1
2
3   European Commission
4   Directorate-General for Informatics
5   DIGIT/01 - European eGovernement services (IDABC)
6   B-1049 Brussels
7
8
9   PUBLIC CONSULTATION ON EUROPEAN INTEROPERABILITY STRATEGY
10
11   First of all, it is important that IDABC unit has given a public and fair possibility to
12   comment the European Interoperability Strategy (EIS) proposal.
13
14
15   This Opinion does not contain any business or trade secrets.
16
17   This Opinion is public and can be published in the dedicated web site of the consultation
18   results.
19
20
21   Annex 1 holds information of copyright, licence and disclaimer.
22
23
24   Best Regards,
25
26
27
28   Jukka Rannila
29   citizen of Finland
30
31   signed electronically
32
33

34
35 **Question Group 1**
36
37 Questions:
38   a) How to raise awareness on interoperability and on the link between interoperability,
39   European Public Services and the successful implementation of EU policies?
40   b) Whom to address and how?
41
42 My Opinion to Question Group 1
43
44   I separate some groups, which could be influential to raise awareness of interoperability:
45
46   1.   national IT experts associations
47   2.   think tanks
48   3.   parliamentary committees responsible for IT matters
49   4.   joint meetings/seminars for political party activists.
50
51   1.
52   To my mind, members of national IT experts associations can provide valuable feedback,
53   when dealing with technical matters related to interoperability. First of all, it can be said that
54   national IT experts associations crave for interesting seminars/workshops for their members.
55   It is also possible to distribute electronic questionnaires to members of national IT experts
56   associations.
57
58   National IT experts associations and their members can provide valuable information of
59   market situation and future development, if the possible electronic questionnaires are well
60   defined.
61
62   My analysis is, that many IT experts are willing to contribute to these questionnaires, since
63   they are interested in reducing wasteful spending related to the information systems in
64   Member States and in the European Union.
65
66   2.
67   There is a wide variety of different thinks tanks. Fact of the matter is that (so called) new
68   ideas disperse to political process through different think tank publications. Generally
69   speaking, politicians are the last resource for new ideas. And in practical matters, it
70   sometimes safer for politicians, if a new (so called) idea is proposed to the general public
71   discussion by someone else than a politician.
72
73   It is of course unfortunate, that politicians are the last resource for new ideas, but we have to
74   live with the situation. With think tanks there are always some ethical problems, but we have
75   to live with the situation.
76
77   In practical terms, interoperability can be endorsed in different meetings/seminars, which are
78   organised by think tanks. If interoperability is viewed as an important topic, there will be

79   policy briefs about interoperability. When there are policy briefs about interoperability,
80   politicians and other stakeholders can grasp to these "new" ideas.
81
82   3.
83   Since politicians are the last resource for new ideas, there must idea presentation
84   meetings/seminars for parliamentary committees responsible for IT matters. In practical
85   terms the content of the meetings/seminars must be so compelling, that there is wide interest
86   to participate to these meetings/seminars.
87
88   Also it should be noted, that these meetings/seminars should be open for general public, and
89   meetings/seminars should be archived to the information networks (e.g. internet).
90
91   4.
92   Joint meetings/seminars for political party activists are worth considering, since generally
93   speaking political parties crave for interesting seminars/workshops for their members; in
94   practical terms annual compulsory administrative meetings are not always highly valued,
95   and there is need for interesting seminars/workshops accompanied to these meetings.
96
97
98   [Continues on the next page]
99

100
101   **Question Group 2**
102
103   Questions:
104   a) How to improve semantic interoperability?
105   b) How to ensure the active participation of all relevant stakeholders in the process?
106   c) When to go for formal standardisation?
107
108   My Opinion to Question Group 2
109
110   First of all there are at least three ways to have (semantic) interoperability:
111
112   1.   system-to-system interoperability
113   2.   system-to-integrator interoperability
114   3.   integrator-to-integrator interoperability.
115
116   1.
117   The first situation would be that all Member State systems (MSS) would be integrated to in
118   system-to-system solution. We can give the following simplified figure to describe this
119   situation.
120
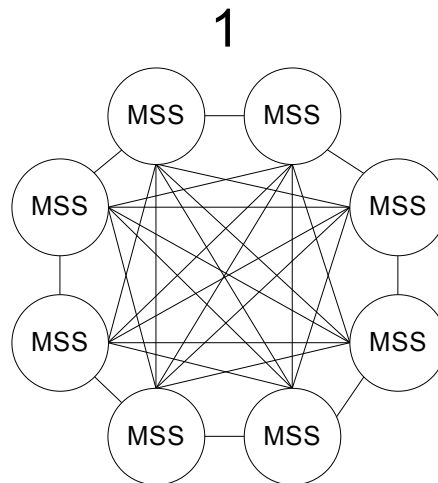
121
122
123   In this scenario all Members States Systems (MSSs) would be integrated one-to-one.
124   Without going to details, it can be said, that this solution would be the most cumbersome
125   and least efficient solution.
126
127   2.
128   The next solution would be that there is a an integrating connection point, which we call
129   European Contact Point (EUCP). The problem with this solution is, that there would be
130   enormous amount of integration solutions for this European Contact Point (EUCP).
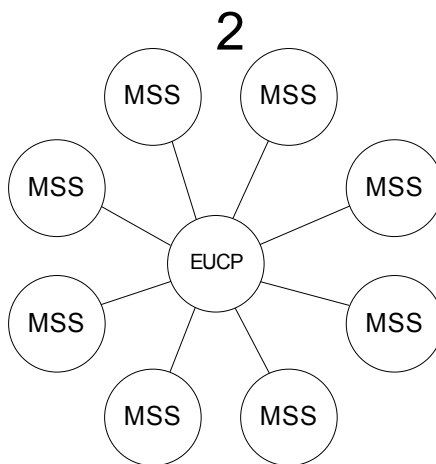
2

131
132
133   3.
134   Therefore we present the integrator-to-integrator interoperability as a feasible solution.
135

3
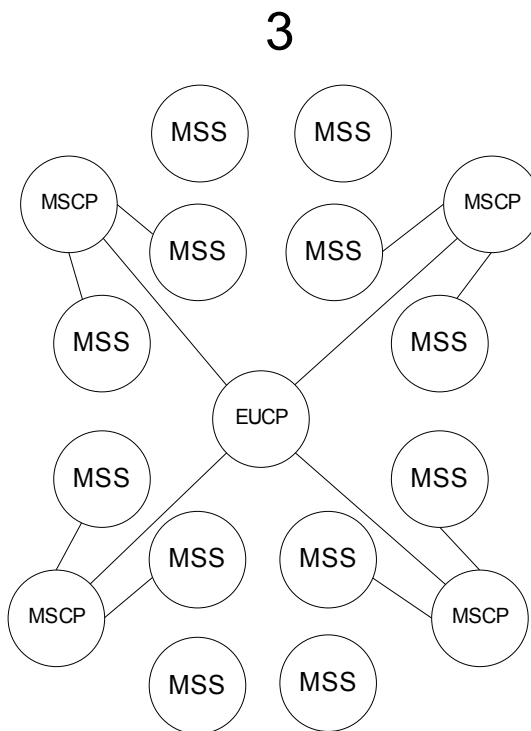
136
137
138   MSS = Member State system
139   MSCP = Member State Contact Point
140   EUCP = European Contact Point
141
142   So, there is Member State Connect Point (MSCP), which integrates member state systems

143   (MSSs), and this Member State Connect Point (MSCP) integrates to the European Contact
144   Point (EUCP).
145
146   In reality there are a huge collection of different Member State Systems (MSSs), which are
147   constructed with wide variety of technologies. Therefore it more feasible, that Member State
148   Systems (MSSs) are made to interoperate first, since it easier to have integrator-integrator
149   connection afterwards.
150
151   Standards? - Did I mention Standards? Interoperability is impossible without standards. This
152   will lead us to the following possibilities:
153
154   1.   Member states agree on EU-wide (semantic) interoperability standard(s).
155   2.   Member states agree on using an existing standard.
156   3.   Member states agree on creating an EU variant of an existing standard.
157   4.   Member states apply for creation of a standard to standards developing
158   organisation.
159
160   1.
161   One way is, that member states agree on EU-wide (semantic) interoperability standard(s).
162   The problem is, that possible and better global standards may evolve during unforeseen
163   future, and EU-wide standards may constitute severe problems afterwards.
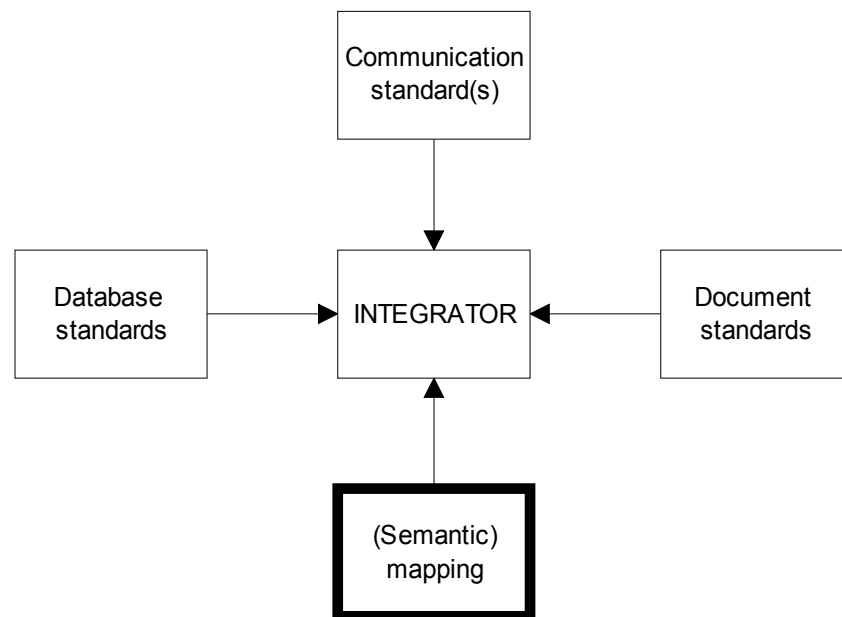164
165   2.
166   An easy way is to accept an existing standard. The problem with these are, that market
167   situation may change, and afterwards the selected standard is obsolete and it is a
168   cumbersome problem.
169
170   3.
171   A EU-wide variant of a (semantic) interoperability standard may be a short-sighted solution,
172
173   4.
174   Creation of totally new standard(s) is very tedious, since standardisation of information
175   technology requires unimaginable level of detail. Therefore applying for creation of a
176   standard can mean years of development.
177
178   Faced with these dilemmas, we need some other solutions.
179
180   In the following figure there is a simplification of the solution.
181

```
                    ┌─────────────────┐
                    │  Communication  │
                    │   standard(s)   │
                    └─────────────────┘
                             │
                             ▼
┌──────────────┐    ┌─────────────────┐    ┌──────────────┐
│  Database    │───▶│   INTEGRATOR    │◀───│  Document    │
│  standards   │    │                 │    │  standards   │
└──────────────┘    └─────────────────┘    └──────────────┘
                             ▲
                             │
                    ┌─────────────────┐
                    ┃   (Semantic)    ┃
                    ┃    mapping      ┃
                    ┗━━━━━━━━━━━━━━━━━┛
```

182
183
184   The practical reality is, that most certainly there will be wrong selections for standards, and
185   therefore in the integration solution there must be a possibility to adapt new standards
186   afterwards.
187
188   The main issue is to select an integration solution, which can
189   –   can add database standards after initiation of the integration system
190   –   can add document standards after initiation of the integration system
191   –   can add communication standards after initiation of the integration system.
192   There are several open source and closed source integration solutions in the market.
193
194   The only certain thing is, that there is need for (semantic) mapping of different systems.
195
196   The answer(s)??? There is no single answer, what to do with (semantic) interoperability
197   standards. The only way is to assess the situation with large enough amount of stakeholders.
198
199   The solution??
200
201   The most feasible solution to my mind is to have **written agreements with different**
202   **stakeholders**, that they are committed to provide feedback to different standards, when
203   these standards are evaluated during (integration) system development. There could be
204   following groups:
205   –   governmental units
206   –   companies
207   –   trade/business associations
208   –   IT experts associations
209   –   members of academia

210   –   private persons.
211   For governmental units, companies and trade/business associations it could be said, that they
212   can take care of their own costs, since they have vested interests with standards.
213
214   For academia and private persons there could be some compensation measures, since private
215   persons and academia may not have similar resources as governmental units, companies and
216   trade/business associations.
217
218   I have been thinking, that possibly members of academia and private persons could formally
219   apply as officially committed stakeholder with written agreement. It is matter of evaluating
220   credentials of these members of academia and private persons; i.e. if they are really capable
221   to evaluate highly complicated information technology standards. In the case of some
222   complicated standard, the amount of work is considerable and is not well-respected work.
223
224   Of course there should be the normal public possibility to all interested stakeholders to take
225   part in consultations, even if there is not the written agreement(s).
226
227
228   [Continues on the next page]
229

230
231   **Question Group 3**
232
233   Questions:
234   a) How to create favourable conditions for the sharing of the information available in the
235   base registers maintained today for public administration purposes?
236   b) How to allow wider use of this information while ensuring security and privacy?
237
238   My Opinion to Question Group 3
239
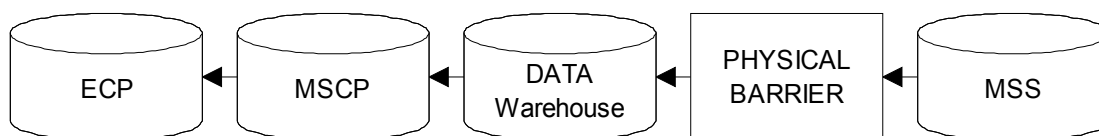240   The main issue here is to make differentiation with the following:
241   –   operational systems
242   –   data warehouse systems.
243   The best way to keep things simple is to have a physical barrier between these two system
244   information system classes.
245

246
247
248   ECP = European Contact Point
249   MSCP = Member State Contact Point
250   MSS = Member State System.
251
252   In reality it is too risky to combine several operating systems from several member states,
253   and therefore there must be separate Data Warehouse Systems, which are are totally separate
254   from the operational Member State System.
255
256   When thinking ensuring security and privacy, the best way is to have a physical barrier,
257   since **all electronic barriers are very prone to defects, electronic warfare, malicious**
258   **behaviour, etc.**
259
260   In practical reality it is sometimes easy or relatively easy to extract and "purify" data from
261   operational systems. This "purified" data can be transferred to the data warehouse system,
262   e.g. with data tape transfer.
263
264   Therefore I recommend that only needed operational (base) systems are joined together, and
265   other systems are based on these Data Warehouse Systems with a physical barrier to the
266   operational system. Physical barriers are not that prone to defects, electronic warfare,
267   malicious behaviour, etc.
268
269   [Continues on the next page]

270
271 **Question Group 4**
272
273 Questions:
274   a) How to work towards a European catalogue of public services?
275   b) How can such catalogue foster interoperability and the creation of new cross-border and
276   cross-sectoral public services?
277   c) Can best practice examples of comparable scope and complexity be found that can be
278   taken as inspiration?
279
280 My Opinion to Question Group 4
281
282   The best way for public service directory is to have a list of usable public data sources. What
283   this means?
284
285   People, organisations, etc. are generally speaking very lazy and poorly motivated to add
286   anything to the information systems. There are some exceptions, e.g. so called social media.
287   However, there is always more motivation to use previously added data.
288
289   The public data source should consist of following:
290   –   general description of the data source
291   –   clarification of retrieving data with different communication methods
292   –   highly detailed technical descriptions of ways of getting data from the data
293   source.
294
295   Marketing, management, etc. general functions prefer general guidelines, but real
296   implementation needs those highly detailed technical descriptions.
297
298   There could be following possibilities:
299   –   use of data source without registration
300   –   use of data source with registration
301   –   use of data source based on monetary fee.
302
303   When there is possibility to use these usable public data sources, different applications can
304   be created. The data must be there before any applications.
305
306   When there is applications, they can be collected to the same registry of public data sources.
307
308   Simple. The data must be there before any applications.
309
310   [Continues on the next page]
311

312
313 **Question Group 5**
314
315 Questions:
316   a) What could be the scope of a European interoperability architecture?
317   b) How far should such architecture be supported by common infrastructure?
318
319 My Opinion to Question Group 5
320
321   This answer combines previously mentioned thoughts together.
322
323   Therefore we present the integrator-to-integrator interoperability as a feasible solution.
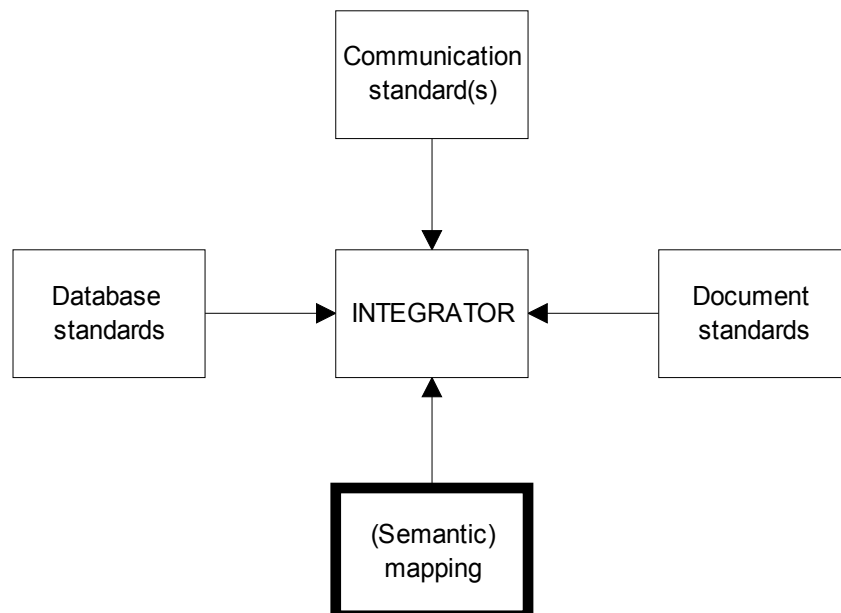324

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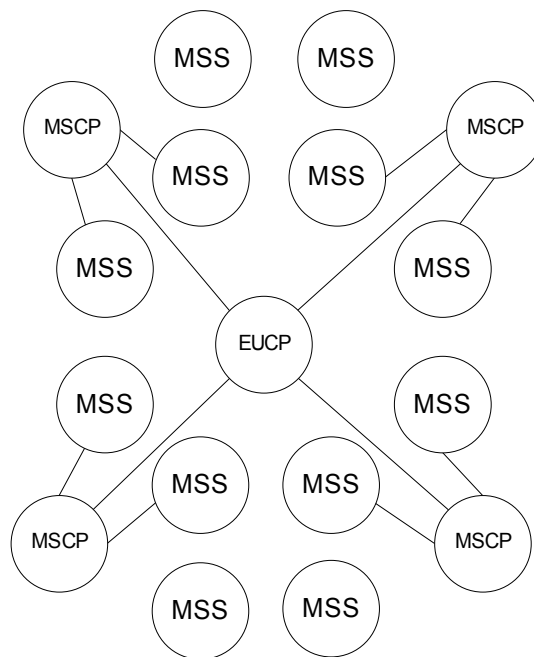
MSS = Member State system
MSCP = Member State Contact Point
EUCP = European Contact Point

325
326
327   MSS = Member State system
328   MSCP = Member State Contact Point
329   EUCP = European Contact Point
330
331   So, there is Member State Connect Point (MSCP), which integrates member state systems
332   (MSSs), and this Member State Connect Point (MSCP) integrates to the European Contact
333   Point (EUCP). In reality there are a huge collection of different Member State Systems
334   (MSSs), which are constructed with wide variety of technologies. Therefore it more feasible,
335   that Member State Systems (MSSs) are made to interoperate first, since it easier to have
336   integrator-integrator connection afterwards.

337
338   In the following figure there is a simplification of the solution.
339

```
                        ┌──────────────────┐
                        │  Communication   │
                        │   standard(s)    │
                        └──────────────────┘
                                 │
                                 ▼
┌──────────────┐        ┌──────────────────┐        ┌──────────────┐
│  Database    │───────▶│   INTEGRATOR     │◀───────│  Document    │
│  standards   │        │                  │        │  standards   │
└──────────────┘        └──────────────────┘        └──────────────┘
                                 ▲
                                 │
                        ┌──────────────────┐
                        ┃   (Semantic)     ┃
                        ┃    mapping       ┃
                        └──────────────────┘
```

340
341
342   The practical reality is, that most certainly there will be wrong selections for standards, and
343   therefore in the integration solution there must be a possibility to adapt new standards
344   afterwards.
345
346   So?
347   The main focus should be ensuring that integration-to-integration solutions work well
348   between European Union Contact Point and Member State Contact Points.
349
350   The main task for EU-wide integrator solution is to ensure following:
351   –   database standards can be added later
352   –   document standards can be added later
353   –   communication standards can be added later.
354
355   And the main task is to work on mappings, which ensure that there is coherent information
356   from different separate systems.
357
358   [Continues on the next page]
359

360
361 **Question Group 6**
362
363 Questions:
364   a) How to work towards a European catalogue of re-usable architectural building blocks?
365   b) Who should be allowed, and under what conditions, to contribute to such catalogue?
366   c) Who should be allowed, and under what conditions, to re-use the architectural building
367   blocks listed in such catalogue?
368   d) Can best practice examples of comparable scope and complexity be found that can be
369   taken as inspiration?
370
371 My Opinion to Question Group 6
372
373   The best way for public service directory is to have a list of usable public data sources. What
374   this means?
375
376   People, organisations, etc. are generally speaking very lazy and poorly motivated to add
377   anything to the information systems. There are some exceptions, e.g. so called social media.
378   However, there is always more motivation to use previously added data.
379
380   The public data source should consist of following:
381   –   general description of the data source
382   –   clarification of retrieving data with different communication methods
383   –   highly detailed technical descriptions of ways of getting data from the data
384   source.
385
386   There could be following possibilities:
387   –   use of data source without registration
388   –   use of data source with registration
389   –   use of data source based on monetary fee.
390
391   When there is possibility to use these usable public data sources, different applications can
392   be created. When there is applications, they can be collected to the same registry of public
393   data sources. Simple. The data must be there before any applications.
394
395   Now we can have the following table.
396

	OWN DATA	**OPEN DATA**	**BUY DATA**
OWN USAGE	Private	Gift	Private
OPEN USAGE	Donation	Public Domain	n/a
BUY USAGE	Private Data Service	Subsidised Data Service	Private Data service

397
398   As can be seen from the table, open data is our concern. As mentioned earlier persons,

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399 organisations, etc. are very eager to use previously added data, not so eager to add data to
400 information systems.
401
402 This question group is quite easy.
403   i) When there is open data, it should be possible to anyone use the data and
404   propose different computer-based solutions for European catalogue.
405   ii) When there is partly/wholly subsidised service, proposing different computer-
406   based solutions should be based on registration.
407
408 [Continues on the next page]
409

410
411	**Question Group 7**
412
413	<u>Questions:</u>
414		a) How to reach, via our collaborative platforms all stakeholders who need to work together
415		around interoperability, sharing and re-use within the context of the establishment of
416		European public services?
417		b) How to work together with similar initiatives elsewhere?
418
419	<u>My Opinion to Question Group 7</u>
420
421		These questions are answered in answers 5 and 6.
422

423   **ANNEX 1**
424   DISCLAIMER
425
426   Legal disclaimer:
427
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429   entity I am member either by law or voluntarily. This opinion paper is only intended to trigger thinking and it
430   is not legal advice. This opinion paper does not apply to any past, current or future legal entity. This opinion
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432   opinion is solely responsibility of respective actor making those actions.
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434   Political disclaimer:
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436   These opinions do not represent opinions of any political party. These opinions are not advices to certain
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439
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468

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1   Based on the Finnish three-party system there is phenomenon called extreme-centre in Finland.