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| **Test operator information** |
| **Company** |  |
| **Test operatorName/E-mail** |  |
| **OBU identifier** |  |
| **Test date/timeStart and end** |  |
| **Log file name/format** |  |

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| **InterCor Interoperability Test Case** |
| **Test Identifier** | Scenario1\_TC1 |
| **Test Objective** | To test RWW and IVS under real life road works conditions. |
| **Test Scenario used** | **Scenario 1 RWW - Test Vehicle with DENM and IVI active** The use case is of type known (i.e. planned in scope of tests) and of type real DENM (i.e. received info reflects the actual situation). |
| **Pre-test Conditions** | * Test configuration as specified in<http://intercor-project.eu/wp-content/uploads/sites/15/2017/06/Plan-of-Action-Testfest-ITS-G5_v-1.0-Participants.pdf> is implemented.
* Participants have been able to test their test vehicle (OBU) with DENM/IVI messages of scenario 6 (Site) and/or with PCAP files.
* Test scenario is activated between A16R 28,3 and A16R 32,5.
	+ RSUs (e.g. at relative position A16R 28,315 and A16R 31,290) are active and send DENM and IVI messages for this scenario. 2 DENM messages and 9 IVI messages for RWW content.
	+ IVI and DENM messages for scenario 1 (RWW with real DENM and IVI) can be identified by OBU as real.
* Test vehicle is outside the radio transmission range of active RSU for this scenario, i.e. has not received/stored messages for this scenario.
* Test vehicle drives from North to South and passes the relevance area for this scenario.
 |
| **Test Sequencea** | **Step** | **Type** | **Action: Description****Check: Expected behaviour** | **Observation** |
| 1 | action | Test Vehicle (TV) enters test area for this scenario (between A16R 28,3 and A16R 31,3) entering the A16, coming from the A15.TV receives messages from RSUs: 9 IVI messages with IVS content with Variable Message Signs information (red crosses, arrows, speed limits, end-of-restrictions).Information of individual gantries is displayed to the driver between km 28,3 and 31,3. | Information of individual gantries is displayed to the driver between km 28,3 and 32,5. The HMI should show a) VMS signs with dynamic speed limits per lane (90, 70), dynamic lane management (merge left, blocked lane) and end-of-restrictions, b) Presence of 2 RWW trailers on correct lane and c) Reason for the blocked lane.The location accuracy of the absolute position (traces, event history) must be accurate enough to identify the position of the trailers on the 4 lanes. |
| 2 | check | HMI display at km 28,3 |  |
| 3 | check | HMI display at km 28,8 |  |
| 4 | check | HMI display at km 29,3 |  |
| 5 | check | HMI display at km 29,6 |  |
| 6 | check | HMI display at km 30,0 |  |
| 7 | check | HMI display at km 30,7 |  |
| 8 | check | HMI display at km 31,3 |  |
| 9 | check | HMI display at km 31,4 |  |
| 10 | check | HMI display at km 31,7 |  |
| 11 | check | HMI display at km 32,2 |  |
| 12 | check | HMI display at km 32,5 |  |
| 13 | action  | TV leaves test area. |  |
| 14 | check | No information is shown when the TV has left last relevance zone. |  |

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| **Test operator information** |
| **Company** |  |
| **Test operatorName/E-mail** |  |
| **OBU identifier** |  |
| **Test date/timeStart and end** |  |
| **Log file name/format** |  |

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| **InterCor Interoperability Test Case** |
| **Test Identifier** | Scenario1\_TC2 |
| **Test Objective** | To test that the information related to scenario 1 stops to be displayed when leaving the motorway and re-starts to be displayed when re-entering the motorway. |
| **Test Scenario used** | **Scenario 1 RWW - Test Vehicle with DENM and IVI active** The use case is of type known (i.e. planned in scope of tests) and of type real DENM (i.e. received info reflects the actual situation). |
| **Pre-test Conditions** | * Test configuration as specified in<http://intercor-project.eu/wp-content/uploads/sites/15/2017/06/Plan-of-Action-Testfest-ITS-G5_v-1.0-Participants.pdf> is implemented.
* Participants have been able to test their test vehicle (OBU) with DENM/IVI messages of scenario 6 (Site) and/or with PCAP files.
* Test scenario is activated between A16R 28,3 and A16R 32,5.
	+ RSUs (e.g. at relative position A16R 28,15 and A16R 31,290) are active and send DENM and IVI messages for this scenario. 2 DENM messages and 9 IVI messages for RWW content
	+ IVI and DENM messages for scenario 1 (RWW with real DENM and IVI) can be identified by OBU as real.
* Test vehicle is outside the radio transmission range of active RSU for this scenario, i.e. has not received/stored messages for this scenario.
* Test vehicle drives from North to South and passes the relevance area for this scenario.
 |
| **Test Sequence** | **Step** | **Type** | **Action: Description****Check: Expected behaviour** | **Observation** |
| 1 | action | Test Vehicle (TV) enters test area for this scenario (between A16R 28,3 and A16R 31,3) entering the A16, coming from the A15.TV receives messages from RSUs: 9 IVI messages with IVS content with Variable Message Signs information (red crosses, arrows, speed limits, end-of-restrictions).Information of individual gantries is displayed to the driver between km 28,3 and 31,3. | Information of individual gantries is displayed to the driver between km 28,3 and 32,.5. The HMI should show a) VMS signs with dynamic speed limits per lane (90, 70), dynamic lane management (merge left, blocked lane) and end-of-restrictions, b) Presence of 2 RWW trailers on correct lane and c) Reason for the blocked lane.The location accuracy of the absolute position (traces, event history) must be accurate enough to identify the position of the trailers on the 4 lanes. |
| 2 | action | TV drives into the relevance area, but takes exit via parking area. |  |
| 3 | check | No information on HMI is shown if the vehicle positioning system is accurate enough to determine it is driving on the parking area. |  |
| 4 | Action | TV re-enters highway in direction North-South via parking area. |  |
| 5 | check | No information on HMI is shown if the vehicle positioning system is accurate enough to determine it is driving on the parking area. |  |
| 6 | action | TV drives into the relevance area. |  |
| 7 | check | HMI display at km 31,3 |  |
| 8 | check | HMI display at km 31,4 |  |
| 9 | check | HMI display at km 31,7 |  |
| 10 | check | HMI display at km 32,2 |  |
| 11 | check | HMI display at km 32,5 |  |
| 12 | action  | TV leaves test area. |  |
| 13 | check | No information is shown when the TV has left last relevance zone. |  |

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| **Test operator information** |
| **Company** |  |
| **Test operatorName/E-mail** |  |
| **OBU identifier** |  |
| **Test date/timeStart and end** |  |
| **Log file name/format** |  |

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| **InterCor Interoperability Test Case** |
| **Test Identifier** | Scenario1\_TC3 |
| **Test Objective** | To test that the information related to scenario 1 is not shown when passing the test area in the opposite direction of the motorway. |
| **Test Scenario used** | **Scenario 1 RWW - Test Vehicle with DENM and IVI active** The use case is of type known (i.e. planned in scope of tests) and of type real DENM and IVI (i.e. received info reflects the actual situation). |
| **Pre-test Conditions** | * Test configuration as specified in<http://intercor-project.eu/wp-content/uploads/sites/15/2017/06/Plan-of-Action-Testfest-ITS-G5_v-1.0-Participants.pdf> is implemented.
* Participants have been able to test their test vehicle (OBU) with DENM/IVI messages of scenario 6 (Site) and/or with PCAP files.
* Test scenario is activated between A16R 28,3 and A16R 32,5.
	+ RSUs (e.g. at relative position A16R 28,315 and A16R 31,290) are active and send DENM and IVI messages for this scenario. 2 DENM messages and 9 IVI messages for RWW content
	+ IVI and DENM messages for scenario 1 (RWW with real DENM and IVI) can be identified by OBU as real.
* Test vehicle is outside the radio transmission range of active RSU for this scenario, i.e. has not received/stored messages for this scenario.
* Test vehicle drives from South to North and passes by the relevance area for this scenario on the opposite side of the motorway.
 |
| **Test Sequence** | **Step** | **Type** | **Action: Description****Check: Expected behaviour** | **Observation** |
| 1 | action | Test Vehicle (TV) drives in opposite direction (North to South) of test area for this scenario between A16R km 28,3 and 31,3).TV receives messages from RSUs: 9 IVI messages with IVS content with Variable Message Signs information (red crosses, arrows, speed limits, end-of-restrictions). |  |
| 2 | check | No information related to scenario 1 is shown. |  |
| 3 | action  | TV leaves test area. |  |
| 4 | check | No information is shown when the TV has left last relevance zone. |  |