First of all, a lot of thanks to AENOR ¹ (The Spanish Association for Standardization and Certification) and SFS ² (Finnish Standards Association SFS) for organising this consultation about Internet Content and communications filtering software and services.

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.

Annex 1 holds information about disclaimers and copyright.

Best Regards,

Jukka Rannila

citizen of Finland

signed electronically

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

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General remarks

Here is my proposals for standardising Internet content and communications filtering software and services:

1) Standardising the paper forms for end users
2) Standardising the web forms for end users
3) Standardising the content of information feeds between different stakeholders.

1) There should be measures to really have highly readable standard contract forms related to Internet filtering
2) There should be different logotypes for different filtering measures.

1) mass imports / mass exports about filtering
2) very tiny changes in filtering, possibly individually tailored
3) and between these two extremes.

Next I will go through those proposals in detail.

Going through some basic concepts

I will start explaining my (humble) opinion from the very beginning, since it seems that working document CEN/PC 365 N 045 implicitly expects the readers to understand a huge variety of information about the computers and communications.

However, these concepts are not scientifically valid, since they are conceptions of a one person.

Definition of computer

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

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To be more specific, we can have four very basic functions for a computer: add, retrieve, remove and change. And actually in many cases there is the fifth function for administration, which can change all inner workings of a computer system.

In many cases administration can/will/should understand the subsystems of a computer system.

The most basic form of using a computer is using programs in a computer system. If everything is fine, the basic user is worried about using properly the programs of a computer system.

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Actually, there is a operating system, which is between programs and processor(s). The operating system actually “talks” with the processor and other machinery of a computer system. Once again, if everything is fine, a basic user might not know anything about operating system(s).

For using data in a computer system there is two basic forms: document and database. In a document there can be a lot of free-form data, even though the rules for organising the free-form data in a document highly structured. In a database the data is structure otherwise, when the data is in smaller bits, and every bit of information is independent of each other, and the human-understandable information is relations of independent bits of information.

**Networks of computers**

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Naturally, several computers can be networked with some communications (COMM) method. Actually there can different computers displaying the same data from computer-based system(s). In some cases these displaying computers are “dummy”, since almost all processing can be done in computer, which is communicating with the computer displaying the data.

Since this consultation is about Internet standards, it can be said that communications (COMM) between different computers can be organised with several layers of communicating computers between the displaying computer and data processing computer.

All-to-all networks

One way of organising computer-based networks would be all computers communicating with all other computers. In practical terms this might be complicated, if there is several communicating methods (standards), and this might cause several layers of all-to-all communication problems.

One-to-many networks

One option is naturally the total opposite solution, where there is one central point, and all communications go through that central point. The problem with this solution is, that one central point can be have problems and causing the whole communication system to fall.

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

Other modes for communication networks

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

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

In practical reality a large and widely-used system can use several communicating methods, which naturally means very complicated computer-based systems.

Third-party systems (broker systems)

In practical reality there must a trusted third-party systems, which will facilitate computer-based communication between two parties, could be also called a broker system.

When there is different broker system(s), there can be several events and states during the communications between two systems. One communication instance might last just for seconds (lifetime) or there can be communication instance, which can be used with different intervals, e.g. daily or weekly.

Many practical actions in the Internet service would be impossible without different broker systems.

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Internet filtering as one broker system

Now we can create a broker system for Internet filtering:

- filtering in the data system itself
- filtering of the retrieving information from the data system
- filtering of the changing information from the data system
- filtering of the adding information from the data system
- filtering of the removing information from the data system
- filtering between communications between to data system
- filtering in the communications network between two data systems
- filtering in the display computer
- filtering of the retrieving information in the display computer
- filtering of the changing information in the display computer
- filtering of the adding information in the display computer
- filtering of the removing information in the display computer

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Now we can move on with different options for broker systems.

### Filtering in the data system itself

When thinking in practical terms, this option has some problems:

- In many cases the registration process for a data system is open for everyone
- There cannot be total guarantee of real identity of real users of the systems

In some systems the actual identity of the user is checked when registering to the system, meaning communication with the system of holding verified identities.

### Analysis:

In Internet terms, the best way for actual data systems filters would be blocking of malicious web page addresses. If a malicious web page address is added to a data system, there should be a filter, which checks the validity of every added web page address.

### Filtering the communication between data systems

In Internet terms, this would mean filtering communications between different ISPs (internet service providers), since in practical terms many systems are using communication networks “as-is” without knowing the technical details about communications networks.

In practical terms this broker system between ISPs would mean very massive systems, since the amount of internet communications is growing every year. An average end user might not even know about these systems.

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Filtering communications between the display (computer) and internet service provider (ISP)

In internet terms, this would mean filtering communications the end users’ computers and the servers of the ISP (internet service provider).

In reality, there should be a filtering option, where the filtering is done in the servers of the internet service provider. Again in reality, the knowledge level of an average end user is so varied, that leaving all filtering options to end user will cause real problems.

Filtering communications in the display (computer) itself

In this option, there is filtering systems in the computers of end users.

The problem with this option is, that average users might not understand anything about the filtering systems in their computers. This might sound trivial, but in reality the knowledge level of millions of user is very varied.

What would be most feasible point of standardising Internet content and communications filtering software and services ???

After analysing different points in Internet communications and filtering options, there should be some roadmap for standardising Internet filtering. Since I did not trust the knowledge level of millions of end user, there might be the following standardisation efforts:

1) Standardising the paper forms for end users
2) Standardising the web forms for end users
3) Standardising the content of information feeds between different stakeholders.

Standardising the forms (paper and web) for end users

In Finland Finnish Federation for Communications and Teleinformatics ⁴ (FiCom), Consumer Agency ⁵ and Finnish Communications Regulatory Authority ⁶ (FICORA) created more standardised versions for standard form contracts. Naturally there is still variations between operators, but the idea is to have less quarrel between end user customers and operators.

Based on this example, it might be feasible to have one standardised paper form for filtering when making the initial contract between Internet service provider and the customer.

Also with further communications between customers and Internet service providers, there should be always a link to the standardised web form form for filtering – when this web form link is always visible in all communications to the customers, it can be reasoned that customer would eventually have more knowledge about possibility of filtering.

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Also, when the paper forms and web forms are standardised, the same form model should be usable in the actual filtering programs in the end users' computers.

In practical reality it can be said, that Finnish customers were bombarded with different sets of standard form contract models, even though all standard form contract models contained the same information based on the law and case law.

In the similar way, it will be difficult for end users, if they are bombarded with different sets of forms related to Internet filtering. Therefore I propose some practical measures:

1) There should be measures to really have highly readable standard contract forms related to Internet filtering
2) There should be different logotypes for different filtering measures.

Standardising the content of information feeds between different stakeholders

When thinking of transmitting filtering information between systems, it will lead to standardisation of information feeds between different stakeholders.

1) The Internet service providers can create their own information feeds for transmitting information about filtering
2) The Internet service providers need filtering information to keep their own internet filters up-to-date
3) The programs in end users' computer need filtering information to keep filtering working.
4) (Not necessarily the XML dialects are the best way of transmitting filtering information).
It can be said that once again extreme options are many-to-many communications and one-to-many communications. In practical reality there would be several central hubs (CH), which can give information feed to next central hubs.

Since the reality will be complex, there should be different standardised feeds:

1) mass imports / mass exports about filtering
2) very tiny changes in filtering, possibly individually tailored
3) and between these two extremes.

Good luck !!!

I have followed standardisation for some time, and standardisation is never easy, and will never be easy. Hopefully this opinion did trigger some thinking.

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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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