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**INDUSTRY STANDARD OF THE
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**Test methods of message layer of LTE-based vehicular
communication
(English Translation)**

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Table of Contents

Foreword...	3
1 Scope...	4
2 Normative References...	4
3 Terms and Definitions...	5
4 Abbreviations...	5
5 Test Environment for Message Layer of LTE-V2X...	6
5.1 Architecture of test system...	6
5.2 Test convention...	6
6 Test for Basic Safety Message (BSM) of Vehicle...	7
6.1 Test of DUT sends BSM message...	7
6.2 Test of DUT receives BSM message...	18
7 Test of MAP Message...	26
7.1 Test of RSU sends MAP message...	26
7.2 Test of OBU receives MAP message...	32
8 Test of Signal Phase and Timing (SPAT) Message...	36
8.1 Test of RSU sends SPAT message...	36
8.2 Test of OBU receives SPAT message...	41
9 Test of Road Side Information (RSI) Message...	43
9.1 Test of RSU sends RSI message...	43
9.2 Test of OBU receives RSI message...	46
10 Test of Roadside Safety Message (RSM)...	48
10.1 Test of RSU sends RSM...	48
10.2 Test of OBU receives RSM message...	50

1 Scope

This Standard specifies the test method for the message layer of the LTE-based vehicle to everything technology; and regulates the test parameters and indicators, test methods, and test cases for the message layer of the LTE-based vehicle to everything technology.

This Standard is applicable to the message layer of the LTE-based vehicle to everything technology.

2 Normative References

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) is applicable to this document.

GB 2312-1980 Code of Chinese Graphic Character Set for Information

Interchange - Primary Set

GB 5768.2-2009 Road Traffic Signs and Markings - Part 2.Road Traffic Signs

GB/T 16263.2 Information Technology - ASN.1 Encoding Rules - Part 2.

Specification of Packed Encoding Rules (PER)

GB/T 27967-2011 Format of Weather Forecast on Highway Traffic

GB/T 29100-2012 Road Traffic Information Service - Traffic Event Classification and Coding

YD/T 3340-2018 Technical Requirements of Air Interface of LTE-Based Vehicular Communication

YD/T 3400-2018 General Technical Requirements of LTE-Based Vehicular Communication

YD/T 3709-2020 Technical Requirements of Message Layer of LTE-Based Vehicular Communication

3 Terms and Definitions

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

4 Abbreviations

The following abbreviations are applicable to this Document.

AID. Application ID;

BSM. Basic Safety Message;

5.1 Architecture of test system

The architecture of LTE-V2X test system can refer to Figure 1.The test system is mainly composed of two parts, namely, PC host and system simulator, the two of which communicate through Ethernet.

5.2 Test convention

The test cases and scenarios involved in this Standard shall follow the following conventions.

6.1.2 Test of vehicle ID in BSM message

Test No.. TC_ML_BSM_MST_BV_02

Test item. Test of DUT sends BSM message

Test purpose. Verify whether the vehicle ID information in the BSM message sent by the DUT is correct

6.1.3 Test of 3D coordinate in BSM message

Test No.. TC_ML_BSM_MST_BV_03

Test item. Test of DUT sends BSM message

Test purpose. Verify whether the 3D coordination information in the BSM message sent by DUT is correct

6.1.4 Test of vehicle gear status information in BSM message

Test No.. TC_ML_BSM_MST_BV_04

Test item. Test of DUT sends BSM message

Test purpose. Verify whether the vehicle gear status information in BSM message sent by DUT is correct

6.1.7 Test of vehicle 4-axis acceleration in BSM message

Test No.. TC_ML_BSM_MST_BV_07

Test item. Test of DUT sends BSM message

Test purpose. Verify whether the vehicle 4-axis acceleration information in BSM message sent by

DUT is correct

6.1.13 Test of millisecond time information in BSM message

Test No.. TC_ML_BSM_MST_BV_13

Test item. Test of DUT sends BSM message

Test purpose. Verify whether the millisecond time information in the BSM message sent by

DUT is correct

6.1.16 Test of vehicle path prediction information in BSM message

Test No.. TC_ML_BSM_MST_BV_16

Test item. Test of DUT sends BSM message

Test purpose. Verify whether the vehicle path prediction information in the BSM message sent by

DUT is correct

6.2.6 Test of vehicle size information parse in BSM message

Test No.. TC_ML_BSM_PP_BV_06

Test item. Test of DUT receives BSM message

Test purpose. Verify whether the vehicle size information in the BSM message received by the DUT is consistent with the content sent by the test instrument

Preconditions.

7.1.1 Test of MsgCount in MAP message

Test No.. TC_ML_MAP_MST_BV_01

Test item. Test of DUT sends MAP message

Test purpose. Verify that the MsgCount value in the MAP message sent by the DUT shall increase sequentially, and the number value shall start from 0 after reaching 127

Preconditions.

7.1.2 Test of node basic information in MAP message

Test No.. TC_ML_MAP_MST_BV_02

Test item. Test of DUT sends MAP message

Test purpose. Verify whether the number of map nodes information, node description information, node ID, map node centre position information, and the number of road segment nodes information in the MAP message sent by the DUT are correct

Preconditions.

with the agreed test content