

ISO 34505:2025-06 (E)

Road vehicles - Test scenarios for automated driving systems - Scenario evaluation and test case generation

Contents

Page

- Foreword..... v
- Introduction..... vi
- 1 Scope..... 1
- 2 Normative references..... 1
- 3 Terms and definitions..... 1
- 4 Introduction and overview..... 4
 - 4.1 General..... 4
 - 4.2 Requirements for compliance..... 5
- 5 Evaluation of scenario characteristics..... 5
 - 5.1 Purpose..... 5
 - 5.2 Set of scenarios..... 6
 - 5.2.1 Objectives..... 6
 - 5.2.2 General..... 6
 - 5.2.3 Input to this clause..... 6
 - 5.2.4 Requirements..... 7
 - 5.2.5 Work products..... 7
 - 5.3 Relations between the scenarios and functional and technical requirements..... 7
 - 5.3.1 Objectives..... 7
 - 5.3.2 General..... 7
 - 5.3.3 Input to this clause..... 8
 - 5.3.4 Requirements..... 8
 - 5.3.5 Work products..... 9
 - 5.4 Relation between scenarios and ODD..... 9
 - 5.4.1 Objectives..... 9
 - 5.4.2 General..... 9
 - 5.4.3 Input to this clause..... 9
 - 5.4.4 Requirements..... 9
 - 5.4.5 Work products..... 10
 - 5.5 Relation between the scenarios and test objectives..... 10
 - 5.5.1 Objectives..... 10
 - 5.5.2 General..... 10
 - 5.5.3 Input to this clause..... 10
 - 5.5.4 Requirements..... 10
 - 5.5.5 Work products..... 11
- 6 Test case generation before test execution..... 11
 - 6.1 Purpose..... 11
 - 6.2 Selection of scenarios..... 11
 - 6.2.1 Objectives..... 11
 - 6.2.2 General..... 11
 - 6.2.3 Input to this clause..... 12
 - 6.2.4 Requirements and recommendations..... 12
 - 6.2.5 Work products..... 12
 - 6.3 Scenario priority..... 13
 - 6.3.1 Objectives..... 13
 - 6.3.2 General..... 13
 - 6.3.3 Input to this clause..... 13
 - 6.3.4 Requirements..... 14
 - 6.3.5 Work products..... 14

6.4	Extend scenarios to test cases.....	15
6.4.1	Objectives	15
6.4.2	General	15
6.4.3	Input to this clause	15
6.4.4	Requirements.....	16
6.4.5	Work products.....	17
6.5	Methods to optimize the set of test cases.....	17
6.5.1	Objectives	17
6.5.2	General.....	17
6.5.3	Input to this clause	17
6.5.4	Requirements.....	17
6.5.5	Work products.....	17
7	Test case evaluation during test execution.....	18
7.1	Purpose.....	18
7.2	Test initialization.....	18
7.2.1	Objectives	18
7.2.2	General.....	18
7.2.3	Input to this clause	18
7.2.4	Requirements.....	18
7.2.5	Work products.....	18
7.3	Monitoring of test execution.....	18
7.3.1	Objectives	18
7.3.2	General.....	18
7.3.3	Input to this clause	19
7.3.4	Requirements.....	19
7.3.5	Work products.....	19
8	Test case evaluation after test execution.....	19
8.1	Purpose.....	19
8.2	Comparison of specified and executed test case after execution	19
8.2.1	Objectives	19
8.2.2	General.....	20
8.2.3	Input to this clause	20
8.2.4	Requirements.....	20
8.2.5	Work products.....	20
8.3	Evaluation of executed test cases concerning validity of simulation (for virtual testing only).....	21
8.3.1	Objectives	21
8.3.2	General.....	21
8.3.3	Input to this clause	21
8.3.4	Requirements.....	21
8.3.5	Work products.....	21
8.4	Evaluation of executed test cases concerning exposure in reality.....	22
8.4.1	Objectives	22
8.4.2	General.....	22
8.4.3	Input to this clause	22
8.4.4	Requirements.....	22
8.4.5	Work products.....	22
8.5	Evaluation of traceability.....	22
8.5.1	Objectives	22
8.5.2	General.....	23
8.5.3	Input to this clause	23
8.5.4	Requirements.....	23
8.5.5	Work products.....	23
8.6	Evaluation of coverage based on executed test cases.....	23
8.6.1	Objectives	23
8.6.2	General.....	23
8.6.3	Input to this clause	23
8.6.4	Recommendations.....	24
8.6.5	Work products.....	24
	Annex A (informative) Methodology to classify the relation between ODD and scenario.....	25
	Annex B (informative) Methodology to sort the test priority based on multiple criteria.....	27