

## Annex 21 - Appendix 1

### USE OF THE DYNAMIC STABILITY SIMULATION

The effectiveness of the directional and/or roll-over stability control function of power-driven vehicles and trailers of categories M, N and O, may be determined by computer simulation.

#### 1. USE OF THE SIMULATION

1.1 The vehicle stability function shall be demonstrated by the vehicle manufacturer to the Type Approval Authority or Technical Service with the same dynamic manoeuvre(s) as for the practical demonstration in Paragraph 2.1.3. or 2.2.3. of Annex 21.

1.2. The simulation shall be a means whereby the vehicle stability performance may be demonstrated with the vehicle stability function enabled or disabled, and in the laden and unladen conditions.

1.3. The simulations shall be carried out with a validated modelling and simulation tool. The verification shall be carried out using the same manoeuvre(s) as defined in Paragraph 1.1. above.

The method by which the simulation tool is validated is given in Annex 21, Appendix 2.

1.3.1. A validated simulation tool that has not been validated specifically for the vehicle manufacturer requesting type-approval shall be shown by that vehicle manufacturer, via a conformation test, to be suitable for the vehicles for which type-approval is requested.

The results of the conformation test shall be attached to the type-approval documentation.

1.4. The availability of the simulation tool software to the software version used shall be maintained for a period of not less than 10 years.