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TO:
Centre for Connected and Autonomous Vehicles
Department for Transport
codeofpractice@ccav.gov.uk

Automated vehicle trialling code of practice: invitation to comment

First of all, a lot of thanks to Department for Transport (Centre for Connected and Autonomous Vehicles) for organising this important consultation.

This opinion represents an opinion of an individual citizen, not any legal entity.

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- any business secrets
- any trade secrets
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PDF file of this opinion can be added to a relevant web page.

Annex 1 holds information about disclaimers and copyright.

Best Regards,

Jukka S. Rannila
citizen of Finland
signed electronically

[Continues on the next page]

39

40 Previous consultation about automated vehicles

41

42 I have published an opinion based on discussion about automated vehicles.

43

44 EN: Opinion 85: Regulatory options for automated vehicles

45 http://www.jukkarannila.fi/lausunnot.html#nro_85

46

47 That consultation was organised by National Transport Commission (Australia)

48

49 National Transport Commission / Material published

50

51 General page about automated vehicles in Australia is following:

52

53 Automated vehicles in Australia

54 <https://www.ntc.gov.au/roads/technology/automated-vehicles-in-australia/>

55

56 General page about the previous consultation (Regulatory options for automated vehicles) is
57 following:

58

**59 Submissions for NTC Discussion Paper – Regulatory options for automated vehicles -
60 May 2016**

61 <https://www.ntc.gov.au/submissions/history/?rid=154145&pid=8247>

62

63 **NOTE: This address may not work in the future.**

64

**65 Proposal: Centre for Connected and Autonomous Vehicles (UK) could assess material
66 published by the National Transport Commission (Australia).**

67

68 Possibly there can be interesting issues when material from Australia is assessed carefully.

69

**70 Summary of SAE International's standard J3016 (Taxonomy and Definitions for Terms
71 Related to On-Road Motor Vehicle Automated Driving Systems)**

72

73 Summary of SAE International's standard J3016 is mentioned on the NTC Discussion Paper.

74 Summary of SAE International's standard J3016 can be downloaded freely after registering an
75 account.

76

**77 SAE International's standard J3016: Taxonomy and Definitions for Terms Related to
78 On-Road Motor Vehicle Automated Driving Systems**

79 <https://www.sae.org/autodrive>

80

81 Summary of SAE International's standard J3016 lists six levels for automation of vehicle
82 automation: (0) No automation; (1) Driver assistance, (2) Partial automation; (3) Conditional
83 automation; (4) High automation; (5) Full automation.

84 **Proposal: Automation issues could be divided into different automation classes – e.g.**
 85 **based on summary of SAE International’s standard J3016 .**

86
 87 **Open horizontal standards / One issue repeated based on opinion 85**

88
 89 There are differences between horizontal and vertical standards. A simple example is naturally
 90 email solutions. There are several vertical standards when creating technically email solutions. Then
 91 there are horizontal standards which enable sending messages between technically different email
 92 solutions. Horizontal standards enables technological solutions which can work together. Horizontal
 93 standards hides different complexities in information systems.

94
 95 **Proposal: There could be assessment of vertical and horizontal standards.**

96
 97 **Proposal: Using horizontal standards could be favoured when creating different**
 98 **information systems.**

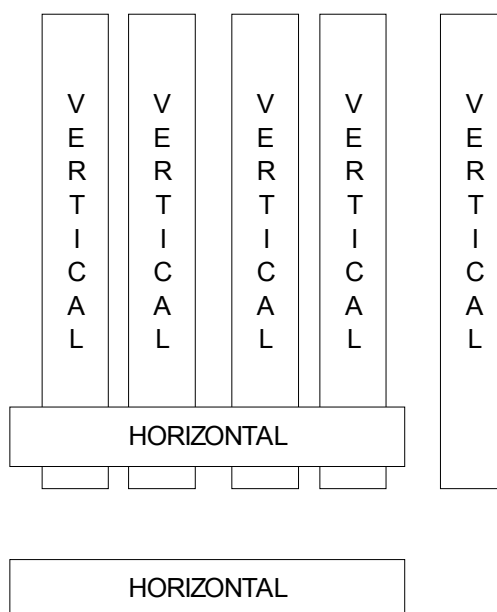
99
 100 **Opinion: The number of redundant standardisation efforts should be minimal.**

101
 102 **Proposal: There could be separation of horizontal standards and vertical standards.**

103
 104 **Proposal: There could be different standardisation efforts to horizontal standards and**
 105 **vertical standards.**

106
 107 Personally I have advocated using different horizontal standards. For example email standards
 108 (horizontal) are implemented with very different technologies (vertical).

109

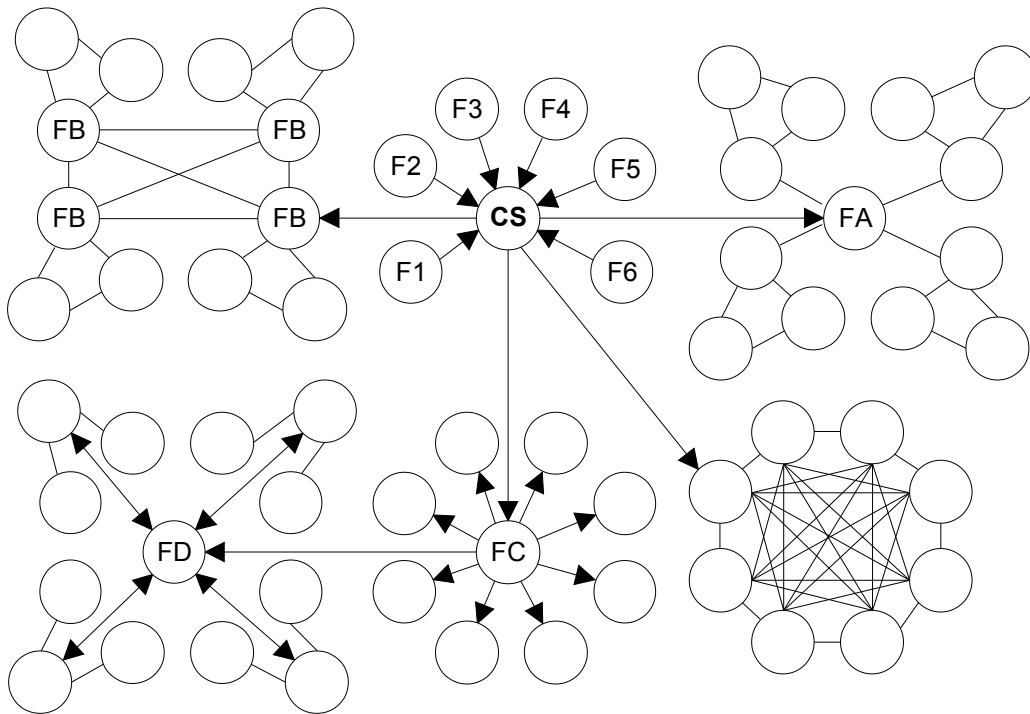


110
 111

112 **Proposal: Governments should especially concentrate on horizontal standards.**

113
 114 **Proposal: Some government agencies could apply for memberships of different**
 115 **standard setting organisations which develop especially horizontal standards.**

116
 117 **Complex networks of different information systems**
 118



119
 120
 121 In reality different information systems are interlinked in many ways. There could be one central
 122 system (CS) which is then used by other information systems. Previously mentioned open
 123 horizontal standards can be mentioned once more.

124
 125 **Proposal: Different layers related to automation of vehicles (also standards) should be**
 126 **assessed carefully.**

127
 128
 129 **Good luck!!!**

130
 131 This opinion is quite limited. Hopefully there are other constructive ideas presented in other
 132 opinions. This remains to be seen.

133
 134
 135 [Continues on the next page]

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151

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