SLOVENSKI STANDARD
SIST EN 50492:2009/oprAA:2012

01-december-2012

Osnovni standard za terensko merjenje jakosti elektromagnetnega polja v zvezi z izpostavljenostjo ljudi v okolici baznih postaj

Basic standard for the in-situ measurement of electromagnetic field strength related to human exposure in the vicinity of base stations

Grundnorm für die Messung der elektromagnetischen Feldstärke am Aufstell- und Betriebsort von Basisstationen in Bezug auf die Sicherheit von in ihrer Nähe befindlichen Personen

Norme de base pour la mesure du champ électromagnétique sur site, en relation avec l'exposition du corps humain à proximité des stations de base

Ta slovenski standard je istoveten z: **EN 50492:2008/prAA:2012**

ICS:

17.220.20	Merjenje električnih in magnetnih veličin	Measurement of electrical and magnetic quantities
33.070.01	Mobilni servisi na splošno	Mobile services in general

SIST EN 50492:2009/oprAA:2012 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

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English version

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This draft amendment prAA, if approved, will modify the European Standard EN 50492:2008; it is submitted to CENELEC members for CENELEC enquiry.
Deadline for CENELEC: 2013-02-15.

It has been drawn up by CLC/TC 106X.

If this draft becomes an amendment, CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

This draft amendment was established by CENELEC in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Project: 23018

Ref. No. EN 50492:2008/prAA:2012 E

Foreword

This document (EN 50492:2008/prAA:2012) has been prepared by CLC/TC 106X "Electromagnetic fields in the human environment".

This document is currently submitted to the Enquiry.

Text of prAA to EN 50492:2008

Contents

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Annexes

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Annex L
(informative)

LTE measurements

L.1 General

Annex L describes methods to measure and extrapolate LTE exposure (FDD LTE). The proposed methods require classical radiofrequency (RF) measurement instruments: a basic spectrum analyzer or a dedicated decoder and an isotropic antenna.

LTE emissions consist of specific signals at specific time frequency allocations [1] [2]. This kind of dynamic time-frequency allocation is known as Orthogonal Frequency Division Multiple Access (OFDMA). See Figure L.1.

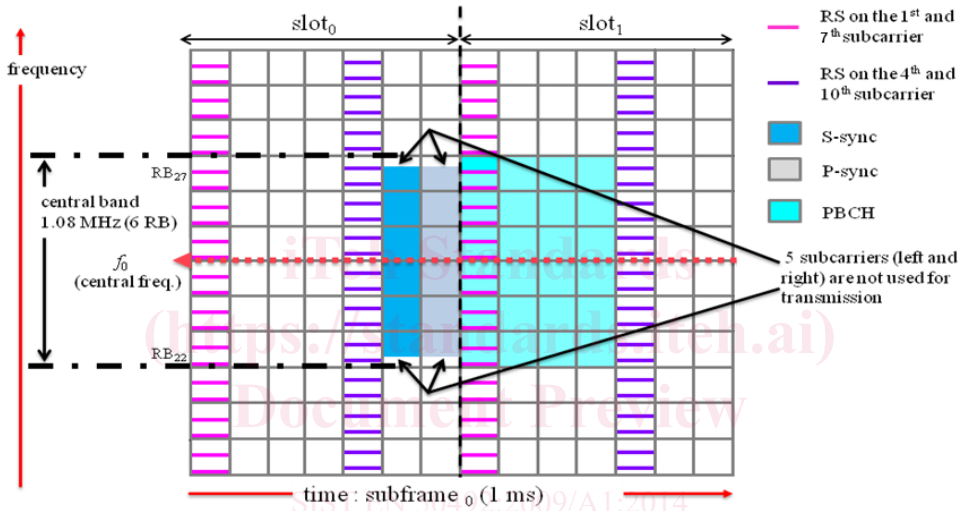

Figure L.1 – LTE time-frequency plan

As for other telecommunication signals, LTE signals are subject to time variations because of random fluctuations of the propagation medium and traffic variations. The extrapolation to the maximum traffic should be based on the measurement of a time independent channel. Due to the LTE specifications, the power of each time-frequency unitary element (66,7 µs, 15 kHz) in the LTE downlink signal is scalable from one kind of transmitted data to another. In addition, LTE downlink spectrum is totally flexible and may vary from 1,25 MHz to 20 MHz, and inside the spectrum, the power level may vary from one channel to another.

Two types of measurements are specified: the assessment of instantaneous LTE exposure levels and the assessment of maximum LTE exposure by extrapolation. For the instantaneous LTE exposure assessment, a basic spectrum analyser and suitable measurement probes are used. For the maximum LTE exposure two types of reproducible methods of electromagnetic field (EMF) exposure assessment of LTE signals, depending on the used measurement instrument, are described: one method, using a dedicated decoder, similar to existing methods that are based on pilot signals (see Clause 8) and another method using a basic spectrum analyzer.

If no frequency information about the present LTE channels is available, the LTE downlink bandwidth should first be determined using a spectrum analyser in frequency mode and a peak detector. In this way, the frequency information and LTE bandwidth can best be determined.