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**TO: European Commission**

**Document identifier: Ref. Ares(2017)3680140 - 20/07/2017**

**About technical arrangements for developing, maintaining and employing electronic systems for the exchange of information and for the storage of such information under the Union Customs Code**

First of all, a lot of thanks to European Commission for organising this important consultation.

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

This opinion does not contain:

- any business secrets
- any trade secrets
- any confidential information.

This opinion is public.

PDF file of this opinion can be added to a relevant web page

Annex 1 holds information about previous consultations on the European Union level.

Annex 2 holds information about disclaimers and copyright.

Best Regards,

Jukka S. Rannila  
citizen of Finland

signed electronically

[Continues on the next page]

44

45 **A list of previous consultations**

46

47 On Annex 1 is information about my previous consultations based on different consultations. Many  
 48 opinions have been addressed to different units of the European Commission. I have repeated the  
 49 same issues several times on those documents (Opinions).

50

51 **Several proposals have been implemented / Ref. Ares(2017)3680140 - 20/07/2017**

52

53 I have highlighted several issues based previous consultations. Many of my proposals are already  
 54 implemented (Ref. Ares(2017)3680140 - 20/07/2017) as legislative text (proposed Commission  
 55 implementing decision).

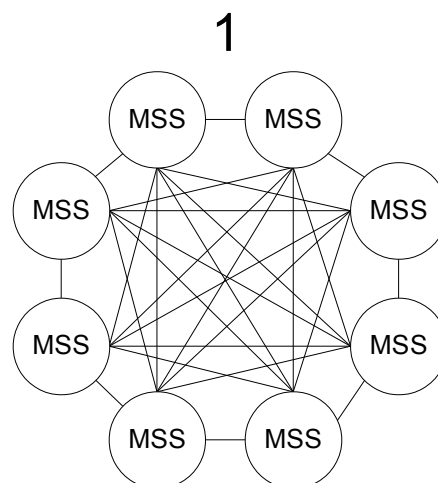
56

57 Therefore this opinion is rather limited and this opinion highlights just some issues.

58

59 **About different member state systems (MSS)**

60



61

62

63 I have noted several times that different member state systems (MSS) can interlinked in many ways.  
 64 This means that co-operation with European Union systems means a lot of work.

65

66 **About European Union Contact Point (EUCP)**

67

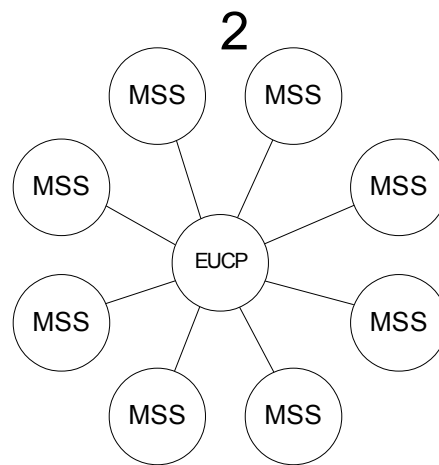
68 Naturally there could be direct contacts between different member state systems (MSS) and  
 69 European Union Contact Point (EUCP). This option (MSS ↔ EUCP) could mean very large  
 70 number of different member state system. Based on 28 member state systems there could be  
 71 hundreds of connections:

72  $28 \times 10 = 280 \text{ MSS} \leftrightarrow 1 \text{ EUCP}$ 73  $28 \times 20 = 560 \text{ MSS} \leftrightarrow 1 \text{ EUCP}$ 74  $28 \times 30 = 840 \text{ MSS} \leftrightarrow 1 \text{ EUCP}$ 

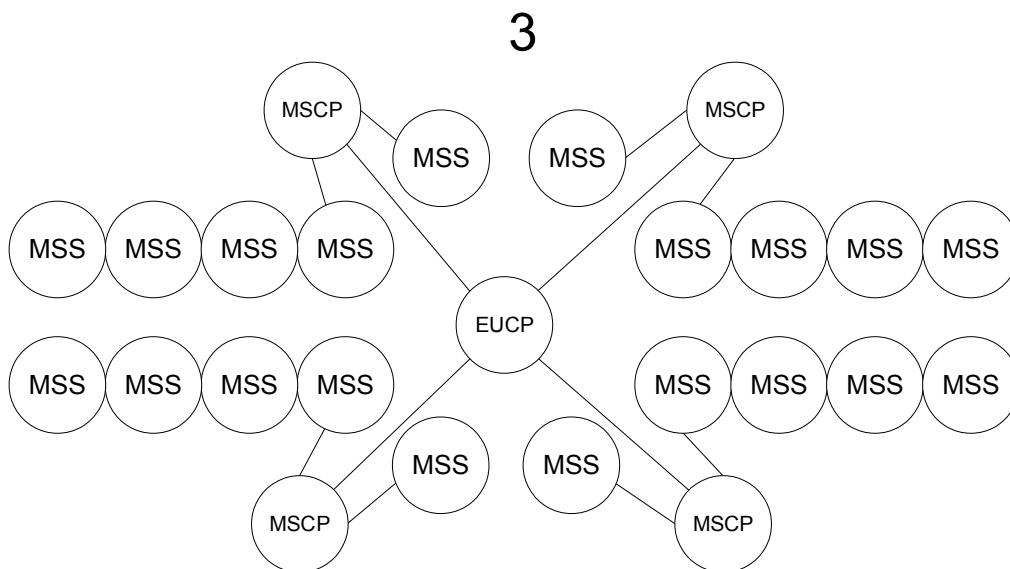
75 etc.

76 Here we can note that there can be hierarchy between different system (EU ↔ member states) and  
 77 there can be member state contact points (MCP). Then there can be some hierarchy between  
 78 different systems. (EU ↔ EUCP ↔ MSCP ↔ MSS ↔ Member state). There are unique situations  
 79 with member state systems in member states. Therefore member state contact points (MCP) can  
 80 reduce the complexity with European Union contact point (EUCP)

81  
 82 Based on those large numbers connecting (MSS ↔ EUCP) member state system I have to conclude  
 83 that there should be member state contact points (EUCP ↔ MSCP ↔ MSS).  
 84



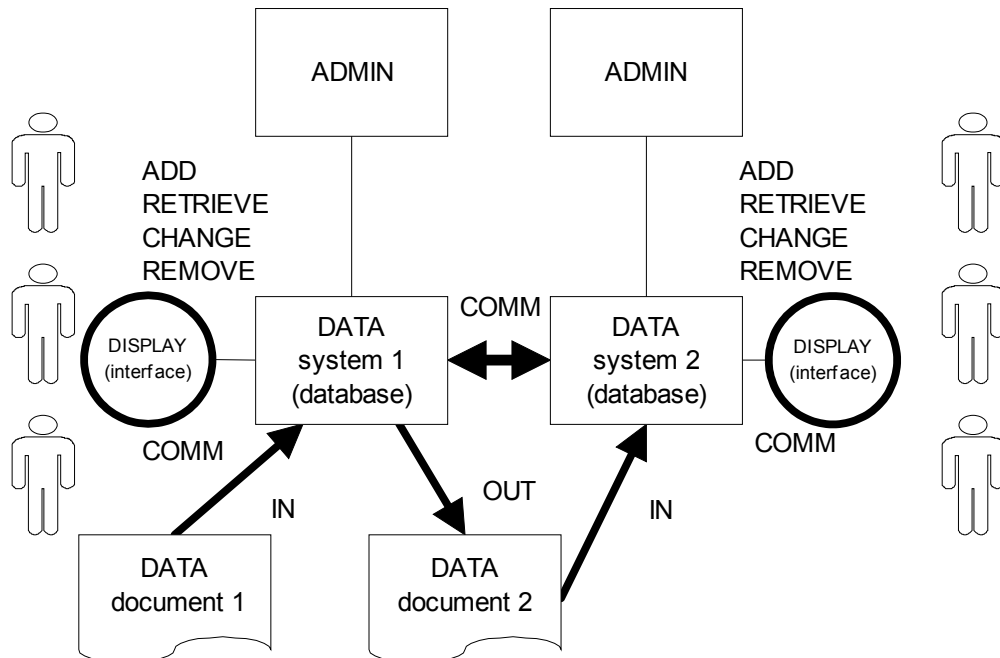
85  
 86  
 87 Based on those large numbers connecting (MSS ↔ EUCP) member state system I have to conclude  
 88 that there should be member state contact points (EUCP ↔ MSCP ↔ MSS).  
 89



90  
 91  
 92

93 **Differences between documents and databases**

94



95  
96

97 Here we can note several basic issues about documents and databases:

98

- 99 • four basic functions (add, retrieve, change, remove)
- 100 • administration of a system
- 101 • displays and interfaces
- 102 • direct communication between system (data)
- 103 • transferring documents between systems (data).

104

105 Here we can note especially following standardisation needs for different parts of different parts of  
106 an information system:

107

108 From this simple (figure) conception we can differentiate several standard classes.

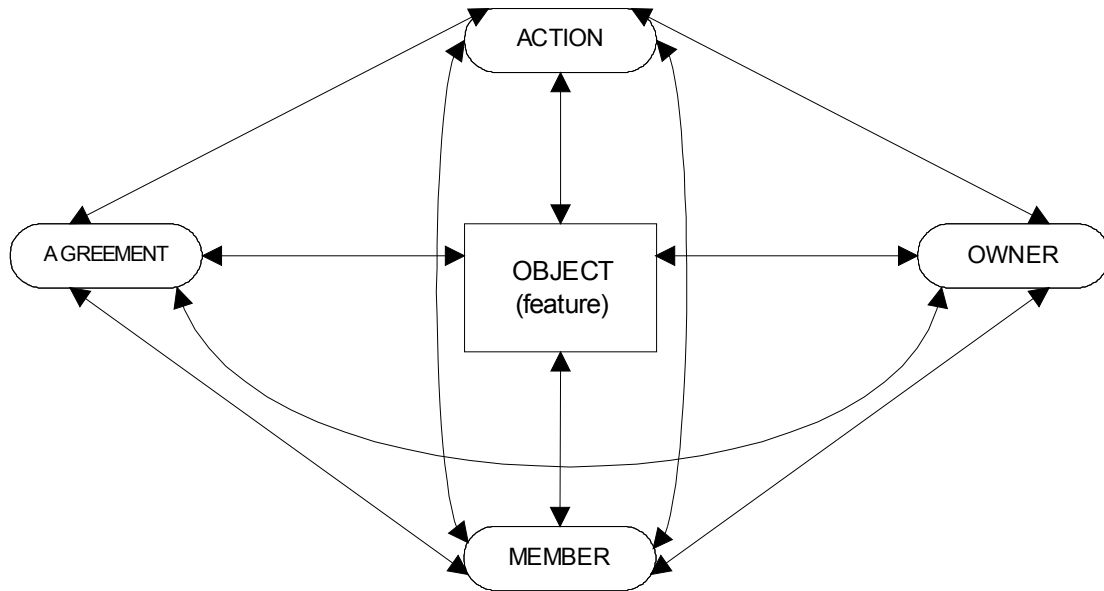
109

- 110 1) Data (documents) standards
- 111 2) Data (database) standards
- 112 3) Standards for adding data to a system.
- 113 4) Standards for retrieving data from a system.
- 114 5) Standards for changing data in a system.
- 115 6) Standards for removing data from a system.
- 116 7) Display standards
- 117 8) Interface standards
- 118 9) Different communication standards.

119

120 **Differences between agreements, members and owners**

121



122

123

124

125

126

**Note: The relations between different aspects of information systems can result rather complicated (legal) network(s): i.e. Ownership, Membership, Agreement.**

127

128

129

130

131

Here we can note the difference between owners, agreements and members. In reality ownerships agreements and memberships cause very complex networks, and those networks are changing all the time: divisions, mergers, ownership changes, agreement changes, cooperation with other entities, life-cycles, etc.

132

133

134

135

136

137

Here we can note that ownership, agreement and membership are interlinked in different ways. Generally speaking average usage of a system means an unique combination of ownership, agreement and membership. When everything works fine there are not problems. However changes with ownership, agreement and membership can result difficult situations.

138

139

140

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146

147

148

	<b>Owner? Member? Agreement?</b>	<b>Standards?</b>	<b>OPEN</b>	<b>CLOSED</b>
<b>1. Device / Machinery</b>				
<b>2. Operating system</b>				
<b>3. Program(s)</b>				
<b>4. Data models / Conceptual models</b>				
<b>5. Documents</b>				
<b>6. Databases</b>				
<b>7. Communications</b>				
<b>8. Retrieve / Interface / Display</b>				
<b>9. Add / Interface / Display</b>				
<b>10. Remove / Interface / Display</b>				
<b>11. Change / Interface / Display</b>				

149

150 Naturally, there can be solutions, which are not based on the maximum solution. It can be  
 151 concluded, that this consultation is not (yet) about technical details.

152

153

**Note: The relations between different aspects of information systems can result  
 154 rather complicated (legal) network(s): i.e. Ownership, Membership, Agreement.**

155

156

**Proposal: There could be some considerations for assessing possible / future changes in  
 157 ownerships, agreements and memberships.**

158

159 **About different standards**

160

161 I have proposed several times to use *open horizontal standards* when developing different  
 162 information system.

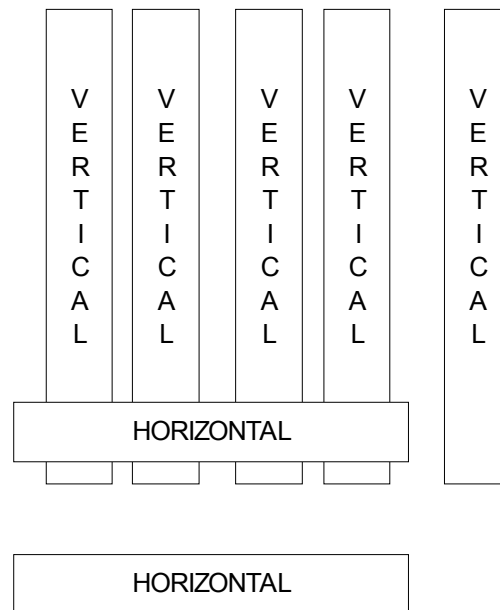
163

164 **Favouring open standards / Favouring horizontal standards**

165

166

167 [Continues on the next page]



168  
169

170 There are differences between horizontal and vertical standards. A simple example is naturally  
171 email solutions. There are several vertical standards when creating technically email solutions. Then  
172 there are horizontal standards which enable sending messages between technically different email  
173 solutions.

174

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

176

177 **Proposal: Using horizontal standards could be favoured when creating different**  
178 **information systems on the European Union level.**

179

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

182

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

184

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

186

187 **Proposal: There could be different standardisation efforts to horizontal standards and**  
188 **vertical standards.**

189

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

192

193 Here we can note some problems:

194

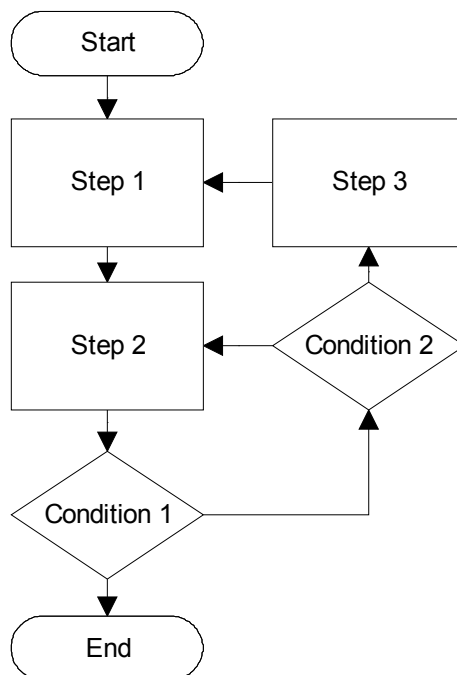
195

- 196 • some systems are based on **de-facto** standards
- 197 • some systems are based on **de-jure** standards
- 198 • there can be confrontations between **de-facto** and **de-jure** standards
- 199 • there can be a monopoly situation in some domain
- 200 • some standards may inhibit possible actions of some stakeholders
- 201 • there can be a standard war on some domains
- 202 • standards have different life-cycles
- 203 • systems have different life-cycles
- 204 • there can be mismatches between different life-cycles
- 205 • there can be failed standards
- 206 • there can be deprecated standards.

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

213 I have advocated open standards even though in some cases open standards are not de facto  
 214 standards. In practice public sector has very important role, when some standards are competing in  
 215 the market place. Because public sector has a considerable power when buying/developing  
 216 information systems and therefore public sector can sometimes direct markets to certain standards.  
 217 Therefore there should be serious vigilance when assessing different standards and “standards” in  
 218 some application fields.

220 **A simple presentation of a process**



222



223

224 Here we can note that there can be different processes.

225

226 **Defining some parts of a process – a lot of details (SPEX)**

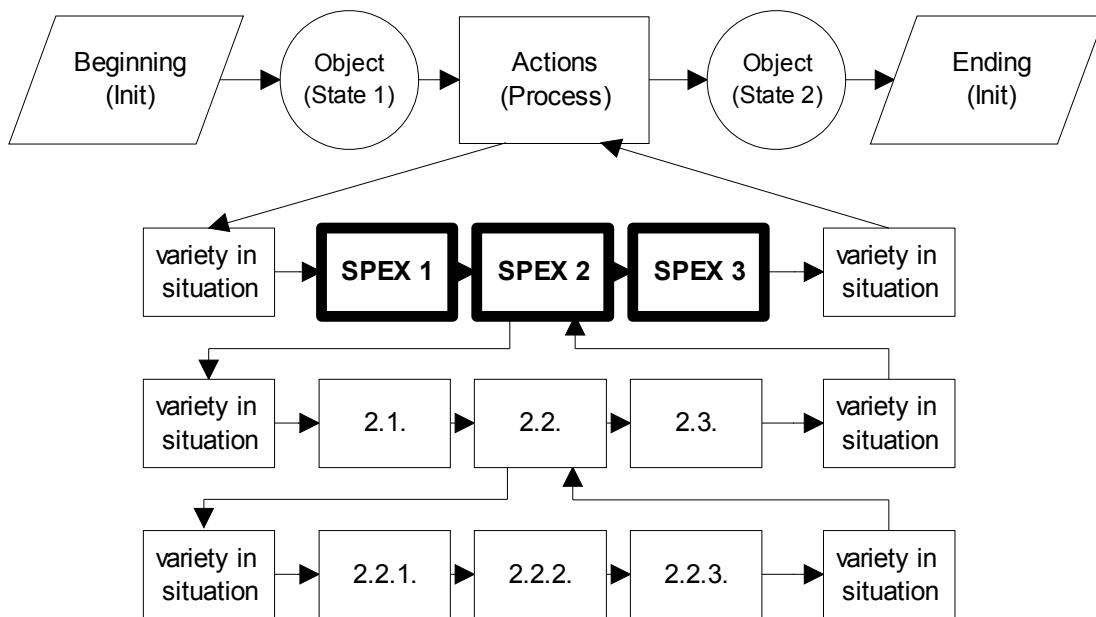
227

228 Following figure notes that some parts of a process can be presented in a detailed way (SPEX).

229

230 Here we can there can be some variety in different situation when implementing some processes.

231



232

233

234 processes (Beginning → Actions → Ending), which can be described in different levels of details.

235

236 Based on the previously proposed actions there can be a clear understanding of different processes.

237 It can be noted that describing different processes can mean a lot of work for different stakeholders.

238

239 It can be noted here that describing different processes are implemented in information systems which  
 240 are hierarchically structured. So there is always some possible mismatches between actual process  
 241 models and actual hierarchy of system.

242

243 Here we can note, that in a process some objects change their state in different stages.

244

245 **Proposal: After some serious assessment there could be some serious work for**  
 246 **standardised (SPEX) interfaces and displays.**

247

248 **Proposal: Some parts of the processes could be standardised for interfaces (SPEX) for**  
 249 **different stakeholders.**

250

251 **Proposal: Some standardised customer interfaces (SPEX) could be used for having**  
 252 **better service processes for different stakeholders.**

253  
 254 It can be noted, that several systems could implement (SPEX) the same parts of different processes,  
 255 even though the technology in different systems can be totally different.

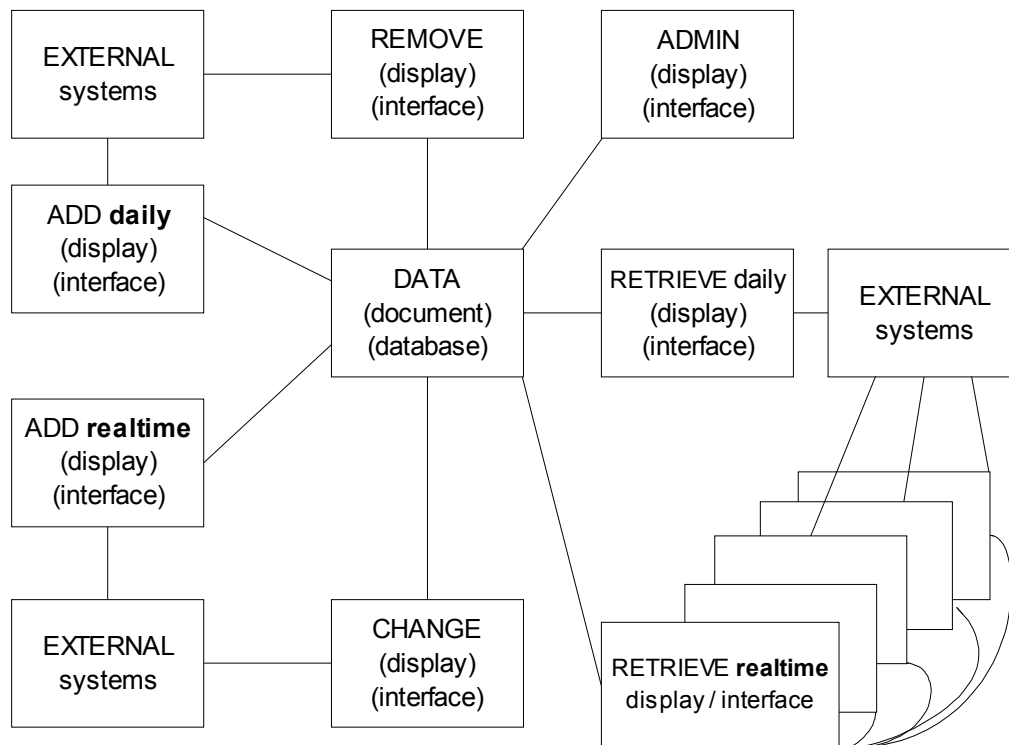
256  
 257 There could be some points in a process model where there is very detailed (SPEX) parts. Naturally  
 258 in these parts (SPEX) there could be very detailed information about different concepts.

259  
 260 Since humans are learning entities there can be different shortcuts in different process models  
 261 implemented in computerised systems.

262  
 263 Based on the previously proposed actions there can be a clear understanding of different processes.  
 264 It can noted that describing different processes can mean a lot of work for different stakeholders.

265  
 266 It can be noted here that describing different processes are implement in information systems which  
 267 are hierarchically structured. So there is always some possible mismatches between actual process  
 268 models and actual hierarchy of system.

269  
 270 **Different time frames for different information systems**  
 271



272  
 273  
 274 Like the previous figure indicates, there is difference between real-time systems and other systems.  
 275

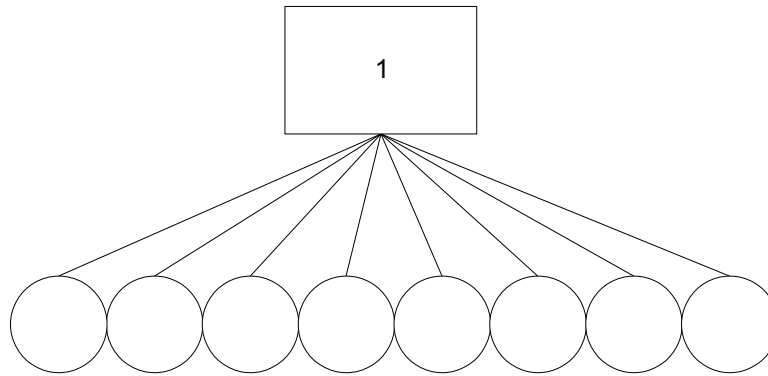
276 **Proposal: There can be different real-time systems, and the need for different real-time**  
 277 **systems could be assessed.**

278  
 279 **Proposal: There can different systems with other time frames, and the need for systems**  
 280 **should with different time frames could be assessed**

281  
 282 In some cases there is a clear need for different replicated information systems.

283  
 284 It can be noted, that there can be different options for layered systems: real-time or other time  
 285 periods. Generally speaking, (real-time) retrieval is the most used function, and adding, changing  
 286 and removing can have different time-periods.

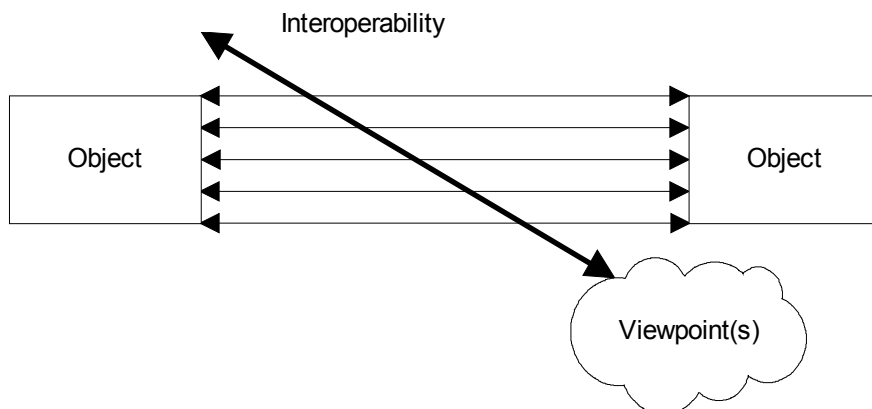
287  
 288 **About different interfaces**



289  
 290  
 291 Based on previous issues we can note that there can be several interfaces for different information  
 292 systems (add, retrieve, change, remove). Different interfaces can real-time interfaces.

293  
 294 **Proposal: Need for different interfaces could be assessed carefully.**

295  
 296 **Assessing interoperability**



298  
 Copyright, licence and disclaimers: check Annex 2.

299

300 Need for interoperability between different objects mean more work for developing information  
301 systems.

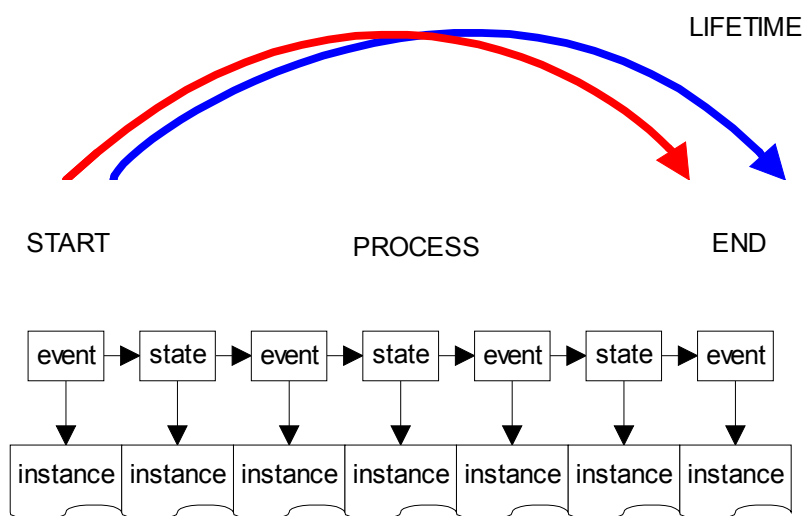
302

303 **Proposal: Interoperability can be assessed based on different viewpoints.**

304

305 **Processes, events, states, lifetime, instances, start and end**

306



307

308

309 Finally some important concepts can be noted: processes, events, states, lifetime, instances start and  
310 end. It can be noted that during the lifetime of an information system there can be significant changes  
311 with the selected and implemented standards.

312

313 **Proposal: Based on the results of this consultation European Commission could create  
314 a roadmap for implementing different open and/or especially horizontal standards.**

315

316 It can be noted that there are very cumbersome information systems on the European Union level on  
317 different application fields. Therefore European Commission could have a clear roadmap for  
318 implementing different standards in the near and distant future. European Commission could  
319 formally join to some important (standards developing) organisations based on the results of this  
320 consultation.

321

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

323



324

325

326 I have advocated usage of web feeds on several previous opinion documents. Actually there are two

327 standards for web feeds: RSS <sup>1 2</sup> and Atom <sup>3 4 5</sup>.

328

329 **Proposal: Web feeds could be advocated when developing different informations**  
330 **systems.**

331

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

334

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

338

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

340

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

343

344 It can be noted, that different back-office systems (with a wide variety of different technologies) can  
345 implement RSS standards, and these RSS feeds can be used in the front-office systems. With this  
346 kind solutions front-office systems dont need direct system-to-system communications with back-  
347 office systems.

348

349

350

351 **Good luck!!!**

352

353 This opinion is quite limited. Hopefully there are other constructive ideas presented in other  
354 opinions. This remains to be seen.

355

356

357 [Continues on the next page]

1 <http://www.rssboard.org/rss-specification>, RSS 2.0 Specification

2 <https://en.wikipedia.org/wiki/RSS>, Wikipedia / RSS

3 [https://en.wikipedia.org/wiki/Atom\\_\(standard\)](https://en.wikipedia.org/wiki/Atom_(standard)), Wikipedia / Atom (standard)

4 <https://tools.ietf.org/html/rfc4287>, The Atom Syndication Format

5 <https://tools.ietf.org/html/rfc5023>, The Atom Publishing Protocol

358

**ANNEX 1**

359

360 My opinions to the previous and relevant consultations – there consultations were mostly organised  
361 by the European Commission. General page to all consultations – both in English and in Finnish:

362 <http://www.jukkarannila.fi/lausunnot.html>

363

364

365 My opinions to the previous and relevant consultations – there consultations were mostly organised  
366 by the European Commission.

367

368 EN: Opinion 1: Review of the rules on access to documents

369 [http://www.jukkarannila.fi/lausunnot.html#nro\\_1](http://www.jukkarannila.fi/lausunnot.html#nro_1)

370

371 EN: Opinion 2: Schools for the 21st Century

372 [http://www.jukkarannila.fi/lausunnot.html#nro\\_2](http://www.jukkarannila.fi/lausunnot.html#nro_2)

373

374 EN: Opinion 3: The future of pharmaceuticals for Human use in Europe- making Europe a Hub for  
375 Safe and Innovative medicines

376 [http://www.jukkarannila.fi/lausunnot.html#nro\\_3](http://www.jukkarannila.fi/lausunnot.html#nro_3)

377

378 EN: Opinion 5: Consumer Scoreboard, Questionnaire for stakeholders

379 [http://www.jukkarannila.fi/lausunnot.html#nro\\_5](http://www.jukkarannila.fi/lausunnot.html#nro_5)

380

381 EN: Opinion 6: Consultation on a Code of Conduct for Interest Representatives

382 [http://www.jukkarannila.fi/lausunnot.html#nro\\_6](http://www.jukkarannila.fi/lausunnot.html#nro_6)

383

384 EN: Opinion 8: European Interoperability Framework, version 2, draft

385 [http://www.jukkarannila.fi/lausunnot.html#nro\\_8](http://www.jukkarannila.fi/lausunnot.html#nro_8)

386

387 EN: Opinion 9: CAMSS: Common Assessment Method for Standards and Specifications, CAMSS  
388 proposal for comments

389 [http://www.jukkarannila.fi/lausunnot.html#nro\\_9](http://www.jukkarannila.fi/lausunnot.html#nro_9)

390

391 EN: Opinion 15: Collective Redress

392 [http://www.jukkarannila.fi/lausunnot.html#nro\\_15](http://www.jukkarannila.fi/lausunnot.html#nro_15)

393

394 EN: Opinion 17: Opinion to Antitrust Case No. COMP/C-3/39.530

395 [http://www.jukkarannila.fi/lausunnot.html#nro\\_17](http://www.jukkarannila.fi/lausunnot.html#nro_17)

396

397 EN: Opinion 18: Opinion Related to the Public Undertaking by Microsoft

398 [http://www.jukkarannila.fi/lausunnot.html#nro\\_18](http://www.jukkarannila.fi/lausunnot.html#nro_18)

399

400 EN: Opinion 19: Official Acknowledgement by the Commission

401 [http://www.jukkarannila.fi/lausunnot.html#nro\\_19](http://www.jukkarannila.fi/lausunnot.html#nro_19)

402

- 403 EN: Opinion 20: SECOND Opinion Related to the Public Undertaking by Microsoft  
404 [http://www.jukkarannila.fi/lausunnot.html#nro\\_20](http://www.jukkarannila.fi/lausunnot.html#nro_20)  
405
- 406 EN: Opinion 21: Opinion about the European Interoperability Strategy proposal  
407 [http://www.jukkarannila.fi/lausunnot.html#nro\\_21](http://www.jukkarannila.fi/lausunnot.html#nro_21)  
408
- 409 EN: Opinion 23: Public consultation on the review of the European Standardisation System  
410 [http://www.jukkarannila.fi/lausunnot.html#nro\\_23](http://www.jukkarannila.fi/lausunnot.html#nro_23)  
411
- 412 EN: Opinion 27: Public Consultation on the Modernisation of EU Public Procurement Policy  
413 [http://www.jukkarannila.fi/lausunnot.html#nro\\_27](http://www.jukkarannila.fi/lausunnot.html#nro_27)  
414
- 415 EN: Opinion 28: Consultation on the Europe 2020 Project Bond Initiative  
416 [http://www.jukkarannila.fi/lausunnot.html#nro\\_28](http://www.jukkarannila.fi/lausunnot.html#nro_28)  
417
- 418 EN: Opinion 30: Internet Filtering  
419 [http://www.jukkarannila.fi/lausunnot.html#nro\\_30](http://www.jukkarannila.fi/lausunnot.html#nro_30)  
420 NOTE: Organised by the European Committee for Standardization (CEN) <sup>6</sup>  
421
- 422 EN: Opinion 32: COMP/C-3/39.692/IBM – Maintenance services  
423 [http://www.jukkarannila.fi/lausunnot.html#nro\\_32](http://www.jukkarannila.fi/lausunnot.html#nro_32)  
424
- 425 EN: Opinion 34: REMIT Registration Format  
426 [http://www.jukkarannila.fi/lausunnot.html#nro\\_34](http://www.jukkarannila.fi/lausunnot.html#nro_34)  
427 NOTE: Organised by The Agency for the Cooperation of Energy Regulators (ACER) <sup>7</sup>  
428
- 429 EN: Opinion 35: Exploiting the employment potential of the personal and household services  
430 [http://www.jukkarannila.fi/lausunnot.html#nro\\_35](http://www.jukkarannila.fi/lausunnot.html#nro_35)  
431
- 432 EN: Opinion 37: CASE COMP/39.654 - Reuters instrument codes  
433 [http://www.jukkarannila.fi/lausunnot.html#nro\\_37](http://www.jukkarannila.fi/lausunnot.html#nro_37)  
434
- 435 EN: Opinion 39: Registry options to facilitate linking of emissions trading systems  
436 [http://www.jukkarannila.fi/lausunnot.html#nro\\_39](http://www.jukkarannila.fi/lausunnot.html#nro_39)  
437
- 438 EN: Opinion 40: Media Freedom and Pluralism / audiovisual regulatory bodies  
439 [http://www.jukkarannila.fi/lausunnot.html#nro\\_40](http://www.jukkarannila.fi/lausunnot.html#nro_40)  
440
- 441 EN: Opinion 41: AT.39398: observations on the proposed commitments  
442 [http://www.jukkarannila.fi/lausunnot.html#nro\\_41](http://www.jukkarannila.fi/lausunnot.html#nro_41)  
443
- 444 EN: Opinion 42: Opening up Education  
445 [http://www.jukkarannila.fi/lausunnot.html#nro\\_42](http://www.jukkarannila.fi/lausunnot.html#nro_42)

<sup>6</sup> <http://www.cen.eu/> (Accessed 2 July 2012)

<sup>7</sup> <http://www.acer.europa.eu/> (Accessed 2 July 2012)

- 446  
447 EN: Opinion 43: Publication of extracts of the European register of market participants  
448 [http://www.jukkarannila.fi/lausunnot.html#nro\\_43](http://www.jukkarannila.fi/lausunnot.html#nro_43)  
449 NOTE: Organised by The Agency for the Cooperation of Energy Regulators (ACER)  
450  
451 EN: Opinion 44: Evaluation policy guidelines  
452 [http://www.jukkarannila.fi/lausunnot.html#nro\\_44](http://www.jukkarannila.fi/lausunnot.html#nro_44)  
453  
454 EN: Opinion 45: About ICT standardisation  
455 [http://www.jukkarannila.fi/lausunnot.html#nro\\_45](http://www.jukkarannila.fi/lausunnot.html#nro_45)  
456  
457 EN: Opinion 46: Review of the EU copyright rules  
458 [http://www.jukkarannila.fi/lausunnot.html#nro\\_46](http://www.jukkarannila.fi/lausunnot.html#nro_46)  
459  
460 EN: Opinion 51: European Area of Skills and Qualifications  
461 [http://www.jukkarannila.fi/lausunnot.html#nro\\_51](http://www.jukkarannila.fi/lausunnot.html#nro_51)  
462  
463 EN: Opinion 52: Trusted Cloud Europe Survey  
464 [http://www.jukkarannila.fi/lausunnot.html#nro\\_52](http://www.jukkarannila.fi/lausunnot.html#nro_52)  
465  
466 EN: Opinion 53: Trade Reporting User Manual (TRUM) (Draft)  
467 [http://www.jukkarannila.fi/lausunnot.html#nro\\_53](http://www.jukkarannila.fi/lausunnot.html#nro_53)  
468 NOTE: Organised by The Agency for the Cooperation of Energy Regulators (ACER)  
469  
470 EN: Opinion 55: European Energy Regulation  
471 [http://www.jukkarannila.fi/lausunnot.html#nro\\_55](http://www.jukkarannila.fi/lausunnot.html#nro_55)  
472 NOTE: Organised by The Agency for the Cooperation of Energy Regulators (ACER)  
473  
474 EN: Opinion 59: Green paper on mobile Health  
475 [http://www.jukkarannila.fi/lausunnot.html#nro\\_59](http://www.jukkarannila.fi/lausunnot.html#nro_59)  
476  
477 EN: Opinion 60: Cross-border inheritance tax problems within the EU  
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497 NOTE: Organised by The Agency for the Cooperation of Energy Regulators (ACER)  
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500 [http://www.jukkarannila.fi/lausunnot.html#nro\\_74](http://www.jukkarannila.fi/lausunnot.html#nro_74)  
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503 EN: Opinion 80: Mandatory Transparency Register  
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512 EN: Opinion 88: Evaluation and Review of the ePrivacy Directive  
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519 EN: Opinion 93: Safety of apps and other non-embedded software  
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536 EN: Opinion 100: Protection of personal data (EU)

537 [http://www.jukkarannila.fi/lausunnot.html#nro\\_100](http://www.jukkarannila.fi/lausunnot.html#nro_100)

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539 EN: Opinion 101: Governance of the Energy Union

540 [http://www.jukkarannila.fi/lausunnot.html#nro\\_101](http://www.jukkarannila.fi/lausunnot.html#nro_101)

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542 EN: Opinion 102: Smart Wearables

543 [http://www.jukkarannila.fi/lausunnot.html#nro\\_102](http://www.jukkarannila.fi/lausunnot.html#nro_102)

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545 EN: Opinion 106: Review of the European Union Agency for Network and Information Security  
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547 [http://www.jukkarannila.fi/lausunnot.html#nro\\_106](http://www.jukkarannila.fi/lausunnot.html#nro_106)

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549 EN: Opinion 108: Single Digital Gateway

550 [http://www.jukkarannila.fi/lausunnot.html#nro\\_108](http://www.jukkarannila.fi/lausunnot.html#nro_108)

551

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553 My opinions to the previous and relevant consultations – there consultations were mostly organised  
554 by the European Commission. General page to all consultations – both in English and in Finnish:

555 <http://www.jukkarannila.fi/lausunnot.html>

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558 [Continues on the next page]

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**ANNEX 2**

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