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2 TO:
3 Directorate-General for Communications Networks, Content and Technology
4 European Commission
5

6 **References: 2018/0111 (COD) – COM(2018) 234 final**

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8 **Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE**
9 **COUNCIL on the re-use of public sector information (recast)**

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11
12 First of all, a lot of thanks to Directorate-General for Communications Networks, Content and
13 Technology for organising this important consultation.

14
15 This opinion represents an opinion of an individual citizen, not any legal entity.

16
17 This opinion does not contain:

- 18 – any business secrets
- 19 – any trade secrets
- 20 – any confidential information.

21
22 This opinion is public.

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

24
25 Annex 1 holds information about previous consultations at the European Union level.

26 Annex 2 holds information about disclaimers and copyright.

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30 Best Regards,

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33 Jukka S. Rannila
34 citizen of Finland

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36 signed electronically

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39 [Continues on the next page]
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Previous opinions

Annex 1 holds information about previous consultations and my previous opinions.

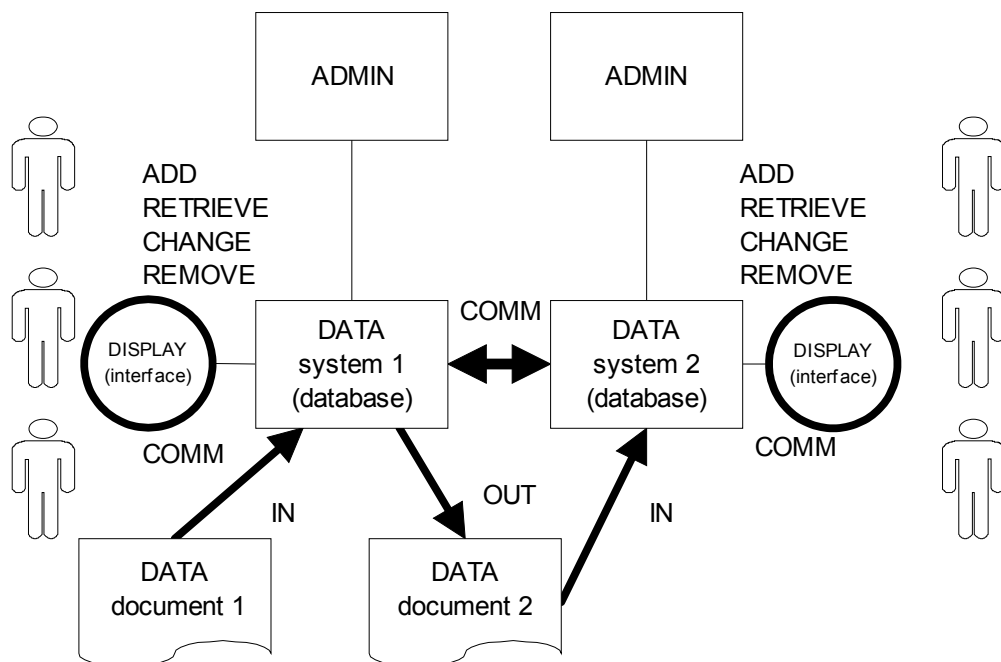
Here we can note that I have repeated the same issues based on previous consultations. Different units of the European Commission already know something about my previous opinions

Note: Previously I have sent opinions to some units of the Directorate-General for Communications Networks, Content and Technology.

Some notes about standards and standardisation

Based on consultation documents I concentrate only on standards and standardisation.

One presentation of information system



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Now we can add four basic functions, communication, displays, interfaces, users, documents, data and databases for describing an information system. Like the figure indicates, there are databases in different information systems. Then there are different documents for transmitting data between different systems. Here we can note especially following standardisation needs for different parts of an information system.

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

- 68 • four basic functions (add, retrieve, change, remove)
- 69 • administration of a system
- 70 • displays and interfaces
- 71 • direct communication between system (data)
- 72 • transferring documents between systems (data).

73

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

76

77 From this simple (figure) conception we can differentiate several standard classes:

78

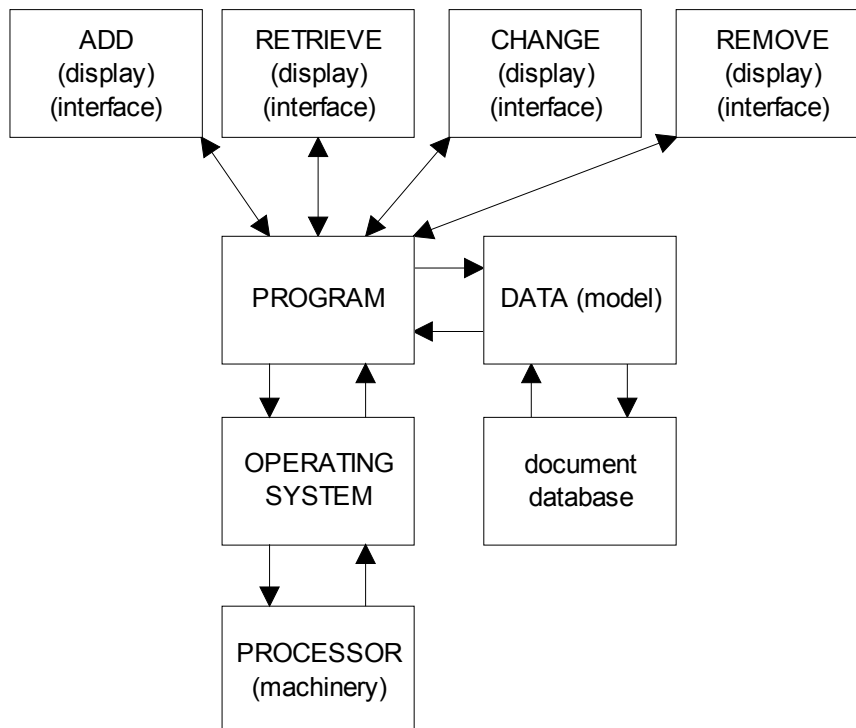
- 1) Data (documents) standards
- 79 2) Data (database) standards
- 80 3) Standards for adding data to a system.
- 81 4) Standards for retrieving data from a system.
- 82 5) Standards for changing data in a system.
- 83 6) Standards for removing data from a system.
- 84 7) Display standards
- 85 8) Interface standards
- 86 9) Different communication standards.

87

One presentation for information system

88

90 Following figure on the reflection paper is one conception of information system. I have presented
 91 the following figure as one conception of information system.



92

93 Generally speaking we have different techniques on the information technology field. Here we can
94 note that programs (most arrows) are in the middle of different information systems. Then programs
95 handle the data in a system (documents and/or databases). However we have to have one specific
96 program which is different – i.e. operating system. Operating systems handle connections with
97 machinery and processors. Generally speaking programs can work with an operating system and
98 developers of programs use different parts of an operating system.
99

100 **What this means to information systems?**

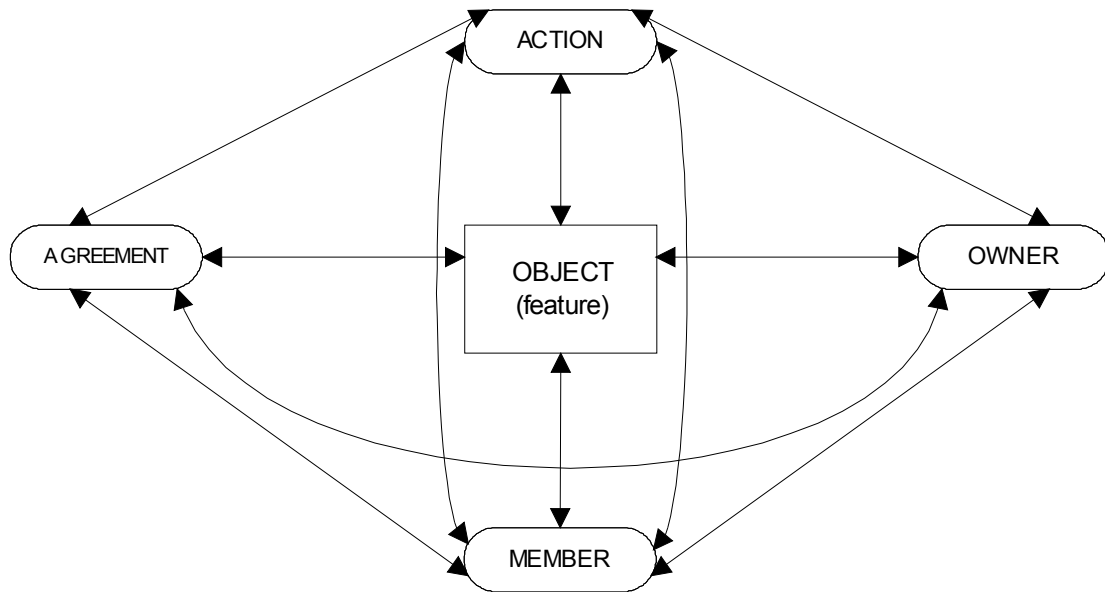
- 101 **1) There can be several processor (machinery) possibilities**
- 102 **2) There can be several operating systems possibilities**
- 103 **3) There can be several programs possibilities**
- 104 **4) Programs handle data in different ways**
- 105 **5) The data can modelled in different ways**
- 106 **6) There can documents and/or databases in different systems**
- 107 **7) There are always four basic functions (add, retrieve, change, remove).**
- 108 **8) There are several providers of different computer programs.**
- 109 **9) There are naturally competing programs.**
- 110 **10) Different programs comply with different standards.**

111
112 We have to note that data can have different models and data (models) are developed and/or used by
113 different stakeholders (four basic functions). Especially in databases there are possibilities for
114 several data models; depending on the modellers there can be different data models in databases.
115 Generally speaking changing data models can be very difficult in many cases.
116

117 **There can be some examples:**

- 118
- 119 **a) There could be some regulations for providing interfaces (private, public)**
- 120 **b) There could be some regulations for document formats (private, public)**
- 121 **c) There could be some regulations for transmitting data between different systems**
- 122 **d) There could be some regulations for using databases (private, public)**
- 123 **e) There could be some regulations for using programs (private, public)**
- 124 **f) There could be some regulations for retrieving information from different systems.**

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127 [Continues on the next page]
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Note: The relations between different aspects of information systems can result rather complicated (legal) network(s): i.e. Ownership, Membership, Agreement.

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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.

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.

[Continues on the next page]

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

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

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

Recital 28 (new)

Recital 28 (new) is following:

(28) In order to get access to the data opened for re-use by this Directive, the use of suitable and well-designed Application Programming Interfaces (APIs) is needed. An API describes the kind of data can be retrieved, how to do this and the format in which the data will be received. It has different levels of complexity and can mean a simple link to a database to retrieve specific datasets, a web interface, or more complex set-ups. **There is general value in re-using and sharing data via a suitable use of APIs as this will help developers and start-ups to create new services and products.** It is also a crucial ingredient of creating valuable ecosystems around data assets that are often unused. The set-up and use of API needs to be based on several principles: stability, maintenance over lifecycle, **uniformity of use and standards**, user-friendliness as well as security. For dynamic data, meaning frequently updated data, often in real time, public sector bodies and public undertakings shall make this available for re-use immediately after collection by ways of suitable APIs

182 Here we can note especially the following text: **uniformity of use and standards.**

183 Here we can especially the following text: **re-using and sharing data via a suitable use of APIs.**

184

185 **Recital 28 (new):**

186 **About different standards**

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188 I have proposed several times to use *open horizontal standards* when developing different
189 information systems.

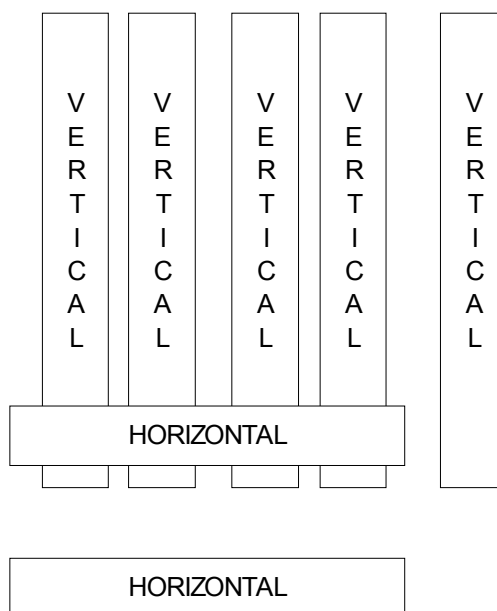
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191 **Favouring open standards / Favouring horizontal standards**

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193 There are differences between horizontal and vertical standards. A simple example is naturally
194 email solutions. There are several vertical standards when creating technically email solutions. Then
195 there are horizontal standards which enable sending messages between technically different email
196 solutions.

197



198

199

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

201

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

204

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

207

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

209

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

211

212 **Proposal: There could be different standardisation efforts to horizontal standards and**
213 **vertical standards**

214

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

217

218 Here we can note some problems:

219

- 220 • some systems are based on **de-facto** standards
- 221 • some systems are based on **de-jure** standards
- 222 • there can be confrontations between **de-facto** and **de-jure** standards
- 223 • there can be a monopoly situation in some domain
- 224 • some standards may inhibit possible actions of some stakeholders
- 225 • there can be a standard war on some domains
- 226 • standards have different life-cycles
- 227 • systems have different life-cycles
- 228 • there can be mismatches between different life-cycles
- 229 • there can be failed standards
- 230 • there can be deprecated standards.

231

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

236

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

243

244 There are different standards setting organisations on the information technology field. One list ¹ of
245 these standards setting organisations is provided by ConsortiumInfo.org.

246

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

250

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

253

1 Standard Setting Organizations and Standards List, www.consortiuminfo.org/links/linksall.php

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

256

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

258

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

261

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

264

265 **Proposal: Government agencies could financially support development of horizontal**
266 **standards.**

267

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

270

271 **Recital 28 (new):**

272 **About different Application Programming Interfaces (APIs)**

273 **Usage of different identifiers (ID) based on different Application Programming Interfaces**

274

275 Here we can note that different APIs can mean using different identifiers (ID).

276

277 **More and more new identifiers (ID)**

278

279 In previous consultations there has been discussion about different identifiers (ID) in different
280 information systems. It can be noted from the previous opinions that there will be several and
281 different identifiers (ID) for different levels.

282

283 Examples of these identifiers (ID) are following:

284

285 1) Facebook ID for an individual person

286 2) Facebook ID for the individual updates of individuals

287 3) Data Universal Numbering System (D-U-N-S)

288 4) Reuters instruments codes (RICs)

289 5) Social security code for individual citizens in the European Union member states

290 6) Business identity code for a company in an European Union member state

291 7) Value added tax code for a company in an European Union member state.

292

293 The examples of private identifiers (Facebook IDs, Data Universal Numbering System (D-U-N-S),
294 Reuters Instrumens Codes (RICs)) show, that persons and/or communities can use or even demand
295 of using identifiers (ID) from privately owned information systems.

296

297 **Proposal: There could be a systematic review of different identifiers (ID) at different**
298 **levels.**

299

300

Proposal: Possible systematic review of different identifiers (ID) should assess different situations.

301

302

303

Different information systems have also internal identifiers (ID) and external identifiers (ID) for (possible) public usage. The added value for different stakeholders is provided by combination of different identifiers (ID) in a specific information system.

306

307

Proposal: There could be some assessment(s) based on different versions of different identifiers (ID).

308

309

310

It can be possible, that there are some legacy identifiers (ID) in the near future. It can be possible, that gradually some legacy identifiers (ID) can be consolidated for more standardised identifiers (ID), but this consolidation means some serious technical and administrative actions.

313

314

Proposal: Legacy identifiers (ID) could be assessed seriously.

315

316

When information about relevant identifiers is collected, there could be a serious assessment of possible (near) monopoly situation of some identifiers. Depending on the nature of an identifier, there may be a need for serious (anti-trust?) negotiations with providers of some identifiers.

319

320

Proposal: The nature of different identifiers (ID) could be assessed.

321

322

Proposal: There could be serious negotiations with some providers of identifiers (ID).

323

324

In the European Union there has been different anti-trust cases which are related to different private sector identifiers (ID), since some of those private sector identifiers (ID) have been used in several other systems. Some private sector identifiers (ID) can mean a (near) monopoly situation.

327

328

Recital 31 (new)

329

330

Recital 31 (new) is following:

331

332

(31) A document should be considered to be in a machine-readable format if it is in a file format that is structured in such a way that software applications can easily identify, recognise and extract specific data from it. **Data encoded in files that are structured in a machine-readable format should be considered to be machine-readable data.** Machine-readable formats can be open or proprietary; they can be formal standards or not. Documents encoded in a file format that limits automatic processing, because the data cannot, or cannot easily, be extracted from them, should not be considered to be in a machine-readable format. Member States should where possible and appropriate encourage the use of open, machine-readable formats

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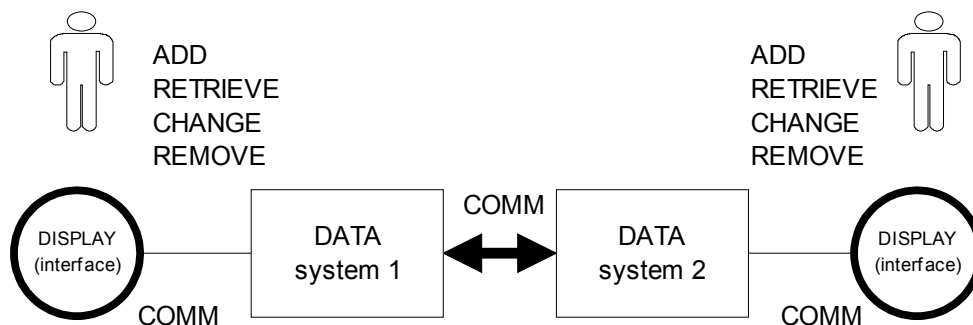
342

Here we can note that there can also be system-to-system connections.

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Proposal: This recital (31 new) could contain information about direct system-to-system connections (cf. previously mentioned issues).



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349

Previously we have noted electronic (standardised?) documents for transmitting data between systems. Here we can note that there can be several version for documents.

352

Proposal: This recital (31 new) could contain information different versions about electronic (standardised?) documents.

355

Usually development of different information systems means using several standards which can mean different versions of electronic (standardised?) documents.

358

359 Article 2 – Definitions - 128

360

Proposed article 2 contains following definition:

362

128. ‘formal open standard’ means a standard which has been laid down in written form, detailing specifications for the requirements on how to ensure software interoperability;

365

Here we can note following proposals for “**formal open standards**” based on previous text:

367

- standards are developed in cooperation with formal standardisation organisations
- formal standardisations organisation should be non-profit organisations
- standards are published without costs
- standards are available to all interested stakeholders without costs
- participation for formal standardisation development should be possible to all interested stakeholders

374

Proposal: Proposed article 2 (Definitions, 12) could contain information about cooperation, standardisation organisations and development of different standards.

376

378 Article 2 – Definitions - 6

379

380 Proposed article 2 contains following definition:

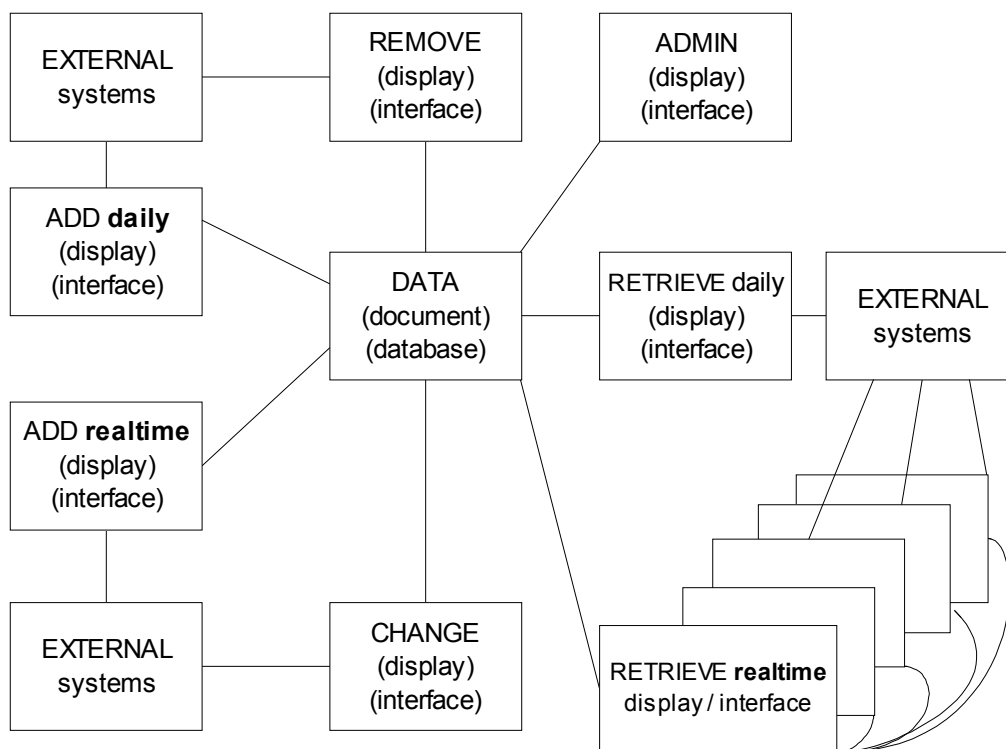
381

382 6. 'dynamic data' means documents in an electronic form, subject to frequent or realtime
383 updates;

384

385 Based on previous issues we can note some issues about frequent and/or realtime updates.

386



387

388

389 Like the figure indicated retrieving information is the most used functions. Retrieving information
390 can be real-time or daily (or other longer time frame). Like said before there can be direct system-
391 to-system connections or transmission of documents between different systems.

392

393 **Proposal: Proposed article 2 (Definitions, 6) could note that there can be other time
394 frames – not only frequent and/or real-time.**

395

396 **Proposal: There could be some mentions about different time frames based on direct
397 system-to-system connections.**

398

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

400



401

402

403 I have advocated usage of web feeds² on several previous opinion documents. Actually there are
404 two standards for web feeds: RSS^{3 4} and Atom^{5 6 7}.

405

406 **Proposal: Web feeds (RSS and/or Atom) could be advocated when developing different**
407 **informations systems (EU / Member states).**

408

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

411

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

415

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

417

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

420

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

425

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428 **Good luck!!!**

429

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

432

433

434 [Continues on the next page]

2 https://en.wikipedia.org/wiki/Web_feed

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

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

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

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

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

435

ANNEX 1

436

437 My opinions to the previous and relevant consultations – there consultations were mostly organised
438 by the European Commission. General page to all consultations – both in English and in Finnish:
439 <http://www.jukkarannila.fi/lausunnot.html>

440

441

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

444

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

446 http://www.jukkarannila.fi/lausunnot.html#nro_1

447

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

449 http://www.jukkarannila.fi/lausunnot.html#nro_2

450

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

453 http://www.jukkarannila.fi/lausunnot.html#nro_3

454

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

456 http://www.jukkarannila.fi/lausunnot.html#nro_5

457

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

459 http://www.jukkarannila.fi/lausunnot.html#nro_6

460

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

462 http://www.jukkarannila.fi/lausunnot.html#nro_8

463

464 EN: Opinion 9: CAMSS: Common Assessment Method for Standards and Specifications, CAMSS
465 proposal for comments

466 http://www.jukkarannila.fi/lausunnot.html#nro_9

467

468 EN: Opinion 15: Collective Redress

469 http://www.jukkarannila.fi/lausunnot.html#nro_15

470

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

472 http://www.jukkarannila.fi/lausunnot.html#nro_17

473

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

475 http://www.jukkarannila.fi/lausunnot.html#nro_18

476

477 EN: Opinion 19: Official Acknowledgement by the Commission

478 http://www.jukkarannila.fi/lausunnot.html#nro_19

479

- 480 EN: Opinion 20: SECOND Opinion Related to the Public Undertaking by Microsoft
481 http://www.jukkarannila.fi/lausunnot.html#nro_20
482
- 483 EN: Opinion 21: Opinion about the European Interoperability Strategy proposal
484 http://www.jukkarannila.fi/lausunnot.html#nro_21
485
- 486 EN: Opinion 23: Public consultation on the review of the European Standardisation System
487 http://www.jukkarannila.fi/lausunnot.html#nro_23
488
- 489 EN: Opinion 27: Public Consultation on the Modernisation of EU Public Procurement Policy
490 http://www.jukkarannila.fi/lausunnot.html#nro_27
491
- 492 EN: Opinion 28: Consultation on the Europe 2020 Project Bond Initiative
493 http://www.jukkarannila.fi/lausunnot.html#nro_28
494
- 495 EN: Opinion 30: Internet Filtering
496 http://www.jukkarannila.fi/lausunnot.html#nro_30
497 NOTE: Organised by the European Committee for Standardization (CEN) ⁸
498
- 499 EN: Opinion 32: COMP/C-3/39.692/IBM – Maintenance services
500 http://www.jukkarannila.fi/lausunnot.html#nro_32
501
- 502 EN: Opinion 34: REMIT Registration Format
503 http://www.jukkarannila.fi/lausunnot.html#nro_34
504 NOTE: Organised by The Agency for the Cooperation of Energy Regulators (ACER) ⁹
505
- 506 EN: Opinion 35: Exploiting the employment potential of the personal and household services
507 http://www.jukkarannila.fi/lausunnot.html#nro_35
508
- 509 EN: Opinion 37: CASE COMP/39.654 - Reuters instrument codes
510 http://www.jukkarannila.fi/lausunnot.html#nro_37
511
- 512 EN: Opinion 39: Registry options to facilitate linking of emissions trading systems
513 http://www.jukkarannila.fi/lausunnot.html#nro_39
514
- 515 EN: Opinion 40: Media Freedom and Pluralism / audiovisual regulatory bodies
516 http://www.jukkarannila.fi/lausunnot.html#nro_40
517
- 518 EN: Opinion 41: AT.39398: observations on the proposed commitments
519 http://www.jukkarannila.fi/lausunnot.html#nro_41
520
- 521 EN: Opinion 42: Opening up Education
522 http://www.jukkarannila.fi/lausunnot.html#nro_42

⁸ <http://www.cen.eu/> (Accessed 2 July 2012)

⁹ <http://www.acer.europa.eu/> (Accessed 2 July 2012)

- 523
- 524 EN: Opinion 43: Publication of extracts of the European register of market participants
- 525 http://www.jukkarannila.fi/lausunnot.html#nro_43
- 526 NOTE: Organised by The Agency for the Cooperation of Energy Regulators (ACER)
- 527
- 528 EN: Opinion 44: Evaluation policy guidelines
- 529 http://www.jukkarannila.fi/lausunnot.html#nro_44
- 530
- 531 EN: Opinion 45: About ICT standardisation
- 532 http://www.jukkarannila.fi/lausunnot.html#nro_45
- 533
- 534 EN: Opinion 46: Review of the EU copyright rules
- 535 http://www.jukkarannila.fi/lausunnot.html#nro_46
- 536
- 537 EN: Opinion 51: European Area of Skills and Qualifications
- 538 http://www.jukkarannila.fi/lausunnot.html#nro_51
- 539
- 540 EN: Opinion 52: Trusted Cloud Europe Survey
- 541 http://www.jukkarannila.fi/lausunnot.html#nro_52
- 542
- 543 EN: Opinion 53: Trade Reporting User Manual (TRUM) (Draft)
- 544 http://www.jukkarannila.fi/lausunnot.html#nro_53
- 545 NOTE: Organised by The Agency for the Cooperation of Energy Regulators (ACER)
- 546
- 547 EN: Opinion 55: European Energy Regulation
- 548 http://www.jukkarannila.fi/lausunnot.html#nro_55
- 549 NOTE: Organised by The Agency for the Cooperation of Energy Regulators (ACER)
- 550
- 551 EN: Opinion 59: Green paper on mobile Health
- 552 http://www.jukkarannila.fi/lausunnot.html#nro_59
- 553
- 554 EN: Opinion 60: Cross-border inheritance tax problems within the EU
- 555 http://www.jukkarannila.fi/lausunnot.html#nro_60
- 556
- 557 EN: Opinion 61: European Register of Products Containing Nanomaterials
- 558 http://www.jukkarannila.fi/lausunnot.html#nro_61
- 559
- 560 EN: Opinion 64: Corporate Social Responsibility - European Commission
- 561 http://www.jukkarannila.fi/lausunnot.html#nro_64
- 562
- 563 EN: Opinion 66: Net Innovation for the Work Programme 2016-2017
- 564 http://www.jukkarannila.fi/lausunnot.html#nro_66
- 565
- 566
- 567

- 568 EN: Opinion 68: European Network Code Stakeholder Committees
569 http://www.jukkarannila.fi/lausunnot.html#nro_68
570 NOTE: Organised by The Agency for the Cooperation of Energy Regulators (ACER)
571
572 EN: Opinion 71: Common Schema for the Disclosure of Inside Information
573 http://www.jukkarannila.fi/lausunnot.html#nro_71
574 NOTE: Organised by The Agency for the Cooperation of Energy Regulators (ACER)
575
576 EN: Opinion 74: Enabling the Internet of Things
577 http://www.jukkarannila.fi/lausunnot.html#nro_74
578 NOTE: Organised by Body of European Regulators for Electronic Communications (BEREC) ¹⁰
579
580 EN: Opinion 80: Mandatory Transparency Register
581 http://www.jukkarannila.fi/lausunnot.html#nro_80
582
583 EN: Opinion 84: Revision of the European Interoperability Framework
584 http://www.jukkarannila.fi/lausunnot.html#nro_84
585
586 EN: Opinion 86: 2016 Annual Colloquium on fundamental rights
587 http://www.jukkarannila.fi/lausunnot.html#nro_86
588
589 EN: Opinion 88: Evaluation and Review of the ePrivacy Directive
590 http://www.jukkarannila.fi/lausunnot.html#nro_88
591
592 EN: Opinion 89: BEREC Guidelines for net neutrality rules
593 http://www.jukkarannila.fi/lausunnot.html#nro_89
594 NOTE: Organised by Body of European Regulators for Electronic Communications (BEREC)
595
596 EN: Opinion 93: Safety of apps and other non-embedded software
597 http://www.jukkarannila.fi/lausunnot.html#nro_93
598
599 EN: Opinion 95: Targeted consultation on eForms
600 http://www.jukkarannila.fi/lausunnot.html#nro_95
601
602 EN: Opinion 97: COM(2016) 882 final - 2016/0408 (COD)
603 http://www.jukkarannila.fi/lausunnot.html#nro_97
604
605 EN: Opinion 98: Opinions related to six (6) co-decision (COD) proposals
606 http://www.jukkarannila.fi/lausunnot.html#nro_98
607
608 EN: Opinion 99: COM(2016)0863 - European Union Agency for the Cooperation of Energy
609 Regulators. Recast
610 http://www.jukkarannila.fi/lausunnot.html#nro_99
611

¹⁰ <http://www.berec.europa.eu>, Body of European Regulators for Electronic Communications (BEREC)

- 612 EN: Opinion 100: Protection of personal data (EU)
613 http://www.jukkarannila.fi/lausunnot.html#nro_100
614
- 615 EN: Opinion 101: Governance of the Energy Union
616 http://www.jukkarannila.fi/lausunnot.html#nro_101
617
- 618 EN: Opinion 102: Smart Wearables
619 http://www.jukkarannila.fi/lausunnot.html#nro_102
620
- 621 EN: Opinion 106: Review of the European Union Agency for Network and Information Security
622 (ENISA)
623 http://www.jukkarannila.fi/lausunnot.html#nro_106
624
- 625 EN: Opinion 108: Single Digital Gateway
626 http://www.jukkarannila.fi/lausunnot.html#nro_108
627
- 628 EN: Opinion 110: Technical arrangements / Information systems / Union Customs Code
629 http://www.jukkarannila.fi/lausunnot.html#nro_110
630
- 631 EN: Opinion 111: Interoperability of information systems for migration and security
632 http://www.jukkarannila.fi/lausunnot.html#nro_111
633
- 634 EN: Opinion 113: Transform of health and care
635 http://www.jukkarannila.fi/lausunnot.html#nro_113
636
- 637 EN: Opinion 114: Premium content on ECS markets and the effect of devices on the open use of the
638 Internet
639 http://www.jukkarannila.fi/lausunnot.html#nro_114
640 NOTE: Organised by Body of European Regulators for Electronic Communications (BEREC)
641
- 642 EN: Opinion 118: Fake news and online disinformation
643 http://www.jukkarannila.fi/lausunnot.html#nro_118
644
- 645 EN: Opinion 119: European Social Security Number
646 http://www.jukkarannila.fi/lausunnot.html#nro_119
647
- 648 EN: Opinion 120: European Labour Authority
649 http://www.jukkarannila.fi/lausunnot.html#nro_120
650
- 651 EN: Opinion 121: 2nd Data Package
652 http://www.jukkarannila.fi/lausunnot.html#nro_121
653
- 654 EN: Opinion 122: Proposal to create a cybersecurity competence network with a European
655 Cybersecurity Research and Competence Centre
656 http://www.jukkarannila.fi/lausunnot.html#nro_122

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