



**Intelligent Transport Systems (ITS);
Access layer specification for
Intelligent Transport Systems operating
in the 5 GHz frequency band**

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Foreword

This draft European Standard (EN) has been produced by ETSI Technical Committee Intelligent Transport System (ITS), and is now submitted for the combined Public Enquiry and Vote phase of the ETSI standards EN Approval Procedure.

Proposed national transposition dates	
Date of latest announcement of this EN (doa):	3 months after ETSI publication
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Document Preview

Introduction

ETSI EN 302 663 V1.2.1 (2013-07)

The present document is outlining the two lowest layers - physical layer and data link layer - in the protocol stack for supporting vehicle-to-vehicle communications in an *ad hoc* network to be used at the 5,9 GHz frequency band allocated in Europe. The two lowest layers are termed access layer in the present document and the technology specified for the access layer is collectively called ITS-G5. The ITS-G5 standard is using already existing standards for communications. The data link layer is divided into two sublayers; medium access control and logical link control. The physical layer and the medium access control layer are covered in IEEE 802.11 [3]. The logical link control is based on the ANSI/IEEE Std 802.2 [5]. The ITS-G5 standard also adds features for decentralized congestion control (DCC) methods [8] to control the network load and avoid unstable behaviour.

By setting the management information base (MIB) parameter `dot110CBActivated` to true in IEEE 802.11 [3] a new capability is introduced namely the possibility to communicate outside the context of a basic service set (BSS), which is the smallest building block of a 802.11 network. Communication outside the BSS implies that neither authentication/association procedures nor security mechanisms are supported. Further, no access point functionality is present. The disable of these features also affects other built-in features of IEEE 802.11 [3]. The requirement that nodes should share a common clock is no longer valid while `dot110CBActivated` is true. Further, scanning of available frequency channels for joining a BSS is also disabled implying that communication outside the context of the BSS requires that a node is configured for a predetermined frequency channel where more information about other available frequency channels can be obtained.

NOTE: IEEE has compiled a new version of the 802.11 standard where all approved amendments produced between 2007 and 2011 have been enrolled in the base standard including 802.11p. This new version called IEEE 802.11-2012 [3] was approved in March 2012. Due to this new version of 802.11 the 802.11p amendment is classified as superseded.