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TO:  
Communications and Marketing Branch  
Innovation, Science and Economic Development Canada

**Big data and Innovation: Implications for competition policy in Canada**

First of all, a lot of thanks to Communications and Marketing Branch (Innovation, Science and Economic Development Canada) for organising this important consultation.

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– any trade secrets  
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Annex 1 holds information about disclaimers and copyright.

Best Regards,

Jukka S. Rannila  
citizen of Finland  
signed electronically

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40 **Previous opinions – many opinions related to information technology**

41

42 General page for my previous opinions is following:

43 [www.jukkarannila.fi/lausunnot.html](http://www.jukkarannila.fi/lausunnot.html)

44

45 **Previous Canadian consultations**

46

47 EN: Opinion 91: Draft New Plan on Open Government 2016-2018

48 [http://www.jukkarannila.fi/lausunnot.html#nro\\_91](http://www.jukkarannila.fi/lausunnot.html#nro_91)

49

50 EN: Opinion 92: Energy efficiency in Alberta

51 [http://www.jukkarannila.fi/lausunnot.html#nro\\_92](http://www.jukkarannila.fi/lausunnot.html#nro_92)

52

53 **Just one issue based on this consultation / Open horizontal standards**

54

55 This is opinion is about different standards and especially about open horizontal standards.

56

57 **About different standards**

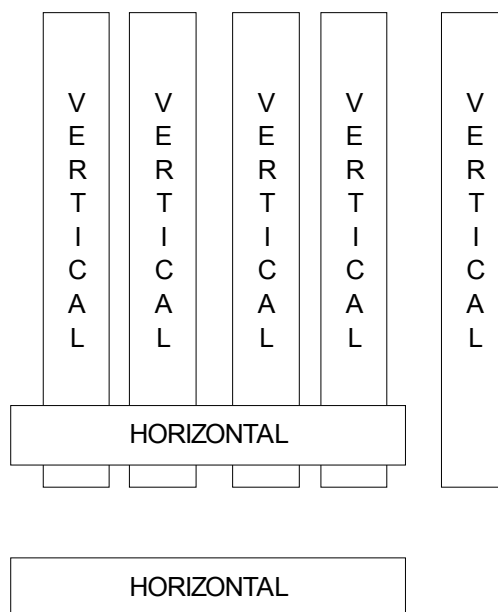
58

59 I have proposed several times to use open horizontal standards when developing different  
60 information system.

61

62 **Favouring open standards / Favouring horizontal standards**

63



64

65

66 There are differences between horizontal and vertical standards. A simple example is naturally

67 email solutions. There are several vertical standards when creating technically email solutions. Then  
68 there are horizontal standards which enable sending messages between technically different email  
69 solutions.

70

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

72

73 **Proposal: Using horizontal standards could be favoured when creating different**  
74 **information systems.**

75

76 Horizontal standards enables technological solutions which can work together. Horizontal standards  
77 hides different complexities in information systems.

78

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

80

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

82

83 **Proposal: There could be different standardisation efforts to horizontal standards and**  
84 **vertical standards.**

85

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

88

89 Here we can note some problems:

90

- 91 • some systems are based on **de-facto** standards
- 92 • some systems are based on **de-jure** standards
- 93 • there can be confrontations between **de-facto** and **de-jure** standards
- 94 • there can be a monopoly situation in some domain
- 95 • some standards may inhibit possible actions of some stakeholders
- 96 • there can be a standard war on some domains
- 97 • standards have different life-cycles
- 98 • systems have different life-cycles
- 99 • there can be mismatches between different life-cycles
- 100 • there can be failed standards
- 101 • there can be deprecated standards.

102

103 It is quite normal situation in the information technology field that there are competing standards  
104 for some application field. Therefore there are all the time ongoing “standards wars” or “format  
105 wars”. The information technology standards tend to be interrelated and one “standards war” or  
106 “format war” can lead to another similar situation.

107

108 I have advocated open standards even though in some cases open standards are not de facto  
109 standards. In practice public sector has very important role, when some standards are competing in  
110 the market place. Because public sector has a considerable power when buying/developing  
111 information systems and therefore public sector can sometimes direct markets to certain standards.

112 Therefore there should be serious vigilance when assessing different standards and “standards” in  
113 some application fields.

114

115 There are different standards setting organisations on the information technology field. One list <sup>1</sup> of  
116 these standards setting organisations is provided by ConsortiumInfo.org.

117

118 One warning can be said about standards setting organisations. All standards setting organisations  
119 are not successes based on several factors and there can may irrelevant standards setting  
120 organisations. Market situation on different markets varies a lot based on different factors.

121

122 **Proposal: Current standardisation (e.g. list provided by ConsortiumInfo.org) efforts by**  
123 **different standard setting organisations could be assessed carefully.**

124

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

127

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

129

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

132

133 **Proposal: Government agencies should not be passive by-standers when different**  
134 **horizontal standards are developed.**

135

136 **Proposal: Government agencies could financially support development of horizontal**  
137 **standards.**

138

139 **Proposal: There could some guidance for using open horizontal standards on different**  
140 **application fields.**

141

142 **An example for cooperation: Web feeds (RSS and Atom)**

143



144

145

146 I have advocated usage of web feeds on several previous opinion documents. Actually there are two  
147 standards for web feeds: RSS <sup>2 3</sup> and Atom <sup>4 5 6</sup>.

148

- 1 Standard Setting Organizations and Standards List, [www.consortiuminfo.org/links/linksall.php](http://www.consortiuminfo.org/links/linksall.php)
- 2 <http://www.rssboard.org/rss-specification>, RSS 2.0 Specification
- 3 <https://en.wikipedia.org/wiki/RSS>, Wikipedia / RSS
- 4 [https://en.wikipedia.org/wiki/Atom\\_\(standard\)](https://en.wikipedia.org/wiki/Atom_(standard)), Wikipedia / Atom (standard)
- 5 <https://tools.ietf.org/html/rfc4287>, The Atom Syndication Format
- 6 <https://tools.ietf.org/html/rfc5023>, The Atom Publishing Protocol

149 **Proposal: Web feeds could be advocated when developing different informations**  
150 **systems.**

151  
152 **Proposal: Web feeds (RSS and/or Atom) should be used extensively for providing (real-**  
153 **time) information for different stakeholder(s) (communities).**

154  
155 **Proposal: There can be different web feeds (RSS and/or Atom) for different**  
156 **stakeholder(s) – having just one web feed (RSS and/or Atom) may not be a feasible**  
157 **solution.**

158  
159 **Proposal: Several web feeds (RSS and/or Atom) can be based on different viewpoints.**

160  
161 It can be easier to create web feeds in different information systems since web feeds enable  
162 connections without direct system-to-system connections.

163  
164 It can be noted, that different back-office systems (with a wide variety of different technologies) can  
165 implement RSS standards, and these RSS feeds can be used in the front-office systems. With this  
166 kind solutions front-office systems don't need direct system-to-system communications with back-  
167 office systems.

168  
169  
170  
171 **Good luck!!!**

172  
173 This opinion is quite limited. Hopefully there are other constructive ideas presented in other  
174 opinions. This remains to be seen.

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176  
177 [Continues on the next page]

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194

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