Jukka S. RannilaOPINION1 (17)www.jukkarannila.fi4 April 2017Public / WWW

TO: European Commission Review of the European Union Agency for Network and Information Security (ENISA) 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]

Jukka S. RannilaOPINION2 (17)

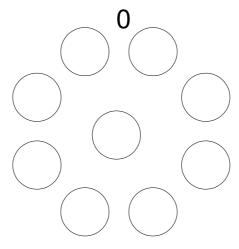
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Many issues are repeated based on previous consultations

Annex 1 holds information about previous consultations. Here we can note that many issues have been repeated. For this consultation (Review of the European Union Agency for Network and Information Security (ENISA)) we can highlight some issues based on previous consultations.

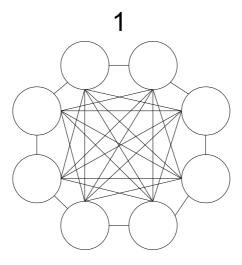
Possible reality / Several systems without connections to other systems

The current reality (0) is that there can several systems which are not connected to other systems. However in the future there can be several ways for cooperation between systems. The problem in the future may be very complex system-to-system (1) connections.



Possible reality: Several systems without connections

Possible future: Very complex system-to-system relations and/or several connections



Possible future: Very complex system-to-system relations and/or several connections

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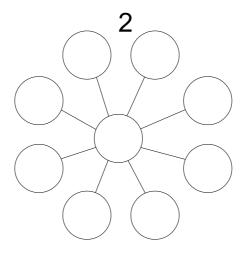
Generally speaking these many-to-many connections can work quite well when there are not changes in different systems. The problem arises when there are changes in one system since one change can affect several other systems.

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Based this problem there are in many cases one central system (2) which can handle cooperation between different (sub)systems. The problem with this option is the failure of the central system and this can lead to unwanted outage of several (sub)systems.

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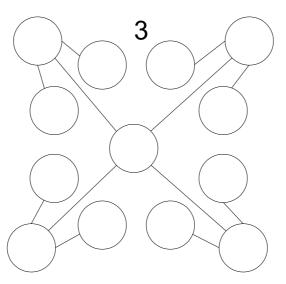
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One central system

66 67 68 One option (3) is to have a hierarchy between different system. In this way there cab some systems which are not connected to the central system. With this approach not all (sub)systems face the same problem with a failure in the central system.

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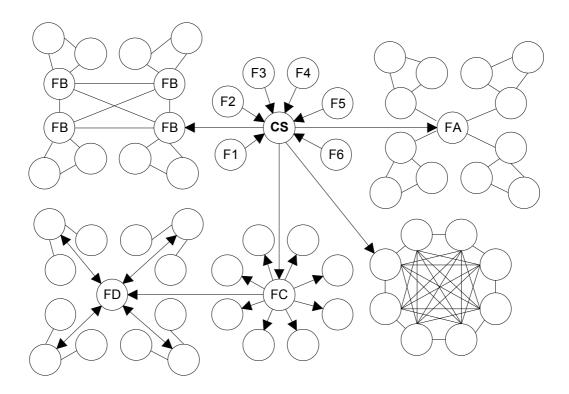
Possible future: Some systems are organised into a hierarchical structure

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Complex networks of different systems?

The reality: There will be several layered systems developed by several stakeholder communities (both for-profit and non-profit communities).



 Here we can note that there can some central systems (CS) and information from those central systems can be distributed to several other systems. In reality the added value for users (citizens and different legal entities) is achieved by combining different systems to provide different services.

We can note that there can several formats (e.g. 1-6, A-D) for transmitting information from some central (CS) information system. Some formats may be non-standard or standard.

Proposal: There could be some efforts for developing some central systems.

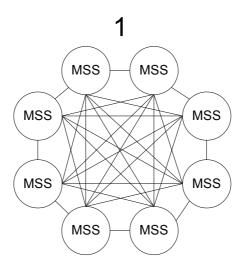
The practical reality is that there will be several central systems – not all-powerful one central system.

Proposal: There could be some efforts for standardising different central systems.

Complexity on the European Union level

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MSS = Member State System

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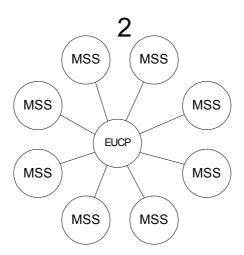
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There are 28 member states (European Union) at the moment. In reality there are unique situations with information systems in different member states. In some cases information systems can be implemented based on complex system-to-system connections. Complex system-to-system connections means a lot of work when there are changes in some systems.

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Proposal: Complex system-to-system connections implemented in information systems could be assessed carefully.

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MSS = Member State System EUCP = European Contact Point

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One option is to have a single European contact point for member state systems. Here we can calculate connections based on number of information systems.

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116	1×28 member state systems = 28 systems
117	5×28 member state systems = 140 systems
118	10×28 member state systems = 280 systems
119	15×28 member state systems = 420 systems
120	20×28 member state systems = 560 systems.
121	28×30 member state systems = 840 systems

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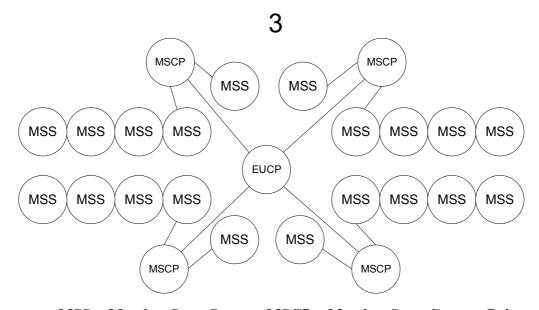
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Here we can note that there can be hierarchy between different system (EU \leftrightarrow member states) and there can be member state contact points (MCP). Then there can be some hierarchy between different systems. (EU \leftrightarrow EUCP \leftrightarrow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

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MSS = Member State System, MSCP = Member State Contact Point, EUCP = European Contact Point

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Based on those calculations there could be a lot of direct connections to the European contact point. Number of those connections can be overwhelming. The situation between member states can vary in many ways. So there can different and unique systems between member states.

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I have proposed several times creation of member state contact points which could handle different system-to-system connections on member state level. Then it can be easier to create connections between member state contact points and European contact point.

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Proposal: There could be one information system (member state contact point) on member state level.

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Proposal: Different member state systems could be consolidated based on limited

www.jukkarannila.fi 4 April 2017 Public / WWW 145 number system-to-system connections. 146 147 Proposal: One information system (member state contact point) on member state level could handle system-to-system connections on the European Union level (European 148 149 contact point). 150 151 Possible global connections 152 153 Here we can note that there can be global contact point for different issues. 154 155 Proposal: There could be assessments about global contact points for different issues. 156 157 Proposal: There could be assessments about cooperation between global contact 158 point(s) and European contact point(s). 159 In reality there are several information systems related to global security issues. Consolidating with 160 different global systems means some practical efforts on the European Union level. 161

OPINION

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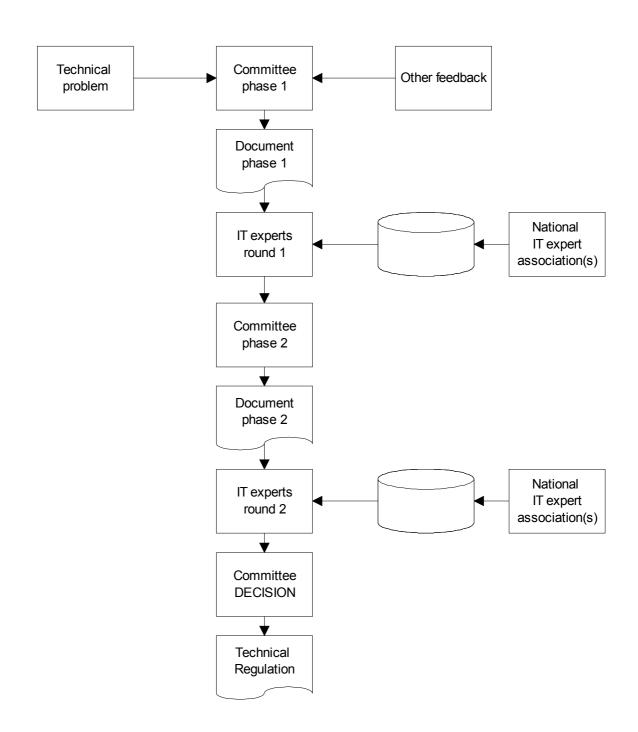
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Based on previous opinions a process model for technical consultations can be presented. It could be possible to inform members of different (national) information technology experts associations about different technical consultations. There can different technical problems when developing different information systems.

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Proposal: Members of different (national) information technology experts associations could be informed about different consultations based on different technical problems

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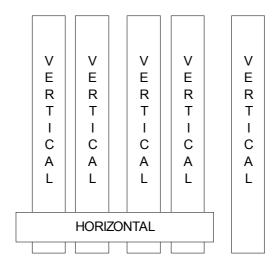
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when developing different (public sector) information systems.

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Favouring open standards / Favouring horizontal standards



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

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

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

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

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

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

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

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

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Here we can note some problems:

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- some systems are based on **de-facto** standards
- some systems are based on **de-jure** standards
 - there can be confrontations between **de-facto** and **de-jure** standards
 - there can be a monopoly situation in some domain
 - some standards may inhibit possible actions of some stakeholders
 - there can be a standard war on some domains
 - standards have different life-cycles
 - systems have different life-cycles
 - there can be mismatches between different life-cycles
 - there can be failed standards
 - there can be deprecated standards.

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

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

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

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I have advocated usage of web feeds on several previous opinion documents.

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

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

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

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

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Actually there are two standards for web feeds: RSS ^{1 2} and ^{3 4 5} Atom.

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

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

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Some final notes

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Different activities of European Union Agency for Network and Information Security (ENISA) can be seriously reviewed.

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Based on previous opinions and proposals there can be well-defined roles for ENISA for advancing information security on the European Union level.

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Good luck!!!

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

^{1 &}lt;a href="http://www.rssboard.org/rss-specification">http://www.rssboard.org/rss-specification, RSS 2.0 Specification

^{2 &}lt;a href="https://en.wikipedia.org/wiki/RSS">https://en.wikipedia.org/wiki/RSS, Wikipedia / RSS

³ 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

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271 272	ANNEX 1			
273 274 275 276 277	My opinions to the previous and relevant consultations – there consultations were mostly organised by the European Commission. General page to all consultations – both in English and in Finnish: http://www.jukkarannila.fi/lausunnot.html			
278 279 280	My opinions to the previous and relevant consultations – there consultations were mostly organised by the European Commission.			
281 282 283	EN: Opinion 1: Review of the rules on access to documents http://www.jukkarannila.fi/lausunnot.html#nro_1			
284 285 286	EN: Opinion 2: Schools for the 21st Century http://www.jukkarannila.fi/lausunnot.html#nro_2			
287 288 289	EN: Opinion 3: The future of pharmaceuticals for Human use in Europe- making Europe a Hub for Safe and Innovative medicines http://www.jukkarannila.fi/lausunnot.html#nro_3			
290291292293	EN: Opinion 5: Consumer Scoreboard, Questionnaire for stakeholders http://www.jukkarannila.fi/lausunnot.html#nro_5			
294 295 296	EN: Opinion 6: Consultation on a Code of Conduct for Interest Representatives http://www.jukkarannila.fi/lausunnot.html#nro_6			
297 298 299	EN: Opinion 8: European Interoperability Framework, version 2, draft http://www.jukkarannila.fi/lausunnot.html#nro_8			
300 301 302	EN: Opinion 9: CAMSS: Common Assessment Method for Standards and Specifications, CAMSS proposal for comments http://www.jukkarannila.fi/lausunnot.html#nro-9			
303 304 305	EN: Opinion 15: Collective Redress http://www.jukkarannila.fi/lausunnot.html#nro 15			
306 307 308	EN: Opinion 17: Opinion to Antitrust Case No. COMP/C-3/39.530 http://www.jukkarannila.fi/lausunnot.html#nro_17			
309 310 311	EN: Opinion 18: Opinion Related to the Public Undertaking by Microsoft http://www.jukkarannila.fi/lausunnot.html#nro_18			
312 313 314 315	EN: Opinion 19: Official Acknowledgement by the Commission http://www.jukkarannila.fi/lausunnot.html#nro_19			

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316 EN: Opinion 20: SECOND Opinion Related to the Public Undertaking by Microsoft

http://www.jukkarannila.fi/lausunnot.html#nro_20

317318

319 EN: Opinion 21: Opinion about the European Interoperability Strategy proposal

320 http://www.jukkarannila.fi/lausunnot.html#nro 21

321

322 EN: Opinion 23: Public consultation on the review of the European Standardisation System

323 http://www.jukkarannila.fi/lausunnot.html#nro 23

324

325 EN: Opinion 27: Public Consultation on the Modernisation of EU Public Procurement Policy

326 http://www.jukkarannila.fi/lausunnot.html#nro 27

327

328 EN: Opinion 28: Consultation on the Europe 2020 Project Bond Initiative

329 http://www.jukkarannila.fi/lausunnot.html#nro 28

330

331 EN: Opinion 30: Internet Filtering

332 http://www.jukkarannila.fi/lausunnot.html#nro 30

NOTE: Organised by the European Committee for Standardization (CEN) ⁶

334

335 EN: Opinion 32: COMP/C-3/39.692/IBM – Maintenance services

336 http://www.jukkarannila.fi/lausunnot.html#nro 32

337

338 EN: Opinion 34: REMIT Registration Format

339 http://www.jukkarannila.fi/lausunnot.html#nro 34

NOTE: Organised by The Agency for the Cooperation of Energy Regulators (ACER) ⁷

341

EN: Opinion 35: Exploiting the employment potential of the personal and household services

343 http://www.jukkarannila.fi/lausunnot.html#nro 35

344

345 EN: Opinion 37: CASE COMP/39.654 - Reuters instrument codes

346 http://www.jukkarannila.fi/lausunnot.html#nro 37

347

348 EN: Opinion 39: Registry options to facilitate linking of emissions trading systems

349 http://www.jukkarannila.fi/lausunnot.html#nro 39

350

351 EN: Opinion 40: Media Freedom and Pluralism / audiovisual regulatory bodies

352 http://www.jukkarannila.fi/lausunnot.html#nro_40

353

EN: Opinion 41: AT.39398: observations on the proposed commitments

355 http://www.jukkarannila.fi/lausunnot.html#nro 41

356

357 EN: Opinion 42: Opening up Education

358 http://www.jukkarannila.fi/lausunnot.html#nro 42

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

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

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359 360 EN: Opinion 43: Publication of extracts of the European register of market participants 361 http://www.jukkarannila.fi/lausunnot.html#nro 43 NOTE: Organised by The Agency for the Cooperation of Energy Regulators (ACER) 362 363 364 EN: Opinion 44: Evaluation policy guidelines http://www.jukkarannila.fi/lausunnot.html#nro 44 365 366 EN: Opinion 45: About ICT standardisation 367 http://www.jukkarannila.fi/lausunnot.html#nro 45 368 369 370 EN: Opinion 46: Review of the EU copyright rules http://www.jukkarannila.fi/lausunnot.html#nro 46 371 372 373 EN: Opinion 51: European Area of Skills and Qualifications http://www.jukkarannila.fi/lausunnot.html#nro 51 374 375 376 EN: Opinion 52: Trusted Cloud Europe Survey http://www.jukkarannila.fi/lausunnot.html#nro 52 377 378 379 EN: Opinion 53: Trade Reporting User Manual (TRUM) (Draft) http://www.jukkarannila.fi/lausunnot.html#nro 53 380 381 NOTE: Organised by The Agency for the Cooperation of Energy Regulators (ACER) 382 383 EN: Opinion 55: European Energy Regulation http://www.jukkarannila.fi/lausunnot.html#nro 55 384 385 NOTE: Organised by The Agency for the Cooperation of Energy Regulators (ACER) 386 387 EN: Opinion 59: Green paper on mobile Health http://www.jukkarannila.fi/lausunnot.html#nro 59 388 389 390 EN: Opinion 60: Cross-border inheritance tax problems within the EU 391 http://www.iukkarannila.fi/lausunnot.html#nro 60 392 393 EN: Opinion 61: European Register of Products Containing Nanomaterials 394 http://www.jukkarannila.fi/lausunnot.html#nro 61 395 396 EN: Opinion 64: Corporate Social Responsibility - European Commission http://www.jukkarannila.fi/lausunnot.html#nro 64 397 398

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http://www.jukkarannila.fi/lausunnot.html#nro 66

EN: Opinion 66: Net Innovation for the Work Programme 2016-2017

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404 EN: Opinion 68: European Network Code Stakeholder Committees

- 405 http://www.jukkarannila.fi/lausunnot.html#nro 68
- 406 NOTE: Organised by The Agency for the Cooperation of Energy Regulators (ACER)

407

- 408 EN: Opinion 71: Common Schema for the Disclosure of Inside Information
- 409 http://www.jukkarannila.fi/lausunnot.html#nro_71
- 410 NOTE: Organised by The Agency for the Cooperation of Energy Regulators (ACER)

411

- 412 EN: Opinion 74: Enabling the Internet of Things
- 413 http://www.jukkarannila.fi/lausunnot.html#nro 74
- 414 NOTE: Organised by Body of European Regulators for Electronic Communications (BEREC) ⁸

415

- 416 EN: Opinion 80: Mandatory Transparency Register
- 417 http://www.jukkarannila.fi/lausunnot.html#nro 80

418

- 419 EN: Opinion 84: Revision of the European Interoperability Framework
- 420 http://www.jukkarannila.fi/lausunnot.html#nro 84

421

- 422 EN: Opinion 86: 2016 Annual Colloquium on fundamental rights
- 423 http://www.jukkarannila.fi/lausunnot.html#nro 86

424

- 425 EN: Opinion 88: Evaluation and Review of the ePrivacy Directive
- 426 http://www.jukkarannila.fi/lausunnot.html#nro 88

427

- 428 EN: Opinion 89: BEREC Guidelines for net neutrality rules
- 429 http://www.jukkarannila.fi/lausunnot.html#nro 89
- 430 NOTE: Organised by Body of European Regulators for Electronic Communications (BEREC)

431

- 432 EN: Opinion 93: Safety of apps and other non-embedded software
- 433 http://www.jukkarannila.fi/lausunnot.html#nro 93

434

- 435 EN: Opinion 95: Targeted consultation on eForms
- 436 http://www.jukkarannila.fi/lausunnot.html#nro 95

437

- 438 EN: Opinion 97: COM(2016) 882 final 2016/0408 (COD)
- 439 http://www.jukkarannila.fi/lausunnot.html#nro 97

440

- 441 EN: Opinion 98: Opinions related to six (6) co-decision (COD) proposals
- 442 http://www.jukkarannila.fi/lausunnot.html#nro 98

443

- 444 EN: Opinion 99: COM(2016)0863 European Union Agency for the Cooperation of Energy
- 445 Regulators. Recast
- 446 http://www.jukkarannila.fi/lausunnot.html#nro 99

447

8 http://www.berec.europa.eu, BEREC

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})	EN: Opinion 100: Protection of personal data (EU)				
) - }	http://www.jukkarannila.fi/lausunnot.html#nro_100 EN: Opinion 101: Governance of the Energy Union http://www.jukkarannila.fi/lausunnot.html#nro_101				
ļ. 5	EN: Opinion 102: Smart Wearables http://www.jukkarannila.fi/lausunnot.html#nro_102				
})					
) -	My opinions to the previous and relevant consultations – there consultations were mostly organised by the European Commission. General page to all consultations – both in English and in Finnish: http://www.jukkarannila.fi/lausunnot.html				

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ANNEX 2

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473 actor making those actions.

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9 Based on the Finnish three-party system there is a phenomenon called extreme-centre in Finland. The 2011 parliamentary elections in Finland challenged the three-party system, since three "old" parties were not traditionally as the three largest parties. On 2015 this "new" party is part of the current Finnish Government. We all must be interested about this new development in Finland.