1
2
3   SR 307
4   Finnish Standards Association SFS
5   (to be submitted to AENOR, AENOR as the Secretariat)
6
7
8   Reference document: CEN/PC 365 N 045 (dated: 2011-04-04)
9
10 **Consultation: Internet content and communications filtering software and services /**
11 **NEW VERSION OF DRAFT TS 00365001**
12
13 First of all, a lot of thanks to AENOR [1] (The Spanish Association for Standardization and
14 Certification) and SFS [2] (Finnish Standards Association SFS) for organising this consultation about
15 Internet Content and communications filtering software and services.
16
17 This opinion represents an opinion of an individual citizen, not any legal entity.
18
19 This opinion does not contain:
20   –   any business secrets
21   –   any trade secrets
22   –   any confidential information.
23
24 This opinion is public.
25
26 Annex 1 holds information about disclaimers and copyright.
27
28
29
30 Best Regards,
31
32
33
34 Jukka Rannila
35 citizen of Finland
36
37 signed electronically
38
39
40 [The opinion starts on the next page]

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1   http://www.en.aenor.es/
2   http://www.sfs.fi/en/

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41
42   **General remarks**
43
44   Here is my proposals for standardising Internet content and communications filtering software and
45   services:
46
47   **1)   Standardising the paper forms for end users**
48   **2)   Standardising the web forms for end users**
49   **3)   Standardising the content of information feeds between different stakeholders.**
50
51   **1)   There should be measures to really have highly readable standard contract**
52   **forms related to Internet filtering**
53   **2)   There should be different logotypes for different filtering measures.**
54
55   **1)   mass imports / mass exports about filtering**
56   **2)   very tiny changes in filtering, possibly individually tailored**
57   **3)   and between these two extremes.**
58
59   Next I will go through those proposals in detail.
60
61   **Going through some basic concepts**
62
63   I will start explaining my (humble) opinion from the very beginning, since it seems that working
64   document CEN/PC 365 N 045 implicitly expects the readers to understand a huge variety of
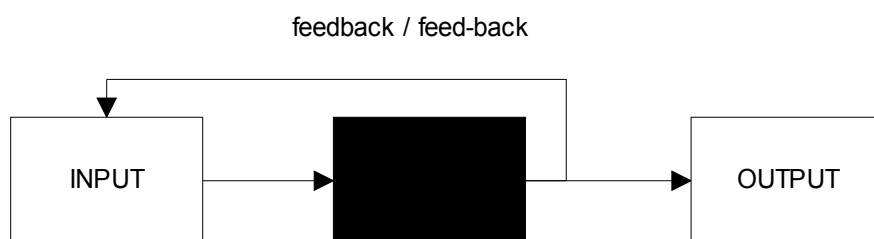65   information about the computers and communications.
66
67   However, these concepts are not scientifically valid, since they are conceptions of a one person.
68
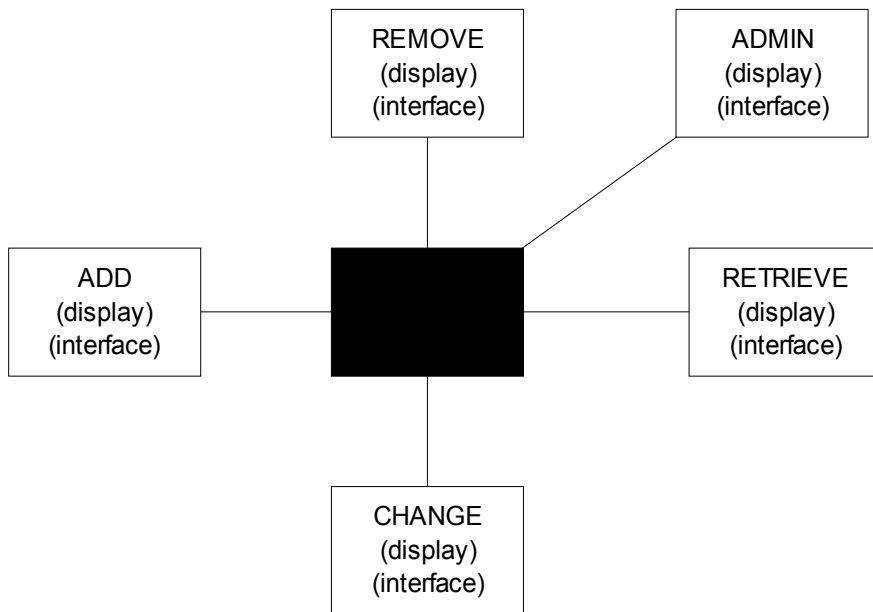69   **Definition of computer**
70

feedback / feed-back

```
  ┌──────────────────────────────────────────┐
  │                                            │
  ▼                                            │
┌────────┐        ┌────────┐        ┌────────┐
│        │        │████████│        │        │
│ INPUT  │ ─────► │████████│ ─────► │ OUTPUT │
│        │        │████████│        │        │
└────────┘        └────────┘        └────────┘
```

71
72
73   In the simplest form of definition we can have a simple model, where a computer is a "black box"
74   with simple input and output. For many users this is the most prevalent form of usage, since they
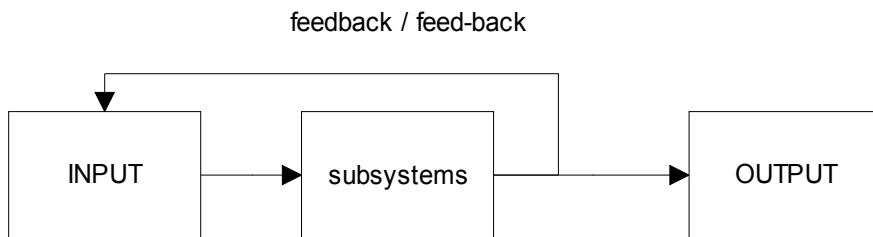75   juts use the system without thinking any larger ramifications.
76

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```
                    ┌──────────────┐      ┌──────────────┐
                    │   REMOVE     │      │    ADMIN     │
                    │  (display)   │      │  (display)   │
                    │ (interface)  │      │ (interface)  │
                    └──────────────┘      └──────────────┘
   ┌──────────────┐         │      ████████        ┌──────────────┐
   │     ADD      │         │      ████████        │   RETRIEVE   │
   │  (display)   │─────────┼──────████████────────│  (display)   │
   │ (interface)  │                ████████        │ (interface)  │
   └──────────────┘                  │             └──────────────┘
                              ┌──────────────┐
                              │   CHANGE     │
                              │  (display)   │
                              │ (interface)  │
                              └──────────────┘
```

77
78
79   To be more specific, we can have four very basic functions for a computer: add, retrieve, remove
80   and change. And actually in many cases there is the fifth function for administration, which can
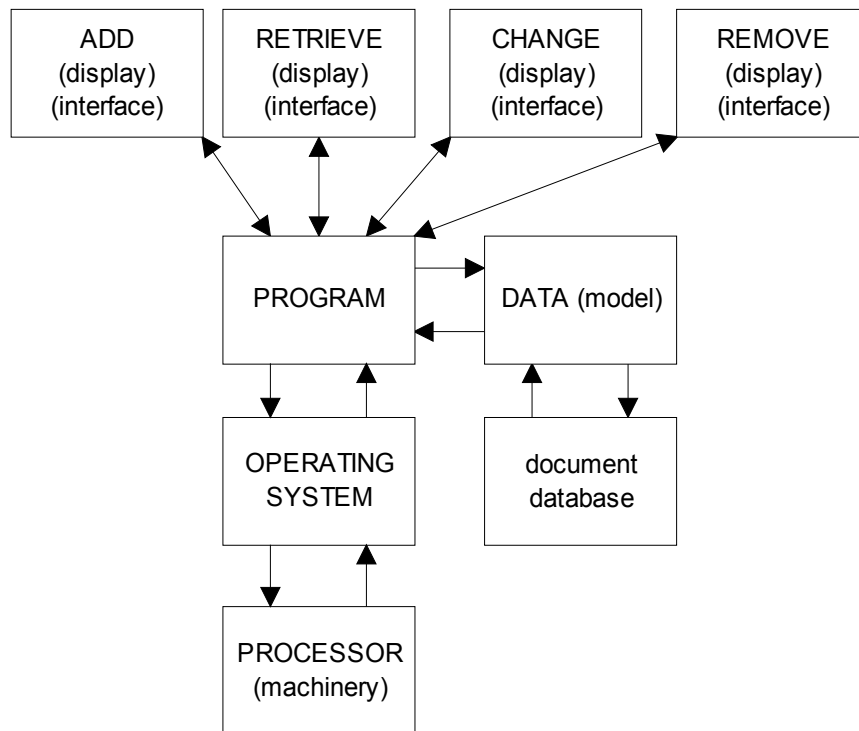81   change all inner workings of a computer system.
82
83   In many cases administration can/will/should understand the subsystems of a computer system.
84

feedback / feed-back

```
   ┌──────────┐      ┌──────────────┐      ┌──────────┐
   │          │      │              │      │          │
   │  INPUT   │─────▶│  subsystems  │─────▶│  OUTPUT  │
   │          │      │              │      │          │
   └──────────┘      └──────────────┘      └──────────┘
```

85
86
87   The most basic form of using a computer is using programs in a computer system. If everything is
88   fine, the basic user is worried about using properly the programs of a computer system.
89
90   [Continues on the next page]
91

```
┌──────────┐  ┌──────────┐  ┌──────────┐  ┌──────────┐
│   ADD    │  │ RETRIEVE │  │  CHANGE  │  │  REMOVE  │
│(display) │  │(display) │  │(display) │  │(display) │
│(interface)│ │(interface)│ │(interface)│ │(interface)│
└──────────┘  └──────────┘  └──────────┘  └──────────┘

              ┌──────────┐      ┌──────────────┐
              │ PROGRAM  │ ───► │ DATA (model) │
              │          │ ◄─── │              │
              └──────────┘      └──────────────┘

              ┌──────────┐      ┌──────────────┐
              │OPERATING │      │  document    │
              │ SYSTEM   │      │  database    │
              └──────────┘      └──────────────┘

              ┌──────────┐
              │PROCESSOR │
              │(machinery)│
              └──────────┘
```

92
93
94   Actually, there is a operating system, which is between programs and processor(s). The operating
95   system actually "talks" with the processor and other machinery of a computer system. Once again,
96   if everything is fine, a basic user might not know anything about operating system(s).
97
98   For using data in a computer system there is two basic forms: document and database. In a
99   document there can be a lot of free-form data, even though the rules for organising the free-form
100 data in a document highly structured. In a database the data is structure otherwise, when the data is
101 in smaller bits, and every bit of information is independent of each other, and the human-
102 understandable information is relations of independent bits of information.
103
104 **Networks of computers**
105

```
   ○                                              ○
  /|\  ADD                               ADD    /|\
  / \  RETRIEVE                       RETRIEVE   / \
       CHANGE                           CHANGE
       REMOVE                           REMOVE

  ⊙         ┌──────────┐  COMM  ┌──────────┐        ⊙
DISPLAY ────│  DATA    │◄─────► │  DATA    │──── DISPLAY
            │ system 1 │        │ system 2 │
       COMM └──────────┘        └──────────┘  COMM
```

106
107

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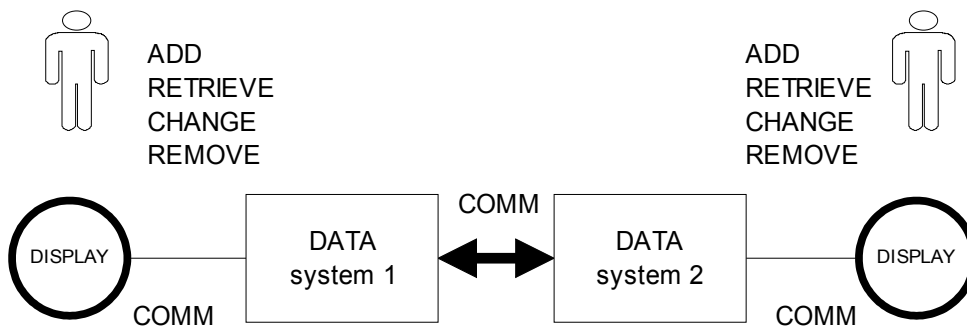
108 Naturally, several computers can be networked with some communications (COMM) method.
109 Actually there can different computers displaying the same data from computer-based system(s). In
110 some cases these displaying computers are "dummy", since almost all processing can be done in
111 computer, which is communicating with the computer displaying the data.
112
113 Since this consultation is about Internet standards, it can be said that communications (COMM)
114 between different computers can be organised with several layers of communicating computers
115 between the displaying computer and data processing computer.
116
117 **All-to-all networks**
118

1
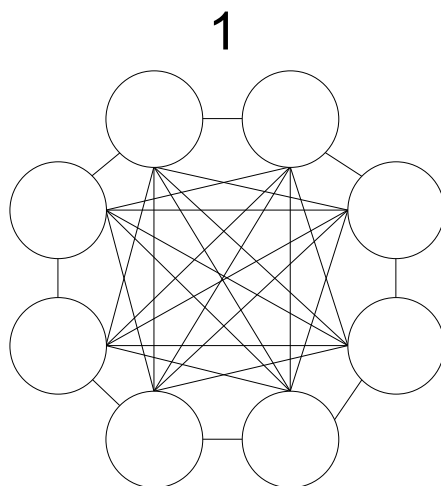
119
120
121 One way of organising computer-based networks would be all computers communicating with all
122 other computers. In practical terms this might be complicated, if there is several communicating
123 methods (standards), and this might cause several layers of all-to-all communication problems.
124
125 **One-to-many networks**
126
127 One option is naturally the total opposite solution, where there is one central point, and all
128 communications go through that central point. The problem with this solution is, that one central
129 point can be have problems and causing the whole communication system to fall.
130
131 [Continues on the next page]
132

2
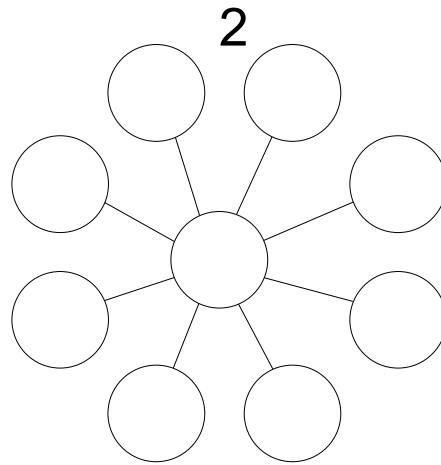
133
134
Replicating the central point

136

3
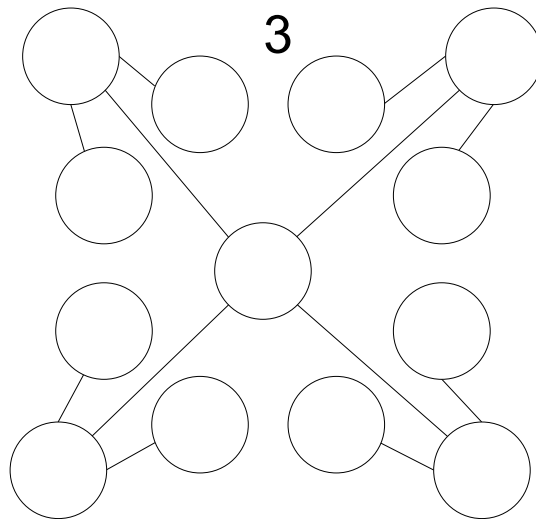
137
138
139 One obvious way is replicating the data from a central point. In some systems this is very feasible,
140 if the central data is changed/removed/added based on some clear-cut intervals. In this way there
141 can smaller one-to-many networks.

142
Other modes for communication networks

144
145 There can be several modes for communication networks [3], and on of the final forms is that many
146 points are interlinked with each other, and central points can be interlinked with many central
147 points. In this way the failure of communication between two points can be easily bypassed by
148 using other communication line/way.
149

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3   Models 1, 2, 1-2, 3, 4, 5 can be presented.

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5
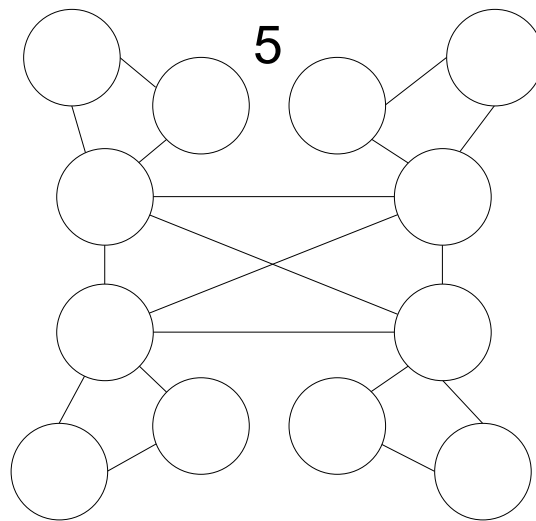
150
151
152 **Practical reality**
153
154 In practical reality a large and widely-used system can use several communicating methods, which
155 naturally means very complicated computer-based systems.
156
157 **Third-party systems (broker systems)**
158
159 In practical reality there must a trusted third-party systems, which will facilitate computer-based
160 communication between two parties, could be also called a broker system.
161
162 [Check the next figure]
163
164 When there is different broker system(s), there can be several events and states during the
165 communications between two systems. One communication instance might last just for seconds
166 (lifetime) or there can be communication instance, which can be used with different intervals, e.g.
167 daily or weekly.
168
169 Many practical actions in the Internet service would be impossible without different broker systems.
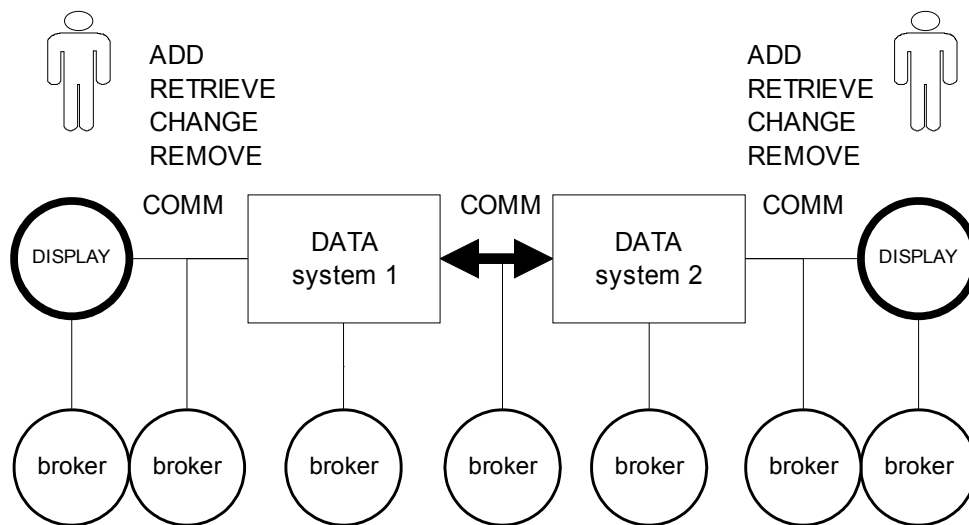170
171 [Continues on the next page]
172
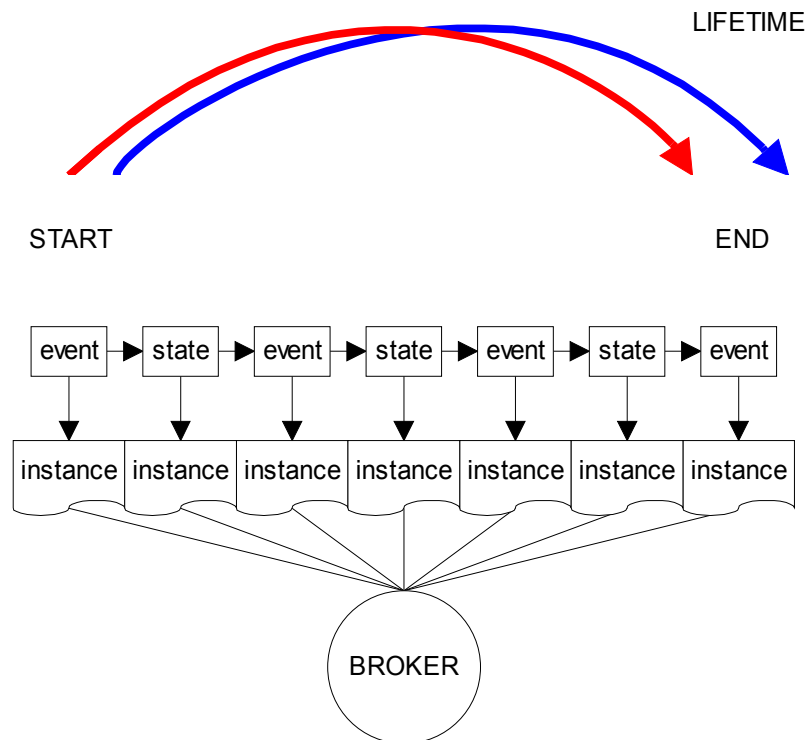
173
174
175   **Internet filtering as one broker system**
176
177   Now we can create a broker system for Internet filtering:
178
179   –   filtering in the data system itself

181   –   filtering of the retrieving information from the data system
182   –   filtering of the changing information from the data system
183   –   filtering of the adding information from the data system
184   –   filtering of the removing information from the data system

186   –   filtering between communications between to data system
187   –   filtering in the communications network between two data systems

189   –   filtering in the display computer
190   –   filtering of the retrieving information in the display computer
191   –   filtering of the changing information in the display computer
192   –   filtering of the adding information in the display computer
193   –   filtering of the removing information in the display computer
194

ADD
RETRIEVE
CHANGE
REMOVE

ADD
RETRIEVE
CHANGE
REMOVE

COMM

DISPLAY

COMM

DATA system 1

COMM

DATA system 2

COMM

DISPLAY

broker broker broker broker broker broker broker

195
196
197 Now we can move on with different options for broker systems.
198
199 **Filtering in the data system itself**
200
201 When thinking in practical terms, this option has some problems:
202
203   – in many cases the registration process for a data system is open for everyone
204   – there can not be total guarantee of real identity of real users of the systems
205
206 In some systems the actual identity of the user is checked when registering to the system, meaning
207 communication with the system of holding verified identities.
208
209   **Analysis:**
210   In Internet terms, the best way for actual data systems filters would be blocking of malicious
211   web page addresses. If a malicious web page address is added to a data system, there should
212   be a filter, which checks the validity of every added web page address.
213
214 **Filtering the communication between data systems**
215
216 In Internet terms, this would mean filtering communications between different ISPs (internet
217 service providers), since in practical terms many systems are using communication networks "as-is"
218 without knowing the technical details about communications networks.
219
220 In practical terms this broker system between ISPs would mean very massive systems, since the
221 amount of internet communications is growing every year. An average end user might not even
222 know about these systems.
223
224 [Continues on the next page]
225

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226 **Filtering communications between the display (computer) and internet service provider (ISP)**
227
228 In internet terms, this would mean filtering communications the end users´ computers and the
229 servers of the ISP (internet service provider).
230
231 In reality, there should be a filtering option, where the filtering is done in the servers of the internet
232 service provider. Again in reality, the knowledge level of an average end user is so varied, that
233 leaving all filtering options to end user will cause real problems.
234
235 **Filtering communications in the display (computer) itself**
236
237 In this option, there is filtering systems in the computers of end users.
238
239 The problem with this option is, that average users might not understand anything about the
240 filtering systems in their computers. This might sound trivial, but in reality the knowledge level of
241 millions of user is very varied.
242
243 **What would be most feasible point of standardising Internet content and communications**
244 **filtering software and services ???**
245
246 After analysing different points in Internet communications and filtering options, there should be
247 some roadmap for standardising Internet filtering. Since I did not trust the knowledge level of
248 millions of end user, there might be the following standardisation efforts:
249
250   **1)   Standardising the paper forms for end users**
251   **2)   Standardising the web forms for end users**
252   **3)   Standardising the content of information feeds between different stakeholders.**
253
254 **Standardising the forms (paper and web) for end users**
255
256 In Finland Finnish Federation for Communications and Teleinformatics [4] (FiCom), Consumer
257 Agency [5] and Finnish Communications Regulatory Authority [6] (FICORA) created more
258 standardised versions for standard form contracts. Naturally there is still variations between
259 operators, but the idea is to have less quarrel between end user customers and operators.
260
261 Based on this example, it might be feasible to have one standardised paper form for filtering when
262 making the initial contract between Internet service provider and the customer.
263
264 Also with further communications between customers and Internet service providers, there should
265 be always a link to the standardised web form form for filtering – when this web form link is always
266 visible in all communications to the customers, it can be reasoned that customer would eventually
267 have more knowledge about possibility of filtering.

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4   http://www.ficom.fi/inbrief/index.html
5   http://www.kuluttajavirasto.fi/en-GB/
6   http://www.ficora.fi/en/etusivu.html

268
269 Also, when the paper forms and web forms are standardised, the same form model should be usable
270 in the actual filtering programs in the end users´ computers.
271
272 In practical reality it can be said, that Finnish customers were bombarded with different sets of
273 standard form contract models, even though all standard form contract models contained the same
274 information based on the law and case law.
275
276 In the similar way, it will be difficult for end users, if they are bombarded with different sets of
277 forms related to Internet filtering. Therefore I propose some practical measures:
278
279   **1)   There should be measures to really have highly readable standard contract**
280   **forms related to Internet filtering**
281   **2)   There should be different logotypes for different filtering measures.**
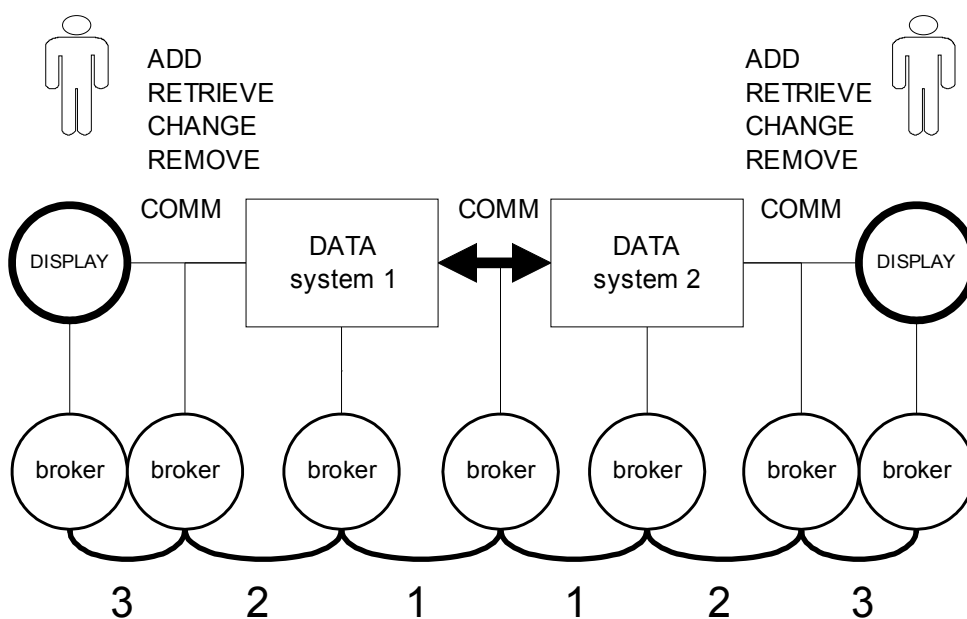282
283 **Standardising the content of information feeds between different stakeholders**
284
285 When thinking of transmitting filtering information between systems, it will lead to standardisation
286 of information feeds between different stakeholders.
287

288
289 1)   The Internet service providers can create their own information feeds for transmitting
290   information about filtering
291 2)   The Internet service providers need filtering information to keep their own internet filters
292   up-to-date
293 3)   The programs in end users´ computer need filtering information to keep filtering working.
294 4)   (Not necessarily the XML dialects are the best way of transmitting filtering information).
295

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296
297 It can be said that once again extreme options are many-to-many communications and one-to-many
298 communications. In practical reality there would be several central hubs (CH), which can give
299 information feed to next central hubs.
300
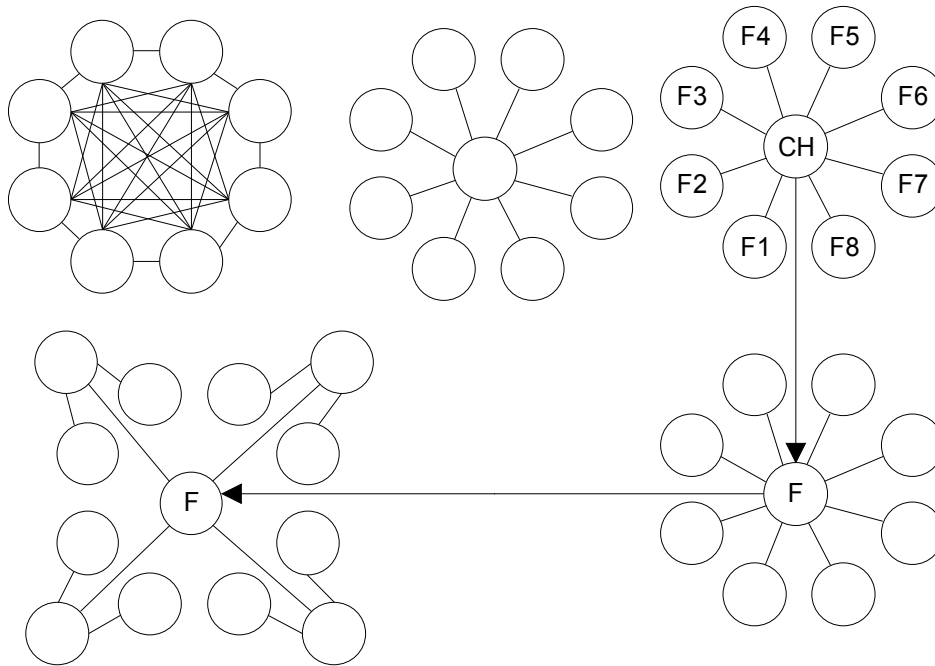
301
302
303 Since the reality will be complex, there should be different standardised feeds:
304
305   1)   **mass imports / mass exports about filtering**
306   2)   **very tiny changes in filtering, possibly individually tailored**
307   3)   **and between these two extremes.**
308
309
310 **Good luck !!!**
311
312 I have followed standardisation for some time, and standardisation is never easy, and will never be
313 easy. Hopefully this opinion did trigger some thinking.
314
315 Jukka Rannila
316 citizen of Finland
317
318 signed electronically
319

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322
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362

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7   Based on the Finnish three-party system there is a phenomenon called extreme-centre in Finland. The 2011
    parliamentary elections in Finland challenge the three-party system, since three "old" parties were not traditionally
    as the three largest parties. The is now a "new" party as the third largest party. We all must remain being interested
    about this new development in Finland.

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