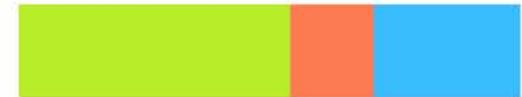# Benchmarking of parental control tools for the online protection of children

SIP-Bench II

Assessment results and methodology 1st Cycle

SAFER INTERNET PROGRAMME

Empowering and Protecting Children Online

NOTICE

The project is Funded by the European Union, through the "Safer Internet Programme"
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(hereafter named as "the Consortium")

SIP-Bench II
Assessment
Results and
Methodology
1st Cycle

Executive Summary

The present 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 first 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, 31 tools have been examined in the 1st 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.

METHODOLOGY

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 typicalcontent 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 was assessed by experts reviews;
- 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

PCs 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. 26 tools for PC were tested.

Functionality key findings

The results show that none of the tested tools reaches the complete functionality coverage. The most complete one is rated 3.5 on a 0-4 scale. The 3 highest scoring products are: Vise (3.5), CyberSieve (3.4) and Windows Vista (3.2).

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 a half is able to block Skype. The possibility to filter contacts is still rare: only 4 tools provide a functionality that works correctly for MSN;
- 80% of the tools are able to provide the PARENTS with at least a basic report on the users' web activity (visited websites or violations). Some of these also provide specific alerts with violations and more detailed report;
- English is the most frequent language for tools, whereas for many other European languages the 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: allow accessing a prohibited page through translation sites or Google cache.

Effectiveness key findings

The tools globally have a low effectiveness.

The main findings can be summarised as follows:

- The underblocking rate (how much 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 (≤10 years old and ≥11 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;
- The tools work better in English than in any other language. For languages other than English there is no outstanding tool.

Usability key findings

On average the tools gain better scores for configuration and installation than for usage. The only 3 products which are rated over 3 out of 4 are: CyberPatrol (3.32), Kaspersky (3.14) and Open DNS (3.11).

- Part of the tools keep the installation and configuration procedure very simple to avoid mistakes of the parents but then the possibilities to customise the tool to individuals' 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 comprises 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 Security Shield (BlackBerry, Symbian, Windows Mobile, Android).

Functionality key findings

Even if there are many parental control tools for mobile phones only few tools are able to filter the web-pages content.
Security Shield is not able to filter web content. It is able to filter email only. Its filtering activity is focused on more traditional phone related activities such as SMS, MMS and phone calls. Safe Eyes mobile is able to filter web content. Functionalities are limited compared to PC tools.

Effectiveness key findings

The tool tested for mobile (Safe Eyes Mobile) also exists for PC, but the effectiveness of the mobile tool is lower than the one (Safe Eyes PC) with similar characteristics assessed for computers (similar effectiveness for the two age classes, lower effectiveness on Web 2.0 content, adult content better filtered than other kind of harmful content, better effectiveness on English content than other languages).

Usability key findings

- Both tools tested come as an application that it is installed nearly automatically with the download;
- Safe eyes mobile has a few options to configure the filtering on the mobile phone interface.

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 a few tools for consoles providing filtering functionalities and for some of them they still seem in a development phase.

Functionality key findings

All the tested consoles have their own embedded parental control tool but none is able to filter web pages according to the content. The 3 embedded tools are focused on the control of other online activities: chatting with other players, online gaming and content downloading/purchasing (as part of offline activities filtering).

Effectiveness key findings

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.

The effectiveness is lower than the tools for PCs with similar characteristics (similar effectiveness for the two age classes, lower effectiveness on Web 2.0 content , adult content better filtered than other kind of harmful content, better effectiveness on English content than other languages).

Usability key findings

It is a challenge for parents to learn about and to decide on the need to install an additional parental control tool.
Configuration is less complex than for PC tools.