Benchmarking of parental control tools for the online protection of children
SIP-Bench III

Results of the 3rd Cycle - Executive Summary

SAFER INTERNET PROGRAMME

Empowering and Protecting Children Online

The study aims to benchmark the main functionalities, effectiveness and usability of most currently used filtering software from a technical and 'fit-for-purpose' point of view, without any commercial or profit-related concern. The European Union, the European Commission or any person acting on their behalf are not responsible for the accurateness, completeness, use of the information contained in this Study, nor shall they be liable for any loss, including consequential loss, that might derive from such use or from the findings of the Study themselves.

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Executive Summary

This report contains the results of the study - Benchmarking of parental control tools for the online protection of children - SIP-Bench II. The study was commissioned by the European Commission, DG Information Society and Media, in the framework of the Safer Internet Programme, to Cybion Srl and Stiftung Digitale Chancen, under the coordination of INNOVA Europe S.à.r.l. It is the third out of 5 reports that will be published on a six-monthly basis.

The report aims to guide the end-users (notably PARENTS) in an easy and comprehensive way through the assorted range of parental control tools currently available on the market in Europe.

In order to achieve this goal, a comparative experts' assessment of parental control tools was carried out. It should be noted that the above mentioned process was vendor/supplier – independent. In total, 30 tools have been examined in the 3rd benchmarking, within the following devices: personal computers, mobile phones and game consoles.

The results of the study are also available online through a searchable database that allows producing ranking lists adjusted to the PARENTS' specific needs. The database can be found at the following address: http://www.yprt.eu/sip .

WHAT ARE THE PARENTAL CONTROL TOOLS?

Parental control tools enable PARENTS to carry out **three types of actions** to protect their CHILDREN/TEENAGERS:

- Customisation of web content filtering: allows CHILDREN/TEENAGERS to view content according to a set of specific criteria defined during the configuration of the tool. The PARENTS may ask the tool to block or show content indicating the topic, a list of URLs or some specific keywords;
- Blocking the usage: allows blocking the usage of a protocol /application notwithstanding the inappropriateness of the content (e.g. the tool might prevent the children to watch streaming through Media Player);
- Monitoring the application/protocol usage and the web content accessed: to be reported on if and/or when and/or for how long accessing a specific websites, entering/using a specific application/protocol.

HOW ARE THE TESTS CARRIED OUT?

A precise methodology was used to perform the benchmarking study. The selection of tools was carried out with the aim to address in the best way possible the parents' needs in terms of devices (PCs, Mobile phones, Consoles), operating systems (Windows, Mac, Linux), languages, type of solutions (default systems like Microsoft Vista parental control, client software, ISP solutions).

The following parameters were identified, according to which the selected tools were tested:

- The **functionality** test, targeted at testing if the tool really has the functions required to satisfy the parents' needs;
- The **effectiveness** test, which aims at assessing whether a tool is able to block or not a specific harmful page and if at the same time it is able to allow visualizing non-harmful pages. The effectiveness tests were performed on a sample set of 6000 pages (containing text, video and images) showing the typical content a filtering tool is faced with on the Internet;
- The **usability** test, which aims at assessing whether a tool is easy to install, configure and also to use. The usability results were based on an assessment by experts reviews; in addition some users gave their individual comments to the products based on single user tests;
- The **security** test, which aims at verifying whether the tools prevent the user from by-passing or disabling the filter through a specific set of actions.

PC PARENTAL CONTROL TOOLS - RESULTS

PPCs are the most common way to access the Internet. They enable the CHILDREN/TEENAGERS to: access the Web pages, share experiences and contents through social networks or communicate with people. 25 tools for PC were tested.

Functionality key findings

None of the tested tools reaches the complete functionality coverage. The most complete one is rated 3.4 on a 4 scale. 12 tools are rated under 2. The 3 highest scoring products are: Kaspersky (3.4), PureSight (3.3) and Profil (3.3).

The main findings can be summarised as follows:

- All the tools provide the PARENTS with the possibility to block content according to categories based on topics;
- Most of the tools provide the PARENTS with the complete set of customization functionalities (topic + URL and black/white lists);
- Most of the tools enable the PARENTS to create and manage different profiles for users with different needs;
- The majority of the tools are able to block web based streaming provided by YouTube, if not with a specific option at least by adding it to a black list;
- Many tools are able to block MSN Messenger but less than half is able to block Skype. Possibility to filter contacts is still rare.
- Most of the tools are able to provide the PARENTS with at least basic report on the users' web activity (visited websites or violations). Some of these also provide specific alerts with violations and more detailed report;
- Only 6 tools give the PARENT possibility to personalize the blocking page. None of the tools redirect the CHILD/TEENAGER to safe research.
- English is the most frequent language for tools, whereas for many other European languages tools choice is limited;
- Some tools present some security weaknesses, giving the user the possibility to by-pass the tool or uninstall it. The most common weakness is: allowing access to prohibited page through translation sites or Google Cache.

Effectiveness key findings

In general, tools have a low effectiveness. The highest scoring products for <12 years old children are Windows and Deutsche Telekom (2,3 out of 4), Norton and Xooloo (2,2 out of 4). The highest scoring products for ≥ 13 years old children are Windows and Deutsche Telekom (2,6 out of 4), Profile (2,5 out of 4), followed by Norton and Xooloo (2,4 out of 4).

The main findings can be summarized as follows:

- The underblocking rate (to what extent the harmful content is not filtered) is higher than 20 % for all tested tools;
- The tools perform quite similarly with a configuration for the two age classes (≤12 years old and ≥13 years old);
- The tools present a lower effectiveness on Web 2.0 content (like blogs or social networks);
- The adult content is better filtered than other content categories, like self-damage or racism or violence; some tools achieve good results for adult content;
- The tools work better in English than in any other language. For languages other than English there is no outstanding tool.

Usability key findings

Fourteen out of twenty-five tools gain better scores for installation and configuration than for usage. Two products fails the threshold of 50 % of 4 point. Twenty-one products range between 2 and 2.99, two products score in the top area and gain 3 points or more.

The main findings can be summarized as follows:

- Some of the tools keep the installation and configuration procedure very simple to avoid mistakes of the parents. However, the possibilities to customize them to individual needs are poor. Other tools have very extended options to configure the software but then the risk of misconfiguration and bad filtering results is high;
- It turns out that the configuration process is the key to the product;
- In several cases there are very few configuration options. In other cases configuration is very exhaustive and provides a lot of functionalities.

PARENTAL CONTROL TOOLS FOR MOBILE PHONES - RESULTS

Smart phones are one of the most popular devices used by CHILDREN /TEENS to access the Internet, to watch video streaming and to communicate with other people by using specific applications such as Instant Messaging. Two tools have been tested: Safe Eyes (iPhone) and Mobile Security for Android (Android).

Functionality key findings

There are only few tools able to filter the web-pages content and they have limited functionalities compared to the tools available for PCs. iPhone is provided with an embedded parental control tool which is able to restrict the usage of some protocols/applications such as accessing to the Internet, YouTube and e-mail. It is also able to carry out some content filtering basing on national ratings. But an external parental control tool is necessary to filter web-pages browsing according to the content.

Effectiveness key findings

Very few tools for mobile phones provide the functionality of filtering the Web. Two solutions tested for mobile (K9 Mobile and Mobicip) also exist for PC. The effectiveness of the mobile solutions is slightly lower than the one assessed for the similar PC products.

Usability key findings

Both tools tested come as an application that is installed almost automatically with the download. Therefore, there is no installation process to be handled by the user. Although the configuration of mobile tools is less complex than those for PC, it is difficult to understand and not well supported.

PARENTAL CONTROL TOOLS FOR GAME CONSOLES - RESULTS

Game consoles are built for gaming and they are not massively used to access the Internet. They are mainly used for online gaming, chatting with other players or downloading content. There are only few tools for consoles providing filtering functionalities and some of them they still seem to be in a development phase.

Functionality key findings

Every tested console has its own embedded parental control tool but none is able to filter Web pages according to the content. The two consoles that enable the users to browse the Web (Wii and PS3) may use an external Web filtering tool (Astaro and Trend Micro Kids Safety) for this functionality. There are only few tools for consoles providing filtering functionalities and some of them still seem to be in a development phase. The 3 embedded tools are focused on the control of other online activities: chatting with other players, online gaming and content downloading/purchasing (apart from offline activities filtering).

Effectiveness key findings

There are only few tools for consoles providing Web filtering functionalities. No tool is available for the Xbox as this device cannot be directly connected to the Internet. A tool for PS3 has been tested: it offers similar but slightly lower results compared to the product for PC produced by the same company. A tool for Wii has been tested but the filtering functionality was not effective so all harmful pages are shown to the user.

Usability key findings

Compared to parental control tools for PC, those for game consoles seem to be less known by parents. Nonetheless, they can be useful and the configuration of game consoles can be entertaining. Installation runs automatically, thus there is nearly no process to be handled by the user, Configuration is less complex than for PC tools.