into space, provide a connection between the transmitter or receiver and the medium that propagates radio waves Provides the required coupling device.

NOTE 1 Where applicable, the terminals of an antenna or what is considered to be the interface between an antenna and a transmitter or receiver are specified.

Note 2: If the transmitter or receiver is connected to the antenna by a feeder line, the antenna is considered to be an exchanger between the radio waves guided by the transmission line and the radiated waves in space.

Energy device.

3.1.2

Antenna system

The antenna together with the mechanical and electrical components necessary for its proper functioning.

3.1.3

A set of antennas together with the mechanical and electrical components necessary for their proper functioning.

3.1.4

Radiating element

The basic unit of an antenna, designed to carry the radio frequency current or field that directly produces the radiation pattern.

Note 1: An antenna consists of one or more radiating elements.

NOTE 2 Radiating elements may be excited or unexcited.

NOTE 3 Certain parts of the antenna, such as the strut, may generate parasitic RF currents or fields that may disrupt the desired antenna radiation.

3.1.5

array(antenna)

Antenna array

An antenna consisting of a number of radiating elements that are usually, but not necessarily, identical and have the same polarization.